Measuring antecedents of service quality in hospitals: A comparative study of LRH and KTH hospitals
Peshawar Region, Pakistan

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Service quality is one of the most important factors in service industry. This research analyzes the antecedents of service quality in two major hospitals of Peshawar Region Pakistan. The study identified an enrich theoretical framework and used a structured questionnaire from 150 patients on equal basis from Leadly Reading Hospital LRH and Khyber Teaching Hospital KTH. Multiple regression technique to find importance of each variable and its contribution towards service quality was used. The study identified that cleanliness and ambulance service is important in LRH while patients of KTH considered blood bank and restaurants as major factors of quality service delivery.

Key words: Quality service, hospitals, blood bank, KTH, LRH, Peshawar Pakistan.

INTRODUCTION

On the basis of personal experience, the author identified that the service quality is one of the areas in LRH and KTH that requires detail analysis to rectify its major problems or inconsistencies. In order to facilitate this piece of objective, the author carried out a market research and discussed the underlined issues with considerable number of people including management staff existence of patients and universities academic staff etc, this was however, a very fundamental piece of research which was carried out informally.

The core objective of this informal research is to envisage the idea about the worth of research. The author identified that previous research literature not merely provides a foundation of further research but also leaves certain areas that require further critical analysis, since the literature or data presently identified by the author lacks certain features pertaining to customer perception towards LRH and KTH service quality. That was the point that motivated the author to carry out the research in two major strands.

Firstly, it was to identify strategic, tactical and operational service quality issues in LRH and KTH and then, critically analyze the real time data that could be obtained through the most appropriate research methodology and prevailing ideas or theories. Secondly, the final core objective of this research is to recommend some cost effective measures that could be implemented by LRH (Lady Reading Hospitals) in order to improve service quality.

In order to ensure that this research brings intended results, it is however paramount to ensure that the author adopts the most appropriate research methodology followed by an adequate set of customers (interviewees).

The lady Reading Hospital is situated in Peshawar Khyber Puktunkhwa in Pakistan. It is one of the largest medical institutes in Peshawar Pakistan. It is also called Gernali hospital. The name of this hospital is on the name of wife of the Viceroy of India, Lord Reading. It was established in 1924 and in the south of Grand trunk road 200 m away behind the famous QilaBalhisar. Across the road of LRH there are several bazaars, Ander Shehr bazaar, QissaKhawani bazaar and Khyber bazaar and famous Masjid Muhabat Khan.

The tale of the hospital from entering into being is that His Excellency Lord Reading, Viceroy of India 1921 to 1926 happened to visit Peshawar. This was the highest position in British India achieved ever by a Jew. He was accompanied by his wife Lady reading and fascinated by the view of the city of QilaBalahisar where they had settled. She expressed her desire to see the city.

The horse was made in compliance with her wishes on her visit to the city. While she was returning to the castle
on the horse, fear gripped her causing the fall of the lady from the horse's back. This has led in some cases to read lady. Non-availability of medical aid was implemented immediately she was unconscious and she was rushed to the hospital Agerton where the facilities were meager. Unable to cope with injuries, she moved to the Royal Artillery Hospital now called the "Joint Military Hospital" (or CMH) Peshawar, where she presented her proper treatment, making a significant impact of this injury on her was necessary to build a hospital.

On the retirement of Lord Reading in 1926, she came to Peshawar from Delhi and a campaign to build a hospital instead of the standard new Agerton Hospital. This Hospital, later named the Lady Reading Hospital was given to the case of a district headquarters hospital with 150 beds in 1930 and had 200 hospitals bedded. Dr. Khan Bahadur Abdul Samad Khan became the first medical supervisor of the hospital. Dr. Muhammad Ayaz Khan was appointed the first director of the hospital in 1973. This became the hospital's Khyber Medical College in 1955 with medical, surgical, nose, throat, eyes and tuberculosis wards; according to a 2008 estimate, patients from the clinic see more than 2,500 patients per day and midwives victim of accident and emergency department more than 1500 or 1800 for the day.

Khyber Teaching Hospital is formally Hayat Shaheed Teaching Hospital, established in 1973. It is for the medical student as training and biomedical research facilities for the medical student of KMC, and now the KTH is the largest health care facilities of the country. This Hospital was specially made for the development of scientific and research base of province in 1976. It is octagonal in shape with extension of Y shaped wings in the form of units.

At present, the capacity of beds in the hospital is 1150. The newly constructed underground passage and the new floor have made safer the smooth flow of patients and students between KMC, IRNUM and KTH. During the period of 1976 to 2000 added extras and deletion taking place within the developmental phases of the 3 tertiary care hospitals namely LRH, HMC made these institutions more effective, viable and productive for the beneficiaries, that is, patients, undergraduate and postgraduate in health care sector human resource development trainees playing major role.

