



# International Journal of Health Care Quality Assurance

Service Quality and Satisfaction in Healthcare Sector of Pakistan - The Patients' Expectations Saad Ahmed Javed, Fatima Ilyas,

#### **Article information:**

To cite this document:

Saad Ahmed Javed, Fatima Ilyas, "Service Quality and Satisfaction in Healthcare Sector of Pakistan – The Patients' Expectations", International Journal of Health Care Quality Assurance, <a href="https://doi.org/10.1108/IJHCQA-08-2016-0110">https://doi.org/10.1108/IJHCQA-08-2016-0110</a> Permanent link to this document:

https://doi.org/10.1108/IJHCQA-08-2016-0110

Downloaded on: 02 June 2018, At: 03:24 (PT)

References: this document contains references to 0 other documents.

To copy this document: permissions@emeraldinsight.com

Access to this document was granted through an Emerald subscription provided by emerald-srm:213934 []

## **For Authors**

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

# About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

\*Related content and download information correct at time of download.

## **Introduction:**

With rising population (and healthcare issues) and a rising focus on improvement in each sector of the economy to achieve competiveness in national economy, the issues of patient satisfaction and service quality are seeking increasing interest among researchers and scholars all over the world. Developed countries are not only improving their healthcare sectors to serve their masses but also making money by promoting healthcare tourism (Lee and Fernando, 2015; Han and Hyun, 2015; Andaleeb, 2001). Developing countries can also reap these benefits by making available high healthcare quality at affordable costs (De Arellano, 2007; Horowitz et al., 2007; Lee and Fernando, 2015) which is a challenging task in countries like Pakistan where healthcare isn't a priority and issues like patient satisfaction and service quality are receiving more attention of academicians or scholars and less of policymakers or practitioners.

In service industries, the service quality always remained one of the key factors manifesting the successful management of customer relationships and value creation in the market. However, in developing countries, the health care service providers do not pay much attention to the say of service seekers and their perceptions and expectations are generally being neglected (Andaleeb, 2001). Han and Hyun (2015) reported that inviting new consumers is five times more expensive than retaining existing consumers. Thus it can be argued that by not seeking the existing consumers' (patients') input in improving or redesigning of value creation processes in hospitals, the service providers are not only closing the door for continuous improvement that is essential for the business survival but also loosing consumers, and thus profits, to their competitors. In case of the private hospitals this can lead to bankruptcy and for public hospitals receiving funds from the state this implies the hospitals that the poor patients consider their last resort.

Pakistan is one of the few countries in the world where healthcare never remained a priority for most of the governments since its creation in 1947. The attitude of the political leadership of the country, that can be manifested though their budget allocated for healthcare and frequent visits to the healthcare facilities of the developing countries even for the smallest treatments, can add to this argument. For instance, the country spends almost 2.8% of its budget on healthcare (WHO, 2015) putting it in the basket of countries whose investment on healthcare is less compared to the most of the countries of the world. Media reports highlight that it is not rare for Pakistani politicians, bureaucrats, legislators and government officials to go overseas for treatment that not only costs millions of rupees to Pakistani taxpayers but also exposes their 'faith in what the country has to offer' (Siddiqi, 2016; Pakistan Today, 2016; Shehzad, 2015; Ahmad, 2011). Thus it is not difficult to comprehend why the majority of the population of Pakistan perceives that their country's healthcare system is corrupt (Gadit, 2011). Considering all this in mind it was felt very important to seek the insight of Pakistani healthcare sector from the public's point of view.

There are not many studies conducted in the healthcare sector of Pakistan in order to examine the service quality of public as well as private hospitals in light of service-seekers' views (see for instance, Irfan and Ijaz, 2011; Saeed and Ibrahim, 2005; Nasim and Janjua, 2014; Shabbir et al., 2016). However, there is a controversy among the studies done on Pakistani healthcare sector. For example, Irfan and Ijaz (2011) and Shabbir et al. (2016) reported that private hospitals' patients are more satisfied with the healthcare services as compare to their public counterparts however Nasim and Janjua (2014) reported the opposite.

The current study not only aims to validate a five-dimensional service quality scale (SERVQUAL) for gauging service quality in Pakistani health sector but it also intends to conclude the abovementioned controversy within Pakistani healthcare literature. The study intends to explore the capacity of the SERVQUAL method to visualize vital service deliverables in two different healthcare systems (public and private). This work is essential for healthcare administrators and policy makers as the paper not only attempts to explain degree of effects of five service quality constructs (Empathy, Responsiveness, Tangibility, Reliability and Assurance) on patients' expectations from the private and public sector hospitals and thus patient satisfaction but also offers several intuitions into the effect of five constructs of service quality on patients' expectations of healthcare service quality and patient satisfaction with the service providers/nursing.

