COMPARISON OF SERVICE QUALITY BETWEEN PRIVATE AND PUBLIC HOSPITALS: EMPIRICAL EVIDENCES FROM PAKISTAN

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ABSTRACT

Healthcare sector of a country needs special attentions from the government as quality of healthcare provides hope and relief to the patients and their dependents. It also helps to maintain a healthy human capital that contributes in the development of the country. Now quality has become an icon for customers while availing any services or buying a product and it is also a strategic advantage for the organizations to gain success and remain competitive in the market by delivering superior quality of services or products based on customer requirements. The objective of this study is to compare the quality of healthcare services delivered by the public and private hospitals to gain patient satisfaction in Pakistan. For this purpose 'SERVQUAL' instrument was used to measure the patient's perception about service quality delivered by these hospitals. Five service quality dimensions; empathy, tangibles, assurance, timeliness and assurance were used in order to measure the patient's perceptions about the service quality of public and private hospitals located in the 2nd largest city Lahore, Pakistan . Due to the nature of this study only those respondents were included in the study having perceptions about both the hospitals. Therefore, 320 questionnaires were selected for this study. Results showed that private hospitals are delivering better quality of services to their patients as compared to public hospitals.

Key Words: public hospitals, private hospitals, patient, service quality

INTRODUCTION

Changing customer demands, increased expectations for superior quality of products or services and the global competition has created a competitive environment among different industrial sectors. Quality has become an icon for customers while selecting a service or product and at

the same time organizations are making efforts for providing quality products or services as per customers' needs and wants. Quality has been considered as a strategic advantage for the organizations to gain success and to sustain in the business world.

The manufacturing sector in many countries around the globe had successfully benefited by implementing the quality management principles and gained remarkable success both at local market as well as in the global market. Products are tangible in nature and quality of the products can be easily measured whereas the services are intangible in nature and difficult to measure as compared with the products. Due to intangible in nature, it is difficult to measure the quality of any services as it is highly dependent on customer perceptions and expectations (Samson & Parker, 1994).

Quality has become a key determinant in both industrial and service sector to gain maximum return on investments and also significantly contributed in reduction of cost (Anderson and Zeithaml 1984; 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 and its implementation escorts the organizations 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 & Suh, 2004; Kang & James, 2004).

Like the other service organizations; healthcare sector has also become a highly competitive and rapidly growing service industry around the world. The biggest challenge faced by healthcare markets is to define and measure the service quality. However, it was recognized in earlier study that 'SERVQUAL' is a comprehensive scale to empirically estimate the level of quality services delivered to customers, and it is best suitable in the hospital environment (Babkus & Mangold, 1992).

In healthcare, patient perceptions are considered to be the major indicator in order to assess the service quality of a healthcare organization (Cronin & Taylor, 1992; O'Connor et al., 1994). It means that customer satisfaction is the major device for critical decision making in selecting a healthcare

services (Gilbert et al., 1992) and quality of services delivered to the customers should meet their perceptions (Parasuraman et al., 1985, 1988; Reidenbach & Sandifer-Smallwood, 1990; Babakus & Mangold, 1992; Zeithaml et al., 1993).

In Pakistan most of its population is living in rural areas and small proportion is living in urban areas (Imran et al., 2006). The population in rural area especially and the populations in urban area to some extent are deprived of fundamental rights: especially healthcare facilities as majority of the public and private hospitals are located in big cities (Irfan et al., 2011). Due to the growing importance of service quality especially in healthcare sector of Pakistan, this study is focused on to evaluate the difference between public and private hospital service quality in Pakistan. However, a very little work in evident from the literature to measure the quality of services delivered to satisfy the patients. For this purpose 'SERVQUAL' instrument was used to measure the patient's perception about service quality delivered by these hospitals. Five service quality dimensions; empathy, tangibles, assurance, timeliness and assurance were used in order to measure the patient's perceptions about the service quality of public and private hospitals located in the 2nd largest city Lahore, Pakistan . Due to the nature of this study only those respondents were included in the study having perceptions of both hospitals. Descriptive statistics, independent sample t-test was used to compare the quality of services delivered to patients by public and private hospitals to gain the patient satisfaction.

LITERATURE REVIEW

According to Cronin and Taylor (1992), expectations for the high quality of services had increased in the lives of the people due to increase of economic share of service sector in almost all the economies of the world and it has reached to half sum of GNP's. Customers played a vital role in the success or failure of a service or product as their perceptions about the product or services played a significant role while assessing the quality of that particular services or products. Therefore, delivering superior quality services to the customers are the key strategies adopted by most of the organizations to sustain in this competitive environment (Parasuraman et al., 1985; Zeithaml et al., 1990; Reichheld & Sasser, 1990; Dawkins & Reichheld, 1990) and this area gain considerable attentions of the research scholars around the globe, and this debate continues (Nimit

and Monika, 2007). Therefore, survival of any organizations in this highly competitive environment is depending upon the delivery of superior quality of services to their customers (Parasuraman et al., 1985; Zeithaml et al., 1990).

