Patients' Perception of Health Care Quality, Satisfaction and Behavioral Intention: An Empirical Study in Bahrain

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Abstract

Purpose – *Through primary research employing SERVQUAL, This paper evaluates the level of service quality of health care providers in Bahrain with a view to uncovering, primarily; the relationship between service quality dimensions and the overall patients' satisfaction and analyzing behavioral intention of patients.*

Design - methodology/approach – *A sample of 235 patients of hospitals and medical centers participated in the questionnaire survey. Descriptive, factor analysis, regression and correlation statistical techniques were employed to investigate the relationship between service quality (SQ) dimensions, patients satisfaction (SAT) and behavioral intention (BI).*

Findings – *The study results show that SERVPERF scale was more efficient than SERVQUAL scale in explaining the variance in service quality. Two – Factor solution was provided by the SERVPERF scale, where reliability, responsiveness and assurance and the majority of empathy dimension were highly correlated and loaded on the first factor, while the second factor covered only the tangible dimension. Responsiveness, empathy and tangible dimensions had the largest influence on the overall service quality. Positive and significant relationships were found between overall service quality (OSQ), patients' satisfaction (SAT), and their behavior intention (BI).*

Research limitation/ implication – *This research adopts the service marketing approach for evaluating the quality of health care. Patients' attitudes toward service quality dimensions were the concern of the research. To get a comprehensive evaluation of the service quality, health care providers have to be considered in future research.*

Practical implication – *Based on the findings of this study, hospital managers are in a position to recognize the patients' perceptions of health care quality and the level of their satisfaction. Consequently, managers can design the marketing strategies that improve the quality of services for increasing patients' satisfaction and propensity to recommend the services of particular healthcare providers to others.*

Originality/ value – *This study investigates the health care quality in a small developing country. SERVPREF is more accurate than SERVQUAL for measuring service quality. It also provides two – factor solution for dimensionality of health service quality.*

Keywords – SERVQUAL/SERVPERF, health care quality, patient satisfaction, and behavior intention.

1. Introduction

Service quality has become an important topic in view of its significant relationship to profit, cost saving and market share (Devlin and Dong, 1994). Researchers of Service marketing have developed nineteen service quality models during the period 1984-2003, (Seth, Deshmukh and Vrat, 2005). These models share a single primary goal - to offer managers insight into the components of service quality for improving organizationsal offerings. The service quality model "SERVQUAL"' ranks as the most important of these models. It is based on the assumption that service quality is a function of differences (gaps) between customers' expectations and perceptions along five quality dimensions: reliability, responsiveness, tangibles, assurance and empathy. In addition, favorable customer perception of service quality will have a positive relationship with overall customer satisfaction and in turn their behavioral intention; repeat purchases and willingness to recommend the service to others (Parasuraman et al. (1985, 1988, 1991).

Consequently, providing high service quality to customers, offers a firm an opportunity to differentiate it's self and gain a competitive advantage in the market (Wang et al, 2003). In the case of Bahrain, given rapid population growth, the government is facing the daunting task of providing health care for every resident of the country. In the period 2005- 2010, population burgeoned from 724,645 people in 2005 to a current population of 1,106,509. The government of Bahrain provides free health services to all people living on the island regardless of their citizenship through an increasing number of public hospitals (9 hospitals in 2005 to 10 hospitals in 2009) and primary health care units and centers (23 centers in 2005 to 24 centers in 2009). The government is also encouraging the private health sector to establish new hospitals, and consequently the number of private hospitals has been increased from 9 in 2005 to 13 in 2009, (Ministry of Health, 2009). Facing the increasing demand for health care has not only a quantitative but also a qualitative dimension.

In this context, this paper investigates: (1) Patient expectations and perceptions toward the service quality of Bahraini hospitals. (2) The relative importance of service quality dimensions. (3) The relationship between overall service quality and overall patients' satisfaction and their willingness to recommend the services of healthcare providers to others.

