

## MEASURING CONSUMER SATISFACTION IN HEALTH CARE SECTOR: THE APPLICABILITY OF SERVQUAL

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### ABSTRACT

Healthcare is one of India's largest sectors, in terms of revenue and employment, and one can well witness the sector to expand rapidly. With the fast growing purchasing power, Indian patients are willing to pay more to avail health care services of international standard. In the era of globalization and heightened competition, it has been observed that delivery of quality service is imperative for Indian healthcare providers to satisfy their indoor as well as outdoor patients. Hence, it is essential to be aware of how the patients and patient parties evaluate the quality of health care service. Such an understanding facilitates hospital administration to enhance quality of service and satisfy patients to a great extent as well. SERVQUAL instrument among several tools of measuring service quality and patient satisfaction is the most widely used tool.

This paper focuses on the measurement of patient satisfaction in the light of service quality provided by hospitals. In this regard, a review of literature on the application of SERVQUAL model has been considered to investigate the relevance of the same in measuring patient satisfaction in health care sector in today's competitive environment. On the basis of literature review from secondary sources, the layout of this paper would appear as follows:

- Importance of customer satisfaction in service sector
- Understanding the concept of patient satisfaction
- Analyzing the notion of patient satisfaction as a subset of customer satisfaction
- Study of patient satisfaction as a tool for measurement of service quality
- Delineating the significance of SERVQUAL model
- Drawing the criticisms associated with the SERVQUAL approach to patient satisfaction measurement

The paper would end with a clear estimation of the modifications as well as the applicability of the SERVQUAL Model. Based on the platform of secondary literature review, the paper would be a move to outline and unveil the justification of measurement of patient satisfaction in the SERVQUAL way.

**Keywords:** Patient satisfaction, Service quality, Measurement, Service Sector.

## **INTRODUCTION:**

In the globalized and liberalized business environment, service sector is encountering stiff competition to meet the requirements of the profitable ways of business. This is reflected in an organization's survival in terms of return on investment, retention of customers, acceptance of service and service qualities, development and augmentation of brand image etc. It appears that the driving force towards success in service business is the delivery of high quality service (Thompson et.al. 1985). In the era of increased competition, enhancement of service quality and its measurement is one of the significant issues for developing efficiency and the growth of business (Anderson and Zeithamal 1984, Babakus and Boller, 1992 and Garvin, 1983). According to Oliver(1980), in both the service and manufacturing industries, quality improvement is the key factor that affects customer satisfaction and increases purchase intention among consumers (Oliver, 1980). Some other theorists have also mentioned that the quality is the key determinant of consumer satisfaction (Omar and Schiffman, 1995, Gremler et.al., 2001, Radwin, 2000). Many companies are focusing on service quality issues in order to drive high level of customer satisfaction (Kumar et.al., 2008).

According to Pricewaterhouse Coopers (2007), in the service sector, the health care industry, one of India's largest sectors in terms of revenue and employment, is growing rapidly. In India, the service quality of health care is miserable and in general, the health outcome is far from satisfactory (Bajpai and Goyel, 2004). Therefore, government of India has adopted a policy of health care reform having two basic objectives to achieve health securities for all and to provide quality health facilities for all within every district in India (John, 2010). In the health care sector, customer satisfaction is also an important issue as in other service sectors (Shabbir et.al. 2010). A health care organization can achieve patient satisfaction by providing quality services; keeping in view patients' expectation and continuous improvement in the health care service ( Zineldin, 2006).

## **PATIENT SATISFACTION: ELUCIDATION OF THE CONCEPT:**

Satisfaction is a psychological concept which is defined in different ways. Sometimes satisfaction is considered as a judgment of individuals regarding any object or event after gathering some experience over time. According to some theorists, satisfaction is a cognitive response whereas some others consider satisfaction as emotional attachment of individuals.

