

## Measuring service quality in Public Sector using SERVQUAL: A case of Punjab Dental Hospital, Lahore

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### Abstract

This paper describes the method, named SERVQUAL which is a twenty two items model, to show the reliability and applicability of this methodology to measure the service quality of different organizations. It tells how applicable this instrument is in measuring the service quality of different organizations including, the health sector. After the proper discussion of the conceptualization and operationalization of this methodology, this paper carries a logical conclusion. The conclusion is evidence based since the reliability and the validity of this methodology is backed by the data which was taken from the library data and the practical implementation of the method for measuring the service quality of The Punjab Dental Hospital, Lahore.

**Key words:** Service, Quality, Gaps, SERVQUAL Model, Consumer's Expectations, Consumer's Perceptions.

### Introduction:

Measuring the service quality has become a very important issue for any organization. Service quality is recognized as a strategic tool to gain operational efficiency and continuous improvement in the organizational performance. An organization must know what are the quality standards demanded by their consumers, for that, they have to measure the gaps between, what is demanded and what they are serving actually for satisfying their consumers.

Service is an action of helping or doing work for others.<sup>15</sup> It has also been defined as, "Social efforts, which include the Government to fight five giant evils: want, disease, ignorance, squalor and illness in the society"<sup>16</sup>.

Service is a help that you give to someone, especially by using your skills, ability, or knowledge.<sup>17</sup>

Service has very different characteristics than any product, which makes it difficult to be measured. These qualities are following:

1. Intangibility: Unlike physical objects, service cannot be touched, seen, smelt or tasted. The service is intangible in nature which makes it difficult to be measured (Fitzsimmonds, 2004; Hill, 2006; Amna, 2011).
2. Perishability: Service, like physical objects is also perishing in terms of time. Once time is gone, service can neither be delivered in a same way, nor it can be stored and it's a complete wastage of time (Fitzsimmonds, 2004; Hill, 2006; Amna, 2011).
3. Inseparability: The generation and the delivery of service are inseparable. The service is delivered as soon as it's generated. Thus the services and the providers are very closely associated and hence is a big challenge for the service management industry (Fitzsimmonds, 2004; Hill, 2006; Amna, 2011).
4. Heterogeneity: Service can be desired in different ways. This quality is due to the difference in perceptions of people at consumer and provider levels. It is very difficult for service, to be reproduced in the same way. Therefore, service cannot be standardized and also, it cannot be undone once delivered (Fitzsimmonds, 2004; Hill, 2006; Amna, 2011).

The study of services is becoming important with every passing day due to its ever increasing worth and size in the global economy (Holis et al, 2009). Service is distributed locally, regionally, nationally and globally. The service quality has become a very important aspect to be measured in order to gain competitive advantage over the rivals (Chingang & Lukong, 2000). It's very important for the organizations to know what are the constructs of consumers about the different aspects of quality of services of the particular organization, which may help the organization to know what exactly the consumer needs from them. This leads to better consumer's satisfaction and hence their retention. The quality of services is a real tough thing to measure; unlike a product, service doesn't carry tangible characteristics like colour, texture, height, width, smell etc. Quality is recognized to be a strategic tool to gain the operational efficiency and improvement in the organizational performance (Beecrof,

<sup>15</sup> <http://www.oxforddictionaries.com/definition/english/service> downloaded on 27-11-13, 20:00.

<sup>16</sup> <http://www.bms.co.in/define-services-and-explain-characteristics-of-services/>, downloaded on 7-11-13, 20:02

<sup>17</sup> <http://www.macmillandictionary.com/dictionary/british/service>, downloaded on 27-11-13, 20:30.

1999). This applies to both the sectors, services and the products. Therefore, these intrinsic qualities of service make the identification and measurement, a real tough ask.

It's very important to measure the quality of service, an organization provides. It helps an organization to identify the areas of improvement in the view of its users. It also enables an organization to provide the type and quality of services, what its consumers expect from it. Measuring the service quality for an organization is also important in order to compare it from the service quality of its competitors.

The healthcare services are provided by the Government and private hospitals. It's seen that there are distinct differences between the two, though they all provide the healthcare services to the mankind. The major difference is the type of ownership. Private hospital is owned by a person or a group of persons, who have the main role in administration and policy making of the hospital. While in Public sector, government is responsible for making its policies and other important strategies for the hospital. Administration is also run by the government employees, who may or may not be given authorities to make decisions. The second main difference is that private hospitals are financed by its owner, while Public hospitals are totally dependent on funds, collected from the state. When come to the quality of service, if cost was never been the issue, the quality of both sectors would have been the same. Since the private hospitals charge the high fee from its consumers, it spends more to provide better services as compared to Public hospitals. The third difference is that, the public setup is service oriented while the private healthcare organization is profit oriented, suggesting that the consumers are patients for the government hospitals while they are customers for the private hospitals (Shaw, R. P, 2004).