2. The importance of the present study

Although many empirical studies have been performed for evaluating the quality of health services in the developed and some developing countries, limited empirical research in this area has been carried out in the Arabic countries for the last two decades. In the state of Bahrain, no attempt has been made to measure the quality of health service by empirically investigating patient expectations and perceptions of health services. This research serves Bahraini policy makers and managers keen to provide and maintain high standard of health care to the residents of the country.

3. Literature survey

Parasuraman et al. (1985, 1988, 1991) undertook a series of research projects which gave birth to the service quality model "SERVQUAL". Initially, the model was based on 10 dimensions of service quality – later reduced to 5 dimensions, encompassing:

Tangibles (physical facilities, equipment and appearance of personnel),
Reliability (ability to perform the services accurately and dependably),

Responsiveness (willingness to help customers and provide prompt services), Empathy (caring and individualized attention given to customers, which includes both access to and understanding of the customers. And
Assurance (providers' knowledge, courtesy and ability to convey trust and confidence).

The SERVQUAL instrument contains 22 pairs of Likert scale questions designed to measure customers' expectation of a service and the customers' perception of a service provided by an organization. To assess a service quality, the gap for each question is calculated based on comparing the perception score with the expectation score. The positive gap score means that customers' expectations are met or exceeded, while the negative score means the opposite.

In general, service quality, to which the health sector is no exception, is divided into two main components; namely they are,: technical and functional quality (Gronroos,1984; Parasuraman et al., 1985. Technical quality (clinical quality) is defined as the technical diagnosis and procedures (e.g., surgical skills), while functional quality refers to the manner of delivering the services to the patients (e.g. attitudes of doctors and nurses toward the patients, cleanliness of the facilities, quality of hospital food….). Because most patients lack medical expertise for evaluating the technical attributes, the service marketing approach, which focuses on functional quality perceived by patients, has been widely used to evaluate the health services, (Buttle, 1996; Dursun and Cerci, 2004).

Combined with some modification or additional operational measurements, the SERVQUAL instruments have been used to gauge service quality in a variety of service industries including, but not limited to: banking (Roig et al., 2006; Yavas, Bilgin and Shemwell, 1997), hotels (Olorunniwo et al., 2006), sport tourism (Kouthouris & Alexandris,2005), retails stores (Eastwood et al., 2005), library setting (Ho and Crowley, 2003), government local authority (Wisniewski, 2001), professional business (Accounting) (Aga and Safali, 2007), education (Arambewela and Hall, 2006), airlines (Prayag, 2007), mobile communications (Lai et al., 2007), and web portal (Kuo et al., 2005).

Regarding the health care industry Within the Arabic Gulf Region, Jabnoun and AL.Rasasi (2005) investigated the relationship between transformational leadership and service quality in six UAE hospitals. The results showed that patients were generally satisfied with the quality of services provided by their hospitals, and a positive relationship was also found between service quality and all dimensions of transformational leadership. Tangibles dimension had the lowest score of expectation of all five dimensions.

Within the context of Arabic countries, Mostafa (2005) analyzed patients' perceptions of service quality in Egypt's hospitals. The results reveal a three - factor solution inconsistent with the five- components associated with SERVQUAL. However, all 22 attributes of service quality in both expectation and perception sectors were statistically significant. Alasad and Ahmed (2003) examined satisfaction of patients with nursing care at a major teaching hospital in Jordan. Data obtained from 266 in-patients of three wards showed that patients in the surgical ward had a lower level of satisfaction than patients in the medical or gynecological wards.

With respect to the conditions of developing countries, Andaleeb (2001) proposed and tested a five dimensional instrument for assessing perception of patients availing of hospital services in Bangladesh. The results indicated that a significant relationship is found between the five factors and patients' satisfaction. The discipline factor, encompassing "tangible' and "assurance", had the greatest impact on patients' satisfaction, while the baksheeh (tips) factor had the lowest effect.

