

Master of Science in Public Health



*Assessing Quality of Primary Healthcare at District
Layyah from Patients Perspective*

By

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Declaration

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I understand that plagiarism is the use or presentation of any work by others, whether published or not, and can include the work of other candidates. I also understand that any quotation from the published or unpublished works of other persons, including other candidates, must be clearly identified as such by being placed inside quotation marks and a full reference to their source must be provided in proper form.

This dissertation is the result of an independent investigation. Where my work is indebted to others, I have made acknowledgments.

I declare that this work has not been accepted in substance for any other degree, nor is it currently being submitted in candidature for any other degree.

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ABSTRACT

Background: Quality primary healthcare is essential for promoting health, preventing diseases, and reducing morbidity and mortality rates. It is a key component of healthcare systems and has a significant impact on individuals and communities' well-being.

Objective: The study was aimed to assess the quality of primary healthcare services at district Layyah from the patients' perspective.

Methodology: The study was carried out at the 10 Basic Health units selected through lottery method among 36 and the sample were selected by using simple random sampling technique.

Results: This study analyzed the responses of 400 participants who met the inclusion criteria. The gender distribution showed that 46.3% of the participants were male and 53.8% were female. The age distribution showed that the most common age group was 29-38, accounting for 29.3% of the sample, while the least frequent age group was 49 years or above, comprising only 19.5% of the sample. The study also examined the distance of the respondents from the Basic Health Unit and found that 36% of the respondents lived within a 3-kilometer radius, while 33.3% lived more than 10 kilometers away. The results showed a significant negative quality gap in all five dimensions of SERVQUAL. The Tangibles dimension had the lowest negative gap of (-3.44), while the Reliability dimension had the highest negative gap of (-3.77). The total services quality gap was (-3.65), indicating that improvements need to be made to meet the expectations of the customers and improve overall service quality.

Conclusion: Our study reveals a significant quality gap in primary healthcare services in Layyah district, Pakistan.

Keywords: Primary healthcare, SERVQUAL, Quality, Patients Perspective

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CHAPTER I: INTRODUCTION

The Pakistan healthcare system is facing severe pressure at present (Malkani et al., 2021). This stress is mainly due to the high incidence of HIV/AIDS, tuberculosis, and other non-communicable diseases, as well as the elevated levels of injury and violence, maternal and child mortality, a shortage of healthcare workers, and insufficient medical equipment. As a result, there is a widespread consensus that a transformative change in healthcare delivery is desperately needed (Hafeez et Al., 2023).

In the past, the technical abilities of healthcare providers were thought to be enough to ensure top-notch care (Donate et al., 2020). However, healthcare facilities have evolved into complex systems (Hämel et al.,2019) according to (lim et al., 2018) effective medical care should align with patient values and preferences, requiring both technical and managerial support. Not only does this give a facility a competitive advantage, but it also addresses the needs of patients. A nation's health state has a significant impact on its social and political stability (Hassan, E., & Mahmoud, H. 2020).

Healthcare has been acknowledged as a key indicator of human progress (Nurvita et al., 2022), therefore, health reform initiatives must be devised in a deliberate manner. The focus on improving both the delivery and quality of healthcare can reduce the burden of disease(Kruk et al., 2022). The government of Pakistan is working towards meeting the Sustainable Development Goals by implementing social security programs and overhauling the health sector to enhance the standard of healthcare services (Shaikh &

Ali, 2023). To enhance both the reach and quality of public healthcare, it is necessary to increase public funding for the healthcare sector and construct advanced health facilities in under-served areas. In order to ensure equitable access to healthcare, initiatives aimed at alleviating poverty and strengthening social security programs must also be implemented (Banerjee, S. 2021).

Despite attempts to enhance the quality of resources and services, health statistics and public opinion indicate that additional efforts are required. The improvement of health indices is progressing at a slower pace than desired or not at all, leading many individuals to opt for private healthcare facilities over public ones (Panzai et al., 2020).

The concept of service quality is complex to quantify due to its intangible nature, making it difficult to define (Álvarez-García et al., 2019). Most research concurs that the most effective way to evaluate service quality is through a paradigm of disconfirmation, where expectations are either met, not met, or exceeded (Ghamry et al., 2022).

The foundation of many quality studies is early research that utilizes a systems-based approach to understand quality. This framework of analysis is composed of three systems: Structure, Process, and Outcome. Structure encompasses physical and staffing aspects, Process covers clinical treatment and staff factors, and Outcome considers health status and staff-related factors. The seminal study by Parasuraman et al., 1985 built upon the work of Donabedian, A, 1980 by focusing on elements within the Process system. Their findings were based on the idea of the multi-dimensionality of service quality, which has since become widely recognized in the literature on service quality.

The Service Quality Gap Model is outlined by Parasuraman et al., 1985 and highlights the five gaps that arise from miscommunication between patients and healthcare providers. The most prominent of these gaps, Gap 5, refers to the difference between the expected and perceived quality of service delivery by healthcare practitioners. The SERVQUAL questionnaire, which is used within this framework, measures the differences in patient expectations and perceptions of the quality of services and helps researchers determine the dimensions that contribute to the quality construct (Parasuraman et al., 1988).

Despite some criticism, the SERVQUAL tool is widely used as a reliable and credible way to measure service quality. In 1991, Parasuraman, Berry, and Zeithaml identified five dimensions that support service quality, known as Tangibles, Reliability, Responsiveness, Assurance, and Empathy. However, some researchers have chosen to identify different underlying factors or dimensions for their specific study groups due to concerns about the validity of applying these dimensions to diverse populations. While these studies have shown some similarities in certain dimensions, it is still important to identify specific elements and combinations that are unique to particular groups.

Rationale:

The relationship between patient satisfaction and service quality has been well established by several studies. It has been established that the quality of service has a significant impact on customer satisfaction (Dehghanpouri et al., 2020). The importance of this association has been emphasized in recent years as research has attempted to

determine its strength (Cabral et al., 2023). The link between higher service satisfaction and better adherence to treatment and attendance at follow-up sessions has been proven by research (Ng et al., 2019). In addition to being important for maintaining a competitive advantage, this highlights the significance of ensuring high-quality service. Despite efforts to improve the Pakistan healthcare system, the focus still remains primarily on tangible indicators of performance, with patient perceptions given little consideration, apart from occasional mentions in national surveys (Teng et al., 2009).