There are different ways by which the service quality of any organization can be measured. It can be either Qualitative which includes observations and interviews or the quantitative method which covers questionnaires and consumer's comments cards, etc. The methods include, SERVQUAL Model, SERVPERF Model, ISO standards, RATER scale, LibQUAL Model (especially for library and information services), etc.

In the past, this model had mostly been employed on private sector hospitals (Buttle, 1995; Rizwan & Hina, 2011; Punnakitikashem et al, 2012). Only a few studies show that it had been used to measure service quality of Public sector hospitals as well. Despite fewer studies on Public sector, it still proved to be equally effective and reliable in determining the quality of healthcare services provided by the Public sector health organizations. Our study is one example in which SERVQUAL Model has been used to assess the quality of services provided by this Public dental hospital in Lahore. The SERVQUAL Model has helped us in identifying the weak areas of healthcare services of this hospital, as well as the areas, with which the patients are already satisfied. This has given the management the key for improvement and modification of their strategies. It has also given the management priorities, to rectify the problems which had occurred previously and the opportunity for continuous improvement by tracking its performance over the time.

#### **LITERATURE REVIEW:**

SERVQUAL Model is a multiple- item scale model which is used to measure the quality of any service providing organization. It was developed by Parasuraman and Berry in 1988. This model is a generic instrument which measures the perceived quality of service which is examined as a level and direction of discrepancy between consumer's expectations and perception. This concludes that service quality originates from a comparison of consumers expectation from a service providing organization with their perception of performance of them. This model was developed for marketing sector initially, later it proved to be fruit full to determine the quality of other organizations like, hospitals, telecom, libraries, schools, colleges, and many other communication centres ( kettinger & Lee, 1994; Nitech, 1996).

The Service Quality Model or the Gap Model has been used by many researchers in the past ( Buttle, 1995; Rizwan & Hina, 2011). Cook & Thompson (2000); Nitech & herson (2000), investigated the reliability and validity of SERVQUAL model to determine library service quality. Parasuraman, Zeithaml & Berry (1988) determined that service quality is the discrepancy between the expectations and the perception, so it's measured easily by averaging the scores gained from the five dimensions of quality (Brown, Churchill & Peter, 1992). This carries five dimensions of quality, which help in assessing the quality of services delivered by any organization. These dimensions are; tangibles, reliability, responsiveness, empathy and assurance (Rizwan & Hina, 2011). They employed the SERVQUAL model to evaluate the service quality of some selected hospitals in Karachi. Their aim of study was to determine whether govt, semi govt or private hospitals are following all the five dimensions of service quality, and hence compared the service quality among the selected hospitals. So consumers evaluate the service quality by the gaps they find between their expectations from the service providers and their actual experience. These five service quality dimensions are described below:

**Responsiveness** is willingness to help consumers and provide prompt treatment in simple words (Buttle, 1995; Punnakitikashem et al, 2012).

**Assurance** consists of questions related to knowledge, competence, courtesy, security, credibility and ability to instil confidence in the patient (Punnakitikashem et al, 2012).

**Reliability** in simple meaning is defined as the ability to perform promised services (Punnakitikashem et al, 2012).

**Tangibility** refers to the physical appearance of the hospital, its infra-structure and the appearance of its personnel (Punnakitikashem et al, 2012). The physical characteristics of the dental health care organization that includes, furnishings, look, ambiance, etc, of its offices, rooms, surgeries and reception area including the technology and the equipment used, may have a significant effect on patient's perceived level of service quality.

**Empathy** is the ability to be approachable; it's the individualized care and attention, ability to understand other's needs.<sup>18</sup>

SERVQUAL have been a key word in almost 41 publications which include both theoretical discussions and applications of the model in a variety of commercial, industrial and also in not-profit oriented settings. A few of those publication studies include: Travel and Tourism (Fick & Ritchie, 1991); Hotels (Saleh & Ryan, 1992); Car Servicing (Bouman & Van der Wiele, 1992); Business Schools (Rigotti & Pitt, 1992); Airline catering (Babakus et al, 1993; Chikwendu, Ejem E & Ezenwa, 2012); Accounting firms (Freeman & Dart, 1993); Informing Science (kappelman & Prybutok, 1997); Mobile Telecommunications in Macedonia (Zekiri et al, 2011); Babakus & Mangold( 1992) evaluated patient's perceived quality of service of hospital's environment. They used a modified version of SERVQUAL model, with 15 paired questions. To evaluate the validity of the study, they used correlation and the factor analysis. For all five dimensions, coefficient of reliability was found greater than 0.05. Lim & Tang (2000) carried out their study to evaluate the service quality of a hospital in Singapore. They added two more dimensions in the SERVQUAL model which were affordability and accessibility. Among the healthcare service providers, it's seen that in the past they also have employed SERVQUAL model for assessing the quality of health services by the different private and public sector hospitals or healthcare facilities. The SERVQUAL model has extensively been adopted by different healthcare providers. Scardina (1994) and Arkina (1999), for instance reported that this model is superior in validity and reliability for evaluating patient's satisfaction from the very healthcare facility. Canel & Fletcher, 2001; Lam, 1997; Donthu, 1991, also have used this model to measure the healthcare quality. Karssavidoue (2001) conducted a study in Greek hospital named National Services Hospital and Sohail (2003) conducted a study on a private hospital in Malaysia. Sohail used the SERVQUAL model to assess the healthcare services of the very hospital. Results showed significant gaps between patient's expectations and perceptions for all quality dimensions. This study proved beneficial in order to identify the gap areas and so as a result helped improving their quality.

