Butwal Campus Journal, Vol. 4, No. 1-2: 13-24, July-December 2021
Research Management Cell, Butwal Multiple Campus, Tribhuvan University, Nepal
DOI: https://doi.org/10.3126/bcj.v4i1-2.44981

ASSESSING SERVICE QUALITY USING SERVQUAL MODEL: COMPARISON OF PUBLIC-PRIVATE HOSPITALS

Lal Bahadur Pun

Assistant Professor, Faculty of Management, Butwal Multiple Campus, T.U.

Article History: *Received 5 August 2021; Reviewed 24 September 2021; Revised 30 November 2021; Accepted 06 December 2021*

ABSTRACT

Patients' perceptions of the services provided by a particular healthcare organization affects the image and profitability of the hospital and it also significantly affects the patient behavior in terms of their loyalty and word-of-mouth. The purpose of this paper was to measure the patients` expectations and perceptions and thereby compare them between private and public hospitals. Based on SERVQUAL model, self-administered questionnaire was prepared with six-point Likert-type scaled questions. Using judgemental sampling, the questionnaires were distributed to 450 patients at different locations of Butwal, out of which only 391 questionnaires were usable. The result revealed that private hospitals have been providing relatively better services than the public hospitals.

Keywords: expectations – perceptions - service gap - service quality – SERVQUAL.

INTRODUCTION

Patients perceive the quality of service on different service quality dimensions (Samson & Parker, 1994). Quality has become a key determinant in both industrial and service sector to gain maximum return on investment and also significantly contributed in reduction of cost (Parasuraman et al., 1985). Service organizations like the manufacturing organizations are now well aware about the facts that they need to take preventive quality measures to gain customer satisfaction and retention (Spreng & Mackoy,1996; Reichheld & Sasser, 1990). The importance of service quality has been recognized to increase

organizational performance, customer satisfaction and loyalty (Berry et al.,1989; Reichheld & Sasser, 1990; Rust & Zahorik, 1993; Spreng & Mackoy, 1996; Cronin et al., 2000; Yoon & Sun, 2004; Kang & James, 2004).

Healthcare sector has become a highly competitive and rapidly growing service industry around the world. The biggest challenge faced by healthcare market, specifically hospitals, is to define and measure the service quality. `SERVQUAL` is a comprehensive scale to empirically estimate the level of quality services delivered to customers, and it is best suited in the hospital environment (Babakus & Mangold, 1992). Cronin and Taylor (1992) emphasize that patient perceptions are considered to be the major indicator in order to assess the service quality of healthcare organizations. Parasuraman et al. (1985,1988) and Zeithaml et al. (1993) argue that the quality of services delivered to the customers should meet their expectations.

THEORETICAL FRAMEWORK

Knowing what customer expects is the first and possibly most critical step in delivering quality service (Zeithaml et al., 1993). It is important to recognize that customers will have perceptions of transaction specific encounters as well as overall perceptions of a company based on all their experiences. Customer satisfaction is the customer`s evaluation of a product or service in terms of whether that product or service has met their needs and expectations. Failure to meet needs and expectations is assumed to result in dissatisfaction with the product or service (Zeithaml et al., 1993).

Several tools have been developed to measure patients` perceptions and expectations, but SERVQUAL instrument developed by Parasuraman et al. (1985) is the most widely used tool (Sohail, 2003). Parasuraman et al (1985) have found that consumers consider five dimensions in their assessments of service quality: reliability, responsiveness, assurance, empathy and tangibles. Since the development of SERVQUAL, it has been extensively applied in a variety of business models. SERVQUAL is the most favored instrument for measuring service quality (Robbinson, 1999). These dimensions represent how consumers organize information about service quality in their minds. These five dimensions were found relevant for such diverse service settings as banking, insurance, automobile repair services, health care and medical sector. Sometimes, customers use all of the dimensions to determine service quality perceptions, at other times not.