**Research objectives**

The research objectives are:

- To investigate the present service quality of LRH and KTH hospitals.
- Identify the ways to improve service quality.
- To investigate the ways in which service quality can be improved in Lady Reading hospital and Khyber Teaching hospitals.

**LITERATURE REVIEW**

Two major reasons exist for reviewing the literature (Saunders, 2003); it was the first preliminary search that helped researchers to generate and refine their research ideas. Secondly, often referred to as the critical review is part of the author research project proper. Most research textbooks, as well as, author project tutor will argue that this critical review of the literature is necessary. words: Saunders (2003) pointed out that knowledge does not exist in a vacuum, and their work only has value in relation to other people. Their work and their findings will be significant only to the extent that they are the same as, or different from other people’s work and findings.

**Service**

The importance of service in any organization can be realized after the discussions of following researchers and expertise.

According to Gronroos (1994), it was stated that service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and /or systems of the service provider, which are provided as solutions to customer problems.

On the other hand, Zeithaml and Bitner (1996) states that service is a performance. It happens through the interaction between consumers and service providers. Other factors such as physical resources or environments play an important medium role in the process of service production and consumption. Service is needed by consumers to provide certain functions such as problem-solving (Gronroos, 1991).

After the aforementioned definitions about service, the author can easily evaluate the importance of service in a way to check the performance of an organization/department through the interaction between service providers and its stakeholders.

**Quality**

There were different definitions as regards quality. Edvardsson (1994) suggests that ‘issues regarding the meaning of “quality” appear to pose formidable barriers to clear thinking’. Zeithaml (1990) calls it ‘superiority’, Randall and Senior (1994) refers to quality as ‘fitness for the purpose’ and Wagen (1994) defined it as ‘conformance to requirements, not elegance’. What all of these definitions have in common is an acknowledgement that the quality of a product in some way rates it against a standard, whether it be real or implied. This standard may be defined by the customer, either explicitly or implicitly, or set by other similar products with which it is compared.
Health-care quality

Quality is an important aspect of healthcare; indeed for most people, it is the most important aspect. Gilles (1993) stated that in domains such as engineering, quality may be linked to tangible physical properties. However, in many other areas, patient care in medicine is one of them; quality is intangible. As Kitchenham (1989) said in a different context that quality in such cases is ‘hard to define, impossible to measure and easy to recognize’.

Traditionally, quality has been seen as ‘the degree of excellence’ or superiority in kind (Arah et al., 2004). This is an attractive definition but is insufficient. On the other hand, an alternative definition of quality is provided by the International Standard Organization (ISO, 1986) said that the total of features and characteristics of a product or service bear on its ability to satisfy specified or implied needs.

Reasons for service quality

Gummesson (2000) stated that this had not destined that quality of service was more complicated than manufacturing; it was the control over output by a service provider that was changed to that of a manufacturer. He also argued that the fact that service activities were not that different from manufacturing challenged the traditional truths and myths regarding service quality. Furthermore, he also explains that service quality research has made a major contribution in stressing the customer’s role in addition to their perception of quality and perceived satisfaction.

Quality service

Saunders et al. (2005) had an overview of traditional measures of service quality and outlined and then, evaluated the usefulness of ‘the template process’ which can be treated as an alternative generic approach to address service encounters. They carried out their research on the following grounds:

1. To help the client to perceive, understand, and act on the process events that occur in the client’s environment in order to improve the situation as defined by the client (Saunders, 2003). Four statements can be extracted from their critical analysis as under:

   1. The overall structure of starting at a more general level before narrowing down;
   2. The provision of a brief overview of the key ideas;
   3. Narrowing down to highlight that work which is most relevant to the research reported in the paper; and
   4. Providing more detail about the findings of that work which is more relevant.

Parasuraman and Zeithaml (1985) focused on measurement of the gap between service users’ perceptions and expectations across a series of dimensions that characterize the service. However, Zemke and Schauf (1989) gave a broad view of aspiring to customer service excellence and commented in the following words: With service excellence, everyone wins; customers, employees, management, stockholders, communities and country win.

Despite shortcomings of conceptualizing service quality in this manner recognized in the SERQUAL debates (Edvardsson, 1994; Saunders, 2003), the use of such a disconfirmation approach is widely reported in the literature.

The number and nature of constructs which represent the service encounter are a function of a service relationship in a particular industry or situation. Each of these relationships differs and is in reality, unique. Gummesson (2000) identifies a series of general qualities characterizing relationships such as collaboration, dependency, trust, power, longevity, frequency, closeness, content, as well as, personal and social properties.