Objectives:

1. To assess quality of primary healthcare at district layyah from patients perspective
2. To measure the gap between expected and perceived quality

CHAPTER II: LITERATURE REVIEW

Primary Healthcare:

Every person has a fundamental right to access health facilities without any discrimination of ethnicity, political inclination, socioeconomic status, and religious beliefs. World Health Organization defines “*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*” (Callahan, D. 1973). In 1986, Ottawa charter more clarify health as “*A resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities*” (WHO, International Conference for the promotion of Health, 1986).

Primary Health Care (PHC) is a comprehensive approach to health that prioritizes individuals' needs and focuses on health promotion, disease prevention, and the provision of comprehensive care, including treatment, rehabilitation, and palliative care (WHO, 1978). The approach aims to be delivered as close as possible to individuals' daily environments and as early as possible in the continuum of care (UNICEF & WHO, 2018).

The concept of PHC was first introduced at the 1978 International Conference on Primary Health Care in Alma-Ata, Kazakhstan, where it was declared as the key to achieving universal health coverage (WHO, 1978). The Alma-Ata Declaration

defined PHC as "*essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford*" (WHO, 1978).

Alma-Ata Declaration was a milestone in the field of public health and it was endorsed by all participants and WHO member states. Health definition was reiterated in the conference and participation of individuals and the community in the health promotion activities was recognized as their basic right. Determination has been made to reduce health inequalities among communities and countries. Primary health care was considered an essential element to attain "*Health for All*" by 2000 and the first point of contact for seeking health care facilities as well (WHO, 1978). It is crucial to expand the reach of primary healthcare facilities to improve public health. Providing easy access to primary healthcare can increase life expectancy, decrease mortality rate, and hospitalization, and promote better health (Memon Medical Institute Hospital). Primary health care (PHC) has vital role in the promotion, prevention, rehabilitation, and provision of curative services in the community. The appropriate PHC services depend upon physicians and allied health professionals and their readiness to respond the community health care needs. However, increasing disparities and inequalities in the resources, especially in developing nations it is the responsibility of authorities that basic health facilities must be made available, affordable, acceptable and approachable to everyone with any distinction (Du et al., 2019).

In recent years, there have been several international conferences and meetings dedicated to PHC, including the Global Conference on Primary Health Care in Astana, Kazakhstan in 2018, and the Global Health Summit in Moscow in 2019 (WHO, 2019). These conferences brought together leaders from governments, international organizations, civil society, and the private sector to discuss the challenges and opportunities for strengthening PHC systems and achieving better health outcomes for all.

A comprehensive approach to PHC was outlined in the UNICEF and WHO, 2018 publication "*A vision for primary health care in the 21st century: towards UHC and the SDGs.*" The publication emphasized the importance of people's full participation and universal access to essential health care, and highlighted the need to address the root causes of health inequities through action on the social determinants of health.

Both the WHO Declaration of Alma-Ata, 1978 and the UNICEF & WHO publication, 2018 emphasize the importance of PHC as a key component in the pursuit of universal health coverage and the achievement of the Sustainable Development Goals. PHC is a comprehensive approach to health that prioritizes individuals' needs, focuses on health promotion and disease prevention, and aims to be delivered as close as possible to individuals' daily environments. The principles of PHC have been supported and promoted by the WHO and UNICEF for several decades, and have been the focus of international conferences and meetings dedicated to strengthening PHC systems and improving health outcomes for all.

The Primary Health Care Performance Initiative (PHCPI) aims to improve primary healthcare in low- and middle-income nations. PHCPI created a framework that connects financial, human, and supply inputs with primary healthcare capabilities and uses 25 critical indicators to assess and identify areas for improvement. The group also works to standardize and spread best practices for effective primary healthcare systems (Bitton et al., 2017).

Primary healthcare is considered the most effective strategy for ensuring equitable provision of essential medical services. Despite having a wide-ranging district health system network, Pakistan has not met expectations. There are ongoing health system reform initiatives, such as the implementation of a bundle of essential health services, public-private partnerships, and a patient-centered approach. However, the collaboration between the three levels of government and other stakeholders is important to the success of these reforms in enhancing the overall effectiveness of the district health system. (Sabih et al., 2017).

Dr. Starfield provided a thorough definition of primary care in her book *Primary care: balancing health needs, services, and technology*. She has defined primary care as, "The Delivery of integrated and accessible healthcare services according to the health need of individuals by healthcare providers who are accountable to address the patient's needs through a sustained partnership with the community." She stated that comprehensive, coordinated, and continuous care that offers a smooth process of care is supposed to be included in integrated care (Starfield, 1998). PHC systems manage health issues with good care at the primary level for the entire community at a

minimum cost, which reduces the burden of tertiary care facilities (Agarwal et al., 2017). Primary Health Care provider is in a unique role to coordinate with patients from disease management to curative therapy and patients feels comfortable with his primary physician. Before this goal becomes a reality, there are a number of obstacles to be conquered (Li, X et al., 2020)

Pakistan Healthcare Delivery System:

Decentralization of power and authority is important for prosperity and development. In Pakistan, a devolution plan known as the "Local Government Ordinance" was implemented in 2001 based on five principles: political power transfer, shared management responsibilities, administrative power delegation, resource allocation at the district level, and severing the connection between power and authority (Malik &Rana, 2019). Later, the 18th Amendment was passed by the parliament in April 2010, distributing power and sovereignty between the national and provincial levels of government (Rana, 2020).

As a result, the provinces enacted their own health legislation. The Khyber Pakhtunkhwa Health Commission approved the relevant bill in 2015, the Sindh Health Commission in 2014, and the Punjab Health Commission in 2010. The laws aimed to ensure the adoption of certain positions in the healthcare sector and to enhance the quality of healthcare services through the implementation of "Minimum Service Delivery Standards (MSDS)" and the elimination of quackery. The Punjab Healthcare Commission Bill aimed to improve funding, budgeting, accounting, inspection, and enforcement (Momina&Zakar,

2021). The Sindh Healthcare Commission Bill aimed to improve access, equity, and quality of healthcare services and address related concerns, while the Khyber Pakhtunkhwa Healthcare Commission Bill aimed to provide citizens with access to high-quality medical care (Khan, 2019). However, no commission or bill has been established at the provincial level to provide healthcare services to the citizens of Baluchistan.