Hospitals are judged by its patients not only on the basis of the behaviour of doctors and nurses but also other physical facilities and the time that they spend to get particular service. Sometimes customer`s preconceived perception also affects the expectation of hospitals specially in the context of public hospitals. In Nepal, for example, the government made substantial investment in basic health care; yet utilization remained low because of clients` negative perceptions of public health care (Lafond, 1995). On this ground, the following hypothesis is formulated.

H_1: Service quality varies across the nature of hospital.

LITERATURE REVIEW

Service quality

The fact that the perceived quality of the product and service is becoming the most important competition factor in business world and that has been the reason of naming the present business era as "Quality Era" (Peeler, 1966). Consequently, service marketing intellectuals and researchers have offered several metaphors of this issue. For example, Berry (1998) calls it the most powerful competition weapon. Services are increasingly becoming a larger portion of many organizations.

Parasuraman, Zeithaml and Berry (1990) concluded that consumer perceptions of service quality result from comparing expectations prior to receiving the service, and their actual experience of the service. The perceived service quality could be the product of the evaluations of a number of service encounters and in this case, of a patient, these could range from encounters with nurses, encounter with doctors and the physical facilities and equipment, etc. Service quality can be determined by calculating the difference between two scores where better service quality results in a smaller gap (Landrum et al., 2008).If an organization regularly provides service at a level that exceeds customer expectations, the service will be evaluated as high quality. In the case of pure services (e.g., healthcare, financial services, education), service quality will be the dominant element in customers` evaluations. Hence, service quality is the judgement and consequences of consumers after making comparison of expectation with the perception of actual services delivered to them by the service organization (Gronoors, 1984; Berry et al., 1985,1988) and any lacking between them is represented as a gap.

Service quality also affects customer satisfaction. Customer satisfaction is a key factor in formation of customer desire for future purchase (Mittal & Kamakura, 2001). Further, the satisfied customers will probably talk to others about their good experience. The association between service quality and customer satisfaction has emerged as a topic of significant and strategic concern (Cronin & Taylor, 1992). In general, perceived service quality is an antecedent to satisfaction (Spreng & Mckoy, 1996). Thus, a proper understanding of the antecedents and determinants of customer satisfaction can be seen as to have an extraordinarily high monetary value for service organization in a competitive environment (Lassar, Manolis & Winsor, 2000).

Service quality dimensions

Reliability: Delivering on promises

Customers want to do business with companies that keep their promises, particularly about the service outcomes and core service attributes. Reliability is defined as the ability to perform the promised service dependably and accurately. Reliability is considered to be the most important dimensions of service quality specially in healthcare sector. The hospitals need to be extremely aware of patient`s expectations of reliability in the sense that, if the hospital is not able to provide its core service (medical service) that patients think they are paying for, then the hospital loses its patients in the future.

Responsiveness: Being willing to help

Responsiveness is the willingness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints and problems. Responsiveness is communicated to customers by the length of time they have to wait for assistance, answers to questions, or attention to problems. For this, a hospital must view the process of service delivery and the handling of request from the point of view of patients rather than from the hospital`s point of view. If the hospital wants to distinctively excel on responsiveness dimension, it needs to have responsive frontline staffs and core staffs (doctors and surgeons).

Assurance: Inspiring trust and confidence

Assurance excels from employees` knowledge and courtesy and the ability of the firm and its employees to inspire customer trust and confidence. This dimension is likely to be particularly important for services that customers perceive as high risk or for

services of which they feel uncertain about their ability to evaluate outcomes (Zeithaml et al., 1985).

Empathy: Treating customers as individuals

Empathy means individualized attention to its customers. The essence of empathy is conveying, through personalized or customized service, that customers are unique and special and that their needs are understood. Customers want to feel understood by and important to firms that provide service to them. Staffs at small healthcare centers or clinics often know their customer by name and build good relationship that reflect their personal knowledge of customer requirements and problems.