## Literature Review:

## Service Quality

Quality has been a topic of discussion since decades. In literature, quality has been defined in a number of different ways (Campbell et al., 2000) and when it comes to defining healthcare quality different perspectives on, and dimensions of, the quality make it further difficult to have a consensus on a universal definition (Piligrimienė and Bučiūnienė, 2008). Building on the works of Parasuraman et al. (1988) and Akter et al. (2013), perceived quality of healthcare services can be defined as the patients' judgment or impression about a healthcare unit's overall excellence and superiority. This perception of service quality is very essential these days since it is in practice to increase its applicability and continuance with view to gain superior health outcomes for patients (Akter et al., 2013).

The impact of features or dimensions of a product or service on customers' perceptions and expectations (and thus on their decision to continue or discontinue using that product or service) is not unknown in literature (see, for instance, Blut et al., 2014; Javed and Javed, 2015). For most of the people health concerns are of prime importance and their decision to continue or discontinue a healthcare service is strongly driven by their expectations from the healthcare service quality features (Akter et al., 2013). They are more likely to quit seeking the service if they see healthcare system not worth trusting or reliable. How service providers respond to the needs of service seekers defines the latter's evaluation of service quality (Piligrimienė and Bučiūnienė, 2008). Ryu et al. (2012) in their study on hospitality sector, report that physical atmosphere and the staff's response to consumer's needs are important attributes that consumers consider in evaluating service quality. As the competition is intensifying across the board, more organizations are realizing that producing satisfied consumers through superior quality services is of strategic importance to achieve competitive edge (Ryu et al., 2012). Today, service quality and service seekers' satisfaction can be considered the fundamental marketing priorities because they lead to positive word-of-mouth and thus help organizations or service providers in building positive image that can influence the perception of potential consumers (Ryu et al., 2012). As patients' quality perceptions account for 17% to 27% of variation in financial performance of a

healthcare system (Naidu, 2009), undermining the importance of these critical issues can be terrible for hospitals in long run.

## Patient Satisfaction

Satisfaction is one of the most widely studied concepts in literature. Consumer satisfaction in healthcare sector can be referred as patient satisfaction that is one of the most frequently reported outcome measures for quality of care used in interventional and quality improvement studies (Barnett et al., 2013; Sawyer et al., 2013). Shabbir et al. (2016) defined patient satisfaction as an important characteristic of healthcare service quality and an important indicator of success sign in healthcare.

According to Grigoroudis et al. (2013), measures of customer satisfaction include expectations, performance and loyalty. Oliver (2010) discussed four perspectives (relating to consumer, organization, industry and society) in his extensive study on satisfaction. While discussing the consumers' perspective, the author states that satisfaction (or the lack of satisfaction) is an inevitable outcome of consumption of services. Thus, it can be argued that patient satisfaction is a consequence of perceived service quality and is a function of observed performance of healthcare service and patient expectations (Shabbir et al., 2016; Oliver, 2010).

#### Role of healthcare service quality in shaping patient satisfaction

There are different ways to define and operationalize the construct of patient expectations of service quality of healthcare sector because of the absence of standards definition of "healthcare service quality" and presence of numerous dimensions of service quality in literature.

Patient satisfaction is an appraisal of distinctive healthcare dimensions (Naidu, 2009). According to Naidu (2009), these dimensions could be core services, customization, professional credibility, competence, communications, admissions, discharge, nursing care, food, housekeeping and technical services. Combination of these features can significantly and positively influence patient perception and thus satisfaction. It can create such a "quality experience" for a hospital's patients that can't be copied by its competitors easily thus can create a source of competitive advantage/edge for the hospital. This may also makes the organizational capability to create a quality experience as one of the sources of competitive advantage for an organization (hospital). Successful management/organization of dimensions or features of a healthcare service quality, thus, is crucial in controlling patients' perceptions.

Other constructs of service quality that are relevant to the research objectives are derived from the SERVQUAL scale.

SERVQUAL - What and why?

SERVQUAL scale is one of the most influential scales being used primarily in service industry to measure service quality. According to Khorshidi et al. (2016), SERVQUAL is a method to evaluate service quality following the gap theory as introduced by Parasuraman and colleagues. According to the founders of SERVQUAL scale (i.e., Parasuraman et al., 1988), the construct of quality as gauged by SERVQUAL encompasses perceived quality whereas perceived quality is the consumer's judgment about an organization's overall excellence or superiority. Parasuraman et al. (1988) also compared perceived quality (involving consumer's attitude) with objective quality (involving objective aspect or feature of a service or product) in their study. According to them, perceived quality is though linked but not equals satisfaction and events of satisfaction over time leads to the perceptions of service quality (Parasuraman et al., 1988). Parasuraman et al.'s (1988) operationalization of SERVQUAL method of measuring service quality was derived from the gap theory involving the comparison or expectations and perceptions of performance. This classic conceptualization of perceived service quality is still reliable and the SERVQUAL method is still popular in modern days' studies. The five dimensions of the SERVQUAL scale are defined in table I.