In so doing, this emphasizes the breadth of properties that may be deemed relevant by the parties involved in a particular service relationship. However, it is unlikely that all of these properties are of similar relevance to every relationship. Consequently, it has been argued that a series of generic dimensions against which to measure service quality is inappropriate (Saunders and Skinner, 2005).

Research has also highlighted that interdependencies between organizations are established and maintained through the encounters and interactions of individuals within each organization (Saunders, 2000). The measurement of the quality of such encounters therefore needs to reflect the perspectives of all these individuals.

John (1992) suggest that traditional measures fall to reflect fully the dyadic nature (that is, interaction between the customer and the customer service provider) of service encountered as they generally assess the quality construct from only one partner's point of view. They call for the evaluation of service relationships to accommodate this by including the perspectives of both parties.

Although, they suggest that this may result in the need to reconcile different views, they also highlight the need for awareness and understanding of the views of all parties involved in a service encounter. They would contend that these processes could result in both parties involved in the service questioning the relevance of the norms against which they evaluate the encounter. This, they believe, supports their contentions that approach which have the ability to capture a diversity of service users’ and providers’ experiences of such concepts are likely to be of more value.

Furthermore, they argued that where measures focus
only on specific transactions, they may fail to take account of the ongoing nature of service relationships that are based upon repeated encounters (Philips, 1994).

Improving the level of customer satisfaction remains one of the major challenges that majority of the service organizations face (Saunders, 2003). This particular issue is particularly accumulated when the business operates in a high competitive environment. Certain ideas may be generated in order to improve the customer satisfaction but the author argued that there is still a greater need to understand the psychology of customer and their perception in relation with service quality standards.

The national policies may also affect the service quality of large service organizations, for example, all related businesses are liable to abide by new health and safety regulations enacted by Department of Health, etc.

Zemke and Schaaf (1989) described four major reasons which severely affect delivery of quality service to customers. They analyzed that the following are the key causes which require considerable amount of attention of the senior management not only to improve the customer service but also ensure that these service quality standards are in sustainable form that could foster management effectiveness and efficient service quality growth.

The very first reason they identified is that majority of the organizations remain unsuccessful to stay in touch with their consumer desires. It is, however, justifiable that not all of the customers’ desires and needs could be met at all times but at the same time, it is paramount for the service provider to clearly understand their customers' perception in terms of service quality standards.

Health service practices clearly demonstrate that this is one of the major challenges that KTH and LRH is currently facing. Better technology support may also be provided in order to improve the service quality but above all, the management can effectively and efficiently ensure a successful service delivery model on time if they establish a clear and proactive relationship between their customers’ expectations and all resources available to LRH and KTH. The author urged that it is essential to recognize that LRH and KTH need to strategize and implement its decisions while being within its financial resources and time scale.

As described earlier, the management staffs that are responsible for service improvement needs to acknowledge what their customers want in terms of service quality. Moreover, there is a need to formulate a clear set of strategies in order to achieve these set goals. A number of difficulties may be examined while managing these goals effectively but the author urged that a proactive approach should be in place in order to bring cost-effective results which could not only meet customer service standards but also enables the management to work in accordance with available financial resources.

From the staff perspective, it is arguable that providing 100% excellent customer service is fairly difficult in health services because this service sector particularly emphasizes on time management and effective resource utilization. Customers always assume a very high standard of service from its provider; however, the customers’ needs and wants may be subject to different situations.

The third major reason is that the service organization remains unsuccessful to make sure that their service delivery is consistent and brings a sustainable quality service outcome. Some primary reasons include deficiency of financial and human resources.

The final reason particularly emphasizes upon the human resources in which staffs that are responsible for service improvement are not adequately provided enough resources to ensure an effective and efficient implementation of their day-to-day activities. This final reason primarily concentrates on the motivation levels of employees.

It is still questionable why concerned staffs do not provide their most effective output that could lead towards the core objective of the service improvement mission. For instance, service improvement and customer relationship staffs are not happy what they are remunerated in response to their services. They often demand for annual percentage increment in their wages. Furthermore, certain staffs may also require further training in order to ensure an effective service provision followed by a right mix of their skills and all available resources.

Saunders and Skinner (2005) arguments when they point to the shortcomings of the global nature of the quality construct as a diagnostic tool for remedial action implies that the assessment of the relationship’s quality should lead to actions to enhance the benefits obtained by both parties from it. Data collected to assess quality should therefore be useful.

A few writers for example, Gunn (2001); Donaldson (1992) and Kennedy (2002) have also suggested that the pace of research in this area had only accelerated since the mid-1980s with the appearance of the first working definition of quality in service businesses. Parasuraman and Zeithaml (1985) stated that although, strictly speaking, ‘quality’ is a noun describing a degree of excellence, common usage implies ‘good’ or ‘excellent’ quality. Quality service meets and exceeds expectations of clients.