## **PATIENT SATISFACTION AS A SUBSET OF CONSUMER SATISFACTION:**

Howard and Sheth (1969) explained customer satisfaction as a cognitive response of customers. Hunt (1977) defined consumer satisfaction on the basis of consumers' evaluation of consumption experience. On the other hand there are exponents namely, Churchill and Surprenant (1982) who have defined consumer satisfaction based on the cognitive and affective dimensions of the concept. Further Oliver (1997) highlights definitions on customer satisfaction that recognize the emotional bent of a consumer towards the desired products or services. Mutawa et.al. (2006), in the conference paper, have mentioned that service or product itself is one of the principal factors of customer satisfaction; defined as a system that customer goes through to receive the value for money. Newman et.al. (2001) opined that customer service is a prerequisite for customer satisfaction. The value of service consists of eight dimensions viz. reliability, assurance, access, communication, responsiveness, courtesy, empathy, and tangibles (Brown, 1997; Caruana and Pitt, 1997; Cooke, 1998; Homburg and Garbe, 1999; Clemes et al., 2001; Sower et al., 2001; Yang et al., 2003).

In some literatures, customer satisfaction has been defined as a cyclical model which explains the relationship between customer satisfaction and customer loyalty. According McAlexander (2003) customer satisfaction is an antecedents of loyalty where as Compton (2004) opined that the customer loyalty drives the expectation value that eventually drives the value of customer satisfaction in future purchase (Compton, 2004).

Lee(2004) defined customer satisfaction as a ratio of customer perception and customer expectation. According to the Centre for the Study of Social Policy (2007), satisfaction is

A personal assessment of customers which is affected by both the expectation and experience of customers.

As noted from the above writings, there is no consensus on defining the response to satisfaction. In short, satisfaction is an emotional response (Zineldin 2006).Some theoretical concepts point out the disconfirmation of expectations model (Oliver, 1980, Carson et.al.1998). Satisfaction is also described on the basis the value of products and services that customers or patients evaluate depending on customers' experience and perception (Liljinder and, Strandvik, 1995). Smith and Swinehart (2001) pointed out a strong relationship between quality of product or service and satisfaction of customers. According to them, customers' perception regarding quality of products or services brings about satisfaction in their mind.

Healthcare is the fastest growing service in both developed and developing countries (Dey et al 2006). Patients are now regarded as healthcare customers, recognizing that individuals consciously make the choice to purchase

the services and providers that best meet their healthcare needs (Wadhwa, 2002). Related to this, healthcare quality and patient satisfaction are two important health outcome and quality measure (Ygge and Arnetz, 2001; Jackson et al., 2001; Zineldin 2006). Some literatures identified the satisfaction as a super-ordinate construct and considered perceived service quality as an antecedent of satisfaction (Cronin, Brady and Hult, 2000; Cronin and Taylor, 1994). Some studies on health care service observed a causal relationship between perceived service quality and patient satisfaction (Woodside et.al., 1989, Choi et.al.2004). In fact, meeting the needs of the patient and creating healthcare standards are imperative to achieve high quality (Ramachandran and Cram 2005). Therefore, the patient is the center of healthcare's quality agenda (Badri et. al.,2007). Scotti, Harmon and Behson (2007) conducted a study that supports the argument that the perceived quality is one of the determinants of patient satisfaction.

Above discussion signifies that patient satisfaction is directly related to the perceived service quality. Therefore, it is important to conduct a literature survey to understand how the measurement of service quality is important to determine patient satisfaction.

### **PATIENT SATISFACTION: A MEASUREMENT OF QUALITY OF HEALTHCARE SERVICE:**

Patients, in general, receive various services of medical care and judge the quality of services delivered to them (Choi et al., 2004). The service quality has two dimensions (a) a technical dimension i.e., the core service provided and (b) a process/functional dimension i.e., how the service is provided (Grönroos 2000). Parasuraman, et al (1988) suggested a widely used model known as SERVQUAL for evaluating the superiority of the service quality. In the SERVQUAL model, Parasuraman et. al. identified the gap between the perception and expectation of consumers on the basis of five attributes viz. reliability, responsiveness, assurance, empathy and tangibles to measure consumer satisfaction in the light of service quality (Parasuraman A., Berry L,1988).

