## COPY RIGHT

Paper Authors: **Farhan Akhtar, Abdul Rasool, Arshad Ali Narejo, Tayyaba Zia**

USE THIS BARCODE TO ACCESS YOUR ONLINE PAPER

To Secure Your Paper As Per UGC Guidelines We Are Providing A Electronic Bar Code

# COMPARATIVE ANALYSIS OF SERVICE QUALITY BETWEEN PUBLIC AND PRIVATE HOSPITALS, USING SERVQUAL MODEL: A CASE STUDY OF PESHAWAR, PAKISTAN

**Farhan Akhtar, Abdul Rasool**
**Rural Development and management, China Agricultural University**
**Arshad Ali Narejo**
**Department of Rural Sociology, Sindh Agriculture University Tandojam**
**Tayyaba Zia**
**Lecturer at Sociology Higher Education Department, Punjab**

**Abstract:** Health care industry is the integration and combination of various sectors offering quality and services to treat patients with preventive, curative, rehabilitative and palliative care. The healthcare system of Pakistan faces the challenges in providing quality as well as services as a whole, which is still supposed to be relatively poor to deliver satisfactory health care service to its citizens. Keeping in the view the nature of study, the researcher applied the quantitative method approach for obtaining the appropriate results, furthermore one sample T-test was performed to get the precise consequences of the data. For the particular purpose the SERVQUAL model which consists of five different service quality dimensions distinctively empathy, tangibility, assurance, timeliness, and responsiveness was applied. utilize to determine the local people/patients actual perception about the health care quality delivered by public and private sector hospital in Peshawar, Pakistan. A convenient based sample *(n=150)* was embraced from five hospital (3 public and 2 private) located in Peshawar. The results of the study identified the quality gaps in the service quality in various dimensions of SERVQUAL model. The result reveals that private hospitals are far better in term of empathy, tangibility, timeliness, and responsiveness, showing big difference between both hospitals. However, there is very little difference between the mean values of the service quality construct 'assurance' among the private having mean value (M=3.67; SD=.5258) and public (M=3.10; SD=7415) hospitals. It is because of qualified doctors with high expertise in the field of medicines/surgery and generally serving public hospitals as a permanent employees. Thus the study concluded that private hospitals are far away better from each perspective than the public due to the increasing trend of the resources availability. Since, majority of respondents who avail health care's from the private hospitals were found satisfied in term of assurance, tangibility, timelines, responsiveness and tangibility as compared to the patients of public hospitals in Peshawar city. Finally the study recommends that, the public hospitals should implement feedback mechanism of its customers to get the actual picture of service quality and any deficiency in service quality should be serious considered for better outcomes. Furthermore government should also introduce value added rewards and facilities for the workforce of public hospitals to motivate them to better health service quality as for the sustainable development and betterment of public sectors.

**Keywords**: Health, Service quality, Servqual model, Peshawar, Pakistan

## Introduction

Quality is the standard of comparing two things of parallel attributes, not only in manufacturer side but services as well (Malik, 2013). During the last decades the services organization also tried to maintain its existing customers and attract new patron to provide them quality services for the satisfaction of their needs (Hu *et al.,* 2010). Previous studies show that there is a significant relationship between customer's satisfaction and services quality, to obtain the competitive advantage from rest of the organizations. Healthcare sector is also the major sector of a country and play an important role to maintain healthy human capital to achieve national objectives. In so many countries healthcare sector is becoming competitive and fast growing service industry (Jabnoun, and Chaker, 2003). Thus, the need of health services and their relation with human life, quality promotion, and quality assurance have caught the attention of tax payers gradually in the health sector, having increasing expectations from health providing organizations and hospitals. Due to the needs of health services, their quality is more essential for improving and the need for quality management and quality control is increasing (Khalesi and Torani 2001). In developing nations majority of the population is living below poverty line and deprived of fundamentals rights, because the un-availability of the basic healthcare facilities. In developing countries government also take no interest in healthcare facilities and could place negative effect on the other sector of economy (Andaleeb, 2000).