Services are basically the interaction of two parties and it occurs between service provider and the consumers. Mostly, services in healthcare are intangible in nature like expertise of the doctors, hospital environment, caring staff, cleanliness but sometime it is a combination of intangibles and tangibles (eyeglasses, a prosthetic device, or prescription drugs, laboratory reports) and this bundle makes up the service products. Patients view services in terms of their whole experience; it includes the successful surgery, hospital environment, cleanliness in rooms and wards, special attentions provided by physicians, nurses, supportive staff, and outstanding follow-up care. In view of the above discussion the healthcare organizations may define services in terms of needs, wants of its patients. Services are characterized in to four categories: intangibility, inseparability, heterogeneity and perishability. These four service characteristics were discussed in the early literature of service marketing (Rathmell, 1966; Regan, 1963; Shostack, 1977; Zeithaml *et al.* 1985).

SERVICE QUALITY

Service quality got considerable attention and interest of both practitioners and researchers during the last couple of decades in the literature of service quality (Riadh, 2009, Wisniewski, 2001, Nimit and Monika, 2007). Service quality is conceptualized as the consumer's perception about the level of services either it is of high quality or low quality (Zeithaml et al., 1990). Generally, service quality is assumed to be the difference between customer expectations and perceptions either it is received or being received by the customer (Grönroos, 2001; Parasuraman et al, 1988). Although service quality is a topic of discussion by both academician and researchers for the last couple of decades but still no comprehensive definition has emerged (Wisniewski, 2001). However, service quality can be viewed as:

- It is the difference between customer expectations and perceptions; expectation means service provider performance during deliverance of services whereas perception is measurement of delivery by the service provider (Parasuraman et al., 1985, 1988).

- According to Asubonteng et al. (1996, p-24): Service quality can be defined as "the difference between customers' expectations for service performance prior to the service encounter and their perceptions of the service received".
- According to Gefan (2002), it is a comparison made by the customers between the quality of services they want to receive and what they actually received from the service provider.

Hence, service quality is the judgment 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.

Measurement of the service quality was another critical issue and number of service quality models were presented during the last couple of decades but most commonly used is 'SERVQUAL' by Parasuraman, Zeithmal and Berry (1985). According to Parasuraman et al. (1985), customer perception about the service quality can be determined by five 'gaps'. The 'SERVQUAL' scale was based on gap 5 and original ten dimensions were collapsed in to five dimensions and 22 items.

Nitin Seth and Deshmukh (2005) (table 1) conducted a comprehensive study to review 19 models of service quality used till now in different studies in order to measure the service quality in different service environment. These studies showed that there is a significant association between service quality and customer satisfaction.

Table 1: Service Quality Models

SERVICE QUALITY MODEL		AUTHOR
1)	Technical and functional quality model	Gro¨ nroos, 1984
2)	GAP model	(Parasuraman et al., 1985)
3)	Attribute service quality model	(Haywood-Farmer, 1988)
4)	Synthesized model of service quality	(Brogowiczet al., 1990)
5)	Performance only model (SERVPERF)	(Cronin and Taylor, 1992)
6)	Ideal value model of service quality	(Mattsson, 1992)
7)	Evaluated performance and normed quality model	(Teas, 1993)
8)	IT alignment model	(Berkley and Gupta, 1994)

	SERVICE QUALITY MODEL	AUTHOR
9)	Attribute and overall affect model	(Dabholkar, 1996)
10)	Model of perceived service quality and satisfaction	(Spreng and Mackoy, 1996)
11)	PCP attribute model	(Philip and Hazlett, 1997)
12)	Retail service quality and perceived value model	(Sweeneyet al., 1997)
13)	Service quality, customer value and customer satisfaction model	(Oh, 1999)
14)	Antecedents and mediator model	(Dabholkar et al., 2000)
15)	Internal service quality model	(Frost and Kumar, 2000
16)	Internal service quality DEA model	(Soteriou and Stavrinides, 2000)
17)	Internet banking model	(Broderick and Vachirapornpuk, 2002)
18)	IT-based model	(Zhuet et al., 2002)
19)	Model of e-service quality (Santos, 2003)	(Santos, 2003)

Source: Nitin Seth and Deshmukh (2005)

However, "SERVQUAL" model which was originally developed by Parasuraman et al. (1985, 1988) is perhaps the most commonly used to measure service quality (Riadh Lidhari, 2009).

SERVICE QUALITY IN HEALTH SECTOR

In healthcare organizations, service quality and patients satisfaction is getting considerable attentions and this issue is considered in their strategic planning process. Patients' perceptions about the services provided by a particular health care organizations also effects the image and profitability of the hospital (Donabedian, 1980; Williams and Calnan, 1991) and it also significantly effects the patient behavior in terms of their loyalty and word-of-mouth (Andaleeb, 2001). Moreover, increased patients expectations about the service quality had realized the healthcare service providers, to identify the key determinants that are necessary to improve healthcare services that causes patients satisfaction and it also helps the service providers to reduce time and money involved in handling patient's complaints (Pakdil & Harwood, 2005).