In general, patient satisfaction surveys are used to examine the quality of the healthcare service provided (Lin and Kelly 1995). Much evidence has been documented for the service quality to satisfaction link in different consumer satisfaction studies including those in the area of health care marketing (Brady and Robertson 2001; Gotlieb, Grewal, and Brown 1994; Rust and Oliver 1994; Andaleeb 2001).

Chahal (2000), in his tri-component model, pointed out that the loyalty of patients towards particular provider of medical service can be measured on the basis of three dimensions viz. using providers again for the same treatment (UPAS), using providers again for different treatments (UPAD) and referring providers to others(RPO). In the tri-component model, Chahal proved that all the above-mentioned loyalty measures depend on the overall service quality. He explained service quality of medical care with three latent constructs. These are physicians' performance, nursing performance and operational quality.

Brady and Cronin (2001) suggested a hierarchical model to measure perceived service quality considering three primary dimensions viz. interaction quality, physical environment quality and outcome quality consist of attitude, behaviour, and experience (interaction quality); ambient conditions, design, and social factors (physical environment quality); waiting time, tangibles and value (outcome quality) respectively. In their approach, Brady and Cronin, emphasized on customers' expectation and perception of different dimensions of services in order to measure service quality.

Aragon et.al.(2003) conducted a research in emergency department of hospitals and suggested the primary provider theory to measure patient satisfaction considering three latent variables or constructs viz. physician service(SP), waiting time(SWT) and nursing care(SN). They applied multiple structural equation models for developing a hierarchical relationship between patient satisfaction and above-mentioned constructs. Three latent variables define the attributes of quality of health care service. They proved that overall patient satisfaction depends on SP, SN and SWT. They also pointed out that over all satisfaction is positively associated with two indicators – likelihood of patients' recommendation of the health care unit and degree to which the service is worthwhile in terms of money paid by patients.

According to Shi and Singh (2005), from the perspective of patient satisfaction, quality has been explained by two ways – a) quality as an indicator of satisfaction that depends on individual's experiences about some attributes of medical service viz. comfort, dignity, privacy, security, degree of independence, decision making autonomy and attention to personal preferences and b) quality as an indicator of overall satisfaction of individuals with life as well as self-perceptions of health after some medical intervention (Shi & Singh, 2005).

The above mentioned two references of quality signify that each represents a desirable process during the medical treatment as well as successful outcome after a health care service is rendered. The above two concepts of quality can also enhance the sense of fulfillment and sense of worth (Shi and Singh, 2005).

The patient satisfaction depends on three elemental issues of health care system. These are perception of patients regarding quality health care service, good health care providers and good health care organization (Safavi, 2006). A study conducted by Safavi(2006) has revealed that satisfaction with hospital experience was

driven by dignity and respect, speed and efficiency, comfort, information and communication and emotional support. During 2004 and 2005, a focus group interview was conducted by the Agency of Health Care Research and Quality and Centers for Medicare and Medicaid Services (CMS) to find out how patients perceive the quality of health care. In this study it was observed that patients, usually, preferred four qualities of health care services viz. doctor communication skill, responsiveness of hospital staff, comfort and cleanliness of the hospital environment and communication of nursing staff (Safavi, 2006). Generally, patients define quality of health service more on the basis of attributes viz. respect and compassion than technical competence of doctors and staff (Safavi, 2006).

Scotti et.al.(2007) pointed out how high involvement approach in working environment helps develop service quality in health care sector. They investigated a chain of activities through which High Performance Work System (HPWS) can be established in a health care organization. In their research they have shown the relationship between HPWS and consumer orientation of the organization.