Followed by, Service quality and patients satisfaction is important and considered in their strategic planning process in health care organizations. Like the other service organizations healthcare sector has also become a highly competitive and rapidly growing service industry around the world. Yoo & park., (2007) stated that, Service quality is the ability of an organization to meet or exceed needs, requirements and expectations of consumers as well as to maintain its competitive advantages. According to a survey by UNICEF (1992) that doctors in many developing and underdeveloped countries spend a 54 seconds time on each patient at district level hospitals rural clinics and distribute medicines which take 37 seconds on each patient. The competent and professionals doctors are more tended to expose in private clinics while government doctors have a dual responsibility. Whereas the private hospitals are providing adequate services as compared to public hospitals as private hospitals are just for money making in spite to serve humanity. Hence it's getting a growing business day by day. Akbari *et al*., (2009) stated that, private care is the most popular choice: >60% of the aggregate demand for healthcare is provided by private healthcare providers. Public primary health care caters to <5% of the aggregate demand of healthcare in Pakistan (Pakistan Bureau of Statistics 2005–2012).

## Statement of problem

Health care industry is the integration and combination of various sectors offering quality and services to treat patients with preventive, curative, rehabilitative and palliative care. Since, the satisfaction comprehends in terms of receiving quality health care and services. Moreover, the healthcare system of Pakistan faces the challenges in providing quality as well as services as a whole. Developing nations like Pakistan is still supposed to be relatively poor to deliver satisfactory health care service to its citizens. Hence the immediate goal of this study is planned to assess the perception of local people of Peshawar regarding the effectiveness of service quality of public and private hospital. The researcher included the SERVQUAL model with five service quality dimensions including

empathy, tangibility, assurance, timeline and responsiveness, used for the assessment of patients about the service quality in hospitals. Therefore, the study was mainly designed to examine the perception of local people regarding the quality services of public and private hospitals.

Fig-1 Conceptual Framework
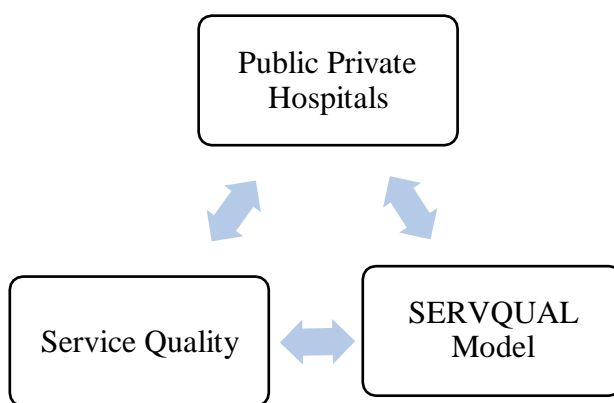


Authors own idea..

**SERVQUAL Model**

The SERVEQUAL model was developed by (parasuraman *et al.,* 1985), which is consists of 22 items presenting five dimensions had been widely used in heath care to measure the satisfaction level about the service quality in health care. Servqual model is considered one of the most valid and reliable measurement of services quality (Gefen, 2002)

The SERVQUAL model has been based on five different gap and ten dimensions of measurements which are combined into five dimensions of services quality namely Empathy, Tangibility, Assurance, timeliness and responsiveness. (Parasuraman *et al*., 1985).

(i) Empathy – it is about the friendly and polite dealing of personnel, understand the specific needs, cooperative staff and caring,

individualized attention is given to the customers.

(ii) Tangibles – it is about waiting facilities, hygienic condition, well and up to date equipments, cleanliness of wards, rooms and toilets and laboratory facilities.

(iii) Assurance – it is about the knowledge, competence of doctors, right diagnoses, accuracy in

Laboratory reports, special attention for emergency patients and the opinion of experts in the critical cases.

(IV) Timelines – it is about the in time delivery of reports/services, patients observed according to the promise time and the ability of the service provider to provide the promised service in time.