Despite these efforts, health indicators remain below desired targets, highlighting the challenges faced by the healthcare system (Nishtar et al., 2013). The bills enacted at the provincial level address governance, registration and licensing, standards for healthcare services, funding, budget, and accounting, and inspection and enforcement.

Pakistan is a developing country where health indices and access to healthcare are a significant concern. Improving these indices would reduce disparities between various communities and districts. A Community Health Index (CHI) has been proposed to investigate the inequality ratio, slope, and spatial analysis of disparities among communities at both regional and geographical levels (Khan & Hussain, 2020).

On a global scale, healthcare is now considered the foundation of human development due to its impact on population productivity, educational success, social and political stability, equity improvement, and economic returns (Kaseje, D. 2006). Hence, enhancing the healthcare system is important for Pakistan's economic sustainability, stability, and growth. As per the United Nations Development Program, Human Development Index report 2022, with a score of 0.544 and a rank of 161 out of 192 evaluated countries globally, Pakistan has fallen seven places in the index.

According to a study, the healthcare system in Pakistan is ineffective. To improve the system, it is necessary to implement reasonable policies that offer cost-effective, accessible, and high-quality healthcare services (Ansari, Hosseinzadeh, & Zwar, 2016). However, conceptual difficulties regarding the effectiveness and quality of the healthcare system still need to be addressed, as recommended by the World Health Organization's standards.

The data shows that multidimensional inequality is high in rural areas and unidimensional inequality is high in urban areas due to unequal income distribution (Khan & Hussain, 2020).

Healthcare Delivery System of Pakistan:

Pakistan has a three-tiered healthcare delivery system, which is primarily managed by the provincial and federal governments. Community health professionals interact with communities through primary healthcare facilities and outreach initiatives, while secondary and tertiary care facilities offer curative and rehabilitative services. Some government/semi-government organizations, such as the military, offer health services to their employees. The private health industry includes a wide range of professionals, including medical professionals, nurses, pharmacists, and unlicensed practitioners. (Wright et al., 2020).

The Ministry of National Health Services, Regulation and Coordination is the primary government agency responsible for the development, implementation and regulation of health policies and programs in the country (Zaidi et al 2019). The government has set up

a three-tiered healthcare system consisting of basic health units (BHUs), rural health centers (RHCs) and district headquarters hospitals (DHQs) to provide primary healthcare services (Kurji, Z et al., 2016). The first point of contact for most people seeking healthcare services is the BHUs, which provide essential drugs, maternal and child health services, and basic diagnostic facilities. RHCs provide more comprehensive services including family planning, immunization and treatment for common illnesses. DHQs provide tertiary care services and act as referral centers for the lower tiers (Hashami, M. F. 2020).

One of the key initiatives aimed at improving primary healthcare in Pakistan has been the introduction of the Lady Health Worker (LHW) Program. Launched in 1994, the LHW program aims to provide health education and services to women and children in rural and underserved areas. LHWs are trained and equipped to provide basic health services and to refer patients to higher levels of care when necessary. (Hafeez et al., 2011).

Quality of Primary Healthcare System of Pakistan:

In Pakistan, Basic Health Units (BHUs) play a key role as the main providers of Primary Health Care services. It is important to evaluate the effectiveness of BHUs in promoting public health. However, Pakistan allocates only 3 % of its GDP to the health sector, which is much lower than the recommended 6% by the World Health Organization (Brollo et al 2021). The public health expenditure in Pakistan, at 0.9% of GDP, was the lowest among South Asian countries in 2020 (Bloch, C. 2020). This is a significant decrease from the previous health budget, which was only 0.23% of GDP. A well-

functioning healthcare system is essential for sustainable development. Primary Health Care (PHC) is provided by various facilities including Basic Health Units (BHUs), Rural Health Centers (RHCs), Maternal and Child Health Centers (MCHCs), TB centers, and dispensaries. According Ali, A., & Panezai, S. 2021, there are a total of 1084 MCHCs, 5798 BHUs, and 581 RHCs in the country.

Several models have been used to assess the quality of Primary Health Care (PHC) services in different studies. The Tanahashi Model (2020) was used by Nambiar et al., 2020 and Naseem et al., 2020, while the Anderson model (2020) was employed by Natera et al. The Donabedian approach is widely considered as a superior method for evaluating the quality of PHC services. This approach involves considering various factors such as the qualifications of care providers and medical staff, the infrastructure, and the technical aspects of treatment and medication quality. Outcomes, or the results achieved through health facilities, are also taken into account. Previously, the focus was on improving the quality of PHC systems, particularly in low- and middle-income countries (LMICs), to increase their effectiveness (Rezapour et al., 2019).

A study conducted in Peshawar, Pakistan found that while family planning (FP) services were present at Primary Health Care (PHC) sites like BHUs, they were only accessible to 27% of the population in three villages surveyed. Similarly, only 26% of the residents in these communities had access to medications (Khan, N., & Abbas, M. (2007). Another study by Panezai et al., 2020 in Pakistan showed that the availability and functioning of instruments were lacking in 18% of BHUs. Antenatal care services were available in 53% of BHUs, but the necessary drugs were only found in 15% of these facilities. The

availability of medicine was poor in 17% of BHUs. These findings suggest that the provision of PHC services in Pakistan is limited.

Studies in Pakistan have shown that the quality of Primary Health Care (PHC) services is poor. The country has failed to reach international standards in its PHC services, and there is a shortage of high-quality services at Basic Health Units (BHUs). Additionally, the supply of high-quality drugs at BHUs in Pakistan is inadequate ((Ali et al., 2021)).

The government of Pakistan is trying to implement the "*health-for-all*" philosophy and receives support from organizations such as WHO, UNICEF, and the World Bank to provide preventive, therapeutic, and rehabilitative services. However, despite these efforts, Pakistan faces a high number of deaths from communicable diseases, such as Acute Respiratory Infections (ARI), and is attempting to address these illnesses through vaccination. BHUs are mostly visited by the poor and illiterate population, and women frequently utilize these facilities. As a result, the utilization of PHC services at BHUs is relatively low in Pakistan (Ali et al., 2021).