The SERVQUAL instrument developed by Parasuraman et al. (1985) comprised of 22-items representing five dimensions had been widely used in health care to measure the service quality and in health care

literature 'SERVQUAL' is considered as most reliable and valid measurement of perceived service quality (Reidenbach & Sandifer-Smallwood, 1990; Babakus & Mangold, 1992; Vandamme & Leunis, 1993; Scardina, 1994; Taylor & Cronin, 1994; Lam, 1997; Wong, 2002; Kilbourne *et al.*, 2004)

HEALTH CARE FACILITIES IN PAKISTAN

According to statistics division of Pakistan (2009-2010) Pakistan is the sixth largest populated country in the world with an estimated 169.9 million people at the end of June 2009, with high growth rate of 2.05%. According to the constitution of Islamic Republic of Pakistan, providing best healthcare facilities to the people is the responsibility of federal and provincial government and they are also responsible for planning and devising the national health policies. In Pakistan Majority of the public hospitals are located in the urban areas especially in major cities of and it had been facilitated by a few number of urban peoples (Arzoo and Hajra, 2005) but still these facilities are inadequate even to fulfill the needs of the people living in urban areas. Healthcare conditions in Pakistan are becoming worst and worst day by day as the healthcare sector is badly ignored by the government. According to economic survey of Pakistan (2009) (table 2), total number of registered doctors in the country is 139,555; total number of dentists 9,822 and registered nurses are 69,313.

Table 2: Health Care Facilities in Pakistan

Health Manpower	2007-08	2008-09	2009-10
Registered Doctors	128,093	133,984	139,555
Registered Dentists	8,215	9,013	9,822
Registered Nurses	62,651	65,387	69,313
Population per Doctor	1,245	1,212	1183
Population per Dentist	19,417	18,010	16,914
Population per Bed	1,544	1,575	1,592

Source: Ministry of Health (Economic Survey of Pakistan 2009-2010)

What is the difference between the service quality of private and public hospitals? To address this research question the following hypothesis were developed.

Research Hypotheses

H_{01}: There is no significant difference in the level of empathy in both private and public hospitals

H_{11}: The private hospitals are more empathetic than public hospitals

H_{02}: There is no significant difference between the level of tangibles between private and public hospitals

H_{12}: The private hospitals are better in tangibles as compared to public

H_{03}: There is no significant difference in the level of assurance in both private and public hospitals

H_{13}: The private hospitals provide more assurance to patients than public hospitals

H_{04}: There is no significant difference in the level of timeliness in both private and public hospitals

H_{14}: The private hospitals are more committed on timeliness issues than public hospitals.

H_{05}: There is no significant difference in the level of responsiveness in both private and public hospitals

H_{15}: The patient perceives that private hospitals are more responsive than public hospitals.

METHODOLOGY

In this study we used quantitative survey methods to validate the hypothesis based on literature review. This study is conducted in to evaluate the difference between the service quality level between the private and public hospitals. The patients having experience of both the public and private hospitals were included in the study in order to make a close comparison between the public and private hospitals. Respondents were availing facilities from the public and private hospitals. This study was conducted at a local level in the 2nd largest city, Lahore, of Pakistan. The questionnaire was based on SERVQUAL instrument consisting of 22 items representing five dimensions of service quality and considered as five different constructs like: empathy (4 items), tangibles (6 items), assurance (6 items), timeliness (3 items) and responsiveness (3 items). Responses were recorded against two columns in the questionnaire which includes information about both the public and private hospitals. This survey was based on pat perceptions having experience of both public and private hospitals. A total 500 questionnaire were distrusted among patients availing healthcare services from public

and private hospitals. The patients having perceptions about both the public and private hospitals were considered for this study. Due to this reason, questionnaire with one response or incomplete were rejected. Therefore, a total of 320 questionnaires mean 320 responses against public hospitals and 320 responses against private hospitals were selected for analysis and thus representing a good response rate of 64%. Table 3 and 4 provide the descriptive statistics of the respondents of this study.

Table 3: Frequency Distribution of Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	259	80.9	80.9	80.9
	Female	61	19.1	19.1	100.0
	Total	320	100.0	100.0	

Table 3 provides the frequency distribution of the gender comprised of male and female. A total of 320 respondents were included in this study, out of which 259 participants were male representing 80.9 % of the total population and remaining 61 participants were female representing 19.1% of the total population.

Table 4 shows the frequency distribution of the participant qualification. Out of 320 respondents, 289 participants were having master level qualification representing 90.4% of the total population and remaining 31 respondents representing 9.6% of population were graduates.

Table 4: Frequency Distribution of Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Graduate	31	9.6	9.6	9.6
	Master	289	90.4	90.4	100.0
	Total	319	100.0	100.0	

Measures

Empathy: Empathy is the first service quality construct in this study, which actually represents the individual concern of doctors, staff, nurses

and the management for patients in order to provide comfort to patients. It includes 4 items and these four items were measured against five point Likert scale ranging from 1= strongly disagree to 5= strongly agree. The reliability coefficient Cronbach Alpha, for the first construct for public and private hospitals is (0.81) and (0.86) respectively.

Assurance: The second service quality construct comprise of 6 items which include doctors expertise and skills about the field of specialization, qualified nurses and supporting staff, accurate lab and medical test results, availability of experts and special attention to emergency patients. These six items were measured against five point Likert scale ranging from 1= strongly disagree to 5= strongly agree. The reliability coefficient, Cronbach Alpha for the second construct for public and private hospitals is (0.84) and (0.87) respectively.