#### **Insert Table I here**

Table I. The five dimensions of SERVQUAL scale and their definitions (Source: Parasuraman et al., 1988: 23)

Tangibility	"Physical facilities, equipment, and appearance of personnel"
Reliability	"Ability to perform the promised service dependably and accurately"
Responsiveness	"Willingness to help customers (patients) and provide prompt service"
Assurance	"Knowledge and courtesy of employees (hospital staff and doctors) and their
	ability to inspire trust and confidence"
Empathy	"Caring, individualized attention the firm (hospital) provides its customers
	(patients)"

## Service quality in healthcare sector of Pakistan

Compares to the developed countries, the picture of healthcare system in the third world countries is quite gloomy and thus need huge attention and efforts. According to WHO (2015), in 2012 Pakistan's total (sum of public and private) expenditure on health was 2.8% of its GDP on health. Pakistan ranked lowest in the region in its investment on health (for comparison: Afghanistan 8.5%, Iran 6.6%, China 5.4% and India 3.8%). According to the recent reports, Pakistan's public health expenditure is embarrassingly 0.9% of its GDP making it one the three worst countries of the world (World Bank, 2016b; Malkani, 2016). This forces Pakistani public to seek private healthcare primarily through out-of-pocket expenditures (Malkani, 2016) and, therefore, around 75% people in Pakistan use private healthcare services (Hafeez, 2014). Pakistan is also one of the last three countries of the world where polioviruses are still endemic (WHO, 2015).

According to the latest statistics available at the World Bank, in 2014 Pakistan's health expenditure per capita was USD 36 (World Bank, 2016a). Comparing this with Pakistan's neighbors, for the same period, gives a very gloomy picture as health expenditure per capita in China, Iran, India and Afghanistan was USD 420, USD 351, USD 75 and USD 51, respectively.

Further, according to WHO (2015), infant mortality rate in Pakistan is 69 per 1000 live births, close to Afghanistan [70.2] but far behind all other neighbors, that is, China [10.9], Iran [14.4] and India [41.4].

These statistics make Pakistan one of the countries whose investment on healthcare is worst as compare to the other countries. The reason for this poor performance in healthcare could be the poor public policy decisions of the government that influence the quality of social determinants of health such as income distribution, housing condition, food, job security, quality of life, social services etc. (Bryant, 2010). Otherwise one may also argue that for Pakistani government healthcare is one of the least important sectors of the country's economy. Even though according to Shabbir et al. (2016), "comparable to different countries, Pakistan has started a significant emphasis to enhance the quality of healthcare services", the current study, through its literature review and findings, refute this delusion.

According to Sahoutara (2014), "the [Pakistani] state is obliged by the Constitution to provide quality health care services to the people free of cost." The 18<sup>th</sup> Amendment in the Constitution transferred this responsibility of the state, or the federal government, to the provincial governments (Sahoutara, 2014; Nishtar, 2013). However, it must be noted that in Pakistan, out-of-pocket expenditure (as percentage of private expenditure) on health is 86.8% (WHO, 2015) which reveals that government's contribution in maintaining the health of its citizens is relatively disappointing. Additionally this inadequate contribution by the Pakistani government is further eroding the gains, through corruption in public service, and is sharply influencing the perceptions of the citizens. A cross-country study quoted in Gadit (2011) revealed that 95% of the population "perceives that the health care system is corrupt in Pakistan," a country that ranks 117 out of 168 countries in corruption (Transparency International, 2015). Thus analyzing the point of view of the service seekers provides deep insight of the service and helps policy makers and service providers in making efforts to rectify the existing inadequacies within a sector.

Despite this despondent situation of healthcare in Pakistan, where quality initiatives are relatively more visible in the manufacturing, education and agriculture sectors than in the healthcare sector, not many scientific studies have been done in this context. Shabbir et al. (2016) studied private and public sector hospitals of Pakistan with view to measure association between patient loyalty, satisfaction and service quality perception and the dimensions of service quality were physician care, nurses' care, supportive staff, operational activities, and physical maintenance. They reported higher level of satisfaction among the private hospitals' patients as compared to the public hospitals' patients. Irfan and Ijaz (2011) used SERVQUAL scale and reported that private hospitals are producing more satisfied patients than their public counterparts. Another study in this context was done by Nasim and Janjua (2014) who in their case study on Pakistani public and private hospitals highlighted the rising concern for healthcare in developing country like Pakistan that spends major chunk of its GDP on defense sector and debt payments and from the rest significant amount feeds bureaucracy and administrative mismanagements. Unlike other studies, they reported that public hospitals are producing more satisfied patients than their private counterparts. Hafeez (2014) in his study related poverty to the poor performance of Pakistan in healthcare sector and showed how poverty leads to poor heath and vice versa. Corruption in healthcare sector is another issue gaining exceeding attention (Gadit, 2011; Yousafzai, 2015). Thus the reasons for Pakistan scoring lowest ranks on various healthcare indicators that make it one of the poorest performers in healthcare sector of the world is not difficult to comprehend.

