Evaluating Patients’ Satisfaction Using SERVQUAL Model: A Case of Ayub Medical Complex, Pakistan

BY

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Abstract

Purpose – A field study was conducted in Ayub Teaching Hospital in out-patients department, to evaluate the level of service quality offered by the healthcare with a view to identify the relationship between service quality dimensions and overall service quality. The researchers used the SERVQUAL instrument for the purpose of assessing the service quality offered by the healthcare attributes to the out-patient department in Ayub Teaching Hospital.

Design - methodology/approach – A sample of 246 patients in out-patients departments participated in the questionnaire survey. Descriptive, regression and correlation statistical techniques were used to identified the relationship between service quality (SQ) dimensions, overall perceived patients’ satisfaction (SAT).

Findings – The study results show that there exists gap between patients’ expectation and actual services offered by the healthcare. The results shows that there exists patients’ dissatisfaction in three dimensions which are; Tangibles, Reliability, Assurance while patients’ satisfaction in two dimensions which are Responsiveness and Empathy.

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.

Responsiveness had most influence; followed by empathy, tangibles, assurance; and finally reliability. The results of this study further demonstrate that service quality can be assessed in diverse service settings such as hospital out-patient departments. SERVQUAL is robust enough to capture the critical elements used to assess overall service quality. The study was limited in its external validity and prediction was constrained due to the nature of the data collected, i.e. cross-sectional design. This study also chose to focus on one outcome variable, i.e. overall service quality. Other critical variables might be reasonably assessed, e.g., customer satisfaction, loyalty intentions, firm performance.

Keywords: Service Quality, Disconfirmation, SERVQUAL, Responsiveness, Thailand, Health services sector

Abstract

This study will be conducted in Ayub Teaching Hospital, Abbottabad to evaluate patients’ satisfaction using SERVQUAL model. A field study was conducted in Ayub Teaching Hospital in out-patients department, Abbottabad. The researchers used the SERVQUAL instrument for the purpose of assessing the service quality offered by the healthcare attributes to the out-patient department in Ayub Teaching Hospital. This paper exams the level of service quality offered by healthcare to its patients. In addition to that the relationship between service quality dimensions and patients’ satisfaction was assessed in order to find out the service quality gaps. The data collected were analyzed to find out the overall service quality gaps.

SERVQUAL model presents the dimensions of perceived service quality. Initially these dimensions were reliability, responsiveness, customization, competence, access, courtesy, security, tangibles, communication and understanding/knowing the consumer. Later these dimensions were reduced to five dimensions that is responsiveness, assurance, empathy, tangibles and reliability. Furthermore each of these dimensions will be assessed in order to find out the impact on the patients’ satisfaction. Results shows the service quality gaps. The patients are mostly satisfied with services offered by Ayub Teaching Hospital. Whereas areas such as visual appearance of physical facilities, personal attention to individual patients are the factors that need improvement. Overall gap
scores shows the room of improvement which can be address to further increase the patients’ satisfaction.

**Key words:**
Patients, Satisfaction; SERVQUAL; Patients expectation; Patients perception; Ayub Medical Complex.

**Introduction**

Over the past few decades the importance of patients’ satisfaction is widely recognized, Woodside et al. (1990) highlighted the importance of patients’ satisfaction as very basic yet important requirement for healthcare. Patients’ satisfaction is explained as pleasure with the services offered by healthcare, Sixam et al., (1998). While Parasuraman et al., (1981) defined it as patients’ feelings related to consumption of health services and its outcomes, thus making patients’ satisfaction as cognitive construct. Sardana (2003) categorized patients’ satisfaction into five dimensions: physician care, nursing care, supportive staff behavior, convenient visiting hours and availability of emergency aid. Furthermore studies conducted by Calnan, (1988) presented view that patients’ satisfaction leads towards patients’ loyalty with healthcare as well retention. Moreover Kotler (2003) presents view that patients’ satisfaction is feeling of pleasure or displeasure regarding the services offered by healthcare by comparing them with his or her expectation. Furthermore number of studies were conducted on patients’ satisfaction and comes up with various factors that contributes towards patients’ satisfaction such as Peprah (2014), identifies attitude of medical staff, prompt services, share of information with patients and latest equipment availability as well usage.
Service quality plays a vital role in terms of cost, profit and gaining market share (Devlin and Dong, 1994). Furthermore over the period of time different models were presented to measure service quality (Seth, Deshmukh and Vrat, 2005). All these models with one aim that is to providemanagers the access to the components of service quality for the purpose of improving performance. Out of all these models SERVQUAL is the most important and high rated model. This model present the view that service quality is a gap between consumers’ expectations and perception with five dimensions that is reliability, responsiveness, tangibles, assurance and empathy (Parasuraman et al., 1985, 1988, 1991).