They have also proved that HPWS has an influence on the perception of consumer regarding the service quality of the organization. HPWS represents an interrelated and aligned set of core characteristics including involvement, empowerment, trust, goal, alignment, training, teamwork, communications, and performance-based rewards which brings about the consumer orientation amongst employees of the organization. Ultimately, the consumer orientation of employees enhances the perception level of the consumers who are patients in health care sector.

Yu Cheng et. al.(2007), in their research on the medical service in Jaiwan, applied Kano's model to measure satisfaction of patients. Following Kano's model, they considered three antecedents of satisfaction viz. one dimensional attributes, must be attributes and attractive attributes.

The one dimensional attributes comprises of some variables viz. comfort, convenience, capacity, modernized system of treatment, medical ethics and commitment to the patient.

Must be attributes consist of some variables viz. professional technology, quality of drug, quality of doctors, expense rationality etc.

Attractive attributes explain two other variables viz. community relations and contribution to the public activities.

Ultimately, they measured overall satisfaction of patients based on the disconfirmation between the customer expectancy regarding the above three latent constructs and actual medical service provided by health care units.

The researchers have also identified two other factors to understand the satisfaction level of patients. These two factors are patients' loyalty status and patients' complaints which have positive and negative correlation with overall satisfaction respectively.

Marrakchi et. al.(2008) developed the Tunisian Measurement Scale to determine patient satisfaction on the basis of seven latent variables viz. reception, nursing care, information, hygiene, comfort, food and invoice service in the Tunisian Patient Clinic. They identified some indicators for explaining and defining the above-mentioned latent variables.

They conducted a survey with patients by asking them to rate the service quality in a five point likert scale ranging from 'very dissatisfied' to 'very satisfied'. They have done factor analysis with the data that they have obtained on the basis of likert scale. The result of factor analysis revealed that all the variables are independent barring the hygiene and comfort which were perceived as one factor by patients. Therefore, the number of factors has been reduced from seven to six. The researchers have proved that those six factors are positively correlated with patient satisfaction.

The Consumer Assessment of Healthcare Providers and Systems (CAHPS) is one of the tools applied for measuring patient satisfaction with quality of care. According to Agency for Healthcare Research and Quality (2009), CAHPS is an internationally validated tool to be anchored on a specific episode of contact between the patient and healthcare professional. CAHPS focuses on assessing the actual experience of patients during care process instead of measuring patients' perception. As per the CAHPS methodology, patients are asked to indicate if they receive any specific quality of care.

Hu et.al.(2010) applied Taiwan Customer Satisfaction Index (TCSI) to measure patient satisfaction in Taiwan. TCSI is the modification of American Customer Satisfaction Index regularly used by ACSI institute to evaluate patient satisfaction in hospitals in the U.S.A. (American Customer Satisfaction Index,2010). TCSI is an econometric model that considers five latent constructs viz. perceived quality, customer expectation, perceived value, image, overall satisfaction and loyalty. A path analysis of latent constructs has been done to understand the effect of one variable on others. The result of path analysis revealed that image has a significant positive effect on customer expectation where as the same does not have similar positive effect on customer satisfaction and customer loyalty. Customer expectation has a significantly positive effect on perceived quality, but the customer expectation does not have the same effect on perceived value and customer satisfaction. Perceived



quality has a significant positive effect on perceived value and customer satisfaction. Customer satisfaction has a positive effect on customer loyalty.

All the above mentioned methods of measuring patient satisfaction have suggested that service quality is one of the major and important antecedents of overall satisfaction of patients. In the service quality, there are two basic aspects which have been considered by all the above researchers. These two are technical and functional aspects. According to Kang and James (2004), it is very difficult for a patient to understand the technicalities of treatment and hospital services. Therefore, present researcher in this study gives more emphasis on the functional aspects of health care service. Furthermore to extend the concept one can understand the functional aspect of health care in terms of process- related as well as functional. Functional quality can be defined as the way of delivering health care service to the patient. Babakus and Mangold (1992) pointed out that SERVQUAL is designed to measure functional quality only. In the health care sector, functional quality depends on technical aspects which represents accurate diagnosis and procedure of treatment.