According to Hill (1995), service quality is a multifaceted construct and there is no clear consensus in the literature on the number of features and their interrelationship, except that there are some fundamental issues to be considered. These fundamental issues include the centrality of the customer, the relationship between their expectations and perceptions of the service provided, and the importance customers ascribe to the different attributes of the service. Parasuraman and Zeithaml (1985) stated that ‘Customers assess quality of
Perceptions of service quality

After analyzing service quality, they also analyzed perception of service quality. Quality of service has been considered in use for a long era in the meadow of business management. On the other hand, no consensus has been achieved between examiners on how to theoretically create. Subsequently, a review of the literature concerning service quality, concentration on the meaning and classifications of service and service quality is presented and after that, the most important move towards theories of quality of service. They also focused on the most important and significant part of quality service, which is perception of service quality (Parasuraman and Zeithaml, 1985). For instance, Edvardsson (1994) definition of service quality differs from that of the traditional approach.

The traditional approach for defining service quality emphasizes that service quality perception is a comparison of consumer expectations with actual performance. Parasuraman and Zeithaml (1985) and Saunders and Skinner (2005) viewed quality as "the degree and direction of discrepancy between customers' service perception and expectations" (Parasuraman and Zeithaml, 1985). On the other hand, Gummesson (2000) questioned that the extent a service provider should go to escalate the promises to customers and their expectations.

Service quality improvement models

Now, the author discusses the following service quality improvement models.

Customer feedback loop model

Since customers define quality based on their perceptions, there is a need to bring these perceptions to front-line staffs so that they perform competently in meeting customers’ expectations (Figure 1) (Wagen, 1994).

In order to evaluate the success (or otherwise) of service delivery, a useful technique is to devise some service dimensions for review and evaluation arising from discussions with staffs and customers (Wagen, 1994).

The model of Lynn Van emphasizes on the technique enhancing service quality of healthcare organizations. The importance of this model is that it focuses on the interaction between front-line staffs and customers because they are always facing each other. This model also explains that there are services dimensions including tangibles, reliability, awareness, courtesy, communication and understanding the customer etc for the front-line staff and how they can evaluate their performance and that the staffs should also know that the expectations and desires of customers from front-line staff.

Here, in healthcare services, the front-line staffs are generally doctors, nurses, laboratory technicians and office staff etc of different departments of hospitals.
These staffs have direct interaction with patients to meet their needs and requirements. Also, the hygienic and food department of the hospital have interaction with hospital stakeholders in order to provide a healthy environment in various wards and departments of the hospital.

**Developing service quality model**

On the other hand, Randall and Senior (1994) stated that, in order to determine the customer’s viewpoint of the quality and improve service quality, it may be useful to attempt to view service delivery as a system as shown in Figure 2. shows the steps for establishing the service levels from customers’ point of view.

Randall and Senior Model about improvement service quality identified the customers point of view of the service quality and improved service quality as they explained that initially service provider identified who the customer is and also determined the meaning of service and how to create service levels, how they perform service and objectives and finally, they applied service quality program.

This model is basically customer oriented and focuses on the opinion of customers. This model also gives a detailed plan about the improvement of service and quality of healthcare in a scientific and modernized way.

**SERVQUAL**

The SERVQUAL protocol measures the gap between customer expectations and perceptions across five dimensions; they captured facets of all of the ten originally conceptualized dimensions. The items making up the consolidated dimensions also suggested concise definitions for them (Parasuraman and Zeithaml, 1985).

Measuring customers’ perceptions of quality has been researched extensively by Parasuraman and Zeithaml (1985). On the other hand, the instrument they developed, SERVQUAL, has been used by many
researchers in a variety of industries to measure customers' perceptions of service quality (Saunders, 2003).

In a review of quality, as one of the primary outcome, measures of relationships (Saunders, 2003), (such as SERQUAL) may not provide the details necessary to assess the strengths and weaknesses of a relationship. In particular, they may fail to take account of the uniqueness and the realities of specific relationships and how they are interpreted and expressed by the parties involved. The SERVQUAL protocol measures the gap between customer expectations and perceptions across five dimensions:

- **Tangibles**: Tangibles are defined as the appearance of physical facilities, equipment, personnel and communications materials.

- **Reliability**: Reliability is defined as the ability to perform the promised service dependably and accurately.

- **Responsiveness**: Responsiveness is defined as the willingness to help the customers and provide prompt service.

- **Assurance**: It can be defined as the knowledge and courtesy of employees and their ability to convey trust and confidence.

- **Empathy**: Caring, individualized attention the firm provides its customers are know as empathy (Parasuraman and Zeithaml, 1985).