In the same direction, Baker, Akgun and Assaf (2008) used an adapted SERVQUAL scale to assess patients' attitudes toward health service in Turkey. Data collected from 472 patients revealed that patient perceived scores are higher than their expected scores for ordinary hospitals and lower than their expected scores for high- quality hospitals. Responsiveness and reliability dimensions get the lowest expected scores of all dimensions.

Based on the application of a modified SERVQUAL instrument, Choi et al. (2005) found a significant relationship between service quality dimensions and patient satisfaction in the South Korea health care system, In particular, "staff concern" followed by "convenience of the care process" and "physician concern" dimensions are the most determinants of patients satisfaction. However, Narang (2010) adopted 20- item scale that had been initially developed by Hadded et al. (1998), to measure patients' perceptions of health care services in India. The study reveals that the four factors -health personnel practices and conduct, health care delivery, access to services and, above all, adequacy of resources and services- were perceived positively by patients. Pakdil and Harwood (2005) applied SERVQUAL construct for measuring patients' satisfactions in Turkey bycalculating the gap between patients' expectations and perceptions. The study found that patients are highly satisfied with all elements of service quality; specifically, "adequate information about their surgery" and "adequate friendliness, courtesy" items. However, Robini and Mahadevappa (2006) investigated patients' satisfactions of service quality in Bangalore - based hospitals in India. Data collected from 500 patients revealed that expectations exceeded their perceptions in 22 items of service quality. The assurance dimension got the least negative score in all hospitals. In contrast, Sohail (2003) found that patients' perceptions exceeded their expectations for all items of services provided by private hospitals in Malaysia.

Karassavidou, Glaveli and Papadopoulos (2009) used a modified version of SERVQUAL instrument to investigate patients' perception of National Health system (NHS) in Macedonia, Greece. The study resulted in three factors in which patients' expectations exceeded their perceptions. The human factor proved to be the most critical dimension in as much as it registered the highest gap score of all.

Regarding the studies in developed countries, Andaleeb (1998) proposed and tested a five – factor model that influences patients' satisfaction with hospitals in Pennsylvania. The study results showed that all factors, though especially perceived competence of the hospital staff and their demeanor, significantly affect patient satisfactions.

Dean (1999) investigated the applicability of a refined SERVQUAL instrument, consisting of 15 statements, in both medical care and health care settings of Australia. The study results revealed a four- factor structure which approximates, in both environments, the dimensions identified by Parasuraman et al. studies (1988). Assurance and Empathy were the most important dimensions in the health care environment, while Reliability/ Responsiveness dimensions came first in the medical care environment.

Frimpong, Nwankwo and Dason (2010) explored patients' satisfaction with access to public and private healthcare centers in London. The results showed that public patients, as opposed to private counterparts, were dissatisfied with the service climate factors. In general, the study concluded that both public and private healthcare users faced major problems in accessing healthcare.

However, Wisniewski and Wisniewski (2005) had applied a modified SERVQUAL instrument, consisting of 19 items, for a colonoscopy clinic in Scotland. They found that although patient overall satisfaction with the services was high, improvements were needed in specific service dimensions, especially the reliability dimension.

SERVQUAL Criticisms

Despite the wide application of SERVQUAL, as an instrument for measuring service quality, it has been subjected to several criticisms regarding its conceptual and operational aspects. Parasuraman et al. (1985, 1988, 1991) proposed SERVQUAL model based on the confirmation/ disconfirmation theory (SQ = P – E). Since then, many marketing researchers have argued that neither disconfirmation theory nor expectation scores have any effect on customer satisfaction, (Carman, 1990; Cronin and Taylor, 1994; Teas, 1994; Buttle, 1996). Instead, the perception scores (SERVPERF) have been mainly recommended for measuring service quality as it has higher predictive validity of customers' satisfaction, (Cronin and Taylor, 1992; Babakus and Mangold, 1992; Cadott, Woodruff and Jenkins, 1987; Lee, Lee, & Yoo, 2000; Luk and Layton, 2004; Baumann, et al, 2007).