### **SIGNIFICANCE OF SERVQUAL MODEL:**

According to Pravakaran and Satya(2003), customers' dissatisfaction arises due to three reasons :

- 1) when service providers are not aware about service dimensions which are important to customers
- 2) when service providers do not know how customers prioritize the service dimensions on the basis of their importance
- 3) when service providers are unaware of service attributes that create service dimensions

SERVQUAL is a standardized and reliable instrument that identifies five different dimensions of service quality and validates those dimensions in different service situations (Rohini and Mahadevappa, 2006). Parasuraman et.al.(1988), in their SERVQUAL model, identified five dimensions viz. responsiveness, reliability, assurance, tangibles and empathy on the basis of which customers' expectations and perceptions are measured. They explained all the above-mentioned dimensions with the help of twenty two statements that have been identified as attributes creating those five dimensions (Parasuraman et. al., 1988, Bhattacharjee,2010). Babakus and Mangold(1992) identified SERVQUAL as a reliable and valid model in the hospital environment.

O'Conner et. al.(2001) found SERVQUAL instruments suitable to analyze the perceptual gap in understanding patient expectation among health care stakeholders. Pakdil and Harwood(2005) found SERVQUAL an useful model to measure the differences between patients' preferences and their actual experiences. According to Rohini and Mahadevappa(2006), SERVQUAL instrument is 'parsimonious' and has standardized analysis procedure to aid interpretations and results in hospitals in Bangalore. According to Chunlaka(2010), SERVQUAL helps understand what the customers' value is all about and how well an organization meets the needs and expectation of consumers of hospitals. Qin and Prybutok (2009) mentioned all the five dimensions of the service quality in SERVQUAL instrument are significant and reliable in a health care setting.

Mangkolrat ( 2008), in his research thesis, summarized seven benefits of SERVQUAL approach in measuring patient satisfaction. These are as follows:

- 1) It is good at eliciting the views of customers regarding service encounters e.g. customer relative importance, expectations and satisfaction.
- 2) It is able to alert management to consider the perception of both management and customers
- 3) Addressing the service gaps can serve as a basis for formulating strategies and tactics in order to ensure the fulfillment of expectations
- 4) SERVQUAL is able to identify specific areas of excellence and weaknesses
- 5) It is able to prioritize areas of service weaknesses.
- 6) It provides benchmarking analysis for organizations in the same industry
- 7) SERVQUAL can trace the trend of customers' relative importance, expectations and perceptions, if applied periodically.

### **CRITICISM OF SERVQUAL MODEL:**

Despite its popularity, SERVQUAL has some limitations which have been pointed out by different theorists. Brown et.al.(1993) explained that measurement of scores of differences in expectation and perception of customers is often weak in reliability. This is because of the positive correlation between component scores may lower the reliability of scores of differences. The measurement of difference score with low reliability may raise questions regarding the construct validity of components. Chatterjee and Chatterjee (2005) pointed out that in SERVQUAL model data responses are obtained on the basis of ordinal scale where statistical analyses based on continuous responses are not appropriate. They also claimed that the difference scores contribute to problems

with the reliability, discriminant validity, convergent validity and predictive validity.