**METHODOLOGY**

According to Gill and Johnson (1997), “Research methodology is always a compromise between options and choices and is frequently determined by the availability of resources”. On the other hand, Brooks (1995) presents the methodology in a concise and very accessible manner and was used below their explanation of the basic reliability concepts.

The theory of how research should be undertaken, including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods were adopted (Saunders, 2003). The methodology approach is usually acknowledged as there is no one greatest research approach (Saunders, 2003). On the other hand, according to Saunders (2003) “they are superior at doing different things” and often, the methodology is a compromise.

**Research design**

Saunders and Skinner (2005) raised the important point that in a qualitative based approach to primary data collection, points of significance will emerge as the research progresses, and this will probably lead the researcher to wish to explore these with other participants. For this, the choice of method would be inductive (qualitative) and deductive (quantitative), as the observations will be collected from the related persons in light of literature reviewed; to lead the research, the data will then be collected to conclude the results. Inductive and Deductive methodology will be used as the focus is on explaining the data and framework for recommendation. The author carried out the research in The Lady Reading Hospital and Khyber Teaching Hospital.

In this dissertation, qualitative and quantitative methods were used to study the improving service quality of LRH and KTH and how they are working, what the problems are and how they can improve their service quality for the purpose of satisfying patients and the author also briefly described differences between the quantitative and qualitative method.

**Method of data collection**

According to Saunders (2003), it was stated that interview is a determined discussion between a couple or more public. In order to achieve research objectives, a face-to-face interview is selected by the author and semi-structured interviews for data collection.

**Scale**

Saunders (2003) stated that ranking questions scale can be overcome with face-to-face questionnaires on which the researcher lists all of the features to be ranked and that is why the author selected ranking questions scale.

**Population**

The full set of cases from which a sample is taken is called the population. For all research questions where it would be impracticable for author to survey the whole population, the researcher needs to select a sample. This will be important whether the researcher is planning to use a predominantly qualitative or quantitative research strategy (Saunders, 2003).

**Sample size**

Sub-group or part of a larger population is called ‘Sample’ (Saunders, 2003). The author has deducted questionnaires to improve service quality of the hospitals by 150 patients which is randomly selected including a
5% margin of error during the research with 95% confidence interval (Saunders, 2003).

Ethical issues

An integer of important ethical factor occurs across the different phases and duration of a research. The ability to explore data or to seek explanations through qualitatively based methods that there will be greater scope for ethical issues to arise relates to this approach in this research (Saunders, 2003). On the other hand, general ethical issues that they considered earlier (Zeithaml 1990) may arise in relation to the use of quantitative research.

In face-to-face interviews and questionnaire, the researcher should have avoided overzealous questioning and pressing of their participant for a response (Saunders, 2003). Zeithaml (1990) believes that the ethical issues linked with survey research are those associated with more general issues discussed earlier: privacy, deception, openness, confidentiality and objectivity. The ethical issues of confidentiality and anonymity also come to the force during the reporting stage of the researcher research. He also stated that it is essential to consider ethical issues throughout the period of the research (Saunders, 2003).

According to Donaldson (1992), business is driven by values. Firms employ a language of ethics when they establish the responsibilities of the organization or its employees. At the core of ethical issues in business is the fact that different ‘players’ often have different perspectives. They have some values in common, as well as, some conflicting ones. From a methodology point of view, the deal, or ‘paradigm’ for case material requires authentic statements from the various ‘players’.

Brooks (1995), stated that, “clinical ethics” as a new discipline is one “that aims to improve patient care and health professional satisfaction by identifying, analyzing and seeking to resolve the clinical, ethical and legal considerations that confront patients, families, physician and clinical investigators in their interactions”. According to Brooks (1995), he stated that for both women and particular ethnic groups, there has sometimes been a failure of the LRH to understand sufficiently the cultural and emotional dimensions of illness which may make the LRH unacceptable.

Questionnaire

In order to achieve the research objectives, the questionnaire will be provided to each of the related persons individually, explaining to them the motive of the given questionnaire and requesting them to fill it so as to carry out the conducted research. According to Saunders et al. (2003), he stated that the general term including all data collection techniques in which each person is asked to respond to the same set of questions is in a predetermined order.


**Conducting the research questionnaires**

According to Saunders (2003), the greatest use of questionnaires is made by the survey strategy. There are various definitions of the term ‘questionnaire’. Many authors, for example, Schein (1988) and Saunders (2003) argued that it is far harder to produce a good questionnaire than the researcher might think.

Walker (1990) stated that customers’ service change as do their expectations of how well these needs will be met. It is important before planning a strategic shift to focus on the marketplace, take a snapshot of customer’s needs and expectations as well as their perceptions of their current performance.