Tangible: Third service quality construct consists of 6 items, which include hygienic conditions, sterilization of equipments, healthy environment, waiting facility for patients, healthy and clean environment, availability of labs and pharmacy within the hospital premises. These six items were measured against five point Likert scale ranging from 1= strongly disagree to 5= strongly agree. The reliability coefficient, Cronbach Alpha of the third construct for public and private hospitals is (0.82) and (0.86) respectively.

Timeliness: Fourth service quality construct consists of 3 items which includes observation of patients according to appointment, availability of the doctors according to promised time, and delivery of reports according to promised time. These three items were measured against five point Likert scale ranging from 1= strongly disagree to 5= strongly agree. The reliability coefficient, Cronbach Alpha for the fourth construct of public and private hospitals is (0.82) and (0.87) respectively.

Responsiveness: Fifth service quality construct comprised of 3 items which includes: how the doctors, nurses and supporting staff respond to patient call and availability of feedback mechanism and how the management respond to patient complaints. These three items were measured against five point Likert scale ranging from 1= strongly disagree to 5= strongly agree. The reliability coefficient, Cronbach Alpha for the fifth construct of public and private hospitals is (0.84) and (0.86) respectively.

As reliability of the instrument helps to provides consistency in the results and the Cronbach alpha is used to measure the reliability of the data (Green et al., 2000). Overall Cronbach Alpha of public and private data along with service quality construct provides values greater than 0.70, as the values of Cronbach Alpha greater than 0.70 is acceptable (Nunnally, 1978).

Results and Discussions

To understand the difference between the service quality delivered by private and public hospitals in Pakistan, descriptive statistics representing the mean, standard deviation and mean square error for each of the service quality construct was used in order to increase understanding regarding the difference in service quality delivered to patients by private and public hospitals against each of the service quality dimension. Secondly, independent sample t-test was performed to calculate the values of Levene's test for *equality of variances*, *t-value*, *df* and *p-value* to test the significance level o the private and public service quality constructs.

Table 5: List of Variables used in the study

Variables and Constructs	Private		Public	
	Mean	S.D	Mean	S.D
Empathy				
Doctors have genuine concern about patients	3.4562	1.05119	2.5125	.99044
Doctor care their patients	3.7500	.90422	2.6625	1.00243
Staff and nurses care the patient	3.9312	.73649	2.6187	1.00234
Hospital put their best efforts to provide comfort to patients	3.4688	.98365	2.5312	.97724
Tangible				
Hygienic conditions at hospital	3.7688	.82585	2.2625	.95488
Waiting facilities for attendants and patients	3.3875	.98407	2.4375	1.07976
Healthy environment at hospital	4.1312	.71041	2.1812	1.05730
Cleanliness of toilets/bathrooms	3.6750	.95529	1.8250	.90804
Cleanliness in wards/rooms (sheets, floor)	3.9625	.78418	2.2750	1.03371
Lab and pharmacy facilities within the hospital	3.7625	.82024	3.3500	1.06517

Variables and Constructs	Private		Public	
	Mean	S.D	Mean	S.D
Assurance				
Doctor's expertise and skills	3.8500	.75402	3.7125	1.00557
Thorough investigations of the patient	3.6313	.90853	2.8562	1.05119
Doctors almost make right diagnoses	3.4250	.98766	3.1812	.96395
Doctors go for expert opinion in critical cases	3.7000	.95034	3.2250	1.01529
Accuracy in lab reports	3.6812	.87143	2.9000	1.08853
Special attention to emergency patients	3.9812	.74793	3.1938	1.12433
Timeliness				
Patients are observed according to appointment	3.8375	.89645	2.4312	1.06766
In time delivery of reports/services	3.8438	.88699	2.9062	1.00812
Doctors/Staff observe the promised time	3.7688	.87035	2.5062	.98413
Responsiveness				
Doctors/staff efficiently respond to the patients	3.8188	.88219	2.4312	1.02560
Doctors/Staff are willing to help/facilitate the patients	3.0688	1.06471	2.2375	.87945
Feedback mechanism	3.5500	.87452	2.4062	.92006

Table 6: Descriptive Statistics: Comparison of service quality constructs between public and private hospitals

	Factor	N	Mean	Std. Deviation	Std. Error Mean
Empathy	Private	320	3.6516	.66298	.05241
	Public	320	2.5812	.70686	.05588
Tangible	Private	320	3.7812	.57437	.04541
	Public	320	2.0094	.54729	.04327
Assurance	Private	320	3.7115	.61592	.04869
	Public	320	3.1781	.67374	.05326
Timeliness	Private	320	3.8167	.64623	.05109
	Public	320	2.6146	.75286	.05952
Responsiveness	Private	320	3.4792	.68496	.05415
	Public	320	2.3583	.68685	.05430