Some theorists have criticized SERVQUAL on its dimensionalities. Haywood- Farmer and Stuart(1988) found SERVQUAL as inappropriate for measuring professional service quality since it excluded the dimensions for care service, service customization and knowledge of the service professionals. Vandamme and Leunis (1993) suggested that SERVQUAL may not be generalized to hospital services or health care services due to the uniqueness of the services offered. Sohail(2003), in his research on service quality measurement in hospitals of Malaysia, did not confirm any of the five generic dimensions of SERVQUAL model. Ramsaran-Fowder (2005) incorporated some modifications in actual SERVQUAL model and applied for measuring patient satisfaction. The findings of their research indicated that SERVQUAL dimensions could not be replicated fully to the health care services. Mostafa (2005) applied factor analysis to investigate how five generic dimensions of SERVQUAL instrument affect patients' perceived service quality and showed that factor analysis extracted a three factor solution and thereby disconfirmed the five generic dimensions of SERVQUAL model. Gonzalez-Valentin et.al. (2005) conducted their study to measure satisfaction of patients in a regional university hospital at Southern Spain by applying SERVQUAL model. Factor analysis extracted three factors affecting satisfaction instead of five generic dimensions of SERVQUAL model. Yesilada and Direktor (2010) applied SERVQUAL model to measure patient satisfaction both at private and public hospitals at Cyprus and conducted factor analysis to evaluate the dimensionality of the SERVQUAL instrument. The factor analysis did not produce the five generic dimensions of SERVQUAL model.

Paul III (2003) explained that the simultaneous measurement of expectations and perceptions of customers in SERVQUAL model may be confusing as the expectation scores depended on the respondents' recall and would be influenced by perceived level of performance.

#### **MODIFICATIONS OF SERVQUAL MODEL:**

Many researchers modified SERVQUAL model by considering more dimensions and latent constructs which are reliable and valid. Reidenback and Sondifer-Smallwood (1990) developed a modified version of SERVQUAL model considering seven dimensions. They employed this model in the three different hospital settings to understand the relationship among patients' perceptions of inpatient, outpatient and emergency room services, to measure the overall perceptions of service quality satisfaction with their care and to identify patients' willingness to recommend the hospital services to others. In their study, Reidenback and Sondifer-Smallwood identified patient confidence as one of the dimensions affecting patient satisfaction in all the above-mentioned three settings. Patient confidence also influences the perception of service quality in both the inpatient and outpatient settings.

Bowers et.al. (1994), in his research, added two more dimensions viz. caring and patient outcomes to the five generic dimensions of SERVQUAL. The results of his study revealed that empathy, responsiveness, reliability, communication and caring are strongly associated with overall patient satisfaction. Where as Gabott and Hogg(1995) explained that caring may not be considered as a separate dimension since it has already been covered in five SERVQUAL dimensions.

Cronin and Taylor (1994) suggested SERVPERF model as a modification of SERVQUAL model. SERVPERF is one dimensional model that focuses on five gaps based on perception. These five gaps are as under:

1. Management perceptions of customer expectation and actual customer expectations
2. Management perceptions of customer expectations and company stated service specification
3. Company stated service specification and service delivery
4. Company stated service specification and the external communication of this
5. Customer expectation and customer experience.

Johnstone(1995) extended the five generic dimensions of SERVQUAL upto eighteen quality dimensions viz. cleanliness, aesthetics, comfort, functionality, reliability, responsiveness, flexibility, communication, integrity, commitment, security, competence, courtesy, friendliness, attentiveness, care access and availability.

Lim and Tang (2000) developed a modified SERVQUAL model considering six dimensions viz. tangibles, reliability, assurance, responsiveness, empathy, accessibility and affordability. They have put emphasis on affordability of patients relating to their satisfaction.

Andaleeb (2001) have modified the SERVQUAL model by including three new dimensions viz. communication, discipline and baksheesh (tips) in lieu of empathy, tangibles and reliability. In their research work, it was observed that discipline had a great impact on patient satisfaction whereas baksheesh had least impact on patient satisfaction.

Ramsaran-Fowder (2005) considered two additional dimensions viz. core medical outcomes and professionalism/skill/competence along with five generic dimension of SERVQUAL model. They also incorporated a few additional items within each of the five SERVQUAL dimensions and finally found that those

five dimensions could not be replicated fully to the health care services.