Tangibility: Representing the service physically

Tangibles are the appearance of physical facilities, equipment, personnel, and communication materials. Tangibles provide physical representations or images of the service that customers will use to evaluate quality. Service industries that emphasize tangibles in their strategies include services in which the customer visits the establishment to receive the service.

The SERVQUAL model

The SERVQUAL instrument has been empirically evaluated in the hospital environment, and has been shown to be a reliable and valid instrument in that setting (Babakus & Mangold,1992). Parasuraman et al., (1988) developed a 22-item instrument, called SERVQUAL for assessing customer perceptions of service quality in service organizations. They gave a distinction between service and satisfaction by saying that perceived service quality is a global judgment or attitude, relating to the superiority of the service, but satisfaction is linked to a specific transaction. Initially, the researchers took ten dimensions of service quality as the input to derive some items for the SERVQUAL scale. It has now a variety of applications in healthcare industry, especially in assessing customer expectations about and perceptions of service quality delivered by different hospitals. It also helps in identifying the areas of managerial attention for future improvement.

The customer gap is the difference between customer expectations and perceptions. Customer expectations often consist of what a customer believes should or will happen. For example, when you visit an expensive restaurant, you expect a high level

of service, one that is considerably superior to the level you would expect in a fast-food restaurant. Closing the gap between what customers expect and what they perceive is critical to delivering quality services; it forms the basis for the gap model.

Since they have defined service quality as being a gap between customer`s expectations and perceptions of performance on these variables, their service quality measurement scale comprised of a total of 44 items composed of two matched sets of 22 items (22 for expectations and 22 for perceptions). The lower the gap better the service quality. The measurement of service quality can be expressed as follows:

$SQ_i = P_i - E_i$

The SERVQUAL instrument has been extensively adopted in various industries, and its validity and reliability have been confirmed, Scardina (1994) and Arikan (1999), for example, reported that SERVQUAL was superior in validity and reliability for evaluating patient satisfaction in medical care.

Healthcare Sector in Nepal

Nepal has a pluralistic health system with a variety of health-care facilities (WHO, 2007), which can be broadly categorized into public and private. Public health facilities within Nepal`s district health system include sub-health posts, health posts, primary health-care centers and districts hospitals (Karkee, 2010). Private health facilities range from formal hospitals, nursing homes, private medical colleges and nongovernmental organizations or community-run hospitals to informal practitioners such as faith healers. The private share of total health expenditure in Nepal is 70%, of which about 85% comes from out-of-payments indicating a significant involvement of private facilities in health provision in Nepal (WHO, 2009). The number of private hospitals increased from 69 in 1995 to 147 in 2008, whereas the number of public hospitals increased from 78 to 96 during the same time period. Similarly, there are almost twice as many hospital beds in the private sector (12,310) than in public sector (6944) in Nepal (RTI International, 2010).

RESEARCH METHODOLOGY

Research design

Since the service quality is about the service perception and service expectation of the customer, it is basically a qualitative phenomenon. Based on the Gap Model proposed

by Parasuraman et al., (1988), the study has been conducted in a positivist domain. The cross-sectional survey based descriptive research design has been used to get the opinion of large number of patients of both private and public hospitals.

Population and sample

One public hospital (Lumbini Provincial Hospital) and two private hospitals (Butwal Hospital Pvt. Ltd. and Lumbini Nursing Home Pvt. Ltd., Butwal) are the hospitals which are under the coverage of this study. The patients who have used the service of hospitals twice or more are the population of this study. Since patients from various districts come for the services of the hospitals in Butwal city, size of the population is unknown. From this unknown population, respondents were chosen using judgment. Out of 391 samples, 190 respondents have been chosen from private hospitals and 201 respondents have been chosen from public hospital. The judgmental sampling technique is used to make the sample more inclusive and more representative of the population. Respondents were needed to be chosen on the basis of their experience in the subject investigated. Therefore, the judgmental sampling method was considered to be the effective.