A study revealed that 43.1% of women and 51.2% of men not utilizing Basic Health Units (BHUs) for basic health care needs. This highlights the pressing need to improve the quality of PHC services in Balochistan. Research has emphasized that enhancing PHC services is vital to overall community well-being. However, limited usage of PHC services in rural areas has been observed due to the province's inadequate implementation of PHC policy (Panzai et al., 2020).

According to Aziz et al., 2016, 28% of health facilities lacked proper infrastructure and 16% had limited access to equipment. Essential supplies such as urine strips for albumin

testing, blood sugar testing strips, and hemoglobin reagents were found to be particularly scarce. However, rural health centers (RHCs) generally had better infrastructure and equipment availability compared to Basic Health Units (BHUs). Another study showed that a significant number of people were dissatisfied with the basic health unit services due to the inconvenient location of the facilities and the lack of quality and scarcity of drugs.

Service Quality:

The meaning of "quality" has developed over time and will likely continue to do so within organizations. Its utilization, examination and interpretation have altered since early 1900s, broadening from simple product requirements (inspection and statistical methods) to encompass all organizational aspects. As organizations encountered more foreign competition, particularly in the US, in the 1970s and 1980s, quality gained a strategic importance, highlighting the need to sustain market share.

Table 1: Evolution of Concepts of Quality

| Time | Focus | Concept of Quality |
|-----------------|-------------------------|--|
| 1900 | Inspection | Inspect for Quality after Production (Old Concept) |
| 1940 | Statistics Sampling | |
| 1960 | Organizational Quality | |
| 1980 and Beyond | Customer Driven Quality | Build Quality Into the Process (New Concept) |

(Source: Reid, R. D., & Sanders, N. R. (2011). *Operations management: an integrated approach fourth edition*).

Total Quality Management (TQM) traces its origins back to the 1940s, but it wasn't until the 1980s that it gained popularity and was widely adopted by western businesses by the end of the 20th century. TQM is a comprehensive set of management and control systems aimed at engaging the entire organization and its employees in delivering products or services that meet and exceed customer expectations (Talha, M. 2004).

TQM is a client-oriented management style that has exhibited advantages for various organizational elements and functions (Powell, T. C. 1995). This notion has propelled the advancement of quality control and management, culminating in the creation of ISO 9000, which encompasses various quality criteria for both products and services (Talha, M. 2004).

The persistent emphasis on and prioritization of quality (and indirectly, customer satisfaction) across organizations highlights the vital significance of service quality in business and the need for a thorough evaluation of its efficacy.

The definition of quality in regards to services has been widely debated due to its continual evolution. Literature provides multiple interpretations of quality, some of which are both practical and sincere (Zineldin, M. 2006). However, quality remains a vague and complex term. A frequent definition of quality is the perceived value of an item or service. More often, it is compared to a pre-established level of service rather than in absolute terms (Campbell et al., 2000).

Definition of Service Quality:

The published definitions suggest that the service quality paradigm is based on the concept of disconfirmation. This means that perceptions can either be higher (negative disconfirmation), lower (positive disconfirmation), or equal (confirmation) to expectations. Perceptions are related to the evaluated service, while expectations represent the patient's desired level of service from the provider (Parasuraman et al., 1994). The concept of service quality has been defined as a state of disconfirmation (Parasuraman et al., 1994). This means that people's perceptions of a service can either be higher than their expectations (negative disconfirmation), lower than their expectations (positive disconfirmation), or equal to their expectations (confirmation) (Parasuraman et al., 1985). The perceptions refer to the actual service experienced, while expectations represent the desired level of service desired by the customer.

The concept of quality is widely acknowledged to be complex and multi-faceted, with various interrelated characteristics (Choi et al., 2005). Over the years, several models and theories have been proposed to define these characteristics as accurately as possible. Donabedian's (1988) work defines quality as a concept that can be evaluated at multiple levels of care, including the care provided by healthcare providers (technical and interpersonal), amenities, patient-initiated care, and community-level care. Most models align with these parameters.

A model of service quality incorporates three elements of service quality: physical and procedural, behavioral, and judgmental. The study analyzed and combined different classification schemes for service activities based on the level of labor intensity, process and product customization, and interaction between the customer and the service organization (Haywood-Farmer, J.1988). Over the past decade, the service sector has grown in significance for the economy, contributing 60% of the value produced within the European Economic Community. Poor service quality can result in losses of up to 40% of operating costs for service organizations, making the improvement of quality is a vital concern (Ghobadian et al., 1994).

The modern market has seen a rise in clients due to the impact of service quality on increasing customer loyalty. A study was conducted to examine the relationship between service quality and customer loyalty. The findings showed that service quality has a significant impact on customer loyalty, with a 38.30% effect (Budianto, A. 2019).

The idea of quality is commonly understood to be intricate and multi-dimensional, with multiple interconnected elements (Choi et al., 2005). Throughout the years, various models and theories have been developed to attempt to define these elements precisely. Donabedian's (1988) research defines quality as something that can be assessed across different levels of care, such as the care given by healthcare professionals (technical and interpersonal), the available facilities, care initiated by patients, and care at the community level.

Relationship between Quality and Customer Satisfaction:

The quality viewed from a patient's perspective is called perceived quality. Zeithaml, V. A (1988) defines perceived quality as a patient's overall evaluation of the quality of healthcare services based on their assessment of its various aspects. To evaluate this perception, a framework that includes technical, functional, environmental, and administrative standards is used. Six factors are used to describe the quality of healthcare services: effectiveness, efficiency, appropriateness, accessibility, legitimacy, and fairness (Swain et al., 2018).

It is natural to assume that a patient's top priorities when seeking healthcare services are their health, the quality of medical treatment, and the medical personnel. This implies that patients prioritize seeking the best medical care and service quality. Hence, a patient's perception of the quality of services received will impact their decision on which healthcare provider to choose. Perceived service quality is thought to be an attitude that is closely tied to satisfaction but not synonymous with it (Abidova et al., 2020). According to Fornell et al. (1996), service quality is one of the three factors that contribute to satisfaction, alongside expected value and perceived value. This relationship was further confirmed by Cronin and Taylor's (1992) study, which found the same directionality across multiple industries.