Table 5, 6 provide the mean and standard deviation of the variables and constructs used in study. These results indicate that overall mean values of service quality constructs representing private hospitals are higher than the public hospitals. This shows that majority of the respondent availing facilities from private hospitals perceive that private hospitals are providing better services to their patients as compare to the public hospitals. However, the mean value of the service quality construct 'assurance' among public hospital is higher as compare to the mean values of other service quality constructs of public hospitals. These public hospitals are the top public hospitals in Pakistan and are associated with best medical college of Pakistan. Highly qualified professors and expert in the field of medicines/surgery are serving in these hospitals as permanent employees. This factor has increased the level of assurance among patients while visiting or selecting the services from the public hospitals for treatment. Figure 1 shows graphical representation of means provide a clear understanding about the service quality delivered by the public and private hospitals in Pakistan based on patient perceptions.
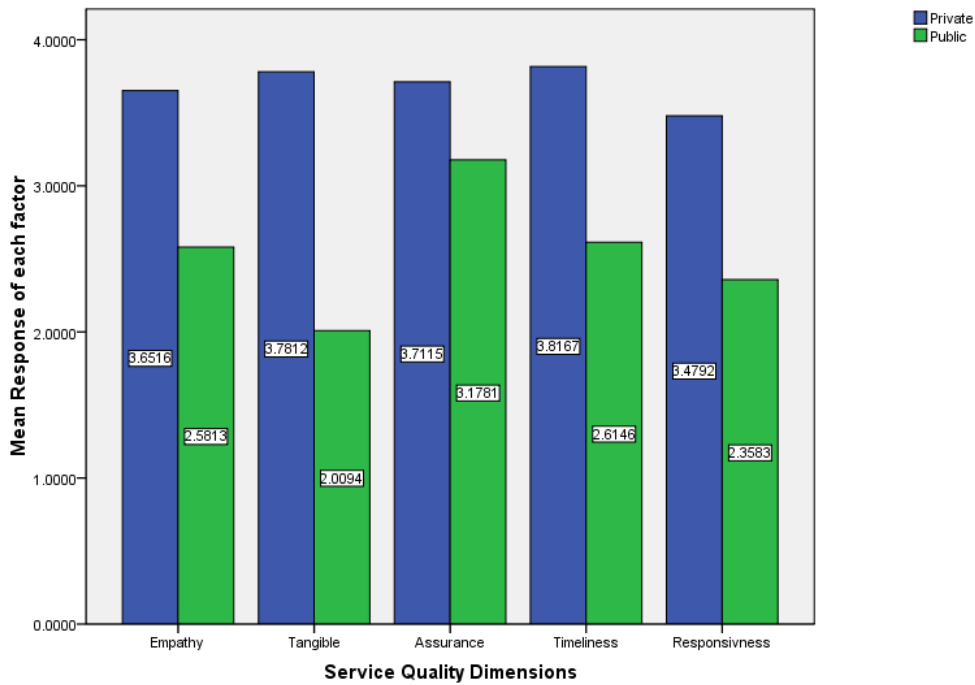

Figure 1: Comparison between Private and Public Hospitals

To compare the mean response of both public and private hospitals regarding the service quality measures constructs based on patient

perception about the service quality constructs used in this study, an independent t-test is performed, which provides mean difference, t-value, degree of freedom and their significance (p-value).

Table 7: Independent t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Empathy	Equal variances assumed	1.110	.293	13.970	318	.000	1.07031	.07662	.91958	1.22105
	Equal variances not assumed			13.970	316.703	.000	1.07031	.07662	.91957	1.22105
Tangible	Equal variances assumed	1.088	.298	28.250	318	.000	1.77187	.06272	1.64847	1.89528
	Equal variances not assumed			28.250	317.261	.000	1.77187	.06272	1.64847	1.89528
Assurance	Equal variances assumed	.243	.622	7.390	318	.000	.53333	.07217	.39135	.67532
	Equal variances not assumed			7.390	315.474	.000	.53333	.07217	.39135	.67532
Timeliness	Equal variances assumed	2.729	.100	15.325	318	.000	1.20208	.07844	1.04776	1.35641
	Equal variances not assumed			15.325	310.860	.000	1.20208	.07844	1.04776	1.35641
Responsiveness	Equal variances assumed	.001	.974	14.616	318	.000	1.12083	.07669	.96996	1.27171
	Equal variances not assumed			14.616	317.998	.000	1.12083	.07669	.96996	1.27171

- Firstly, values of Levene's test for equality of variances is reported which shows an insignificant p-values (0.293) showing the variances of both groups are same, hence for further interpretations of results variances are assumed equal. A ***t-value 13.970, df 318*** has a significant ***p-value 0.000*** which shows that private hospitals are more empathic toward the patient's dealings than public hospitals. In private hospitals, doctors are genuinely concerned for their patients as these hospitals have hired the services of the best doctors and physicians and the patients. As all the hospitals are trying their best to gain competitive edge and to remain market leader and objective of the private hospitals is to provide superior quality services to their patients as compare to their competitors'. To achieve this goal all the people involved in hospital operations either it is doctor, nurse, staff or any other management personal try their best to provide extra care and show concern for them, to make the customer happy. Due to this reason the service quality dimension 'empathy' is high in private hospitals as compare to the public hospitals. Where as in public

hospitals these highly skilled and expert doctors are involved in teaching, hospital activities and other management duties and they have a limited time to visit the patients or they have allocated some days to examine the patients. It is difficult for the doctors to provide extra care or show concern for the patients as they have to examine a large number of patients on that particular day. Secondly, poor management in the public hospitals and the people visiting hospitals with some references (safarish) also affects smooth functioning of the system in public hospitals. Staff and nurses are also less committed, due to this reason they show less concern for the patients. Therefore, the null hypothesis H_{01} is rejected and hypothesis (H_{11}) is accepted mean the patient perceives that private hospitals are more empathetic in their dealing with patients than public hospitals.