Punnakitikashim et al. (2012) employed the SERVQUAL model on a hospital with lean implementation. Their study results showed that hospital's overall quality scores were positive. This model helped them identify the gap in services, which was assurance. This helped the management to improve this area of gap and also in designing and prioritizing the hospital strategies to improve the service quality. Parasuraman et al (1988) developed a 22-items questionnaire describing five dimensions of service quality. Many other researchers later, used the same questionnaire for their studies in order to determine the service quality of different service providing organizations.

Critics added that the five dimensions of SERVQUAL Model are not universal (Vandamme and Leunis, 1993). They also say that the model is unable to explain statistical, economical and psychological aspects (Francis, B, 1994). They say that there exists no evidence that customers asses the service quality as a gap between their expectations and the perceptions what they actually get from that particular organization. Also, the whole of the model is centred about the service delivery and not the outcomes of the service (Francis, B, 1994). Ranjit, C. & Anirban, N, 2011, in their study say that, there's a strong correlation among all the five dimensions; one cannot be so sure in scoring them exactly. They also say that SERVQUAL Model has unstable dimensions. Different researchers used different dimensions in their studies. The literature tells that Jiang, Klein & carr (2002) used four dimensions, Landrum & prybutok (2004) used five and Niteckie (2006) proposed three dimensions in their studies.

A research by Mangkolrat (2008) summarized the benefits of SERVQUAL, which despite all the critics suggests that the model is quite helpful to measure quality of services of any organization. He mentions the following advantages; the model brings forth the consumer's views regarding the services encountered in terms of their expectations and perceptions. It enables the management to consider the perception of the consumers as well as the management while strategy formulation. Also, helps the management to identify the gap areas and to modify

<sup>18</sup> <http://nptel.iitm.ac.in/courses/110106046/Module%205/Lecture%201.pdf>, downloaded on 27-11-13, 21:05.

their strategies accordingly for improving its quality of service to meet consumer's expectations. SERVQUAL Model enables the organization to identify the areas of excellence and weaknesses as well. It helps identifying the weak areas and suggests prioritizing them while decision making. If the SERVQUAL Model is applied periodically, it helps to track the trends of consumer's relative importance, expectation and perception.

These all advantages suggest that the SERVQUAL Model is the most popular instrument to be used to measure the service quality if varying organizations across the globe. The main advantage of the model is that it's a tried and tested model and has been used by countless organizations among different sectors of services and hence can be used comparatively as a benchmark purpose. Most importantly, SERVQUAL is very valuable when used periodically to track the service quality of an organization.

All of these studies hence support the reliability and effectiveness of SERVQUAL mode for determining the quality of services of any organization. We employed the SERVQUAL model on a public sector dental hospital in Lahore and it also helped in identifying the areas needed for improvement. All these studies show that SERVQUAL model is as reliable method to determine the quality of services in Pakistan as is in other parts of the globe.

### **Plan of work and Methodology:**

#### **1. Research Instrument:**

The research instrument taken for this study was a questionnaire. It included 22 items, each having two parts. One part of which covers the patient's expectations and the other part, their perception based upon their experiences. Each question was constructed with the five levels of Likert's Scale, ranging from 1-5, i.e. strongly disagree, disagree, neutral, agree and strongly agree respectively. This questionnaire originally was in English language. In order to make the questions clear and comprehensible to the respondents, it was translated into Urdu language.

The reliability of the Urdu questionnaire was tested by taking data from ten samples of patients who knew both languages, i.e. English and Urdu. Two types of questionnaires, one in English and the other in Urdu, were carrying the same questions. The data was compared for any difference in the comprehension of the two languages. The results showed no significance difference while answering the same questions in different languages. So, it was concluded that using the Urdu version of the questionnaire was a reliable instrument to gather the data for the very purpose. The reliability of the language translation from English to Urdu was also confirmed by the English linguistic expert, who approved its reliability.