Most large-scale research will be carried out by interview or questionnaire, and possibly by a combination of the two. The presence of the interviewer means there is a possibility to probe and gain more depth, but it is more time consuming, more difficult to analyze and consequently, more expensive. On the other hand, a questionnaire is difficult to design well and may have a poor response rate. Questionnaires are easy to repeat and compare (Walker, 1990).

**Participant response rate**

The entire patient participated well and we distributed 150 questionnaire among the patients in which 75 was distributed among the patients of Lady Reading hospital and 75 in the Khyber Teaching Hospital in which all the patients participated well and gave a good response; in the 150 sample size, 95% responded well.

**Hypothesis**

H₀: Doctor has direct influence on the service quality of hospital;
H₁: Doctor has no direct influence on the service quality of hospital;
H₂: Nursing has direct influence on the service quality of hospital;
H₃: Nursing has no direct influence on the service quality of hospital;
H₄: Ambulances have direct influence on the service quality of hospital;
H₅: Ambulances have no direct influence on the service quality of hospital;
H₆: Wards have direct influence on the service quality of hospital;
H₇: Wards have no direct influence on the service quality of hospital;
H₈: Restaurant has direct influence on the service quality of hospital;
H₉: Restaurant has no direct influence on the service quality of hospital;
H₁₀: Cleaning has direct influence on the service quality of hospital;
H₁₁: Cleaning has no direct influence on the service quality of hospital;
H₁₂: Accident and emergency have direct influence on the service quality of hospital;
H₁₃: Accident and emergency have no direct influence on the service quality of hospital;
H₁₄: Reception services have direct influence on the service quality of hospital;
H₁₅: Reception services have no direct influence on the service quality of hospital;
H₁₆: Blood banks have direct influence on the service quality of hospital;
H₁₇: Blood banks have no direct influence on the service quality of hospital;
H₁₈: Medical laboratory have direct influence on the service quality of hospital;
H₁₉: Medical laboratory have no direct influence on the service quality of hospital;
H₂₀: Securities have direct influence on the service quality of the hospital;
H₂₁: Securities have no direct influence on the service quality of the hospital.

**RESULTS AND DISCUSSION**

The R value is 0.725 which means that the independent variable is 72.5% correlating with dependent variable. The R² value is 0.526; this means that independent variables will explain 52.6% of the dependent variable. The adjusted R² value is 0.484 (Table 1). The F-value 12.589 is greater (Table 2) than the mean value 2.010 and the p-value 0.000 shows the statistical model is 99%.

Doctors with the service quality (Table 3). The independent variable, nursing beta value is 0.154; this means that the independent variable nursing explains 15.4% of the dependent variable quality service. The p-value is 0.175 which shows insignificant association of

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**Table 1. Statistical results and interpretation of Khyber teaching hospital.**

<table>
<thead>
<tr>
<th>Model summary</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Standard error of the estimate</th>
</tr>
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<tbody>
<tr>
<td>Model</td>
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</tr>
<tr>
<td>1</td>
<td>0.725&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.526</td>
<td>0.484</td>
<td>0.400</td>
</tr>
</tbody>
</table>

<sup>a</sup>Predictors: (Constant), cleanings, ambulance, doctor, restaurants, wards, nursing.
The independent variable accident and emergency beta value is 0.127; this means that the independent variable accident and emergency explains 12.7% of the dependent variable quality service. The p-value is 0.239 which shows insignificant association of ambulance with the service quality. The independent variable ambulance beta value is 0.127; this means that the independent variable ambulance explain 12.7% of the dependent variable quality service. The p-value is 0.033 which shows insignificant association of reception services with the service quality. The independent variable reception services beta value is 0.226; this means that the independent variable reception services explain 22.6% of the dependent variable quality service. The p-value is 0.033 which shows insignificant association of reception services with the service quality.

The independent variable blood bank beta value is 0.308; this means that the independent variable blood bank explain 30.8% of the dependent variable quality service. The p-value is 0.000 which shows insignificant association of blood bank with the service quality. The independent variable medical laboratory beta value is 0.226; this means that the independent variable medical laboratory explain 22.6% of the dependent variable quality service. The p-value is 0.018 which shows insignificant association of medical laboratory with the service quality. The independent variable security beta value is 0.174; this means that the independent variable security explain 17.4% of the dependent variable quality service. The p-value is 0.038 which shows significant association of security with the service quality. The R value is 0.908 which means that the independent variables are 90.8% correlated with the dependent variable. The R² value is 0.825; this means that independent variables will explain 82.5% the dependent variable. The adjusted R² value is 0.809 (Table 4).

The f-value is 52.491 greater than the mean value 4.576 and the p-value is 0.000 which shows the statistical

nursing with the service quality.