On the other hand, other researchers have questioned the universality and dimensionality of SERVQUAL instrument. They argued that the instrument could not be a generic measure for all service industries; instead it needs to be customized to fit the nature of specific service or nation, such as changing the wordings of some items in the instrument (Carman, 1990; Babakus and Mangold, 1992; Buttle, 1996; Mels et al., 1997; Andaleeb, 2001). To avoid such weaknesses, other researchers proposed different structural models, but most of them are based on SERVQUAL instrument, (Gronroos, 1984; Lehtinen and Lehtinen, 1985; Mels et al, 1997; Svensson, 2006). Relating to the health service, Piligrimiene and Buciuniene (2005; 132) summarized the dimensions for measuring the quality of health care proposed by various researchers. Coulthard (2004) offered a comprehensive review for the service quality researches since (1998). She concluded that further research is required to control or inhibit the conceptual, methodological and interpretative biases of SERVQUAL instrument.

Notwithstanding the criticism of the validity and reliability of SERVQUAL instrument, Buttle (1996) argued that it remains a useful instrument for measuring service quality. With respect to the health services, Babakus and Mangold (1992; 780) reached the same conclusion and underscore that

"SERVQUAL, a standard instrument for measuring functional service quality, is reliable and valid in the hospital environment and in a variety of other service industries".

4. Research Methodology

Research Hypotheses

To achieve the purpose of this study, the following hypotheses were formulated:

H1: there are no significant differences in patient perceptions of service quality dimensions, (tangibles, reliability, responsiveness, assurance and empathy) of Bahraini hospitals.
H2: there is no significant relationship between overall service quality and overall patient satisfaction of Bahraini hospitals.
H3: there is no significant relationship between overall patient satisfaction of Bahraini hospitals and propensity of patients to recommend the health services to others.

Some statistical techniques were used to analyze the data generated by the questionnaire survey, such as: descriptive analysis, factor analysis for determining the major factors underlying the service quality. To test the study hypotheses, regression and correlation analysis were employed.

Instrument design

In this study, the researcher employed to measure the perceived service quality consonant with the methodology proposed by Parasuraman et al. (1988). The instrument was first translated into Arabic language, as the majority of Bahraini citizens are native speakers of Arabic. Then, the translated version was submitted to a number of instructors of the Business and Finance College at Ahlia University of Bahrain, for revision of the wording of the questions. The researcher reviewed these modifications and, finally, an instructor in the English Department compared the original instrument with the translated Arabic version, for consistency.

Both language versions include five sections: the first section covers the demographic characteristics of the respondents. The second and third sections measure respondents' expectations and perceptions to the five dimensions of service quality. The fourth section includes five statements for estimating the relative importance of service quality dimensions. Finally, the fifth section assesses patients' evaluations of overall service quality, their satisfactions and willingness to recommend the services to others.

Sampling and Data Collection

A convenience sampling of hospital and health clinic patients was conducted during the second quarter of 2010. Administrated questionnaires were distributed personally to the samples in Manama, the capital of Bahrain. Individuals who had at least one year of health experience with the hospitals, were only intercepted by interviewers at different geographical locations, such as, hospitals, homes and business offices. 250 patients agreed to participate in the survey, fifteen questionnaires were dropped at the preliminary evaluation stage for incongruous or incomplete answers. The remaining 235 questionnaires, which represent 94% of the study samples, were considered suitable to be included in further statistical analysis.

