Impact of Service Quality on Patient’s Satisfaction using SERVQUAL: A comparison of Combined Military, Private and Government Hospitals of Pakistan

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Received: July 25 2013
Accepted: August 20 2013

ABSTRACT

The intent of this study is to evaluate the fundamentals of service quality in the hospitals of Pakistan i.e. combined military, public & private hospitals. Hospitals seem to increasingly focus on their strategies of service quality around the world. Service quality plays a critical role in government, private, as well as in military hospitals of Pakistan. Patients’ satisfaction is one of the most significant quality factors in healthcare departments. By reviewing the different facts of quality management, this study has strived to analyze the use of quality of service i.e. SERVQUAL model by which precision of the study was checked. Responsiveness, empathy, tangibility, reliability, and assurance were important determinants used in study. Self-administered questionnaires using five-point Likert scale were implied to collect data from respondents (N=300) in five cities of Pakistan i.e. Rawalpindi, Lahore, Kohat, Okara and Sahiwal. Regression, descriptive statistics and reliability analyses using SPSS were conducted to analyze the data. The findings specified that private and combined military hospitals were more anxious about quality of service, but, little attention has been paid on service quality dimensions by public healthcare centers.

KEYWORDS: Patients’ satisfaction, SERVQUAL, Service quality.

Article Type: Research Article

1. INTRODUCTION

The increasing trend of globalization and commercialization has changed the demand of customers, expecting high quality products and services that create competitive environment among different sectors. Organizations focus on improving product quality because it is well thought-out to gain competitive advantage and to survive in the business market. While, offering services internationally, there is a need to understand the trends and rules of the market and people around to gain competitive edge in those countries. Today, manufacturing sector implement quality management practices and gained success around the globe. These products are tangible in nature; so, these can be easily understandable due to non-elusive in nature as compared to service sector [1]. Quality is recognized as the main determinant of success, to gain high return, cost-efficient tool and for continued existence in the competitive environment prevailed in services sector [2].

In healthcare sector, patients are considered as customers and their perceptions remain significant in determining the quality of service. How can quality be measured at healthcare centers? There are various methods to measure service quality, but, SERVQUAL is the most reliable scale to assess the perceptions and expectations of customers. Servqual is a multiple-item scale for measuring consumer discernment regarding service quality. This instrument is the most efficient to improve service-quality performance, identify its effects and provide useful information regarding different levels of competitors on a single scale[3]. Now, the subject to answer the question: how much customer satisfaction is related to service quality? There is a significant relationship between customer satisfaction and service quality. The customers create perception regarding a product/service after its consumption. This perception leads to the behavior of selecting services of healthcare from different providers [4]. Excellent services attract customers resulting in their loyalty [5].

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Pakistan is a developing country with majority of the population lives in rural areas. Mostly, well-equipped hospitals are situated in big cities; so, people are deprived from health care facilities. Due to escalating trend of service quality, people got experience of different healthcare centers. Pakistan has a diversity of hospitals i.e. private, public and combined military hospitals (CMH’s). Healthcare services are much imperative as compared to other services due to their uncertain nature of the work. With a huge number of hospitals in Pakistan, the needs and requirements of the patients still need to be satisfied. Mostly, people live in rural areas having no awareness about diseases e.g. fever, tuberculosis, heart diseases and blood cancer, generated by polluted water, poor environment, and bad sanitation, provided the rationale for study. The patients have to go through many stages and face problems before admitting in the wards of hospitals for proper treatment. The patients develop perception at the end of treatment about hospital services and provided treatment.

The aim of this study is to compare the provided service quality among private, public and CMH’s. For the sake of this study, five dimensions of SERVQUAL model i.e. empathy, tangibility; reliability, assurance and responsiveness are integrated to assess the quality of service and its impact on patients’ satisfaction. No study has been found related to comparison of three types of hospitals in Pakistan.