**(V)** Responsiveness – it is about efficient respond to the patients, the willingness of employees to help and facilitate the patients and feed back about the medical condition of patients**.**

## Methodology

Research methodology elucidates the practices and procedures of the research to conduct a scientific study. In order to meet the research objectives, quantitative research technique was adopted to address the study goals concerning mainly theoretical ideas and concepts into real numerical measures that signify these ideas. By following the quantitative procedures, social survey technique was adopted and a reliable and valid questionnaire was developed. The questionnaire was based on SERVQUAL model/instrument consisting of 22 items which representing five dimensions of service quality and considered five diverse assembles like: empathy (four items), tangibles (six items), assurance (six items), timeliness (three items) and responsiveness (three items). Nevertheless,

# International Journal for Innovative Engineering and Management Research
## A Peer Reviewed Open Access International Journal
www.ijiemr.org

the survey was based on patient's perceptions having experience of assorted public and private hospitals using five point likert scales. For the purpose, 150 respondents from five public private hospitals (60 from Private and 90 from Public hospital) in Peshawar city were randomly selected for the interview using convenience sampling technique. Finally, SPSS software was used to conduct the descriptive analysis by mean, mode, minimum, maximum, and standard deviation.

## Results
### Table-1 Age of the respondents

|     | Min   | Max   | Mode  | Mean    | Std. deviation |
|-----|-------|-------|-------|---------|----------------|
| Age | 24.00 | 46.00 | 26.00 | 36.4313 | 9.59254        |

Age is the momentous part that highlights the certain variations in approaches. The table-1 shows the age of the respondents, where the mean age of the respondents was 36.4313 years, while the most frequent age was supposed to be 26.00 years in the study area. So far, highest age was set 46 and the lowest age was recorded 24 years.

### Table-2 lists of variables used in study

| Variables and Constructs | Private | | | Public | | |
|---|---|---|---|---|---|---|
| **Empathy** | N | Mean | Std. Deviation | N | Mean | Std. Deviation |
| Doctors have genuine concern about the patients | 60 | 3.96 | .7462 | 90 | 1.64 | 1.004 |
| polite and friendly dealing of personnel with patients | 60 | 3.85 | .8420 | 90 | 1.73 | 1.0642 |
| staff and nurses take care of patients | 60 | 3.95 | 1.134 | 90 | 1.86 | 1.0783 |
| Doctor and staff understand specific needs of patients | 60 | 3.56 | .9117 | 90 | 2.98 | 1.0216 |
| Valid N (listwise) | 60 | | | 90 | | |
| **Tangibility** | N | Mean | Std. Deviation | N | Mean | Std. Deviation |
| Hygienic condition at hospital | 60 | 3.71 | .7831 | 90 | 2.71 | 1.614 |
| Waiting facilities for attendants and patients | 60 | 3.59 | 1.048 | 90 | 2.13 | 2.172 |
| Up to date and well maintained equipments in the hospital | 60 | 3.48 | .9476 | 90 | 2.35 | 1.758 |
| Cleanliness of toilets /bathrooms | 60 | 3.73 | 1.132 | 90 | 2.42 | 2.022 |
| Cleanliness in wards /rooms /floor | 60 | 3.98 | 1.017 | 90 | 1.67 | 2.678 |
| Lab and Pharmacy facilities within the hospital | 60 | 4.08 | .8086 | 90 | 2.43 | 1.763 |
| Valid N (listwise) | 60 | | | 90 | | |

# International Journal for Innovative Engineering and Management Research
### A Peer Reviewed Open Access International Journal
www.ijiemr.org

| Assurance | N | Mean | Std. Deviation | N | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Doctors and staff are professional and competent | 60 | 3.83 | .8068 | 90 | 3.63 | .8670 |
| Through investigation of the patient. | 60 | 3.67 | .8455 | 90 | 2.67 | .9715 |
| Doctor almost make right diagnoses | 60 | 3.68 | .8731 | 90 | 2.88 | .9418 |
| Doctors go for expert opinion in critical cases | 60 | 3.35 | .8197 | 90 | 3.11 | 1.156 |
| Special attention is given to emergency patients | 60 | 3.73 | .8994 | 90 | 2.92 | .9165 |
| Accuracy in lab reports | 60 | 3.70 | .9260 | 90 | 3.53 | .9962 |
| Valid N (listwise) | 60 | | | 90 | | |

| Timeliness | N | Mean | Std. Deviation | N | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Patients are observed according to appointment. | 60 | 3.7333 | .68561 | 90 | 2.5667 | .99493 |
| In time delivery of reports/services | 60 | 3.6833 | .81286 | 90 | 2.5444 | .96175 |
| Doctor/staff observe the promised time. | 60 | 3.4333 | .88999 | 90 | 2.2556 | .94288 |
| Valid N (list wise) | 60 | | | 90 | | |