Satisfaction is an emotional reaction that arises from evaluating a service experience, while perceived service quality is considered to be a cognitive construct (Choi et al., 2005). Tam, J. L. (2007) concurs that satisfaction stems from comparing one's expectations of service with their actual perceptions. Given that patient satisfaction is a

critical aspect of hospital management, many studies have sought to understand the relationship between these two metrics (Choi et al., 2005).

According to Badri et al.,(2008), patient perceptions play a key role in evaluating services, setting and meeting healthcare standards, and planning and improving service delivery. In fact, studies have shown that patient satisfaction is one of the top three indicators of healthcare service performance (Zabada et al., 2001). Research suggests that the factors affecting satisfaction ratings with service quality can vary depending on the situation, including primary care facilities, advanced medical centers, public and private hospitals, and the patient's health status (Aladwan et al., 2021)

Measuring Quality and Satisfaction of Healthcare Services:

The extension of access to basic healthcare services has frequently been the exclusive emphasis of policies to enhance population health, with the quality of care being neglected. Usually, it has been assumed that available quality of care is sufficient or will naturally improve as utilization will be increased. These assumptions are wrong because it is established fact that low quality of care restrict people to the utilization of services which leads to barrier to achieve Universal Health Coverage (Hanefeld et al., 2017). Quality of health care is broad concept and standards of quality of care varies in different countries even in developed nations. It is more challenging in developing countries to provide quality care with increase in demand of health services and limited resources. (Maphumulo et al., 2019).

Institute of Medicine defined Quality of care as “*quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge*” with the properties of should be measurable on the scale, capable to address the need of individual and community, can produce desirable outcomes with consistency (Dharmarathne et al., 2020).

In the past, the effectiveness of healthcare institutions was evaluated based on tangible elements such as physical facilities and metrics such as death and illness rates. However, recently there has been a shift in focus towards prioritizing patient satisfaction and their perceptions of the quality of care received (Wiig et al., 2013).

The new focus on enhancing patients' perception of quality has led to improved delivery of healthcare services and has brought favorable outcomes for healthcare management (Al-Abri et al., 2014). This change in focus has also resulted in evolving patient needs and expectations, increased access to information, and a broader understanding of what contributes to patient satisfaction beyond just medical outcomes (Viitanen et al., 2022). Therefore, understanding patients' views of service quality is becoming increasingly important for the effective management of healthcare services. As patient satisfaction plays a major role for various reasons, it's beneficial for healthcare managers to pay close attention to patients' perceptions of quality (Hussain et al.,2019).

Satisfied patients are more likely to maintain a long-term relationship with their healthcare provider, which is beneficial in terms of keeping medical records up-to-date (Zanaboni et al., 2020). Additionally, when patients are happy with the care they receive,

they are more likely to comply with medical treatment plans, including taking prescribed medications (Afrashtehfar et al., 2020).

Thirdly, understanding what causes patients' satisfaction or dissatisfaction can help identify structural problems and improve risk management. Finally, measuring patient satisfaction with the quality of care provides valuable information for quality management systems and helps to assess the performance of the healthcare system (Shirley et al., 2013). By gaining insight into how patients perceive the standard of care in the public healthcare sector, healthcare organizations can develop effective strategies for enhancing patient satisfaction.

Quality and Outcome Framework was introduced for the very first time as General Medical Services on 1st April 2004, with the objective to improve quality of care. (Taggar et al., 2012). In the result many countries and organizations have decided to introduce quality monitoring and reforms to build effective and efficient and safe health system (Asmri et al., 2020). Hospital inpatient administrative data that are easily accessible can be utilized with quality indicators to monitor and track clinical performance and outcomes (AHRQ Quality Indicators). The Productivity Measurement and Enhancement System (ProMES) is a very effective management system for assessing and enhancing the performance of individuals within organizations (Hysong et al., 2021) Canadian Institute for Health Information and Manitoba Physician has jointly developed Primary Care Quality Indicators. These indicators are revised and reviewed regularly by the advisory committee (Manitoba Health) 29 quality indicators summed in 4 categories, Prevention and detection, management of chronic disease, medical care, and health

service delivery (University of Manitoba). The performance of PHC facilities is evaluated using a number of categories of indicators, such as convenience, appropriateness, acceptability, efficacy, coordination of care, care continuity and safety (Al Rashidi et al., 2020)

Challenges in Measuring Perceptions

Measuring patients' perceptions of quality is challenging due to various factors. In addition to external socioeconomic and demographic factors that impact the standards of quality, the abstract and subjective nature of the concept of quality adds to the difficulty of evaluating it (Fingeret et al., 2013). The challenge of evaluating patient satisfaction is further compounded by the intangible nature of the services provided by medical institutions and the size, complexity, and specialization of these organizations (Wesso, A. D, 2014).

Several studies have been conducted to understand the underlying factors of quality in healthcare. In an effort to better comprehend the complex relationships between various factors that contribute to patient satisfaction and service quality, Naidu (2009) created a comprehensive model. This model is based on a review of 24 studies and captures the intricate interactions between different elements and dimensions of patient satisfaction and service quality. It shows how patients and healthcare professionals both shape and influence the quality of care.

Patients play an important role in influencing healthcare outcomes by following instructions and accurately reporting their symptoms. However, their satisfaction with the

care they receive is also impacted by contextual and socio-demographic factors. The model includes additional factors that influence satisfaction, such as access and the quality of care. The SERVQUAL tool, which will be discussed later, is able to measure these dimensions and other factors that contribute to healthcare quality. It's important to note that the importance of different components of service quality can vary between sectors (Parasuraman et al., 1994).