The objective of this study is to access patients’ satisfaction using SERVQUAL model at Ayub Medical Complex, in Abbottabad. The findings of the study will be significant for stakeholders; from hospital management aspect it can be used for the purpose of reengineering so to bring improvement in the services offered to the patients. It will also be useful for government for strengthen the healthcare services. Also, this study will be very useful to the future researchers who want to do research in similar field.

**Literature Review: SERVQUAL: A Tool for Measuring Service Quality**

Currently, the role of service quality is widely recognized as being a critical determinant for the success and survival of an organization in competitive environment. One of the fastest growing in the service sector is the health care industry (Zaim, Bayyurt & Zaim, 2010). In this study, we are specially focusing on private hospital in Thailand as it is one of the parts of health care system. During the recent decade, the number of private hospital providing health care service in Thailand has been ever increasingly growing. Based on the 2010 statistics issued by the Ministry of Public Health of Thailand, 270 private hospitals are active in the Thai health sector.

According to the social security office (SSO), in 2010, the total medical service utilization rates for private hospitals outpatients were 2.77 visits per person per year. Furthermore, quality of care perceptions vary based on type of provider and patient payment status. For example, patients under the social security scheme, who are paid for on a capitation basis, consistently gave lower ratings to certain aspects of outpatient care than other patients (Tangcharoensathienm Bennett, Khongswatt, Supacutikul & Mills, 1999). The success of private hospitals depends on patients’ perceptions or judgment on the quality of products / services provides by
service personnel in hospitals and service quality is the measure of how well the services delivered meet patients’ expectations. 

Parasuraman et al., (1985) presented the view about service quality in terms of differences between customer expectation and perceived services. In order to offer the services that achieve patients’ satisfaction it needs identifying of the patients’ needs and expectation as well assigning priorities (Parasuraman et al., 1985, 1988). Originally the SERVQUAL instrument consists of twenty-two items with Likert scale. The items were developed against five service quality dimensions, that is:

(i) Tangible: it refers to the appearance of physical facilities, personnel and equipment.
(ii) Reliability: Refers to the ability to offer the services as promised by healthcare dependably and accurately.
(iii) Responsiveness: Refers to for willingness for helping the patients by providing prompt service.
(iv) Assurance: Refers to possession of knowledge, courtesy shown by staff and their role in building trust and confidence with customers, and
(v) Empathy: Refers to the care and attention given to customers.

Above statements were used in two different ways; First it is used to measures the expectations of customers. Then same statements used to measures the perceived level of service offered by the organization. The twenty-two items are designed in terms service quality five dimensions. Likert scale is used to measure (Strongly agree to strongly disagree) (Parasuraman et al., 1985, 1988). Furthermore when expectations are met or exceeded it results in satisfaction. Whereas when expectation are not met by healthcare it results in dissatisfaction. Addition to that once the data is acquired the gap score is calculated minus expectation score. When the gap score is positive it means that expectations has met or exceeded, whereas the negative score reflect the dissatisfaction. Gap score can be calculated individually and then aggregated to find out the overall gap score of each dimension. SERVQUAL allows the opportunity to identify the service gaps for dimensions (Parasuraman et al., 1985). Furthermore Accounts Commission for Scotland (1999a) presented the view that the SERVQUAL model can be adopted to find out following aspects:

(i) Assessing current service quality
(ii) Performance measures
(iii) Identifying needs and expectations of customers
(iv) Evaluating the improvement steps

In healthcare variety of studies adopted the SERVQUAL model to assess various healthcare related services. Such as (Bowers et al., 1994), about acute services offered by healthcare; (McAlexander et al., 1994); regarding the services offered by AIDS related institutes; (Fusilier and Simpson, 1995); about health services offered at state owned universities; (Anderson, 1995) study on physicians services offered to patients; (Taner and Antony, 2006) study on healthcare services; Furthermore Buttle (1994) presented the advantages of SERVQUAL model these are as follow:

(i) SERVQUAL is standard tool for assessing service quality;
(ii) The model reveals valid results for many studies;
(iii) The model is known for its reliability;
(iv) The model is user friendly, customers can easily and quickly fill the instrument; and
(v) Easy to analyze and interpret.