# **Hypotheses and Methodology:**

## Hypotheses

In the light of the research objectives the following hypotheses have been developed for the study:

H<sub>1</sub>: Empathy is expected to be positively related to patient satisfaction in a given health sector.

H<sub>2</sub>: Tangibility is expected to be positively related to patient satisfaction in a given health sector.

H<sub>3</sub>: Assurance is expected to be positively related to patient satisfaction in a given health sector.

**H<sub>4</sub>:** Responsiveness is expected to be positively related to patient satisfaction in a given health sector.

H<sub>5</sub>: Reliability is expected to be positively related to patient satisfaction in a given health sector.

 $H_6$ : There exists a difference between the patients' expectations from public hospitals and private hospitals.

# Sample and Procedure

Our sample consisted of three public hospitals and three private hospitals of Lahore, the capital of Pakistan's most populous province. The names of the hospitals are not mentioned in the study because few hospitals allowed surveying in their premises on the condition of anonymity. Hospitals were selected considering their popularity and size. Here it is worth mentioning that treatment in each of these public hospitals is at significantly low cost when compared to their private counterparts. Data collection took almost one month because to avoid contacting same respondents who might be on bed rest or were visiting hospitals daily the authors surveyed hospitals on four different periods in the month. In each sector, only those patients were surveyed who had experience of both private and public sector healthcare and then they were asked to report their expectations from both sectors. The questionnaire was bilingual and was first developed in English and latter was translated into Urdu, the national language of Pakistan. A copy of it was also shown to two university professors of Urdu and Quality Management and after updating its language in light of their suggestions, the surveying was finally initiated and 477 patients were surveyed. At least one of the authors was present during the survey. Out of these 477 responses 456 questionnaires were properly completed and were utilized for data analysis.

## Construct of the instrument

The research instrument (questionnaire) had three parts. The first part recorded basic demographic information (e.g., gender, age etc). Each of the second and the third part contained 22 items adapted from Parasuraman et al. (1988; 1991) with slight necessary adjustments, to gauge expectations of patients concerning the service quality in public and private healthcare sectors. 5 point Likert scale was used. Satisfaction with nursing was measured using the three research items adapted from Aiken et al. (2012).

Reliability, validity and normality

477 patients were surveyed and 456 questionnaires were properly filled and utilized for data analysis on IBM SPSS (version: 18). Out of 456 responses, 206 related to public sector and 250 were related to private sector hospitals. To confirm the normality of the data kurtosis test was applied and after getting a satisfactory value next tests were applied. Response rate was good confirming the validity of the instrument. To confirm the reliability of the instrument Cronbach's alpha values were calculated. Reliability of each research item is shown in table III.

# Results and discussion

Table II is showing that more data has been gathered from private sector hospitals (54.8%) than from public sector hospitals (45.2%). More than half of the respondents are female (53.5%) as compared to males (46.5%). More data has been collected from age group of 30-39 (45.2%), while least data filled up by age group of 50 and over (8.5%).

#### **Insert Table II here**

Table II. Demographics

Healthcare Sectors									
		Frequency	Percent	Cumulative Percent					
	Public	206	45.2	45.2					
Valid	Private	250	54.8	100					
	Total	456	100						
Gender									
Valid	Male	212	46.5	46.5					
	Female	244	53.5	100					
	Total	456	100						
		Age							
	29 and less	73	16	16					
Valid	30-39	206	45.2	61.2					
	40-49	138	30.3	91.5					
	50 & over	39	8.5	100					
	Total	456	100						

Table III shows the descriptive statistics, reliability and correlation analysis associated with both public and private healthcare sectors.

# **Insert Table III here**

Table	III. Num	ber of items,	, reliability, mea	ın, standard d	eviation and	correlation:	for both sectors
					1		