#### **APPLICATIONS OF SERVQUAL MODEL:**

Anderson (1995) applied the SERVQUAL model to measure the quality of health care service offered by a public university of health clinic. The findings of the research pointed out that the clinic was poor on the assurance dimension. Youseff (1996) applied SERVQUAL in National Health Service Hospitals in the UK and found that the reliability was the most important dimension affecting the patients' overall quality perceptions. Empathy was the second important dimension closely followed by responsiveness and assurance. In the research of Youseff, tangibility was found the least important of the five SERVQUAL dimensions. Lam (1997) examined the validity, reliability and predictive validity of SERVQUAL and analyzed its applicability to the health sector in Hong Kong. The study result proved that SERVQUAL is a reliable model to measure health care service quality. However, factor analysis on five dimensions indicated that the scale could be treated as one-dimensional for the results identified one dominating factor representing expectations and perceptions. Sewell (1997) in his study with National Health Service Hospitals found that the most important quality dimension was reliability followed by assurance. Empathy and responsiveness were rated as almost equal. Tangibles were identified as the fifth dimension. Angelopoulou et.al.(1998) in their investigation on service quality provided in the public and private hospitals, found that patients in public hospitals were satisfied with the competence of physicians and nurses where as findings on private hospitals were more satisfied with physical facilities, waiting times and admission procedures. Dean (1999) applied SERVQUAL in two different health care settings at Australia to test the transferability of the said model. The result of the research showed that quality factors differ on the basis of the type of health service provided to patients. Lim and Tang(2000) measured satisfaction of 252 patients in hospitals of Singapore by applying modified version of SERVQUAL and found that the hospital needed improvements across all six dimensions viz. tangibles, reliability, assurance, responsiveness, empathy, accessibility and affordability. Wong (2002) pointed out that three dimensions viz. responsiveness, assurance and empathy of SERVQUAL model were more important factors than other two dimensions affecting overall patient satisfaction. Jaboun and Chaker(2003) conducted a comparative study on public and private hospitals at UAE. Their research result revealed that there is a significant differences between private and public hospitals in terms of overall service quality in empathy, tangibles, reliability and administrative responsiveness. They conducted a comparative analysis between private and public hospitals and pointed out that public hospitals were perceived to be better than the private hospitals as far as service quality is concerned. Boshaff and Gray (2004) conducted their research on patients of private health organizations in South Africa and found that the service quality dimensions of nursing staff viz. empathy, assurance and tangibles have positive impact on the loyalty of patients. Kilbourne et.al. (2004), in his study, proved that SERVQUAL is capable of capturing even slight quality indicators in a multidimensional way, namely, tangibles, responsiveness, reliability and empathy as well as overall service quality. Wisniewski and Wisniewski (2005) conducted a study with SERVQUAL model in a Scottish colposcopy clinic and evaluated each of the five generic dimensions by applying mean score and t-test analysis. The result revealed that the reliability was the priority dimension given that it had both the largest negative gap and the highest mean weight.

Karassavidou et.al. (2007) applied SERVQUAL model to measure a service quality on three dimensions viz. a) human aspects, b) physical environment and infrastructure of the care unit and c) access. They applied a modified version of SERVQUAL model where demographic features of patients (age, gender, education and income) have been taken into account. Applying SERVQUAL model the researchers have measured gaps between patients' expectation and perception for above-mentioned three dimensions. The research result pointed out that the human aspect is the most important area where the relationship of patients with physicians and other staff of hospital occupy the central place of the health care system.

Mangkolrat (2008), in her recent work on patient satisfaction measurement, suggested a conceptual framework where she measured the gap between patients' expectation and their perception in the light of service quality.

Akter et. al. (2008), in their research on service quality perception and satisfaction, applied SERVQUAL model considering three new dimensions viz. communication (a system to convey message to patients and patient parties), discipline (control of non performance of prescribed duties and non adherence to written rules), tips or 'Baksis' (extra compensation in order to receive satisfactory service) replacing other three dimensions viz. reliability, tangibles and empathy suggested by Parasuraman et.al. to determine the gap between patients' expectation and perception of service quality.