- Secondly, values of Levene's test for equality of variances is reported which shows an insignificant p-values (0.298) showing the variances of both groups are same, hence for further interpretations of results variances are assumed equal. A *t-value 28.250, df 318* has a significant *p-value 0.000* which shows that the factor tangible is better than public hospitals. The private hospitals have a better infrastructure as compare to the public hospitals as they are aimed to provide best quality of services to their patients. Private hospitals are providing better hygienic conditions as compare to public hospitals. All areas of the hospitals including wards, private rooms, waiting areas, toilets and bathroom are cleaned on regular intervals by using germ killer and insect killer liquids and are maintaining log. To save time and facilitate the patients, medical test labs, X-rays, ECG, etc. and pharmacy services are available within hospital premises. Private hospitals provide a healthy environment to the patients which show their commitment towards quality of services for their patients. Therefore, the null hypothesis H_{02} is rejected and H_{12} is accepted that patient perceives that in private hospitals the level of tangibility is higher than public hospitals.

- Thirdly, values of Levene's test for equality of variances is reported which shows an insignificant p-values (0.622) showing the variances of both groups are same, hence for further interpretations of results variances are assumed equal. A *t-value 7.390, df 318* has a significant *p-value 0.000* which shows that private hospitals provide more assurance of better treatment to the patients than public hospitals and causes patient satisfaction. Expert doctors in all fields of medicines and surgery are at their panel list which creates assurance for the

patients that they are thoroughly investigated and diagnoses. These hospitals have developed well equipped labs and highly skilled lab technicians working under the supervision of qualified doctors generate best results about any test which helps the doctors in making right diagnosis. Therefore, the null hypothesis H_{03} is rejected and H_{13} is accepted means patient perceives that in private hospitals the level of assurance among patients is higher than that of public hospitals.

- Fourthly, values of Levene's test for equality of variances is reported which shows an insignificant p-values (0.100) showing the variances of both groups are same, hence for further interpretations of results variances are assumed equal. A *t-value 15.325, df 318* has a significant *p-value 0.000* which shows that private hospitals are more conscious about the timeliness while treating the patients than public hospitals. As success of any business is strongly depending on the timely delivery of services to customer or patients. Private hospitals are making efforts to develop a mechanism as compare to public hospitals to deliver timely, services to the patients. Patients are examined according to appointment which helps to save the time of both doctors and patients. Medical reports are delivered according to promised time and doctors are also available to examine the patients at promised time. Whereas public hospitals are lack of these factors due to poor management and lack of commitment towards the quality. Therefore, the null hypothesis H_{04} is rejected and H_{14} is accepted means patient perceives that in private hospitals the level of timeliness among patients is higher than public hospitals.

- Finally values of Levene's test for equality of variances is reported which shows an insignificant p-values (0.974) showing the variances of both groups are same, hence for further interpretations of results variances are assumed equal. A *t-value 14.616, df 318* has a significant *p-value 0.000* which shows that private hospitals are more responsiveness while attending the patients than public hospitals. Private hospitals are aimed to satisfy their patient to get quick relief from illness through quality of health services to the patients. Doctors, nurses and other staff respond to the patients call quickly, to make them comfortable and developed a feedback mechanism for continuously increasing their service quality. Whereas in public hospitals, there is a lacking of above discussed factors which shows their less commitment towards quality. Therefore, the null hypothesis H_{05} is rejected and H_{15} is accepted means the patient perceives that in private hospitals the more responsive than that of public hospitals.

CONCLUSION

Form the above results and discussion; the empirical findings are evident that private hospitals are aimed at providing better healthcare facilities to the patients and also contributing a positive role in order to lower the public hospital burden. This validates our study that private hospitals in Egypt are delivering better quality of services as compared to public hospitals (Mostafa, 2005). Similarly, the patient realization about quality of healthcare drives a greater proportion of the population towards private hospitals in Bangladesh (Andaleeb, 2000). However, a study conducted to measure the patients satisfaction in Pakistan by Shabbir et al. (2010) reported that public hospitals in Islamabad are providing better quality of services to patients as compare to private hospitals and these results are quite different with the other studies conducted on this topic (like Andaleeb, 2000, 2001; Mostafa, 2005). As these public hospitals are located in the capital city of Pakistan and having better healthcare facilities as compare to other public hospitals even public hospitals located in the adjacent city Rawalpindi.

Private hospitals in Pakistan are making better efforts as compared to the public hospitals. As the private hospitals have to depend on customers in order to meet the financial constraints and gain profitability. So, like the other private sector organizations. Results of this study shows that private hospitals like the other service organizations are focusing on their patients demands and developing themselves in order to provide maximum healthcare facilities to their patients. From the results discussed above also showed that in private hospitals, all the people including doctors, nurses and supporting staff are aimed to provide care to their patients, providing clean and healthy environment to both the patients and their attendants, sterilized equipments, efficiently attending patient calls, availability of medical test and pharmacy facilities within the hospital and development of a feedback mechanism. All these efforts led these hospitals towards continuous improvement in the processes, system and provide continuously quality of healthcare service to their patients.