Service quality needs to focus on customers’ needs as each customer has its own needs in comparison from management point of view. Furthermore Parasuraman, Zeithaml and Berry, (1991), suggested that service quality is an external perception that is based on customers’ expectations.

**Service quality in hospitals sector**

The main purpose of the SERVQUAL is to measure the result of patients’ expectation and perception regarding on particular service sector (Haque, Sarwar, Yasmin, & Nuruzzaman, 2012). Many researchers have applied SERVQUAL to assess perceived service quality have been undertaken in the hospital sector in different countries (Al-Hawary, 2012; Zarei et al., 2012; Butt & Run, 2010; Suki, Lian, & Suki, 2011; Norazah, Jennifer, & Norbayah, 2011; Irfan & Ijaz, 2011; Ahmed & Samreen, 2011; Brahmbahtt, Baser, & Joshi, 2011; Haque et al., 2012). Al-Hawary (2012) studied to health care services quality of private hospitals in Jordan and Saudi Arabia found that tangibles and accessibility were better provided in Saudi Arabia hospitals. Ramez (2012) found that patients rated the reliability dimension most important, the assurance dimension least important. The study also reported a significant relationship between service quality and overall satisfaction with the service. Abu-Kharmeh (2012) found that among the service
quality dimensions, responsiveness, assurance, tangibles, empathy, and reliability were ranked in order of importance respectively. In another study, tangibles were found to be perceived better in the hospitals in Jordan. Zarei et al. (2012) studied service quality in private hospitals of Iran, evaluating the service quality from the patients. They found that the highest expectations and perceptions were related to the tangibles dimension and the lowest expectation and perception related to the empathy dimension. Butt and Run (2010) found that the highest and lowest expectations and perceptions gap of service quality was reported in the tangibles dimension as it relates to the physical delivery of care at private hospitals in Malaysia. Suki, et al. (2011) indicated that patients’ expectations exceed perceptions of private health care setting in Malaysia, as they felt that a waiting time of more than an hour to receive the service was excessive and that the health care provider did not respond fast enough when there were problems. Norazah, et al. (2011) studied patients’ perceptions and expectations in a private health care setting in the Klang Valley Region of Malaysia. The results revealed that the customers’ perceptions did not exceed their expectations, as they were dissatisfied with the waiting time of more than an hour to receive the service and the healthcare provider did not respond fast enough when there was a problem. Irfan and Ijaz (2011) found that private hospitals in Pakistan were delivering better service quality as compared to public hospitals; and that doctors, nurses, and support staff provided care to the patients, which involved providing a clean and healthy environment, available medical tests and pharmacy facilities within the hospital, sterilized equipment, and efficiently attending to patient calls. Ahmed and Samreen (2011) studied the private hospital of Karachi in Pakistan and found that the factors reliability & responsiveness, feedback and guidance, and affordability greatly influence patients’ satisfaction. They recommend to focus on the waiting time of the patients and make sure of the availability of the doctors at the appointed time.

Objectives

The following are the objectives of study these are based on the literature findings, the following objectives were formulated.

1. To conduct service gap analysis using SERVQUAL approach for Ayub Teaching Hospital.

2. To present the suggestions to overcome weakness and strengthen the strengths.

Hypotheses
The following are the hypothesis that are formed based on above objectives of study.

**H1:** There exists no service quality gap in the perceived and the actual quality of services in Ayub Teaching Hospital as reported by the patients’.

**Ho:** There exists a service quality gap in the perceived and the actual quality of services in Ayub Teaching Hospital as reported by the patients’.

**Research Instrument**

**Method**
A cross-sectional study was conducted between August and September 2011 in Bangkok, the capital of Thailand.

**Survey instrument**
The study questionnaire was composed of 2 parts; the first part assessed demographic characteristics of the outpatient, such as gender, age, and education. In the second part, the SERVQUAL questionnaire was used for assessing the patients’ expectations and perception of service quality which included 21 items representing 5 dimensions: tangibles (5 items), reliability (5 items), responsiveness (3 items), assurance (4 items) and empathy (4 items). The SERVQUAL scale was translated into the Thai and back-translated into English from Parasuraman et al. (1991). A 7-point Likert-type scale was used, ranging from strongly disagree (1) to strongly agree (7) to access the level of expectations and perceptions with regard to out-patients service quality. The final questionnaire after scale psychometrics were performed resulted in a 11-item service quality assessment scale (also, for further details, see the discussion below under —Measurement Model ).