5. Statistical Results and Discussion

Respondents' demographic Characteristics

The respondents of this study were 235 people, of whom 52.34% were male and 47.66% were female, Table 1. The majority of these respondents were young or middle aged people: 35.75 % for the 20 – 29 years of age group, 19.15 % for the group 30 – 39 years of age and 18.30 % were between 40- 49 years of age. In addition, they were highly educated people, 42.55% of them were University graduate, (BS.c degree), 24.68% for the diploma certificate level and 11.92% for the postgraduate degree. They were working in different fields, ranging from professional people to housewife 9.79% and Craftsman 2.13%. Regarding the nationality, the majority of the respondents were 80% Bahrainis out of the total sample's 235. In general, 57% of the respondents use to attend the public hospitals for medical treatment, while 43% of them attend the private hospitals.

Validity and reliability tests

For conducting Factor analysis, the entire study sample has to be first tested for their fitness to such test. Table 3, shows that the Kaiser- Meyer – Olkin (KMO) value is .958 and the Bartlet sphere test is also significant at $p <$ 0.001. These results indicate that the study sample is adequate to be used in factor analysis.

In addition, the SERVQUAL scale has to be tested for its internal consistency, thus the overall total scale of the service quality and its five dimensions in the Expectation, Perception and Gap sections were subjected to reliability assessment. The values of Cronbach's coefficient alpha for the total scale and for each dimension exceed the minimum standard (0.70) that was recommended by Churchill (1979), Table 2. The lowest value of all can be observed in the "Tangibles" dimension of gap section (.832). Based on these figures, the internal consistency among items of each dimension is good, and thus our scale can be considered quite reliable.

Table 1: Demographic Characteristics of Respondents

Characteristics	**Frequency**	**%**
Gender:		
Male	123	52.34
Female	112	47.66
Age:		
Under 20 years	27	11..49
20 – 29	84	35.75
30 – 39	45	19.15
40 – 49	43	18.30
50 – 59	28	11.91
60 years & over	8	3.40
Education:		
Secondary School & Lower	49	20.85
Diploma Level	58	24.68
University Graduate	100	42.55
Postgraduate	28	11.92
Nationality:		
Bahraini	188	80.00
Non - Bahraini	47	20.00
Occupation:		
Executive / Manager	21	8.94
Professional	60	25.53
Trade / Proprietor	15	6.38
Student	56	23.83
Craftsman	5	2.13
Retired	21	8.94
Housewife	23	9.79
Unemployment	6	2.55
Others*	28	11.91
Type of hospitals		
Private hospitals	101	43.00
Public hospitals	134	57.00
Total	**235**	**100**

* Others category includes: Teachers, clerks, sellers, and air hostess.

Table 2: Cronbach's alpha coefficient

Features	**Expectations**	**Perceptions**	**P – E**
Tangibles	.842	.868	.832
Reliability	.842	.923	.877
Responsiveness	.881	.902	.871
Assurance	.878	.911	.884
Empathy	.893	.913	.888
Total	**.961**	**.973**	**.962**

Results of Factor Analysis

Based on the procedures of Parasuraman et al. (1985, 1988, 1991), the scored gap of each item in the SERVQUAL scale was calculated by subtracting the perception score of each respondent from his/ her own expectation score for that item. In this study, the factor analysis was performed on both the SERVQUAL and the SERVPERF scale using varimax rotation. Any item in both scales that had factor loading equal or greater than .5 was retained, and any factor with eigenvalues greater than 1.0 would be included in the further analysis. In addition, items that show cross-loading greater than .5 on more than one factor were dropped since they make the interpretation of the factors difficult and less precise.