SERVQUAL model was used in the questionnaire for measuring the five dimensions, i.e. tangibility, reliability, responsiveness, assurance and empathy. As the purpose of the study was to measure the gap between patients' expectations and perceived services, paired sampling t test was used. This test was used to measure the gap between the two means of the same sample. First, the data was taken as patient's expectation before getting the treatment and then the second data was taken as patient's perception after getting the treatment.

#### **2. Data Collection:**

Primary data was drawn from the patients, who visited the dental hospital in specific categories of outdoors, indoors and radiology departments. In order to evaluate patients' expected and perceived values, a questionnaire was filled by them before and after the treatment. To give appropriate representation of each speciality of dentistry in the hospital, data was collected from proportionally stratified number of respondents from each department of patients, visiting that department. Data collection process was completed in 10 days from 7 different departments of the hospital. So a sample of 105 patients was drawn from different specialities taking 15 samples from each department.

#### **3. Data Analysis:**

SPSS-16 was used for the analysis of data. In this way the minimum and the maximum gap areas of the hospital were identified. Pared Sample T test was used to determine the association between patient's expectation and perception from the hospital. The Pierson's value of each dimension was determined to evaluate the strength and the type of association between the two variables of each determinant of service quality.

Findings: The overall findings of the Paired sample T test shows that the two means i.e. patient's Perception from the services of The Punjab Dental Hospital and their expectations are almost the same. They show that a little gap exists among means which fall under responsiveness dimension of service quality. Among all the five dimensions of service quality, almost all the items, including, tangibility, reliability, empathy and assurance, showed significance value greater than 0.05. The items of 'responsiveness' showed significance value, less than 0.05. These items are appointment period, response to complaints, service delivery time and the prompt service which showed significance value less than 0.05. The overall findings suggest for "reject Null Hypothesis". This points to the fact that alternative hypothesis is true.

The correlation results of all the dimensions show that the paired variables are strongly associated with each other. All items except responsiveness showed positive R-values, which show that the two variables of all these dimensions have a direct relationship with each other. As the two variables of all the items of responsiveness give negative values, this suggests that the inverse relationship exists between them.

The results showed that the overall performance of the hospital was average and there was a little gap in patient's expectations with the hospital services and their perceptions. Little negative gaps were found in areas of responsiveness. The results may help the hospital management to improve these weak areas and further promote patient's satisfaction from this particular dental health facility.

Discussion: In service sector, there is an increasing pressure to demonstrate that their services are consumer-centred and that they are on continuous improvement strategy. Despite all the financial, human or other resource constraints, a good organization must understand what are the expectations and also able to measure them so as to find out the gaps between the expectations and the actual services being delivered in order to improve the quality<sup>19</sup>.

Through this study, five dimensions of SERVQUAL Model were measured before and after the treatment, which explains patient's expectations and the perception respectively. Paired Sample T-Test was applied for the hypothesis testing. Significance level <0.05 showed statistically significance value so therefore it suggest rejecting the null hypothesis and accepting the researcher's hypothesis i.e. the patient's expectations were almost equal to their perception after they got the treatment from the very hospital.

This study and all the others which were carried out in different sectors of services, like government semi-government, private and NGO's support that SERVQUAL model is a very useful, reliable and valid methodology which determines all the dimensions of service quality and helps the organization to identify the areas of problems and hence helps the top management to alter their strategies in order to gain long term consumer's satisfaction and hence retention. So, this model is equally applicable in different areas across the globe and a variety of service providing organizations.

SERVQUAL Model proved to be very helpful in assessing an organization's service quality in terms of its each dimension. A company can easily evaluate where it stands at particular point in time in the minds of its consumers. An organization can evaluate how much it has progressed or declined over a period of time by tracking its consumer's expectations and perceptions through this model. It also helps to compare an organization's SERVQUAL scores against its competitors. SERVQUAL Model can also be used interdepartmentally in order to identify the quality gaps among them to gain continuous and overall improvement.

#### **Conclusion:**

SERVQUAL Model is an efficient and effective instrument in helping an organization to shape up their strategies in order to fill up the gaps between perceived and expected services. Although it's face and construct validity are not well established, still it's widely applied in modified forms to measure the quality of a variety of service providing organizations, including the non-profit oriented health sector as well (Buttle, 1995). This model proved to be equally effective in assessing and measuring the quality gaps of Punjab Dental Hospital, Lahore and providing another evidence proving SERVQUAL Model as an effective and reliable tool to assess service quality.

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<sup>19</sup> <http://umu.diva-portal.org/smash/get/diva2:327600/FULLTEXT01>, 27-11-13, 19:45.

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