The five dimensions of SERVQUAL as proposed by Parasuraman et al. (1988) were used and modified in this study. SERVQUAL is one of the most popular and widely used tool for measuring service quality. The instrument consists of 22 structured and paired questions developed to analysicustomers’ expectations regarding the service quality and the customers’ perceptions of what it is actually being offered or delivered. A sevenpoint Likert-type scale is used in this study that is —strongly disagree to —strongly agree . Content validity was checked carefully by discussion with supervisor. A pre-test was then conducted in Ayub Teaching Hospitalwith a group of patients, and based on pre-test small adjustments was made in the scale in order to ensure effective results.
Methodology

Research was descriptive in nature and was based upon the primary data collected through standardized questionnaire with small modifications to fit the scope of study. The questionnaire was personally administered on a sample of 246 with a sampling technique of purposive random sampling in Ayub Teaching Hospital in Abbottabad. Data was collected in two parts, the first part consists of 22 items categorize in five dimensions which measures patients’ expectation regarding the service quality. While in second part the perception of patients’ were recorded using 22 set of questions categorized in five dimensions. Here, patients’ were asked to evaluate the statements with regard to the hospital first regarding their expectation and then their perception related to the service quality at Ayub Teaching Hospital. Pilot study was conducted in which 30 patients were given questionnaire. Each patient was brief about each question so to minimize the chances of wrong interpretation as well biased views. The analysis was performed using SPSS (Statistical Package for Social Science) software, version 20. Sample size was calculated using following formula.

\[ n = \frac{Z^2pq}{d^2} \]

Here;

\[ Z = 1.96, \]
\[ p = 0.20, \]
\[ q = 0.80, \]
\[ d = 0.05, \]

\[ n = \frac{(1.96)^2 (0.20)(0.80)}{(0.05)^2} \]

\[ n = 245.8624 \]

Hence

\[ n = 246 \]
Sample

The sample was drawn from the patients visiting Ayub Teaching Hospital in outpatient department (OPD) from 9 am to 1 pm having 18 years or above age. Purposive random sampling technique was used to gather responses from patients’. A total of 256 questionnaires was distributed and 114 complete and useful questionnaire was obtained.

Theoretical Framework

There are five gaps identified in the service quality concept, which are shown in Figure 1. The model was proposed by Parasuraman et al. (1988) Othman and Owen (2001, 2002) and Jabnoun and Al-Tamimi (2003).

![Figure 1: Hospital Service Quality Measurement](HOSQUAL)

Analysis

Analysis is categorized on the basis of five dimensions of SERVQUAL, each dimension items perceived score followed by actual score is presented in separate table and gap score is revealed. The detail discussion of each dimension is as given below;

Figure Structural Model Testing of Service Quality:
Overall Perceived Patients’ Satisfaction

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.724a</td>
<td>.525</td>
<td>.502</td>
<td>.12265</td>
</tr>
</tbody>
</table>

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

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles Gap</td>
<td>114</td>
<td>.38</td>
<td>1.00</td>
<td>.5789</td>
<td>.22389</td>
</tr>
<tr>
<td>Reliability Gap</td>
<td>114</td>
<td>.00</td>
<td>1.90</td>
<td>.9947</td>
<td>.63145</td>
</tr>
<tr>
<td>Responsiveness Gap</td>
<td>114</td>
<td>-.13</td>
<td>.38</td>
<td>-.6776</td>
<td>.23862</td>
</tr>
<tr>
<td>Assurance Gap</td>
<td>114</td>
<td>-.13</td>
<td>.50</td>
<td>.2237</td>
<td>.23250</td>
</tr>
</tbody>
</table>
### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>4.237</td>
<td>.233</td>
<td>18.207</td>
<td>.000</td>
</tr>
<tr>
<td>Tangibles E</td>
<td>.006</td>
<td>.029</td>
<td>.019</td>
<td>.194</td>
</tr>
<tr>
<td>Reliability E</td>
<td>.111</td>
<td>.033</td>
<td>.312</td>
<td>3.397</td>
</tr>
<tr>
<td>Responsiveness E</td>
<td>.428</td>
<td>.067</td>
<td>.661</td>
<td>6.403</td>
</tr>
<tr>
<td>Assurance E</td>
<td>-.224</td>
<td>.042</td>
<td>-.580</td>
<td>-5.320</td>
</tr>
<tr>
<td>Empathy E</td>
<td>-.131</td>
<td>.021</td>
<td>-.560</td>
<td>-6.097</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Overall Perceived Service Quality