The independent variable ambulance beta value is 0.127; this means that the independent variable ambulance explains 12.7% of the dependent variable quality service. The p-value is 0.239 which shows insignificant association of ambulance with the service quality. The independent variable, wards beta value is 0.096; this means that the independent variable wards explain 9.6% of the dependent variable quality service. The p-value is 0.033 which shows insignificant association of wards with the service quality.

The independent variable variable restaurants beta value is 0.262; this means that the independent variable restaurants explain 26.2% of the dependent variable quality service. The p-value is 0.005 which shows significant association of restaurants with the service quality. The independent variable cleaning beta value is 0.226; this means that the independent variable cleaning explains 22.6% of the dependent variable quality service. The p-value is 0.006 which shows significant association of accident and emergency with the service quality. The independent variable security beta value is 0.174; this means that the independent variable security explains 17.4% of the dependent variable quality service. The p-value is 0.038 which shows significant association of security with the service quality. The R value is 0.908 which means that the independent variables are 90.8% correlated with the dependent variable. The R² value is 0.825; this means that independent variables will explain 82.5% the dependent variable. The adjusted R² value is 0.809 (Table 4).

The f-value is 52.491 greater than the mean value 4.576 and the p-value is 0.000 which shows the statistical
Table 4. Statistical results and interpretation of Lady reading hospital.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R^2</th>
<th>Adjusted R^2</th>
<th>Std. error of the estimate</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>0.908a</td>
<td>0.825</td>
<td>0.809</td>
<td>0.29525</td>
</tr>
</tbody>
</table>

a: Predictors: (Constant), cleaning, doctor, nurse, ambulance, wards, restaurant.

Table 5. ANOVAa.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>27.454</td>
<td>6</td>
<td>4.576</td>
<td>52.491</td>
<td>0.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>5.840</td>
<td>67</td>
<td>0.087</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33.294</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a: Dependent variable: quality services; b: Predictors: (Constant), cleaning, doctor, nurse, ambulance, wards, restaurant.

Table 6. Independent variable doctor’s beta

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficientsa</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized coefficients</td>
<td>Standardized coefficients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Std. error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.529</td>
<td>0.169</td>
<td>-</td>
</tr>
<tr>
<td>Doctor</td>
<td>0.158</td>
<td>0.041</td>
<td>0.215</td>
</tr>
<tr>
<td>Nurse</td>
<td>0.074</td>
<td>0.041</td>
<td>0.106</td>
</tr>
<tr>
<td>Ambulance</td>
<td>0.183</td>
<td>0.046</td>
<td>0.271</td>
</tr>
<tr>
<td>Wards</td>
<td>0.159</td>
<td>0.043</td>
<td>0.258</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0.094</td>
<td>0.039</td>
<td>0.176</td>
</tr>
<tr>
<td>Cleaning</td>
<td>0.198</td>
<td>0.051</td>
<td>0.306</td>
</tr>
<tr>
<td>Accident and emergency</td>
<td>0.184</td>
<td>0.037</td>
<td>0.301</td>
</tr>
<tr>
<td>Reception</td>
<td>0.147</td>
<td>0.053</td>
<td>0.224</td>
</tr>
<tr>
<td>Blood bank</td>
<td>0.165</td>
<td>0.057</td>
<td>0.260</td>
</tr>
<tr>
<td>Medical laboratory</td>
<td>0.091</td>
<td>0.059</td>
<td>0.140</td>
</tr>
<tr>
<td>Security</td>
<td>0.157</td>
<td>0.048</td>
<td>0.260</td>
</tr>
</tbody>
</table>

a: Dependent variable: quality services.

model is 99% (Table 5). The independent variable doctors beta value is 0.215; this means that the independent variable doctor explain 21.5% of the dependent variable quality service (Table 6). The p-value is 0.003 which shows significant association of doctor with the service quality. The independent variable nursing beta value is 0.106; this means that the independent variable nursing explain 10.6% of the dependent variable quality service. The p-value is 0.075 which shows insignificant association of nursing with the service quality.

The independent variable ambulance beta value is 0.271; this means that the independent variable ambulance explain 27.1% of the dependent variable quality service. The p-value is 0.000 which shows insignificant association of ambulance with the service quality (Table 6).

The independent variable wards beta value is 0.258; this means that the independent variable wards explain 25.8% of the dependent variable quality service. The p-value is 0.000 which shows insignificant association of wards with the service quality. The independent variable restaurants beta value is 0.176; this means that the independent variable restaurants explain 17.6% of the dependent variable quality service. The p-value is 0.018 which shows significant association of restaurants with the service quality.