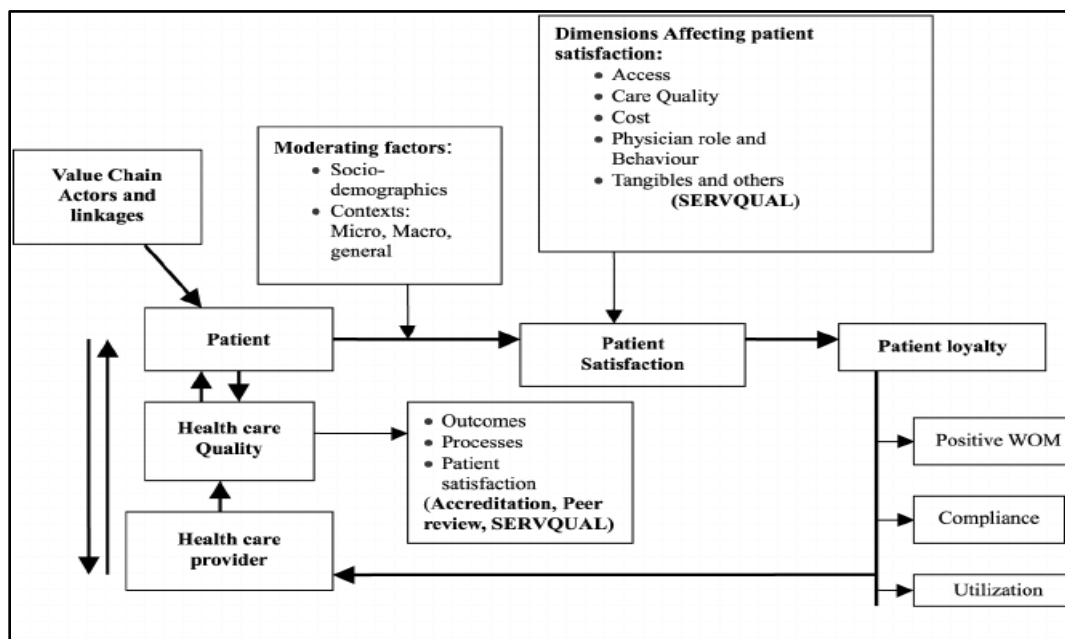


Figure 1: DIMENSION OF HEALTHCARE

Source: (Naidu, A, 2009. Factors affecting patient satisfaction and healthcare quality).

There has been some criticism of using patients to judge the quality of healthcare due to the fact that most patients lack the technical expertise required to make such evaluations (Lynn et al., 2007). It has also been suggested that patients' preferences may not align

with what is considered to be high-quality treatment because they lack the necessary technical knowledge to understand the best course of action for their care (Donabedian, 1992).

While there is agreement among researchers that the patient's perspective is important, there are also arguments against relying solely on patients' perceptions of quality (Zarei et al., 2012). Patients can provide valuable information, both as the primary source and as a way to confirm other measurements, when used as informants (Badri et al., 2008).

Many studies have shown that healthcare providers often overestimate patients' satisfaction, and that different dimensions are given varying levels of importance. For example, management tends to prioritize efficiency and effectiveness over patients' needs for a more personalized approach (Elwyn et al., 2003). While using providers' perceptions to assess the medical quality of care may be useful, it may not accurately reflect patient satisfaction.

The evaluation of healthcare services has evolved from relying solely on physical factors and metrics like mortality and morbidity to taking into consideration patient happiness and perceptions of quality. This shift has led to improvements in service delivery and management and has made it crucial for healthcare organizations to understand patient views of service quality. The benefits of measuring patient satisfaction include a better patient-provider relationship, improved adherence to treatment plans, risk management, and quality management. However, measuring patient quality perception is challenging due to the intangible nature of medical services, the complexity of healthcare

organizations, and the influence of external factors. A model created by Naidu (2009) helps to understand the different elements and dimensions of patient satisfaction and service quality. While some may argue that patients lack the technical expertise to evaluate service quality, others believe that the patient's perspective is the most significant and can serve as a valuable source of information. Studies have shown that providers' perceptions of patient satisfaction can be exaggerated and may not accurately reflect patient opinions. Thus, evaluating the quality of healthcare based on how patients feel about the services provided is important and can reveal disparities in the healthcare system.

Previous studies have found that patients are more concerned with the human aspects of care, such as physician communication, empathy, and respect, as well as access to care and convenience (Wesso & A. D. 2014). Additionally, these findings highlight that patients' perceptions of quality care are not only related to the medical outcome of treatment, but also to their overall experience of the healthcare system. Thus, incorporating the patient perspective into the evaluation of quality in healthcare is important in providing a comprehensive understanding of the quality of care provided.

SERVQUAL as an Assessment Tool of Service Quality:

The SERVQUAL questionnaire is a survey that measures the gap between customer expectations and their perceptions of the actual service quality. It consists of 22 questions and evaluates service quality based on five dimensions. The initial development of the questionnaire identified 10 dimensions of service quality (Parasuraman et al., 1985).

1. Tangibles: The physical appearance of the service provider, equipment and their facilities.
2. Reliability: The ability of the service provider to deliver the service as promised.
3. Responsiveness: The level of prompt and friendly service provided by staff.
4. Competence: The skill and knowledge of employees to deliver the service effectively.
5. Courtesy: The staff's politeness, kindness and attentiveness towards customers.
6. Credibility: The trustworthiness and honesty of the service provider.
7. Security: The absence of any risks or danger for the customer during the service.
8. Accessibility: The ease of reaching the service provider.
9. Communication: The clarity and effectiveness of communication between the service provider and the customer.
10. Customer Understanding: The service provider's effort to understand the needs and preferences of the customer.

Later, these dimensions were condensed to five key areas. These are Reliability, Empathy, Assurance, Responsiveness, and Tangibles. Each of these dimensions includes specific phrases related to it (Parasuraman et al., 1988). The SERVQUAL questionnaire includes questions that assess customers' perceptions of these dimensions by rating relevant statements. The format of the statements in this survey is as follows:

1. Tangibles (Statements 1-4)
2. Reliability (Statements 5-9)

3. Responsiveness (Statements 10-12)
4. Assurance (Statements 13-18)
5. Empathy (Statement 19-22)

The physical appearance of the facilities is known as "tangibles". This dimension encompasses the overall condition of the environment, as well as the appearance of staff, equipment, and the level of cleanliness. Research has shown that patients' opinions of service quality are positively related to the physical setting of the facilities (Wesso & A. D. 2014).

Reliability refers to the ability to consistently provide services as promised (Parasuraman et al., 1991). In the healthcare setting, this may include precise disease diagnosis.

Responsiveness refers to the willingness of staff to assist patients and provide prompt service (Parasuraman et al., 1991).

Assurance involves the ability to instill confidence and trust through polite and knowledgeable behavior (Parasuraman et al., 1991). This includes factors such as competence, respect, effective communication, and positive interpersonal interactions. In this crucial aspect of service delivery, patients may have uncertainty about the outcomes of high-risk services.

When using the SERVQUAL questionnaire to assess quality, it's important to consider the gap between customers' perceptions and expectations of the service. The SERVQUAL score for each dimension is calculated using an equation given below.