2. LITERATURE REVIEW

2.1. Healthcare Facilities in Pakistan: A Brief Overview:

Pakistan is the 6th largest country in terms of population. Statistical Division of Pakistan (2009-10) revealed that the growth rate in Pakistan is about 2.05% with an expected population of 169.9 million people. The constitution of Pakistan states that healthcare facilities’ is the obligation of federal and provincial governments’ health departments. These departments are also liable for planning and making healthcare policies. Most of healthcare centers are situated in urban areas and in big cities, so, urban people enjoy more facilities than people of rural areas [6]. Table 1 illustrates the statistics regarding health department and describes the number of registered medical/dental practitioners in four provinces of Pakistan.

<table>
<thead>
<tr>
<th>Table 1. STATISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL NUMBER OF DOCTORS / DENTAL SURGEONS(G.P's with basic degree only)</td>
</tr>
<tr>
<td>REGISTERED UP TO 28th March, 2013(Pakistan Medical &amp; Dental Council, 2013)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Province</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab/Federal AREA</td>
<td>27786</td>
<td>22728</td>
<td>50514</td>
<td>1908</td>
<td>2448</td>
<td>4356</td>
<td>511</td>
<td>54</td>
<td>565</td>
</tr>
<tr>
<td>SINDH</td>
<td>28129</td>
<td>24718</td>
<td>52847</td>
<td>1432</td>
<td>2517</td>
<td>3949</td>
<td>284</td>
<td>22</td>
<td>306</td>
</tr>
<tr>
<td>K.P.K</td>
<td>9853</td>
<td>4537</td>
<td>14390</td>
<td>850</td>
<td>848</td>
<td>1698</td>
<td>52</td>
<td>2</td>
<td>54</td>
</tr>
<tr>
<td>BALOCHISTAN</td>
<td>2311</td>
<td>1449</td>
<td>3760</td>
<td>167</td>
<td>17</td>
<td>284</td>
<td>44</td>
<td>11</td>
<td>55</td>
</tr>
<tr>
<td>A.J.K.</td>
<td>1376</td>
<td>884</td>
<td>2260</td>
<td>126</td>
<td>93</td>
<td>219</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Foreign Nationals</td>
<td>2392</td>
<td>768</td>
<td>3160</td>
<td>309</td>
<td>105</td>
<td>414</td>
<td>98</td>
<td>8</td>
<td>106</td>
</tr>
<tr>
<td>TOTAL</td>
<td>71847</td>
<td>55084</td>
<td>126931</td>
<td>4792</td>
<td>6128</td>
<td>10920</td>
<td>992</td>
<td>98</td>
<td>1090</td>
</tr>
</tbody>
</table>

The CMHs are armed forces hospitals located in various cantonments around country and serve patients efficiently. General duty medical officers (GDMOs) carried out the administration system and specialist doctors are accountable for care and supervision of patients. CMHs are categorized into A, B and C categories according to their competencies and positions i.e. primary, secondary and tertiary care positions. Except all these amenities, people are not completely satisfied with the services of hospitals. The public hospitals provide the services at District and Tehsil level in Pakistan, controlled by district and provincial government. The private hospitals are greater in number as compared to public and CMHs. The private hospitals provide excellent services and create gap of perception between private and public hospitals.

2.2. Service Quality

Customer perception about service quality played crucial role in the accomplishment or breakdown of a product/service after utilizing that particular product/service [7]. Organizations employ strategies to enhance quality of service/product to sustain in competitive environment. Service quality is defined as inconsistency between customer perception regarding services of any organization and his expectations after using those services [8]. It is basically a condition related to product, processes and environmental services which meet up or surpass the expectations, generate elevated value and builds customer satisfaction[9]. Service quality is basically comparison
stuck between customer expectations and service performance: evaluates how much service provided is equivalent to customer expectations and ensuring those expectations on consistent basis [10].