Variables	No. of Items	Cronbach's Alpha		Standard Deviation	Pearson Correlation					
					1	2	3	4	5	6
Responsiveness (1)	3	.864	9.4417 <sup>a</sup> 11.6064 <sup>b</sup>	2.57455 <sup>a</sup> 4.10322 <sup>b</sup>	1.00					
Reliability (2)	3	.784	9.6165 <sup>a</sup> 12.4538 <sup>b</sup>	2.33395 <sup>a</sup> 2.84245 <sup>b</sup>	.614**a .559**b	1.00				
Tangibility (3)	3	.796	9.5097 <sup>a</sup> 11.6586 <sup>b</sup>	2.45891 <sup>a</sup> 3.50920 <sup>b</sup>	.689***a .569***b	.594** <sup>a</sup> .653** <sup>b</sup>	1.00			
Assurance (4)	4	.795	12.6117 <sup>a</sup> 8.4699 <sup>b</sup>	3.12576 <sup>a</sup> 2.00204 <sup>b</sup>	.677**a .513 <sup>**b</sup>	.613** <sup>a</sup> .751 <sup>**</sup> <sup>b</sup>	.693**a .681**b	1.00		
Empathy (5)	2	.857	5.6699 <sup>a</sup> 17.1566 <sup>b</sup>	2.01404 <sup>a</sup> 3.46695 <sup>b</sup>	.397** <sup>a</sup> .474 <sup>**b</sup>	.590**a .678**b	.376**a .628**b	.575**a .234**b	1.00	
Patient Satisfaction (6)	3	.789	9.1408** <sup>a</sup> 12.2088** <sup>b</sup>	2.79627** <sup>a</sup> 1.90621** <sup>b</sup>	.510** <sup>a</sup> .421** <sup>b</sup>	.556** <sup>a</sup> .256** <sup>b</sup>	.429** <sup>a</sup> .354** <sup>b</sup>	.600** <sup>a</sup> .225** <sup>b</sup>	.661** <sup>a</sup> .234** <sup>b</sup>	1.00

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

The results shown in table III reveal the correlation between patient satisfaction, and five constructs of the SERVQUAL model. In public sector healthcare, the correlation of patient satisfaction is relatively stronger with empathy (.661) followed by assurance (.600), reliability (0.556), responsiveness (.510) and tangibility (0.429). In private sector healthcare, the correlation of patient satisfaction is also relatively stronger with responsiveness (.421) followed by tangibility (.354), reliability (.256), empathy (.234) and assurance (.225).

Results of regression analysis for the healthcare sectors have been shown in table IV.

## **Insert Table IV here**

Table IV. Regression analysis for both public and private hospitals and for overall healthcare sector

IV	Public H	ospitals	Private Hospitals		Combined Effect	
	Beta	t-value	Beta	t-value	Beta	t-value
(Constant)	1.049*	1.637	1.181*	2.581	1.142*	3.019
Responsiveness	.191***	2.357	.032*	.509	.109*	2.175
Reliability	.117***	1.347	.0172***	.0172*** 2.741		2.764
Tangibility	.073*	.847	.068**	-1.124	071**	-1.404
Assurance	.194*	2.684	.287***	4.896	.240***	5.254
Empathy	.602***	6.715	.541***	8.237	.574***	10.721
F	45.709		93.426		133.166	
$\mathbb{R}^2$	.533		.657		.597	
Adjusted R <sup>2</sup>	.522		.650		.592	
Durbin-Watson	1.92	26	1.8	380	1.9	921

a. Predictors: (Constant), Assurance, Tangibility, Empathy, Responsiveness, Reliability

The results shown in table IV reveal that for the patients of both public and private healthcare sectors; tangibility is insignificantly related to patient satisfaction. Therefore, the hypotheses H<sub>1</sub>, H<sub>3</sub>, H<sub>4</sub>, H<sub>5</sub> are accepted while H<sub>2</sub> is not accepted. This implies that, overall, for the patients most important attribute of a service quality is empathy followed by assurance, reliability and responsiveness. The F values show overall fitness of the models. Here the results revealed an interesting fact perhaps concerning human psychology i.e., when a patient who has experience of both public and private sector is asked to evaluate both sectors individually his/her prioritization

a= Public Hospitals, b=Private Hospitals

b. Dependent Variable: PatientSatisfaction

<sup>\*</sup>p<0.001, \*\*p<0.01, \*\*\*p<0.05

of the service quality dimensions is almost similar for each sector. However this finding can't be generalized without further testing.

To test H<sub>6</sub>, the *Laplace criterion*, an important method for decision making under uncertainty, was used following the lines suggested by Taha (2007) and Prasad (2015). This method has been applied, in the following steps:

- i. Defining goal/objective: From which of the two sectors, the patients' expectation is maximum.
- ii. Defining decision criterions: Responsiveness  $(s_1)$ , Reliability  $(s_2)$ , Tangibility  $(s_3)$ , Assurance  $(s_4)$ , and Empathy  $(s_5)$ .
- iii. Defining alternative actions: Public Sector  $(a_1)$ , and Private Sector  $(a_2)$ .
- iv. Defining likelihood of occurrence for each decision criterion: All states are equally likely, hence the probability distribution is

$$p(s_1) = p(s_2) = p(s_3) = p(s_4) = p(s_5) = 1/n = 1/5$$

v. For each alternative action, defining the outcome/payoff vectors,  $v(a_i, s_j)$ ; i=1,2 and j=1,2,3,4,5: To achieve this task, the values of beta were used because it signifies the strength of relationships between these variables, as shown in table V.