According to these procedures, the SERVQUAL scale resulted in two- factor solution which explained 62.750% of the cumulative variance in service quality. This figure is more than the 62% level reported in Parasuraman et al.'s studies, by small fraction, .750%. On the other hand, reviewing the loadings of all items in Table 3 indicates one item, No.19, is dropped, since it's loading is less than .5. In addition, Item No. 5 should be dropped since it had more than .5 loading on both factors. Consequently, the result of factor analysis on gap score revealed two factors with twenty items, which is inconsistent with the findings of Parasuraman et al.' s studies (1988, 1991).
On the other hand, factor analysis on the SERVPERF scale produced two– factor solution which explains 69.716% of the cumulative variance in service quality, Table 3. The first Factor includes the four dimensions of service quality (reliability, responsiveness, assurance and the majority items of empathy dimension), while the second factor covers only the tangible and item No. 19 of the empathy dimension. Although the results of factor analysis on both SERVQUAL and SERVPERF scales ended up with two factors, the latter scale explained more of the variance in service quality than the SERVQUAL scale. Such results support the findings of other studies (e.g. Cornin and Taylor, 1992). For this reason and others that are mentioned in the literature survey section, this study will employ the SERVPERF scale in the further analysis.

Table 3: Factor loadings for SERQUAL & SERPERF construct

Dimensions & Items	Factor loadings for SERQUAL construct		Factor loadings for SERPREF construct	
	Factor 1	Factor 2	Factor 1	Factor 2
Tangibles				
1		.806		.813
2		.857		.861
3		.586		.601
4		.747		.738
Reliability				
5	.562	.522	.726	
6	.634		.739	
7	.709		.797	
8	.722		.775	
9	.711		.762	
Responsiveness				
10	.645		.646	
11	.761		.745	
12	.767		.801	
13	.817		.800	
Assurance				
14	.775		.829	
15	.753		.785	
16	.727		.736	
17	.706		.725	
Empathy				
18	.722		.749	
19				.614
20	.752		.692	
21	.688		.734	
22	.713		.774	
Eigenvalue	12.408	1.397	14.170	1.167
Cumulative % of variance	56.400	62.750	64.411	69.716
Note SERVQUAL: KMO (Kaiser-Meyer-Olkin measure of sampling adequacy) = 0.958. Bartlett's test of Sphericity =3897.288. (P < 0.001)				
Note SERPERF: KMO (Kaiser-Meyer-Olkin measure of sampling adequacy) = 0.965. Bartlett's test of Sphericity =4965.149. (P < 0.001).				

Hypotheses Testing

Hypothesis one

For identifying the importance of service quality dimensions, patients of Bahraini hospitals were asked to allocate the 100 points over these dimensions. The respondents showed differences in their relative perceived importance of each dimension, Table 4. The reliability dimension received the highest average points .214, followed by the responsiveness dimension with .204 average points, while the assurance dimension rated at the least importance of all with .175 average points.

These results confirmed by the weighted mean scores for the five dimensions of service quality, which reflect the high perceptions of respondents to all service quality dimensions, except assurance dimension, Table 4.

On the other hand, to estimate the impact of the relative importance of the five dimensions on the patients' evaluation of overall service quality, linear regression analysis was performed, where the weighted mean of overall service quality as a dependent variable and the weighted means of service quality dimensions as the independent variables. Consequently, The value of R square (0.459) indicates that the five independent variables explain 45.9% of the variation in the dependent variable, Table 4. In addition, the results show that responsiveness dimension has the greatest impact on service quality of all with coefficient value of (.364), and empathy comes in the second position (.264), while tangible dimension ranged in the third ordered position. These findings confirms the conclusions reached by (Parasuraman et al., 1985, 1988; 1991) studies, which indicates that the reliability dimension is the most crucial factor influencing service quality.

In addition, this study does agree with the findings of other studies carried out in the other Arabic countries, regarding "responsiveness" and "empathy" dimensions (e.g. Mostafa, 2005; Alasad and Ahmmed, 2003). Based on these findings and the high score of F (45.354), the first null hypothesis is rejected.

Hypothesis two

To test this hypothesis that focuses on the relationship between overall service quality (SQ) and patients' satisfaction with the services of specific hospital (SAT), Spearman correlation analysis was performed. Positive and significant relationship between these two variables was observed (.779), and thus the null hypothesis is rejected, Table 4.