Quality is an obscure and indefinite construct because it is intangible, so, researchers face difficulties in measurement and elucidation. The articulation of service quality is difficult for customers, so, circumvent type definitions are used to explain this concept. The determinants of this conception are ambiguous, but, it remained much important for organizations as well as for consumers. Organizations can increase their market share and return on investment by maintaining quality. Quality has a momentous connection with customer satisfaction, retention, financial performance and costs which can achieve competitive advantage for organization[11,12,13,14,15].

Measurement of service quality has also been a very essential subject. SERVQUAL is a widely used and accepted scale, applied to estimate customer perception regarding service quality. SERVQUAL was firstly introduced by Parasuraman et al. [16]. They found five gaps regarding expectations and superior quality in that service quality model which show resistance in quality. They developed 22 items scale through 3-4 interview with researchers from which five dimensions were derived which termed as;

| Tangibility: it refers to physical assessories which can be touched e.g. equipment, machinary and look of human resource as well. |
| Reliability: it refers how much staff is trustworthy regarding providing services accurately and consistently. |
| Responsiveness: it refers how much staff is willing to pay attention and help customers out. |
| Assurance: it refers to knowledge about their fields of specialization and courteousness capability to instigate trust and confidence. |
| Empathy: it refers to feel care about customers and give indivisual concentration to their customers. |

2.3. Service Quality in Healthcare Sector

Both, the service quality and patients’ satisfaction have significant consideration in healthcare organizations because this is crucial for their strategic decisions. Perception of patients about hospitals affects the profitability, as well as image extensively influenced the hospitals’ reputation, with patients’ word-of-mouth and trust [17,18]. The increased patients’ satisfaction helps hospitals’ management in terms of money and reduces time in managing patients’ complaints [19].

A research using SERVQUAL in Dhaka found that customer satisfaction is significantly positively influenced by five dimensions of SERVQUAL model [20]. She also found that tangible accessories like medical equipment, environmental situations and input competence are insignificantly associated with customer satisfaction. A study conducted in Greek on NHS hospitals, stated that perception has a direct relationship with expectation [21].

The patients’ satisfaction is effected by attitude of staff of hospital and facilities at hospital [22]. Another study used SERVQUAL scale at 12 hospitals on 500 patients in Egypt explained that there were different responses on satisfaction regarding public and private hospitals [23]. Oliveria and Ferreira [24], conducted the study using SERVQUAL in Brazilian university, argued that students show greater expectations but perceptions were not satisfactory. It was described that the functional and technical quality of cellular phones was significantly associated to consumers’ perceptions which ultimately results in quality service [25].

2.4 Customer Satisfaction

The study also focuses to shed the light on determinant of customer satisfaction. The attitude of customer satisfaction has increased in the area of service industry in the forthcoming years and satisfaction can be enhanced by improving experiences. Customer satisfaction is an estimation of the surprise inherent in a product acquirement and its utilization experience. It is influenced by expectations and disconfirmation. Expectation is a point which makes comparison between perceived and actual performance resulted in disconfirmation. If performance will exceed the expectations, it creates positive disconfirmation and it is lower than reference points which build negative disconfirmation [26]. Service quality is defined as “customers’ perception about how well a particular service meets or exceeds expectation of customers” [27]. Dissatisfaction happens when perceived quality is less than reference level and customers’ expectations are greater than providing services by organizations.