**Table 3: Descriptive Statistics: Comparison of service quality constructs between public and private Hospitals**

| Responsiveness | N | Mean | Std. Deviation | N | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Doctor and staff efficiently respond to the patients. | 60 | 3.7667 | .74485 | 90 | 2.5778 | .98275 |
| Doctor and staff are willing /facilitate the patients | 60 | 3.4500 | .81146 | 90 | 2.8556 | .90642 |
| Feedback is obtained from patients about their medical conditions. | 60 | 3.7167 | .86537 | 90 | 2.6556 | 1.07223 |
| Valid N (listwise) | 60 | | | 90 | | |

| Sectors | | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| **Empathy** | Private | 60 | 3.82 | .6478 | .0589 |
| | Public | 90 | 2.84 | .7415 | .0565 |
| **Tangible** | Private | 60 | 3.74 | .6589 | .0598 |
| | Public | 90 | 2.28 | .7845 | .0587 |
| **Assurance** | Private | 60 | 3.67 | .5258 | .0254 |
| | Public | 90 | 3.10 | .7415 | .0587 |
| **Timelines** | Private | 60 | 3.61 | .5528 | .0584 |
| | Public | 90 | 2.45 | .6145 | .0512 |
| **Responsiveness** | Private | 60 | 3.64 | .6552 | .0585 |
| | Public | 90 | 2.69 | .6851 | .0585 |

Table-2 and 3 show the mean and standard deviation of the variables and constructs which is used in the study. On behalf of the perception of local people with regards to the service quality of public private hospitals, the results indicate that entire mean values of service quality representing private hospitals are higher than the general public hospitals. This implies that majority of the respondent availing facilities from private hospitals perceive that private hospitals are generally Providing better services to their patients as compare on the public hospitals. With regards to the empathy dimension, the data revealed that, local patients/people were agreed with the polite and friendly behavior of the staff and doctors where the mean value (M=3.82; SD=.6478) in private hospital were supposed showing the satisfactory level at greater extent, whereas in public hospitals it was noticed moderately with mean (M=2.84; SD=.7415). This shows the polite nature of the doctors as well as other staff in private hospitals more than the public one. Besides that, the facilities as well as the hygienic condition in hospital where including some differences having mean (M=3.74; SD=.6589) in private hospital regarding tangible dimension, whereas (M=2.28; SD=.7845) were generally noticed by the respondents highlighting the facilities and cleanliness level initiated in private more than the public hospitals . However, there is very little difference between the mean values of the service quality construct 'assurance' among the private (M=3.67; SD=.5258) and public (M=3.10; SD=.7415) hospitals. These public hospitals are the top level of hospital in Peshawar and are associated with the best medical colleges of Pakistan. Extremely qualified professors in addition to expert in the field of medicines/surgery are generally serving in these hospitals as permanent employees. This particular factor has increased the quality of assurance among patients although visiting or

selecting the services in the public hospitals regarding treatment. So far, With regards to the timelines dimension, it was well reported that the punctuality scrutinize in private (M=3.61; SD=5528) and public (M=2.45; SD=6145) were showing quite a big loop, which is noticed to be the availability of the doctors in private hospitals at a time, while in public it show some difference as a whole. Nevertheless, with regards to the responsiveness the results have little bit variation, in private (M=3.64; SD=.6552) and public (M=2.69; SD=6851) were generally observed, highlighting the responsiveness in both hospitals quite fair.