Sample characteristics

There were total of 391 samples in this study. 190(33.2%) samples were taken from private hospitals and 201 (66.8%) samples were taken from public hospital. There were three categories of residential area of the samples. Out of 391 samples there were 180 samples from village which was 59.8% of the total sample. Likewise, there were only 34 samples from sub-urban area which was only 11.3% of the total sample and there were total of 87 samples from urban area which was 28.9% of the total sample.

Data collection

The patients in the sample were provided the list of questions hand to hand and the responses were collected at the same time. The 6-point Likert-type scale has been used. The first part of each questionnaire contains small description about the patient and the second part of questionnaire contains total of 22 questions from different 5 service quality dimensions to measure patient`s expectations and in the third part another set of 22 questions are asked to measure patient`s perception on same 5 dimensions of service

quality. At the third part of questionnaire, 4 questions were asked to measure the overall service quality.

Reliability and validity

Cronbach`s alpha can be used to statistically measure the reliability of the data (Green et al., 2000). The values of Cronbach`s Alpha greater than 0.7 indicate that the constructs are reliable enough to measure the concept (Nunnally, 1978). The combined value of Cronbach`s Alpha of this instrument is 0.958.

STUDY RESULTS

Customer gap compared across the hospitals

The gap between customer expectations and perceptions are negative in all five dimensions indicating that the hospitals under study are not able to meet the expectations of the patients (See Table 1). Based on the SEVQUAL model, all the statements indicate that none of the hospitals have delivered quality. If the service performance or perception of private and public hospital is compared with the average value 3.5 in each statement, the value of all statements in private hospitals are distinctly greater than the average value. The value of perception of public hospital for each statement is also higher except second statement 3.16 < 3.5 in tangibility dimension, which means the physical facilities of public hospitals are not visually appealing.

Table 1: Customer gap across the hospitals

	Private			**Public**		
	Mean	Mean	Gap_1	Mean	Mean	Gap_2
Statements	(P)	(E)	(P-E)	(P)	(E)	(P-E)
When hospital promises to do something by a certain time, it does so.	4.86	6	-1.14	3.98	5.8	-1.82
When you have a problem, hospital shows a sincere interest in solving it.	5.18	5.99	-0.81	4.28	5.81	-1.53
Hospital performs the services right the first time.	4.96	6	-1.04	3.81	5.72	-1.91
Hospital provides its services at the time it promises	4.95	5.99	-1.04	3.98	5.69	-1.71
Hospital insists in error free records.	5.51	5.99	-0.48	4.51	5.82	-1.31
Reliability	**25.46**	**29.97**	**-4.51**	**20.56**	**28.84**	**-8.28**

Hospital keeps patients informed about when services will be performed.	5.37	5.99	-0.62	4.35	5.79	-1.44
Employees in hospital provide prompt services.	5.18	5.99	-0.81	3.72	5.79	-2.07
Employees in hospital are always willing to help.	5.17	5.99	-0.82	3.92	5.87	-1.95
Employees in hospital are never too busy to respond to your request.	5.35	5.99	-0.64	3.92	5.71	-1.79
Responsiveness	**21.07**	**23.96**	**-2.89**	**15.91**	**23.16**	**-7.25**
The behaviour of employees in hospital instils confidence in you.	5.4	5.99	-0.59	4.22	5.76	-1.54
You feel safe in your transaction with the hospital.	5.35	5.99	-0.64	4.1	5.75	-1.65
Employees in hospital are consistently courteous.	5.33	5.99	-0.66	4.01	5.81	-1.8
Employees in the hospital have the knowledge to answer your questions.	5.53	5.99	-0.46	4.34	5.78	-1.44
Assurance	**21.61**	**23.96**	**-2.35**	**16.67**	**23.1**	**-6.43**
Hospital gives you individual attention.	5.55	5.99	-0.44	3.81	5.58	-1.77
Hospital has employees who can give you personal attention.	5.44	5.99	-0.55	3.87	5.68	-1.81
Hospital has your best interest at heart.	5.18	5.99	-0.81	4.14	5.76	-1.62
Employees of hospital understand your specific needs.	5.26	5.99	-0.73	3.68	5.69	-2.01
Hospital has operating hours that are convenient to all its customers.	4.92	5.99	-1.07	3.56	5.75	-2.19
Empathy	**26.35**	**29.95**	**-3.6**	**19.06**	**28.46**	**-9.4**
Hospital has modern looking equipment.	5	6	-1	3.91	5.85	-1.94
Hospitals' physical facilities are visually appealing.	3.85	5.99	-2.14	3.16	5.63	-2.47
Hospitals' employees appear neat and clean.	5.52	5.99	-0.47	4.62	5.79	-1.17
Materials associated with services are visually appealing at hospital.	4.79	5.99	-1.2	3.83	5.79	-1.96
Tangibility	**19.16**	**23.97**	**-4.81**	**15.52**	**23.06**	**-7.54**