Some researchers found that satisfaction is cognitive and psychological insight about the function of any product/service. Customer satisfaction is a development & assembles customers’ predilections and hopes to develop customers’ delivered value [28]. In healthcare sector, patients are customers, thus; satisfaction is a tool to evaluate the success of services delivered by healthcare organizations. It is difficult to measure the satisfaction in clinical perspectives. Patients are the main concern of healthcare institutions, but, managers pay less attention to patients in developing countries. There are various factors affecting patients’ satisfaction such as behavior of staff & doctors, infrastructure of departments, tangible facilities, and emotional favor, and to understand their preferences [29].
It has been found customer satisfaction with hospital services depends upon accuracy, timeliness and completeness. So, hospitals should raise the voice of patients for their satisfaction and successful responsiveness [30]. It has been reported that the determinants of conventional facilities, convenience, attitude of employees, and atmosphere affect the customer satisfaction level [31]. Naik et al. [32], using SERVQUAL, found that service quality has positive impact on customer satisfaction in retail sector of India and these determinants play a central role in customer satisfaction. Reliability is defined as employee competencies to give services at predetermined time and keeping records of patients’ files and it is positively related to patients’ satisfaction. The availability of well-equipped labs, pharmacy as well as communication resources are also crucial to facilitate people [33]. Assurance is the courtesy, knowledge of employees and their capability to encourage confidence and trust. It also includes skills of doctors in their specialization fields; how much they are competent and knowledgeable? Accuracy in medical test results, labs machinery, qualification of staff & nurses, and particular interest in emergency patients are determinants of assurance.

3. Research Question and Objectives

The study struggled to address the questions: how much patients are satisfied with the staff and doctors’ attention given by healthcare departments? Are tangible facilities sufficient to meet the requirements of patients? Does the rate of responsiveness play its role to amplify the service quality of hospitals? In which hospital, the knowledge and courtesy of staff is superior, either in private, public or CMHs?

The Objectives of the study are:
- To test the dimensions of SERVQUAL model in CMH’s, government and private hospitals of Pakistan.
- To find out the discrepancy of service quality providing by different healthcare organizations.
- To assess the patients’ involvement and their ultimate satisfaction by experiencing divergent providers of healthcare services.
- Suggest guidelines to improve service quality in hospitals by applying different strategies.

4. Theoretical Framework and Hypotheses Development

4.1. Research Model

Figure 4.1. Schematic Diagram

4.2. Hypotheses Development

H1: There is a significant relationship between empathy and patients’ satisfaction in hospitals of Pakistan.
H2: There is a significant relationship between reliability and patient’s satisfaction in hospitals of Pakistan.
H3: There is a significant relationship between tangibility and patient’s satisfaction in hospitals of Pakistan.
H4: There is a significant relationship between responsiveness and patient’s satisfaction in hospitals of Pakistan.
H5: There is a significant relationship between assurance and patients’ satisfaction in hospitals of Pakistan.
5. METHODOLOGICAL DESIGN

5.1. Data Collection and Analysis

Data was collected using non-probability sampling from patients (N=300) who have experience of three types of hospitals. The study used close-ended questionnaire using 5-point likert scale in five cities of Pakistan i.e. Lahore, Rawalpindi, Kohat, Okara & Sahiwal. Questionnaires were designed separately for three types of hospitals i.e. private, public and CMH’s. CMH’s were selected from two cities of Punjab province i.e. Rawalpindi & Okara and one city of KPK province i.e. Kohat. Data was collected from two private hospitals i.e. Ghruki Trust Teaching Hospital, Lahore & Sherazi Polyclinic, Sahiwal. The respondents having experience of public hospitals were approached in District Headquarter Hospital (DHQ), Sahiwal. The collected data from all three groups were analyzed using descriptive statistics, reliability analysis and regression analysis.

5.2. Findings

All the variables had Cronbach’s Alpha greater than 0.70 which showed that scale was reliable. The tangibility (α=.734), reliability (α=.756), assurance (α=.730), empathy (α=.801), responsiveness (α=.747), and customer satisfaction (α=.824) have the valid and acceptable reliability values. The results of adjusted R² reveal that there is a significant relationship between variables. The results regarding CMH’s (Adj. R²=.737, F=84.017, Durbin-Watson=1.667 p=.000), private hospitals (Adj. R²=.730, F=31.504, Durbin-Watson=1.893, p=.000) and public hospitals (Adj. R²=.726, F=65.576, Durbin-Watson=1.841, p=.000) shows that patients’ satisfaction is influenced by 73.7%, 73.0% and 72.6% in CMH’s, private and public hospitals respectively due to empathy, tangibility, reliability, assurance and responsiveness.