**Table 5: Independent t-test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | TT | Ddf | Sig.(2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Empathy | Equal variances assumed | 6.594 | .277 | 5.980 | | .000 | 0.9708 | 0.163 | 0.6485 | 1.3053 |
| | | | | | 148 | | | | | 0.5900 |
| | Equal variances not assumed | | . | 5.825 | 135.18 | .000 | 0.9708 | 9.984 | 0.6570 | |
| Tangibility | Equal variances assumed | 1.814 | .482 | 9.157 | 1148 | .000 | 1.4583 | 0.1588 | 0.8765 | .9877 |
| | | | | .151 | 25.32 | 000 | | | | 0.8767 |
| | Equal variances not assumed | | | | | | 1.4583 | 1.4583 | 0.4356 | |
| Assurance | Equal variances assumed  Equal variances not assumed | 2.595 | .376 | 3.526 | 1148 | .000 | 0.5435 | 0.5643 | 0.8768 | 1.9821 |
| | | | | 3.585 | 118.75 | .000 | | | | 0.8789 |
| | | | | | | | 0.5435 | 1.5643 | 0.9878 | |

| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
|---|---|---|---|---|---|---|---|---|---|---|
| Timeliness | Equal variances assumed | 6.399 | .388 | 7.709 | 1148 | .000 | 1.1610 | 0.8765 | 0.9324 | .5634 |
| | | | | 7.856 | 139.6 | .000 | | | | 0.8754 |
| | Equal variances not assumed | | | | | | 1.1610 | 1.0981 | 0.6748 | |
| responsiveness | Equal variances assumed | 4.393 | .301 | 6.155 | 1148 | .000 | 0.9481 | 0.4563 | 0.4976 | 1.0975 |
| | | | | 6.609 | 141.25 | .000 | | | | 0.7659 |
| | Equal variances not assumed | | | | | | 0.9481 | 1.9076 | 0.7814 | |

Firstly for the empathy value of Levene's Test for Equality of Variances indicates that insignificant p-values are (0.277) show that variances of both of the groups are same, so for further interpretation of results are assumed equal. At **t value5.980, df148** has significant p-value **0.000** which show that private hospitals are more empathic than public hospitals in dealing with patients. In private hospitals the doctors have genuine concern for their patients because the private hospitals have hired best physicians and professional doctors to provide better health care to their patients. As all private hospitals are trying to remain market leader and gain market competitive edge so the objective of private hospitals is to provide better quality of healthcare service. To achieve this objective all employee involved in private hospitals operation either doctors, staff, nurses and other management personnel show concern for them and try to provide extra care to their patients in the order to make them happy and satisfied. Due to some of these factors the service dimension "empathy" is high in private hospitals than public hospitals. where as in the public sector hospitals the expert and high skilled doctors are involved in other activities such as management duties, teaching in medical colleges, and some of them of their own private clinics so they have limited time to visit and examine the patients and it is difficult for doctors to provide extra care and show genuine concern to their patients.

Nurses and staff are also less committed, due to this they show less concern for their patients. Secondly too poor management in the public hospitals and peoples visiting hospitals with some references which effect the smooth functioning of hospitals, indicating that private hospitals are most empathetic than public hospitals. Therefore, the null hypothesis Ho is rejected and hypothesis H1 is accepted.

Secondly for the tangibility value of Levene's Test for Equality of Variances indicates that insignificant p-values are (0.482) show that variances of both of the groups are same, so for further interpretation of results are assumed equal. At **t value9.157, df148** has significant p-value **0.000** which show that private hospitals are better in tangibility factor than public hospitals. The private hospitals have good infrastructure and health environment than public hospitals because they aimed to provide better quality of service to patients. Private hospitals are better in waiting facilities, well and up-to-date equipment's, cleanliness of toilet/ wards and having laboratory facilities in hospitals. Private hospitals provide all these facilities to their patients with show their commitment toward better quality of services for their patients. Which means that private hospitals are more better in tangibility than public hospitals. Therefore, the null hypothesis Ho2 is rejected and H12 is accepted.

Third for the assurance value of Levene's Test for Equality of Variances indicates that insignificant p-values are (0.376) show that variances of both of the groups are same, so for further interpretation of results are assumed equal. At **t value 3.526, df148** has significant p-value 0.000 which show that private hospitals providing more assurance of better treatment to their patients as compares to public sector hospitals professional and competent doctors in all fields, thorough investigation of their patients, doctors almost make right diagnoses, accurate laboratory reports special attention for emergency patients and doctor go for expert opinion in critical case this creates assurance for patients. Private hospitals have developed well equipped lab which works under the supervision of expert's doctors which also give accurate results of tests. This shows that the private hospitals provide more assurance to patients as compared to public hospitals. Therefore, the null hypothesis Ho is rejected and hypothesis H1 is accepted.