The independent variable cleaning beta value is 0.306; this means that the independent variable cleaning explains 30.6% of the dependent variable quality service. The p-value is 0.000 which shows significant association of restaurants with the service quality.
significant association of accident and emergency with the service quality. The independent variable reception services beta value is 0.224; this means that the independent variable reception services explain 22.4% of the dependent variable quality service. The p-value is 0.007 which shows insignificant association of reception services with the service quality.

The independent variable blood bank beta value is 0.260; this means that the independent variable blood bank explain 26.0% of the dependent variable quality service. The p-value is 0.005 which shows insignificant association of blood bank with the service quality. The independent variable medical laboratory beta value is 0.140; this means that the independent variable medical laboratory explain 14.0% of the dependent variable quality service. The p-value is 0.127 which shows insignificant association of medical laboratory with the service quality. The independent variable security beta value is 0.260; this means that the independent variable security explain 26.0% of the dependent variable quality service. The p-value is 0.002 which shows significant association of security with the service quality.

On the basis of this critical analysis and the data (primary and secondary) available, the LRH and KTH showed that the service quality is overall satisfactory or positive but in some operational areas, the trust needs more attention to be improved in order to achieve organizational strategic goals as well as, a desired level of patients’ satisfaction.

The research reveals that the LRH has taken all possible steps into account for aiming to provide better service quality to its stakeholders. The primary and secondary data also support that the overall performance of the trust is satisfactory and this has been acknowledged by the patients. All services of the trust being provided to the patients have been rated by over or nearby the satisfactory level in the survey. However, the author's survey shows the following areas need to be addressed for further development and improvement.

The punctuality and availability of trust’s staff is very important. This plays a key role to impact a good impression on its patients. The customers’ opinion and feedback can be a parameter of performance for any organization. Some patients pointed out in the survey that when doctors and nurses are not available or they are absent or they are on leave, at that time they get delayed service with unfamiliar staff under uncertainty.

Patients also mentioned that there are some services that should be improved like ambulance, reception telephone service, A and E services. According to them, ambulance service is not sometimes provided quickly as needed and telephone service is often engaged and this makes them mentally upset to hold on for a long time. Based upon research, it was identified that out of these three hospitals, only the LRH and KTH hospitals is currently operating A and E function.

It means that this A and E business function is supposed to handle all those accidents and emergency services which take place within Peshawar city. These are the patients who require healthcare and emergency services. So, these are the issues which have been found in this study and should be considered by trust to fulfill the expectations of its patients.

In this survey, the author also found some other concerns which have been reported by the patients. For example, patients feel that sometimes trainee doctors are unable to diagnose or find the exact problem of the patient.

CONCLUSIONS AND RECOMMENDATIONS

The author reaches at this conclusion that the Lady Reading Hospital is, overall, performing very well and most of its patients are satisfied with the quality of service being received by them. In service quality, the hospitals trust aims to improve patients’ care, treatment and experience. The study shows that most of the trust’s services have been found positive in order to fulfill the expectations of their patients.

The LRH hospital has a very significant role and position because this is the largest hospital in Peshawar. According to survey report, patients expressed their experience and opinions positively in the areas of doctors’ response, nurses’ punctuality and their attitude, ambulance service quality, wards facilities, catering service quality, A and E service quality, and reception service quality and also trust caring quality with reference to others. The author believes that the trust has focused on its strategic and operational issues that enhance all its caring activities. Even though, the research produces satisfactory results about the trust, there are still some following operational areas that need to be addressed by the concerned departments.

The hospitals trust needs to improve doctors’ punctuality, their communication, doctors’ more visits in the wards, more cleaning of hospitals to avoid unengaged telephonic service and trainee doctors’ diagnostic mistakes.

Service quality is very important for every organization especially for healthcare organizations. This also plays a key role for an organization to survive and flourish highly competitive and ever changing health and service care industry. Customers or patients are the best judges of the quality of the services they use as the author has got feedback from them to find out the service quality of trust.

Finally, the author recommends that the trust should focus on the aforementioned pointed out areas to improve them for their patients’ maximum care as well as, to keep on its strategic position in the area with their set targets and desired goals.
To improve the service quality, the author suggests following steps in order to get more competency in the concerned areas:

- Repeat the process and procedures again and again to overcome short comings;
- Adapt more Involvements;
- Review of staff shortages;
- Review regularly patient’s responses or feedback;
- No compromising on service quality;
- Caring patients as an asset of the Trust;
- Provision of training and close monitoring of the staffs.

The scope of future research will be that the hospitals try to provide good service quality to patients. The principal method of collecting data is to concentrate on potential customers to evaluate knowledge skills of employees. Values and scope of that research is problem solving and also improves research skills.

REFERENCES

Edvardsson (1994). "Quality of Service." Published by British Library. UK.