Figure 5.1 Comparison of Three Types of Hospitals
In case of empathy, the patients are more satisfied with private hospitals with mean value of 4.0, followed by CMHs and public hospitals with mean values of 2.8 and 2.2 respectively. The private and CMHs (Mean=3.9) have almost same influence in case of empathy, while the public hospitals have mean value of 2.4. The people are more satisfied with responsiveness of the private hospitals (Mean=3.9), while little difference have been observed for CMHs (Mean=3.8). The people are dissatisfied with public hospitals because the staff of these hospitals respond less to patients (Mean=2.0). The public hospitals were also observed not to provide good services in regarding assurance and reliability with mean values of 2.0 & 2.2 respectively. The private hospitals are more reliable (PMean=3.75 &MMean=3.60) than CMH’s, whereas, people responded that CMHs provide more assurance (MMean=3.90 &PMean=3.80) about treatment and services to patients as compared to private hospitals.

5.3. Summary of Hypotheses

The coefficient of correlation results about the empathy show that ((CMH (β=.208, t=4.15, p<.05), private (β=.290, t=3.45, p<.05)&public (β=.416, t=4.58, p<.05)) the variables are significantly related to each other. The descriptive statistics also supports the H1. In case of empathy, the results of coefficients and mean average values ((CMH β=.321, t=3.25, p<.05), private (β=.190, t=2.85, p<.05) & public (β=.305, t=4.76, p<.05)) indicate that the coefficients are statistically significantly different to zero and t values of tangibility are also significant and it also provides the basis for acceptance of H2 which shows that tangibility is also associated with patients’ satisfaction. The results about assurance ((CMH β=.152, t=3.45, p<.05), private (β=.152, t=3.19, p<.05) & public (β=.367, t=4.17, p<.05)) of three types of hospitals provide basis for acceptance of H3. The responsiveness was also positively associated with patients’ satisfaction ((CMH β=.334, t=2.97, p<.05), private (β=.250, t=4.27, p<.05) & public (β=.316, t=4.15, p<.05)), so, the study accepts H4. The reliability also contributes to patients in healthcare services of Pakistan. The results of analysis ((CMH β=.317, t=5.25, p<.05), private (β=.390, t=3.64, p<.05) & public (β=.526, t=4.78, p<.05)) builds foundation for acceptance of H5.

6. DISCUSSION AND IMPLICATIONS

After testing of hypothesis and analyses, it is concluded that service quality of CMH’s and private hospitals is more satisfactory than public hospitals. People consider CMH’s and private hospitals as a source to meet the requirements of patients due to timely treatment and other facilities. The patients are worried about the condition of public hospitals. The patients are dissatisfied with behavior of doctors in public hospitals. The environment at public hospitals was also not hygienic and healthy; so, government should improve the conditions of these hospitals. In summary, the condition of public hospitals is very pitiful. The people feel satisfied with services of private hospitals but people also express their problems regarding non-affordability of high charges of these hospitals. The findings of study are important for policy makers while making allocation of funds in hospitals. The management of government and private hospitals should take steps to improve their technological equipment, processes and communication system, and give high quality services to patients. Management could also focus on recruitment of skilled, experienced and effective staff. Improvements in government hospitals are necessary due to lack of satisfaction. The doctors at CMH’s are busy in seminar and other military related activities, but people are satisfied with overall services at CMH’s.
7. Limitations
The restricted area and insufficient sample size compels the limitations on generalizability of results. The other factors i.e. trust and word-of-mouth can also be used to better examine the problem.

Acknowledgement
The authors thank to Maj. Dr. Mudassar Noor for helping in collection of data. They are also grateful to Dr. Hafiz Mohammad Arshad for his insight and comments.

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