### Correlations

<table>
<thead>
<tr>
<th></th>
<th>Tangibles E</th>
<th>Reliability E</th>
<th>Responsiveness E</th>
<th>Assurance E</th>
<th>Empathy E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>1</td>
<td>.595&quot;</td>
<td>-.016</td>
<td>.295&quot;</td>
<td>- .617&quot;</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.868</td>
<td>.001</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>1</td>
<td>-.134</td>
<td>.276&quot;</td>
<td>- .501&quot;</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.155</td>
<td>.003</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>1</td>
<td>.685&quot;</td>
<td>.262&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.005</td>
<td>.005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>1</td>
<td>.041</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.665</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>114</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Descriptive Statistics

Tangibles

The tangible dimensions reveals the following results. Which are as discussed below;

Table 1: Tangibles

<table>
<thead>
<tr>
<th>Items</th>
<th>E Score</th>
<th>A Score</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ATH should have up-to-date equipment.</td>
<td>5.3684</td>
<td>3.2105</td>
<td>2.1534</td>
</tr>
<tr>
<td>2 ATH physical facilities should be visually appealing.</td>
<td>4.3684</td>
<td>4.6316</td>
<td>-0.2632</td>
</tr>
<tr>
<td>3 ATH employees should be well dressed and appear neat.</td>
<td>6.2105</td>
<td>6.0000</td>
<td>0.2105</td>
</tr>
<tr>
<td>4 The appearance of the physical facilities of ATH should be in</td>
<td>6.0000</td>
<td>3.4737</td>
<td>2.5263</td>
</tr>
<tr>
<td>keeping with the type of services provided.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tangibles dimension of SERQUAL consists of four items. Patients are not satisfied with visually appealing of the physical facilities as negative gap score (2.1534) was revealed. Patients are satisfied with medical equipment as the gap score (-0.2632) which is more than they had expected from health care. Addition to that patients are not satisfied with the employees dressing and appearances as the gap score reveals (0.2105) score. The last item in this dimension reveals gap score (2.5263) which means health care has not match their expectation and therefore results in dissatisfaction.

Reliability

The reliability dimensions reveals the following results. Which are as discussed below;

Table 2: Reliability
Reliability dimension of SERQUAL consists of five items. Patients’ are not satisfied regarding the commitment of timing that ATH had made as a gap of 3.1053 was revealed. Patients’ are dissatisfied regarding the ATH approach for handling patients’ problems as a gap score of 2.2632 was revealed. Patients’ response regarding the dependence over ATH reveals a gap score of 2.6842 which means patients’ are not satisfied. Patients’ shows dissatisfaction regarding the commitment of services and timing as a gap score of 1.5263 was revealed. Patients’ shows dissatisfaction regarding the records accuracy as a gap score of 0.3685 was revealed.

**Responsiveness**

The responsiveness dimensions reveals the following results. Which are as discussed below;

**Table 3: Responsiveness**

<table>
<thead>
<tr>
<th>Items</th>
<th>P Score</th>
<th>A score</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 ATH does not tell customers exactly when services will be performed.</td>
<td>2.0526</td>
<td>2.7368</td>
<td>-0.6842</td>
</tr>
<tr>
<td>11 You do not receive prompt service from ATH’s employees.</td>
<td>1.6842</td>
<td>3.7895</td>
<td>-2.1053</td>
</tr>
<tr>
<td>12 Employees of ATH are not always willing to help customers.</td>
<td>1.7368</td>
<td>2.3158</td>
<td>-0.579</td>
</tr>
<tr>
<td>13 Employees of ATH are too busy to respond to customer requests promptly.</td>
<td>3.7895</td>
<td>5.8421</td>
<td>-2.0526</td>
</tr>
</tbody>
</table>

Responsiveness dimension of SERVQUAL consists of four items. Patients’ are satisfied regarding the information ATH provide about the date and time of delivery of services as a negative gap score (-0.6842) revealed. Patients’ are satisfied with the prompt services as a negative gap score of (-2.1053) revealed. Patients’ are satisfied with the response of ATH employees as negative response (-0.579) were revealed. Patients’ are also satisfied regarding the prompt response from ATH employees as negative gap score (-2.0526) was revealed.