The SERVQUAL score is determined by subtracting the customer's expectation from their perception of the service.

Equation 1:

$$\text{Perception} - \text{Expectation} = \text{SERVQUAL}$$

The SERVQUAL questionnaire has been used in a wide range of industries and its versatility across different business sectors has been demonstrated. It is widely accepted as a tool to measure the multidimensional quality of healthcare services (Wesso& A. D. 2014)Figure 1shows the effectiveness of the SERVQUAL instrument in evaluating various factors that contribute to customer satisfaction (Naidu, 2009). Empirical research has found that the SERVQUAL survey is suitable for both public and private healthcare settings (Alumran et al., 2021).

The SERVQUAL questionnaire has been successfully adapted and used in research on healthcare service quality in various countries, including the Iran (Dopeykar et al., 2018),Saudia Arabia, Iran, Jordin and Malaysia (Jonkisz et al., 2022), the United States and United Kingdom (Kilbourne et al., 2004), and Egypt (Aboubakr et al., 2022). Despite using modified versions to accommodate for differences in socioeconomic conditions and systems, the five fundamental dimensions proposed by Parasuraman et al. (1985) have remained the underlying elements in these studies (Wesso& A. D. 2014)

Operational Definitions:

Quality:

Quality is defined as the aggregate of traits and attributes inherent in a product or service, which exert an influence on its capability to satisfy explicit or implied requirements and align with customer expectations. This definition underscores that quality encompasses all the elements comprising a product or service that contribute to its effectiveness in meeting consumer needs.

Primary Healthcare:

Primary healthcare is an accessible, community-based healthcare approach that emphasizes core services. It provides comprehensive, coordinated care addressing physical, mental, and social health, considering socioeconomic factors. Through a multidisciplinary team, it delivers promotive, preventive, curative, and rehabilitative treatments, aiming to remove barriers, ensure equity, and meet diverse healthcare needs across the lifespan. Primary healthcare fosters long-term relationships and focuses on overall well-being of individuals and populations.

CHAPTER II: METHODOLOGY

Study Design:

A cross-sectional study was conducted to assess the quality service of primary healthcare at District Layyah from patient's perspective.

Study Duration:

Study duration was from September 2022 To February 2023. The study took a six month time to collect data and interpret the results.

Study Setting:

District Layyah has 36 BHUs, out of 10 BHUs selected through lottery method. Study was carried out at these selected Basic Health Units of District Layyah.

Study Participants:

The patients and their attendants visiting Basic Health Unit, who fulfil the study inclusion criteria were invited to participate in the study. The participation was voluntary. The inclusion and exclusion criteria were set at below.

Inclusion criteria:

1. Both male and female
2. Age above 18 years
3. Permanent Residents of the District Layyah.

Exclusion Criteria:

1. Non Residents of District Layyah
2. Mentally challenged persons.

Sample Size calculation:

The sample size was calculated by assuming the 50% previous prevalence and a 5% margin of error at 95% confidence interval by using online software open-epi and it was calculated as $384 \pm 5\% = 400$.

Sampling Technique:

Non-Probability Consecutive sampling technique was used to collect the data.

Data Collection Tool:

The data was obtained using a structured questionnaire based on a validated tool, SERVQUAL TOOL. The questionnaire was translated into urdu language and it is validated through a pilot study, and a Chronbach alpha test was performed resulting in a score of (.782). The data consisted of three main parts: Part A collected information on the Socio-Demographic characteristics, Part B focused on patient expectations from Basic Health Units, and Part C was on the Part B duplicate questions to measure the perceptions of the patients.

STUDY VARIABLE:

| | |
|-----------------------------|--|
| Dependent Variable | <ul style="list-style-type: none">• Quality of Primary Healthcare |
| Independent Variable | <ul style="list-style-type: none">• Socio-Demographic Characteristics• Expectations• Service Quality |

Data Collection Procedure:

District Layyah is situated in the South Punjab. Its population is 10 million. It has 1 District Head Quarter (DHQ) Hospital, 6 Tahsil Head Quarter (THQ) Hospitals and 36 Basic Health Units (BHUs). From 36 BHUs, 10 BHUs (WaraSahran, Shahpur, Bait WasawaShumali, SumraNashaib, Chak 157/TDA, Chak 151/TDA, BakhriAhamd Khan, Chak 120/TDA, Chak 366/TDA, Chak 75A/TDA) were selected through lottery method. Simple random method was used to select the sample of 40 respondents from each BHU as it is illustrated in the Fig No 2.

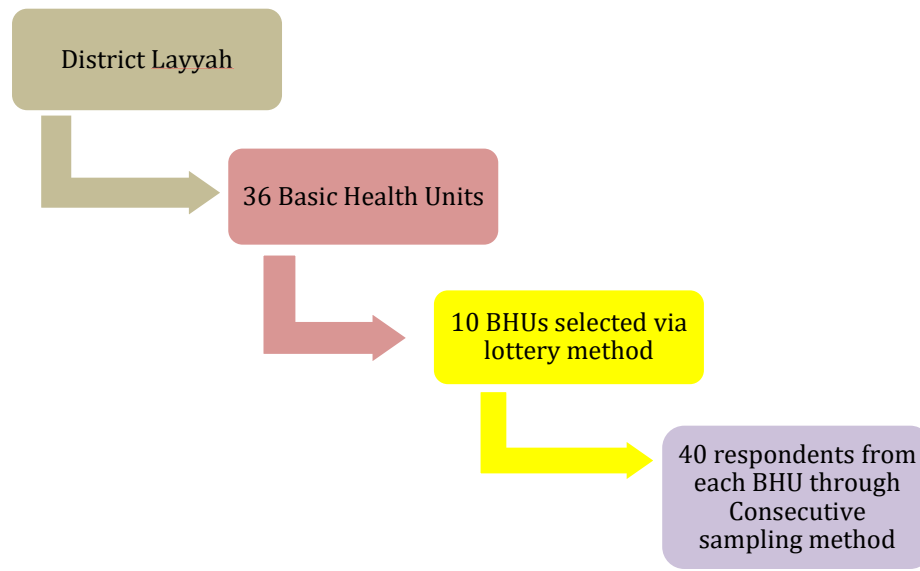


Figure 2: Data Collection Procedure

Data Analysis Procedure:

The data was entered into SPSS version 20. All errors and discrepancies were eliminated by cleaning the data. Frequencies and tabulation were also performed. Categorical variables were computed into 10 categories in expectations and perceived dimensions of Tangibility, Reliability, Responsiveness, Assurance and Empathy. Two more categories were also computed to measure Total Expectation mean score and Perception mean score. To compare the mean of two groups, paired sample t-test has been performed to determine the gap score of expectation and perception.