On the basis of gap analysis, they interpreted four situations related to improvement of service quality of any health care organization in Bangladesh. Those four situations have been presented in a matrix with four quadrants. The matrix has two axes; horizontal and vertical axes that denote attribute performance and attribute importance respectively. The top left quadrant where attribute importance is very high and performance is low,

points out the area of highest leverage of service quality improvement by providing much stress on discipline and responsiveness. The researchers have identified the top right quadrant as an area of high importance and performance which needs proper maintenance to provide better service quality to patients. The lower left and right quadrants are less important but need certain maintenance performance so that any health care unit can provide better communication and assurance to patients and reduce the undesirable transaction like tips between service provider and patients.

Qin et.al.(2009) considered the perceived quality as one of the antecedents of patient satisfaction and compared perceived quality with the expected service quality on the basis of SERVQUAL model to measure the satisfaction level of a patient regarding waiting time in a hospital. They considered a hypothesis that the service quality directly and positively influences patient satisfaction. They were also able to prove that the service quality is one of the antecedents of patient satisfaction.

## **JUSTIFICATION OF THE CRITICALITY OF SERVQUAL MODEL IN MEASURING PATIENT SATISFACTION:**

According to Sohail (2003), SERVQUAL instrument among several tools for measuring patient satisfaction is the most widely used tool. From the above literature survey, it is observed that some studies have proved the reliability of SERVQUAL model. Some other studies have confirmed five generic quality dimensions of SERVQUAL instrument where as some studies have identified either less number of dimensions or additional dimensions. On the basis of variation in dimensionalities, researchers prefer to apply modified version of the same instrument. Initially, in 1985, SERVQUAL instrument considered ten dimensions viz. reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, tangibles. In 1988, the same model has been modified by reducing the number of dimensions from ten to five viz. responsiveness, reliability, assurance, tangibles and empathy. Later on some researchers modified the same by replacing some dimensions by the new components which were never considered earlier in the original model of SERVQUAL. From literature survey it has been observed that some identifiable dimensions have been selected based on country specific cultural practices. As for example, in hospitals of Bangladesh, discipline, communication and 'baksish' (tips) to employees have been considered as one of the dimensions.

SERVQUAL model helps obtain customers rating of perception and expectation on the basis of ordinal scale. It has also been found that the application of statistical tool with the ordinal data in the SERVQUAL model is inappropriate. Simultaneous measurement of patients' expectation and perception is also erroneous.

The literature survey explained that in a number of health care settings different researchers viz. Anderson (1995), Youseff (1996), Lam (1997), Sewell (1997), Angelopoulou et.al.(1998), Dean (1999), Lim and Tang(2000), Wong (2002), Jaboun and Chaker(2003), Boshaff and Gray (2004), Kilbourne et.al. (2004), Wisniewski (2005), Karassavidou et.al. (2007), Mangkolrat (2008), Akter et. al. (2008) and Qin et.al.(2009) have applied SERVQUAL model since mid 90s to 2009. Finally, it is observed that in spite of all limitations, SERVQUAL is still popular instrument to measure patient satisfaction even in recent days.

## **CONCLUSION:**

In the era of globalization, competition has become a key issue in all sorts of industry as well as service sectors. Literature survey suggests that patient satisfaction and perceived service quality both should be considered together for the stability of a health care organization in a competitive environment. Researchers have suggested different models and methods of measuring patient satisfaction considering service quality as one of the antecedents. Different literatures established that SERVQUAL is a popular model for measuring service quality where as some other researchers pointed out its draw backs. Although many limitations of SERVQUAL approach have been identified by different researchers, the same instrument is applied in different health care organization for measuring service quality and patient satisfaction. Therefore, it is required to go deeper into the subject matter of the applicability of SERVQUAL model in Indian context.

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