**Assurance**

The assurance dimensions reveals the following results. Which are as discussed below;
Table 4: Assurance

<table>
<thead>
<tr>
<th>Items</th>
<th>P Score</th>
<th>A Score</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 You can trust employees of ATH.</td>
<td>6.4737</td>
<td>5.6842</td>
<td>0.7895</td>
</tr>
<tr>
<td>15 You feel safe in your transactions with ATH’s employees.</td>
<td>6.2632</td>
<td>5.7895</td>
<td>0.4737</td>
</tr>
<tr>
<td>16 Employees of ATH are polite.</td>
<td>6.3158</td>
<td>6.1053</td>
<td>0.2105</td>
</tr>
<tr>
<td>17 Employees get adequate support from ATH to do their jobs well.</td>
<td>6.1579</td>
<td>5.8421</td>
<td>0.3158</td>
</tr>
</tbody>
</table>

Assurance dimension consists of four items. Patients’ express their dissatisfaction in trusting ATH employees as a positive gap score (+0.7895) were revealed. Patients’ feel insecure while doing transactions with ATH employees as positive gap score (+0.4737) were revealed. Patients’ are dissatisfied regarding the behavior of ATH staff as positive gap score (+0.2105) were revealed. Patients expressed dissatisfaction regarding ATH employees’ coordination to deliver services as positive gap score (+0.31582) were revealed.

**Empathy**

The empathy dimensions reveals the following results. Which are as discussed below;

Table 5: Empathy

<table>
<thead>
<tr>
<th>Items</th>
<th>P Score</th>
<th>A score</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 ATH does not give you individual attention.</td>
<td>2.1053</td>
<td>2.2632</td>
<td>-0.1579</td>
</tr>
<tr>
<td>19 Employees of ATH do not give you personal attention.</td>
<td>2.7895</td>
<td>2.5789</td>
<td>0.2106</td>
</tr>
<tr>
<td>20 Employees of ATH do not know what your needs are.</td>
<td>2.0000</td>
<td>3.3684</td>
<td>-1.3684</td>
</tr>
<tr>
<td>21 ATH does not have your best interests at heart.</td>
<td>2.8596</td>
<td>4.1579</td>
<td>-1.2983</td>
</tr>
<tr>
<td>22 ATH does not have operating hours convenient to all their customers.</td>
<td>3.3684</td>
<td>2.3158</td>
<td>1.0526</td>
</tr>
</tbody>
</table>

Empathy dimension consists of five items. Patients shows satisfaction regarding the individual attention given by ATH staff as negative gap score (-0.1579) were revealed from analysis. Patients’ shows dissatisfaction regarding the personal attention given by staff as positive gap score (+0.2106) were revealed. Patients’ are satisfied regarding the ATH staff attention towards patients’ needs as negative gap score (-1.3684) were revealed. Patients’ are dissatisfied regarding ATH attitude regarding patients’ interest as results shows negative gap (-1.2983) were revealed. Patients’ shows dissatisfaction regarding the operating hours as negative gap score (1.0526) were revealed.

**Findings**
Based on above findings it is concluded that H1 is rejected and Ho is accepted.

**Suggestions**

SERVQUAL analysis reveals the service quality gaps in ATH both the negative as well the positive. Suggestions for each dimension is as given below;

**Tangibles**

ATH needs to invest in medical equipment, ATH employees’ needs to be train regarding their dressing and appearance. The physical facilities appearance needs to be revealed to give a pleasant look.

**Reliability**

ATH management and staff needs to pay attention regarding the commitment of services, they need proper planning and management of services. They need to develop strong relationship with patients by offering quality services at a given time. This will also help ATH to develop strong image in public. ATH also needs to maintain their record effectively, use of soft wares to manage patients’ records could be solution to this problem.

**Responsiveness**

Responsiveness dimensions results shows satisfaction, however this dimension can be further improved by increasing the flow of information from staff to patients’ and giving training to staff for patients’ handling for more effective services.