Table 4: Relative Importance of Service Quality Dimensions, customer satisfaction and behavioral intention

Factors	Average Importance	Weighted means	Beta	T	Sig
Tangible	.204	9.590	.236	4.820	.000
Reliability	.214	9.709	.193	3.871	.000
Responsiveness	.199	9.381	.364	7.086	.000
Assurance	.175	8.036	.192	3.723	.000
Empathy	.208	9.403	.264	5.116	.000
Overall perception of SQ		9.224*			
R .677 R square .459 Adjusted R square .447					
F 38.838 Significant at 0.05 level					
.*The weighted overall SERVPERF mean is calculated by multiplying the respondent's mean score for each dimension by its relative importance weight and summing the results of all dimensions.					
SQ – SAT R .779**					.000
SAT – BI R .822					.000
** Significant at the 0.01 level					

Hypothesis three

Finally, correlation analysis indicates again a positive and significant relationship between patients' satisfaction with the services of a specific hospital (SAT) and their behavior intentions (BI), (.822).

Consequently, the null hypothesis is rejected. The results of this study confirm the findings of other studies (e.g. Zeithaml, et al., 1996) indicating that a satisfied patient will engage in a positive word-of- mouth about the hospital's services.

6. Conclusion and managerial application

The study findings support the hypothesis that performance scores can provide more reliable results than gap scores. The SERQUAL scale explains 62.75% of the cumulative variance in the overall service quality, compared with 69.716% by the SERVPERF scale.

On the other hand, the results of factor analysis for SERVQUAL construct shows two factors with twenty clean items, while the SERVPERF produces also two factors but with twenty two valid items. One factor includes four dimensions of service quality (reliability, responsiveness and assurance and the majority items of empathy dimension), while the second factor covers only the tangible and item No. 19 of the empathy dimension. These findings indicate that the overall service quality of health care industry may not be a function of the five dimensions, as originally suggested by Parasuraman et al.'s studies (1985, 1988, 1991).

Regarding the importance of service quality dimensions, the study concludes that Bahraini patients rated the reliability dimension the most important of all with average points of .214, followed by responsiveness with .204 points, whereas the assurance dimension rated least important of all. Meanwhile, the results of linear regression show that the SERVPERF dimensions explains 45.9% of the variation in the overall service quality. Responsiveness is the most important influencer of overall service quality with a coefficient score, .364, followed by the empathy dimension, .264, while tangible is third.

In addition, a positive and significant relationship was found between overall service quality (OSQ) and patients' satisfaction with the service of a specific hospital (SAT) at .779. A stronger correlation was also declared between patients' satisfaction and their willingness to recommend the services of a hospital to other people (BI) at .822.
The findings of this study reflect the following managerial implications: First, systematic assessment of patients' perceived service quality and their satisfaction is an important element to design the marketing strategy for health care services over time. Such processes will enable the managers and doctors of a given hospital to identify the points of strength and weakness, relative to competitors, and consequently investing the available resources in the dimensions that improve the quality of service delivery and patient satisfaction. Second, managers and doctors of Bahraini hospitals and health care centers should work together to enhance their responses to patient's requests and enquiries, treat patients with high emotion and kindness, and improve tangible assets of the hospitals. By doing so, the hospital will make the patients satisfied with its services, and in turn improve their willingness to recommend the hospitals' services to others. Third, managers and doctors should build cultural values, renew the operational system and recruit qualified managerial and medical staff to offer an excellent and constant level of service quality over time.

Regardless of the contribution to the topic of service quality, the present study suffers two points of limitation. First, convenience sampling technique was mainly used to select the study respondents. Such procedure restricts the representation of all patients of health industry in Bahrain, and thus will affect the generalization of the study findings. Second, the study evaluated the quality of health services from the investigated patients' expectations and perceptions toward the service quality of the health sector, while providers' attitudes were not undertaken. To get a complete and accurate vision of health services in Bahrain, further empirical researches is needed to cover both patients and providers.

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