#### **Insert Table V here**

**Table V.** Payoff values

(Beta values)	s <sub>1</sub>	S <sub>2</sub>	<b>S</b> <sub>3</sub>	S <sub>4</sub>	S <sub>5</sub>
$a_1$	$v(a_l, s_l) = 0.191$	$v(a_1, s_2) = 0.117$	$v(a_1, s_3) = 0.073$	$v(a_1, s_4) = 0.194$	$v(a_1, s_5) = 0.602$
$a_2$	$v(a_2, s_1) = 0.032$	$v(a_2, s_2) = 0.0172$	$v(a_2, s_3) = 0.068$	$v(a_2, s_4) = 0.287$	$v(a_2, s_5) = 0.541$

vi. Finding the best alternative: The best alternative is the one that yields

$$\max ai \left\{ \frac{1}{n} \sum_{i=1}^{n} v(ai, sj) \right\}$$

E 
$$(a_1)$$
 =  $(1/5)$  x  $(0.191 + 0.117 + 0.073 + 0.194 + 0.602)$  =  $1.177/5$  = **0.2354** E  $(a_2)$  =  $(1/5)$  x  $(0.032 + 0.0172 + 0.068 + 0.287 + 0.541)$  =  $0.9452/5$  =  $0.18904$ 

The results reveal that that there is a difference in expectations (H<sub>6</sub> is accepted) and to increase overall patient satisfaction, more attention should be paid to the improvement of service quality in the public sector healthcare facilities because the expectations of the patients from the public sector is higher. Thus it can be argued that patients are likely to be more satisfied with the

healthcare performance of private hospitals from whom their expectations are lower. Here, the current study also validates the findings of previous studies (Taner and Antony, 2006; Irfan and Ijaz, 2011; Shabbir et al., 2016; Ahmed et al., 2017) done in this context, in demonstrating that as compare to the public hospitals' patients, the private hospitals' patients are more satisfied with healthcare service quality.

#### **Conclusion and Recommendations:**

Healthcare sector is a neglected area in Pakistan despite its growing importance in the developed countries, so the question of healthcare service quality in the country will continue arising again and again in academic papers, reports and news unless the government takes effective steps to lift up the healthcare sector of the country. The theme of this work may not be entirely novel but the study highlights some important issues in order to improve the sanitary system in Pakistan. For instance, the results clearly indicated that the expectations of Pakistani patients are significantly higher from the public hospitals than from the private hospitals in a country where, according to the Constitution, the state is primarily responsible for providing free healthcare facilities to its citizens. The findings also underline the apparently irresponsible attitude of the state in fulfilling its constitutional commitment. One may also argue that most of the patients are well-aware of the responsibilities of the state and thus their expectations from the public sector healthcare facilities are higher as compare to the private sector healthcare facilities. findings guide the healthcare administrators and the practitioners by revealing on them the difference of expectations in term of the service quality dimensions. As reported in the results section of this paper, in public sector healthcare, the patients most strongly correlate their satisfaction with empathy and assurance and least with tangibility. On the other hand, in private sector healthcare, the correlation of patient satisfaction is strongest with responsiveness and tangibility and weakest with assurance. Thus, it can be said that when patients visit a public hospital they expect from the staff to feel their pain and treat them with courtesy. However, when patients visit private hospitals, they expect to be treated quickly (without delays) and in a comfortable physical setup or infrastructure. Also, the results reveal on the policy makers that if they want to meet the expectations of patients from the country's overall healthcare sector then they need to pay more attention toward empathy and assurance. This prompts the need to provide effective training to the hospital staffs and practitioners across the board because when patients visit hospitals the first thing they encounter is people not medicine!

#### **Limitations and implications:**

First, this study was conducted only in the hospitals of Lahore. The future study may be conducted in different cities of Pakistan as well in order to enhance the generalizability of the findings. In this study, patients having experience of both sectors evaluated both sectors. Future researchers can study by segregating the respondents in two distinct class; private hospitals' patients and public hospitals' patients. The current study revealed that when patients who have experience of both public and private sector are asked to evaluate both sectors individually their prioritization of the service quality dimensions is almost similar for each sector. This finding seems interesting but can't be generalized without further testing and confirmation (or disconfirmation) by future researchers. The unexpected negative relation between patient satisfaction and tangibility, despite the good fitness of the model, prompts the need to retest the

model on different sample size either to verify the current findings or to present new insight on this relationship.