**Assurance**

ATH needs to develop customers’ trust by offering quality of services. ATH staff needs to be train so they can more effectively coordinate to produce quality services at right time.

**Empathy**

ATH management needs to train their staff so they can pay more attention to patients and better handling of their concerns as well management of ATH needs to revised the operating timing so maximum patients’ can benefits from the health care.

**Limitations and Future Recommendations**
The findings of this study are limited to the Ayub Teaching Hospital in Abbottabad region. It may not be generalizable to any other area. The following are the recommendations for future research scholars who wants to do research in the above area;

1- Comparative analysis between hospitals can be performed to identify service quality gaps and based on those results suggestions can be presented.
2- Specific department wise research can be taken place using SERVQUAL model to better understand service quality gaps department wise.
3- More analysis techniques can be applied to further develop the relationships between dimensions and patients’ satisfaction.

References


**Appendix I.**

**22 statements of the SERVQUAL instrument**

**DIRECTIONS:** This survey deals with your opinions of——— services. Please show the extent to which you think firms offering ———— services should possess the features described by each statement. Do this by picking one of the seven numbers next to each statement. If you
strongly agree that these firms should possess a feature, circle the number 7. If you strongly disagree that these firms should possess a feature, circle 1. If your feelings are not strong, circle one of the numbers in the middle. There are no right or wrong answers. All we are interested in is a number that best shows your expectations about firms offering services.

E1. They should have up-to-date equipment.
E2. Their physical facilities should be visually appealing.
E3. Their employees should be well dressed and appear neat.
E4. The appearance of the physical facilities of these firms should be in keeping with the type of services provided.
E5. When these firms promise to do something by a certain time, they should do so.
E6. When customers have problems, these firms should be sympathetic and reassuring.
E7. These firms should be dependable.
E8. They should provide their services at the time they promise to do so.
E9. They should keep their records accurately.
E10. They shouldn't be expected to tell customers exactly when services will be performed. (-)
E11. It is not realistic for customers to expect prompt service from employees of these firms. (-)
E12. Their employees don't always have to be willing to help customers. (-)
E13. It is okay if they are too busy to respond to customer requests promptly. (-)
E14. Customers should be able to trust employees of these firms.
E15. Customers should be able to feel safe in their transactions with these firms' employees.
E16. Their employees should be polite.
E17. Their employees should get adequate support from these firms to do their jobs well.
E18. These firms should not be expected to give customers individual attention. (-)
E19. Employees of these firms cannot be expected to give customers personal attention. (-)
E20. It is unrealistic to expect employees to know what the needs of their customers are. (-)
E21. It is unrealistic to expect these firms to have their customers' best interests at heart. (-)
E22. They shouldn't be expected to have operating hours convenient to all their customers. (-)

**DIRECTIONS**: The following set of statements relate to your feelings about XYZ. For each statement, please show the extent to which you believe XYZ has the feature described by the statement. Once again, circling a 7 means that you strongly agree that XYZ has that feature, and
circling a 1 means that you strongly disagree. You may circle any of the numbers in the middle that show how strong your feelings are. There are no right or wrong answers. All we are interested in is a number that best shows your perceptions about XYZ.

P1. XYZ has up-to-date equipment.
P2. XYZ's physical facilities are visually appealing.
P3. XYZ's employees are well dressed and appear neat.
P4. The appearance of the physical facilities of XYZ is in keeping with the type of services provided.
P5. When XYZ promises to do something by a certain time, it does so.
P6. When you have problems, XYZ is sympathetic and reassuring.
P7. XYZ is dependable.
P8. XYZ provides its services at the time it promises to do so.
P9. XYZ keeps its records accurately.
P10. XYZ does not tell customers exactly when services will be performed. (-)
P11. You do not receive prompt service from XYZ's employees. (-)
P12. Employees of XYZ are not always willing to help customers. (-)
P13. Employees of XYZ are too busy to respond to customer requests promptly. (-)
P14. You can trust employees of XYZ.
P15. You feel safe in your transactions with XYZ's employees.
P16. Employees of XYZ are polite.
P17. Employees get adequate support from XYZ to do their jobs well.
P18. XYZ does not give you individual attention. (-)
P19. Employees of XYZ do not give you personal attention. (-)
P20. Employees of XYZ do not know what your needs are. (-)
P21. XYZ does not have your best interests at heart. (-)
P22. XYZ does not have operating hours convenient to all their customers. (-)