Whereas the poor quality of healthcare services delivered to patients by public hospitals as compare to the private hospitals are due to the many factors. These factors include: government funding, lack of government interest in development of new healthcare projects rural areas and overburdened public hospitals due to rapid growth in population and

people trends to move from rural areas to major cities. These factors are affecting the service quality of public hospitals. Results showed that in public hospitals, doctors, nurses and supporting staff are not taking pain to attend the patient or to provide individual care to the patients, take care of cleanliness, and sterilization of equipments, lack of feedback mechanism showed a low commitment level towards their responsibilities. It requires government attentions to improve the existing quality of the public hospitals and develop more hospitals in public sector to maintain the healthcare needs of the people.

RECOMMENDATIONS FOR FUTURE RESEARCH

This research is based on the SERVQUAL instrument based on five service quality dimensions and a more comprehensive study may be conducted by adding more dimensions like Andaleeb (2001) used Communication, discipline, bakseesh of other than five service quality dimensions. Secondly, this study is limited to one city only. Therefore, it is needed to develop a comprehensive study in order to gain clear understanding about the service quality of public and private hospitals. This will provide more accurate response regarding their perceptions about the services delivered to them.

REFERENCES

Andaleeb, S. S. (2000). Public and private hospitals in Bangladesh: service quality and predictors of hospital choice. *Health Policy and Planning*, Vol. 15, No. 1, pp. 95–102

Andaleeb, S. S. (2001). Service Quality Perceptions and Patient Satisfaction: A Study of Hospitals in a Developing Country. *Social Science and Medicine*, Vol. 52, pp. 1359-1370.

Anderson, C., and C. P. Zeithaml (1984). Stage of the Product Life Cycle, Business Strategy and Business Performance. *Academy of Management Journal*, Vol. 27: pp. 5-24.

Arzoo Saeed, Hajra Ibrahim (2005). Reasons for the Problems faced by Patients in Government Hospitals: results of a survey in a government hospital in Karachi, Pakistan. *Journal of Pakistan Medical Association*, Vol. 55, No. 45, (http://jpma.org.pk/full_article_text.php?article_id=563)

Asubonteng, P., McCleary, K.J. and Swan, J.E. (1996). SERVQUAL revisited: a critical review of service quality. *Journal of Services Marketing*, Vol. 10, No. 6, pp. 62-81.

Babakus Emin & Mangold W. Glenn (1992). Adapting the SERVQUAL Scale to Hospital Services: an Empirical investigation. *Health Service Research*, Vol. 26, No. 6, pp. 767-780.

Berry, L.L., Bennet, D.R. & Brown, C.W. (1989). Service Quality: A Profit Strategy for Financial Institutions. Dow-Jones-Irwin, Homewood, IL.

Berry, L.L., Lefkowith, E.F. and Clark, T. (1988). In services, what's in a name? *Harvard Business Review*, Vol. 66, pp. 28-30.

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

Cronin, J.J. Jr and Taylor, S.A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, Vol. 56, No. 3, pp. 55-68.

Cronin, J.J. Jr and Taylor, S.A. (1994). SERVPERF versus SERVQUAL: Reconciling Performance-Based and Perceptions-Minus-Expectations Measurement of Service Quality. *Journal of Marketing*, Vol. 58, No. 1, pp. 125- 31.

Cronin, J.J., Brady, M.K. & Hult, G.T.M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environment. *Journal of Retailing*, Vol. 76, No. 2, pp. 193-218.

Dawkins P, Reichheld F (1990). Customer retention as a competitive weapon. *Directors Boards,* Vol. 14, No. 4, pp. 42-47.

Donabedian, A. (1980). The Definition of Quality and Approaches to its Assessment. Ann Arbor: Health Administration Press.

Economic Survey of Pakistan (2009). http://www.finance.gov.pk/urvey/chapter_10/11_Health.pdf

Gefen, D., (2002). Reflections on the Dimensions of Trust and Trustworthiness among Online Consumers. *The DATA BASE for Advances in Information Systems*, Vol. 333, pp. 38-53.

Gilbert, F.W., Lumpkin, J.R. and Dant, R.P. (1992), "Adaptation and Customer Expectations of Health Care Options", *Journal of Health Care Marketing*, Vol. 12, No. 3, pp. 46-55.

Grönroos, C. (2001). *The Perceived Service Quality Concept – A Mistake.* Managing Service Quality", Vol. 11, No. 3, pp. 150-152

Imran Sharif Chaudhry, Shahnawaz Malik & Muhammad Ashraf (2006). Rural poverty in Pakistan Some Related Concepts, Issues and Empirical Analysis, *Pakistan Economic and Social Review* Volume 44, No. 2, pp. 259-276

Irfan Syed Muhammad, Aamir Ijaz & Saman Shahbaz (2011). An assessment of service quality of private hospitals in Pakistan: a patient perspective. *Indian Journal of Commerce & Management Studies*, Vol. 2 (2), pp. 20-32

Kang, G.-D. & James, J. (2004). Service quality dimensions: an examination of Gro¨nroos's service quality model. Managing Service Quality, Vol. 14, No. 4, pp. 266-77

Kilbourne E. William, Jo Ann Duffy, Michael Duffy, Geoge Giarchi (2004). The Applicability of SERVQUAL in Cross-national Measurements of Health-care Quality. *The Journal of Services Marketing*, Vol. 18, No. 6/7, pp. 524-33.