#### **References:**

- 1. Ahmad, Z. (2011, November 29). Four politicians, four bureaucrats treated abroad: medical expenses of over Rs 300 million facilitated. *Business Recorder*. Retrieved from http://www.brecorder.com/top-stories/single/595/0:/1256000:four-politicians-four-bureaucrats-treated-abroad-medical-expenses-of-over-rs-300-million-facilitated/?date=2011-11-29 on June 26, 2016.
- 2. Ahmed, S., Tarique, K. M., and Arif, I. (2017). Service quality, patient satisfaction and loyalty in the Bangladesh healthcare sector, *International Journal of Health Care Quality Assurance*, 30(5), 477-488.
- 3. Aiken, L. H., Sermeus, W., Van den Heede, K., Sloane, D. M., Busse, R., McKee, M., ... and Tishelman, C. (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ*, 344, e1717.
- 4. Akter, S., D'Ambra, J., and Ray, P. (2013). Development and validation of an instrument to measure user perceived service quality of mHealth. *Information & Management*, 50(4), 181-195.
- 5. Andaleeb, S. S. (2001). Service quality perceptions and patient satisfaction: a study of hospitals in a developing country. *Social Science & Medicine*, *52*(9), 1359-1370.
- 6. Barnett, S. F., Alagar, R. K., Grocott, M. P., Giannaris, S., Dick, J. R., and Moonesinghe, S. R. (2013). Patient-Satisfaction Measures in AnesthesiaQualitative Systematic Review. *The Journal of the American Society of Anesthesiologists*, 119(2), 452-478.
- 7. Blut, M., Beatty, S. E., Evanschitzky, H., and Brock, C. (2014), "The impact of service characteristics on the switching costs—customer loyalty link", *Journal of Retailing*, 90(2), 275-290.
- 8. Bryant, T. (2010). Politics, public policy and population health. *Staying alive: Critical perspectives on health, illness, and health care*, Canadian Scholars' Press, p.193-216.
- 9. Campbell, S. M., Roland, M. O., and Buetow, S. A. (2000). Defining quality of care. *Social science & medicine*, 51(11), 1611-1625.
- 10. De Arellano, A. B. R. (2007). Patients without borders: the emergence of medical tourism. *International Journal of Health Services*, *37*(1), 193-198.
- 11. Gadit, A. A. M. (2011). Opinion and Debate-Corruption in medical practice: How far have we gone? *JPMA The Journal of the Pakistan Medical Association*, 61(1), 93.
- 12. Gong, T. (2015). A SERVQUAL based approach to assessing customer satisfaction for Hostelling International USA (Masters thesis, California State Polytechnic University, Pomona).
- 13. Grigoroudis, E., Tsitsiridi, E., and Zopounidis, C. (2013). Linking customer satisfaction, employee appraisal, and business performance: an evaluation methodology in the banking sector. *Annals of Operations Research*, 205(1), 5-27.
- 14. Hafeez, M. (2014). Poverty and Poor Health in Pakistan: Exploring the Effects of Privatizing Healthcare. *Harvard International Review*, 35(4).

- 15. Han, H., and Hyun, S. S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust, and price reasonableness. *Tourism Management*, 46, 20-29.
- 16. Horowitz, M. D., Rosensweig, J. A., and Jones, C. A. (2007). Medical tourism: globalization of the healthcare marketplace. *MedGenMed*, 9(4), 33.
- 17. Iihan, A., Möhlmann, R., and Stock, W. G. (2015). Customer value research and SERVQUAL surveys as methods for information need analysis. In *Re-inventing information science in the networked society. Proceedings of the 14th International Symposium on Information Science* (pp. 457-468).
- 18. Irfan, S. M. and A. Ijaz (2011). Comparison of Service Quality between private and government hospitals: an empirical study of Pakistan. *Journal of Quality and Technology Management*, 7(1), 1-22.
- 19. Javed, S. A. and Javed, S. (2015), The impact of product's packaging color on customers' buying preferences under time pressure, *Marketing and Branding Research*, 2(1), 4-14.
- 20. Khorshidi, H. A., Nikfalazar, S., and Gunawan, I. (2016). Statistical Process Control application on service quality using SERVQUAL and QFD with a case study in trains' services. *The TQM Journal*, 28(2).
- 21. Ladhari, R., Souiden, N., and Dufour, B. (2017). The role of emotions in utilitarian service settings: The effects of emotional satisfaction on product perception and behavioral intentions. *Journal of Retailing and Consumer Services*, 34, 10–18
- 22. Lee, H. K., and Fernando, Y. (2015). The antecedents and outcomes of the medical tourism supply chain. *Tourism Management*, 46, 148-157.
- 23. Li, W. Yu, S., Pei, H., Zhao, C., and Tian, B. (2017). A hybrid approach based on fuzzy AHP and 2-tuple fuzzy linguistic method for evaluation in-flight service quality. *Journal of Air Transport Management*, 60, 49-64
- 24. Malkani, S. (2016, June 27). Pakistan's healthcare crisis. *Dawn*. Retrieved from http://www.dawn.com/news/1267410 on July 1, 2016.
- 25. Naidu, A. (2009). Factors affecting patient satisfaction and healthcare quality. *International Journal of Health Care Quality Assurance*, 22(4), 366-381.
- 26. Nasim, K., and Janjua, S. Y. (2014). Service Quality Perceptions and Patients' Satisfaction: A Comparative Case Study of A Public And A Private Sector Hospital in Pakistan. *International Journal for Quality Research*, 8(3), 447-460.
- 27. Nishtar, S., Boerma, T., Amjad, S., Alam, A. Y., Khalid, F., Haq, I. U., and Mirza, Y. A. (2013). Pakistan's health system: performance and prospects after the 18th Constitutional Amendment. *The Lancet*, *381*(9884), 2193-2206.
- 28. Oliver, R. L. (2010). Satisfaction: A behavioral perspective on the consumer. ME Sharpe. *Inc.*, *New York*.
- 29. Parasuraman, A., Berry, L. L., and Zeithaml (1991). Refinement and reassessment of the SERVQUAL scale. Journal of Retailing, 67 (4).
- 30. Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*. 64 (1), 12-40.
- 31. Piligrimienė, Ž., and Bučiūnienė, I. (2008). Different perspectives on health care quality: Is the consensus possible?. *Engineering Economics*, 56(1).