Fourth for the timeliness value of Levene's Test for Equality of Variances indicates that insignificant p-values are (0.388) show that variances of both of the groups are same, so for further interpretation of results are assumed equal. At **t value 7.709, df148** has significant p-value **0.000** which show that private hospitals take more care about the timeliness when treating the patients as compare to public hospitals. The success of any organization and business depends on timely delivery of goods and services to their customers or patients. private hospitals are making good efforts to deliver timely services to their patients, which include in timely delivery of laboratory reports, patients are examine according to promise time and whereas public sector hospitals are lacking behind in all of these factors due to lack of commitment towards better quality, no check

and balance and poor management. Which show that private hospitals are more committed on timeliness issues than public hospitals. Therefore, the null hypothesis Ho is rejected and hypothesis H1 is accepted.

Finally for the responsiveness value of Levene's Test for Equality of Variances indicates that insignificant p-values are (0.301) show that variances of both of the groups are same, so for further interpretation of results are assumed equal. At **t value 6.155, df148** has significant p-value **0.000**show that private sector hospitals are more responsiveness in attending of patients as compared to public sector hospitals. The objective of private hospitals is to satisfy their patients to get relief from diseases through better quality of health service. In private hospitals doctors and staff are willing to help and facilitate their patients, efficiently respond to the patients and obtaining feedback from patients about their medical conditions. Whereas in public hospitals all these factors are lacking which show no serious commitment towards quality. The patient perceives that private hospitals are more responsive than public hospitals. Therefore, the null hypothesis Ho is rejected and hypothesis H1 is accepted regarding this study.

## Conclusion

The results of study express the real picture of health service quality of public and private hospitals in Peshawar city. The instrument (SERVQUAL model) used in this study is accurate and perfect way of measuring perception and expectation of customers (Patients) regarding rating of service quality of services providers. On behalf of findings, the study concludes that private hospitals are far better than public sector hospitals in healthcare facilities and also playing a role in lowering the burden from public hospitals. Since, Majority of respondents who avail health care's from the private hospitals were found satisfied in term of

assurance, tangibility, timelines, responsiveness and tangibility as compared to the patients of public hospitals in Peshawar city.

## Recommendation

Finally the study recommends that, the public hospitals should implement feedback mechanism of its customers to get the actual picture of service quality and any deficiency in service quality should seriously be considered for better outcomes. Furthermore government should also introduce value added rewards and facilities for the workforce of public hospitals to motivate them to better health service quality as for the sustainable development and betterment of public sectors.

## References:

1. Akbari AH, Rankaduwa W, Kiani AK. 2009. Demand for public health care in Pakistan. The Pakistan Development Review, July 2001: 141–53

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

3. Gefen, D, (2002). Reflections on the Dimensions of Trust and Trust worthiness among online Consumers.*The DATA BASE forAdvances in Information Systems*, Vol. 33, pp. 38-53.

4. Hu, H. Y., Lee, Y.C., & Yen. T.M. (2010). Service quality gaps analysis based on fuzzy linguistics SERVQUAL with a case study in hospital outpatient services, *The TQM Journal.* 22(5), 449-515.

5. Jabnoun, N. and M. Chaker, 2003.Comparing the quality of private and public hospitals.ManagingService Quality, 13(4): 290-299.

6. Khalesi N, and S. Torani, 2001: *Total Quality Management In Health Care System*. Tehran: JahanRayane Press:2-3.

7. Malik, K. (2013). Human Development report 2013. The rise of the south: Human progress in a diverse world. (March 15, 2013). UNDP-HDRO Human development reports.

8. Pakistan Bureau of Statistics (2012). A report about the healthcare system in Pakistan. website:www.google.com/pbs/health.

9. Parasuraman A, Berry LL, Zeithaml, A,(1985). SERVQUAL: A Multiple-item Scale for Measuring Customer Perceptions of Service Quality, Report No. 86-108, Marketing Science Institute, Cambridge.

10. Unicef (1992): A report about the medical facilities in Pakistan. source www.google.com

11. Yoo, D.K. and Park. J.A. (2007). Perceived service quality- analysis relationships among employees, customers, and financial performances. *International journal of quality and reliability management,* 24(9). 908-26.