Overall service quality across the hospitals

Since the mean value of patient`s perception of private hospital is higher than the public hospital (See Table 2), private hospitals are doing relatively better than the public hospital in overall service quality.

Table 2: Comparison of overall service quality between private and public hospitals

	Private		Public		Gap of
Items	Mean	S.D.	Mean	S. D.	**Mean**
I am satisfied with quality of the overall service.	5.05	0.796	4	1.373	1.05
The overall service quality is conducive to the need of patients.	4.93	0.795	3.85	1.341	1.08
The overall service quality is according to my expectation.	5.19	0.761	3.94	1.257	1.25
The other patients also have good perception about the service quality.	4.98	0.752	3.85	1.323	1.13

Hypothesis testing

H_1: Service quality varies across the nature of hospital.

Table 3 reveals that there is significant difference in service quality across the private and public hospitals. The value of F is 27.882 at significance level $\alpha \leq 0.05$rejecting the null hypothesis. Therefore, it is statistically claimed that the service quality varies across the nature of hospitals.

Table 3: Test of significance of role of nature of hospital in service quality.

	Levene's Test for Equality				
Mean Difference	**F**	**Sig.**	**T**	**Df**	**p-value**
Equal variances assumed	27.882	0.000	-8.545	299	0.000
Equal variances not assumed			-10.329	297.556	0.000

DISCUSSION

Patients have higher expectations from private hospitals compared to public hospitals and they perceive that private hospitals provide better service than public hospitals. The patients perceived that the private hospitals are more reliable, more responsive, more assuring, more empathetic and more sound physically compared to public hospital. However, the study conducted to measure the patient's satisfaction in

Pakistan by Shabbir et al, (2010) reported that public hospitals in Islamabad are providing better quality of services as compare to private hospitals. The SERVQUAL model developed by Parasuraman et al. (1985) has used 7-point scale. We used 6-point scale in order to avoid the central tendency effect from the respondents. The future scholars can measure the same service quality using SERVPERF model.

REFERENCES

Arikan, Y.S. (1999). Effect of nursing service on patient satisfaction. Health Sciences Institute of Marmara University, Nursing Department (Thesis). Istanbul, Turkey.

Babakus, E., & Mangold, G. W. (1992). Adapting the SERVQUAL scale to hospital services: An empirical investigation. *Health Service Research*, *26*(6), 767-86.

Berry, L.L., Parasuraman A., & Zeithaml, V. A. (1985). Quality counts in services too. Business Horizons.

Cronin, J.J. Jr. & Taylor, S.A. (1992). Measuring Service Quality: A Re-examination and Extension. *Journal of Marketing*, *56* (3), 55-68.

Green, T.M., Cronin, J.J., Brandy, M.K. & Hult. (2000). Assessing the effects of quality, value and customer satisfaction of consumer behavioural intensions in service environment. *Journal of Retailing, 76* (2), 193-218.

Kang, G.-D. & James, J. (2004). Service quality dimensions: an examination of Gronroos's service quality model. Managing Service Quality, *14*(4), 266-77.