Lam, S.S.K. (1997). SERVQUAL: A Tool for Measuring Patients' Opinions of Hospital Service Quality in Hong Kong. *Total Quality Management*, Vol. 8, No. 4, pp. 145-52.

Mostafa Mohamed M. (2005). An empirical study of patients' expectations and satisfactions in Egyptian hospitals. *International Journal of Health Care Quality Assurance*, Vol. 18, No. 7, pp. 516-532.

Nimit Chowdhary, Monika Prakash, (2007). Prioritizing service quality dimensions. Managing Service Quality, Vol. 17, No. 5, pp. 493-509.

Nitin Seth, S.G. Deshmukh, Prem Vrat, (2005). Service quality models: a review. *International Journal of Quality & Reliability Management*, Vol. 22, No. 9, pp. 913-949.

Nunnally, J. (1978). Psychometric Theory", McGraw-Hill Book Co., New York, NY.

O'Connor, S. J., Shewchuk, R. M., & Carney, L. W. (1994). The great gap. *Journal of Health Care Marketing*, Vol. 14, No. 2, pp. 32–39.

Pakdil, F., Harwood, T.N. (2005). Patient Satisfaction in a Preoperative Assessment Clinic: an Analysis Using SERVQUAL Dimensions. *Total Quality Management and Business Excellence*, Vol. 16, pp. 15-31.

Parasuraman A., Zeithaml V., & Berry L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, Vol. 64, No. 1, pp. 12-40.

Parasuraman, A., V. A. Zeithaml, and L. L. Berry (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, Vol. 49, pp. 41-50.

Rathmell, J.M. (1966). What is meant by service? *Journal of Marketing*, Vol. 30, No. 4, pp. 32-36.

Regan W.J. (1963). The Service Revolution. *Journal of Marketing*, Vol. 47, pp. 57-62.

Reichheld, F. & Sasser, W.E. Jr. (1990). Zero defecting: quality comes to services. *Harvard Business Review*, Vol. 68, pp. 105-11.

Reidenbach, E.R. and Sandifer-Smallwood, B. (1990). Exploring Perceptions of Hospital Operations by a Modified SERVQUAL Approach. *Journal of Health Care Marketing*, Vol. 10, No. 4, pp. 47-55.

Riadh Ladhari (2009). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences*, Vol. 1, No. 2, pp. 172-198.

Rust and Anthony J. Zahorik (1993). Customer Satisfaction, Customer Retention and Market Share. *Journal of Retailing*, Vol. 69, pp. 193-215.

Samson, Parker (1994). Service Quality: The Gap in the Australian Consulting Engineering Industry. *International Journal of Quality & Reliability Management*, Vol. 11, No. 7, pp. 60-76.

Scardina S.A. (1994). SERVQUAL: A Tool for Evaluating Patient Satisfaction with Nursing Care. *Journal of Nursing Care Quality*, Vol. 8, No. 2, 38-46.

Shostack G. (1977). Breaking Free from Product Marketing. *Journal of Marketing*, Vol. 41, pp. 73-80.

Shabbir Shahbaz, Hans Ruediger Kaufmann and Mudassar Shehzad (2010). Service quality, word of mouth and trust: Drivers to achieve patient satisfaction, *Scientific Research and Essays*, Vol. 5(17), pp. 2457-2462.

Spreng, R.A. & MacKoy, R.D. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of Retailing*, Vol. 72, No. 2, pp. 201-14.

Statistics division of Pakistan (2009-2010): www.statpak.gov.pk

Taylor, S.A., Cronin, J.J. (1994). Modeling patient satisfaction and service quality. *Journal of Health Care Mark*, Vol. 14, No. 1, pp. 34-44.

Vandamme R. & Leunis J. (1993). Development of a Multiple-item Scale for Measuring Hospital Service Quality. *International Journal of Service Industry Management*, Vol. 4, pp. 30-49.

Williams, S. G., Calnan, M. (1991). Key Determinants of Consumer Satisfaction with General Practice. *Journal of Family Practice*, Vol. 8, pp. 237-242.

Wisniewski, M. (2001). Using SERVQUAL to assess customer satisfaction with public sector services. *Managing Service Quality*, Vol. 11, No. 6, pp. 380-388.

Wisniewski, M. and Donnelly, M. (1996). Measuring service quality in the public sector: the potential for SERVQUAL. *Total Quality Management*, Vol. 7, No. 4, pp. 357-365.

Wong, J.C.H. (2002). Service Quality Measurement in a Medical Imaging Department. *International Journal of Health Care Quality Assurance*, Vol. 15, No. (14/5), pp. 206-12.

Yoon, S. and Suh, H. (2004). Ensuring IT consulting SERVQUAL and user satisfaction: a modified measurement tool. *Information Systems Frontiers*, Vol. 6, No. 14, pp. 341-51.

Zeithaml V., Parasuraman A., & Berry L.L. (1990). Delivering Quality Service. *The Free Press*, New York.

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

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*, Vol. 21, No. 1, pp. 1-12.