- 32. Pramanik, A. (2016). Patients' Perception of Service Quality of Health Care Services in India: A Comparative Study on Urban and Rural Hospitals. *Journal of Health Management*, 18(2), 1–13.
- 33. Prasad, D. (2015). Operation Research (Chapter 9). Alpha Science. UK. ISBN 978-84265-907-6.
- 34. Pakistan Today. (2016, January 14). Millions of rupees spent on treatment of legislators abroad. *Pakistan Today*. Retrieved from http://www.pakistantoday.com.pk/2016/01/14/city/islamabad/millions-of-rupees-spent-on-treatment-of-legislators-abroad/ on June 26, 2016.
- 35. Ryu, K., Lee, H.R., and Kim, W.G. (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management*, 24(2), 200-223.
- 36. Saeed, A., and Ibrahim, H. (2005). Reasons for the problems faced by patients in government hospitals: results of a survey in a government hospital in Karachi, Pakistan. *JPMA The Journal of the Pakistan Medical Association*, 55(1), 45-47.
- 37. Sahoutara, N. (2014, July 04), Know your rights: Rights of patients. *The Express Tribune*. Retrieved from http://tribune.com.pk/ on June 09, 2016.
- 38. Sawyer, A., Ayers, S., Abbott, J., Gyte, G., Rabe, H., and Duley, L. (2013). Measures of satisfaction with care during labour and birth: a comparative review. *BMC Pregnancy and Childbirth*, 13(1), 108.
- 39. Shabbir, A., Malik, S. A., and Malik, S. A. (2016). Measuring patients' healthcare service quality perceptions, satisfaction, and loyalty in public and private sector hospitals in Pakistan. *International Journal of Quality & Reliability Management*, 33(5), 538-557.
- 40. Shehzad, R. (2015, March 31). Medical expenditure: Overseas treatment for government officials weighs heavy on national kitty. *The Express Tribune*. Retrieved from http://tribune.com.pk/story/861600/medical-expenditure-overseas-treatment-for-government-officials-weighs-heavy-on-national-kitty/ on June 26, 2016.
- 41. Siddiqi, K. (2016, June 12). Charity begins at home. *The Express Tribune*. Retrieved from http://tribune.com.pk/story/1121398/charity-begins-home/ on June 26, 2016.
- 42. Taha, H. A. (2007). *Operations Research An Introduction* (8<sup>th</sup> ed). New Jersey: Pearson Education, Inc.
- 43. Taner, T., and Antony, J. (2006). Leadership in health services: Comparing public and private hospital care service quality in Turkey. *Leadership in Health Services*, 19(2), 1-10.
- 44. Transparency International. (2015). Retrieved from https://www.transparency.org/country/#PAK on April 26, 2016.
- 45. WHO. (2015). *World health statistics 2015*. Retrieved from World Health Organization Website: http://apps.who.int/iris/bitstream/10665/170250/1/9789240694439 eng.pdf
- 46. World Bank. (2016a). Retrieved from http://data.worldbank.org/indicator/SH.XPD.PCAP on April 26, 2016.
- 47. World Bank (2016b). Retrieved from http://data.worldbank.org/indicator/SH.XPD.PUBL.ZS?locations=PK on July 1, 2016.
- 48. Yousafzai, A. W. (2015). Corruption In Medical Practice: Where Do We Stand?. *Journal of Ayub Medical College*, 27 (3). 515-516.