Karkee, R. & Jha, N. (2010). Primary health care development: *Where is Nepal after 30 years of Alma Ata declaration?* JNMA J Nepal Medical Association, *49*, 178-84.

Lafond, AK. (1995). Improving the quality of investment in health: lessons on sustainability. *Health Policy and Planning*, *10*, 63–76.

Landrum, H., Prybutok, V. R., Kappelman, L. A., & Zhang, X. (2008). Services: A parsimonious instrument to measure service quality and information system success. *The Quality Management Journal, 15*(3), 17-25.

Lassar, W. M., Manolis, C., & Winsor, R. D. (2000). Service quality perspectives and satisfaction in private banking, *Journal of Service Marketing*, *14*(3), 244-271.

Nunnally, J. (1978). *Psychometric Theory*. McGraw Hill Book Co., New York.

Parasuraman, A., Zeithaml, V. & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research, *Journal of Marketing*, *49*, 41–50.

Parasuraman A., Zeithaml V., & Berry L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, *64* (1), 12-40.

Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1990). Five imperatives for improving service quality. *Sloan Management Review*, 29-38.

Parasuraman, A. & Berry, L. L. (1991). Marketing for Services: Competing through Quality. *The Free Press, New York.*

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1996). The behavioural consequences of service quality. *Journal of Marketing, 60*(2), 31-46.

Peeler, G. H. (1996). Selling in the quality era. *Blackwell Business, USA.*

Reichheld, F.,& Sasser, W.E. Jr. (1990). Zero defecting: quality comes to services. *Harvard Business Review*, *68*, 105-111.

RTI International. (2009). *Assessing implementation of Nepal's free health care policy*: Third trimester health facility survey report. North Carolina: Ministry of Health and Population, Government of Nepal and Research Triangle Park.

RTI International. (2010). *Overview of Public-Private Mix in Health Care Service Delivery in Nepal*. North Carolina: Ministry of Health and Population, Government of Nepal and Research Triangle Park.

Rust & A. J. Zahorik (1993). Customer Satisfaction, Customer Retention and Market Share. *Journal of Retailing*, *69* (2), 193-215.

Samson, P. (1994). Service Quality: The Gap in the Australian Consulting Engineering Industry. *International Journal of Quality & Reliability Management*, *11* (7), 60-76.

Scardina, S. (1994). SERVQUAL: A tool for evaluating patient satisfaction with nursing care. *Journal of Nursing Care Quality*, *8*(2), 38-46.

Sohail, M.S. (2003). Service quality in hospitals: More favourable than you think. *Managing Service Quality, 13*(3), 197-206.

Spreng, R. A., & Mackoy, R. D. (1996). An empirical examination of a model of perceived service quality and satisfaction, *Journal of Retailing*, *72*(2), 52-64.

Ware, J.E., & Snyder, M.K. (1975). Dimensions of patient attitudes regarding doctors and medical services. *Journal of Medical Care*, *26*, 669-673.

WHO. (2007). Health system in Nepal: Challenges and strategic options. Kathmandu: World Health Organisation, country office for Nepal.

WHO. (2009). World Health Statistics. World Health Organization, Geneva.

Yoon, S., & Suh, H. (2004). Ensuring IT consulting SERVQUAL and user satisfaction: a modified measurement tool. *Information Systems Frontiers*, *6*(14), 341-351.

Zeithaml, V.A., Parasuraman, A., & Berry, L.L. (1985). Problems and Strategies in Services Marketing. *Journal of Marketing*, *49*, 33- 46.

Zeithaml, V. (1987). *Defining and relating price, perceived quality and perceived value*. Cambridge, MA: Marketing Science Institute.

Zeithaml, V.A. & Bitner, M. (2002). *Services Marketing*, 3rd edition (New York, McGraw Hill).

Zeithaml, V.A., Berry, L.L., & Parasuraman, A. (1993). The nature and determinants of customer expectations of service. *Journal of the Academy of Marketing Science*, *21*(1), 1-12.