Ethical Consideration:

Before starting formal data collection, approval from Institutional Review Board (IRB) of Al-Shifa School of Public Health Rawalpindi, Pakistan has been taken. Respondent were explained the main purpose of the research and oral consent was taken, from each participant for collecting the data. Data was collected from only those respondents who had agreed to participate in the research process voluntarily. Participants were assured for the confidentiality of their data. Data collected from the respondent was kept anonymous and was not shared with anyone. Data was entered in SPSS anonymously. After data entry hard copies of collected were kept at a safe place.

CHAPTER IV: RESULTS

This study examined the responses of 400 participants who met all inclusion criteria and did not meet any exclusion criteria. Figure 3, displays the gender distribution, indicating that 46.3% of the participants were male and 53.8% were female. The most common age group was 29-38, accounting for 29.3% of the sample, while the least frequent age group was 49 years or above, comprising only 19.5% of the sample, as shown in Figure 4.

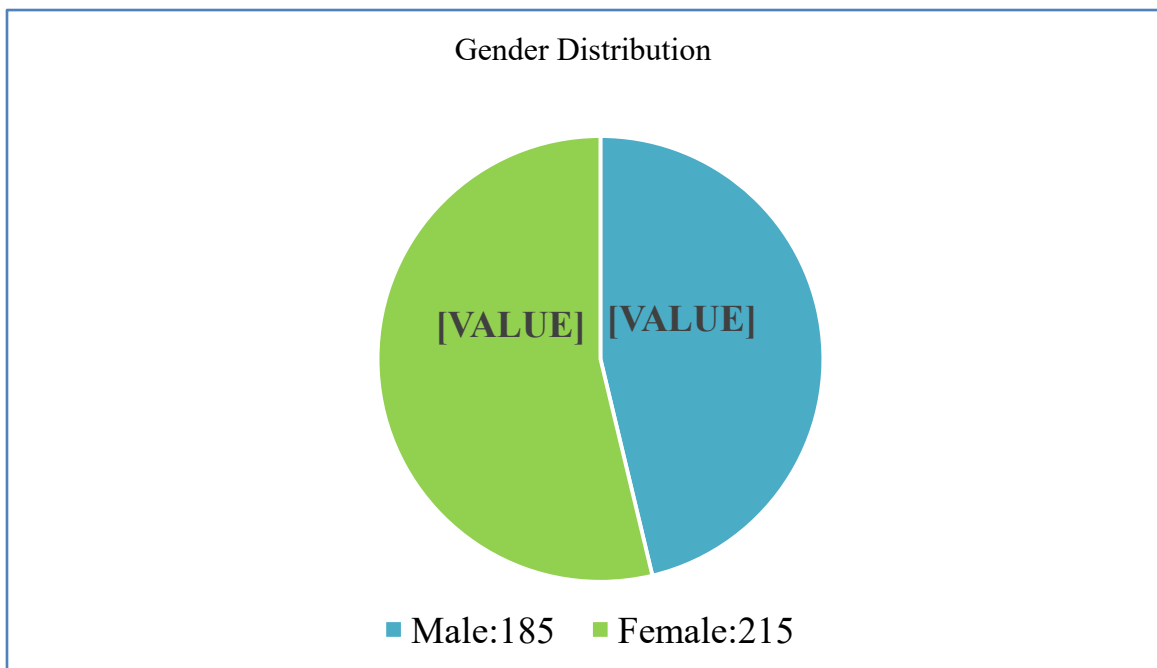


Figure 3: Gender Distribution

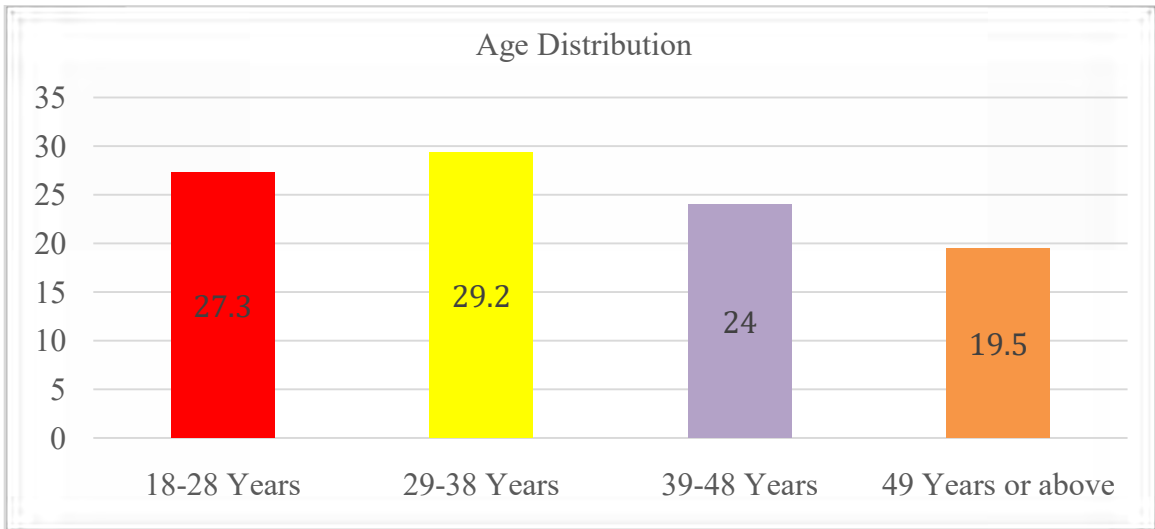


Figure 4: Age Distribution

As illustrated in the Figure 5, 36% of the respondents lived within a 3-kilometer radius of the Basic Health Unit, while 13.5% lived within a 3 to 6 kilometer radius. 17.3% of the respondents lived within a 10-kilometer radius, and the remaining 33.3% lived more than 10 kilometers away from the Basic Health Unit.

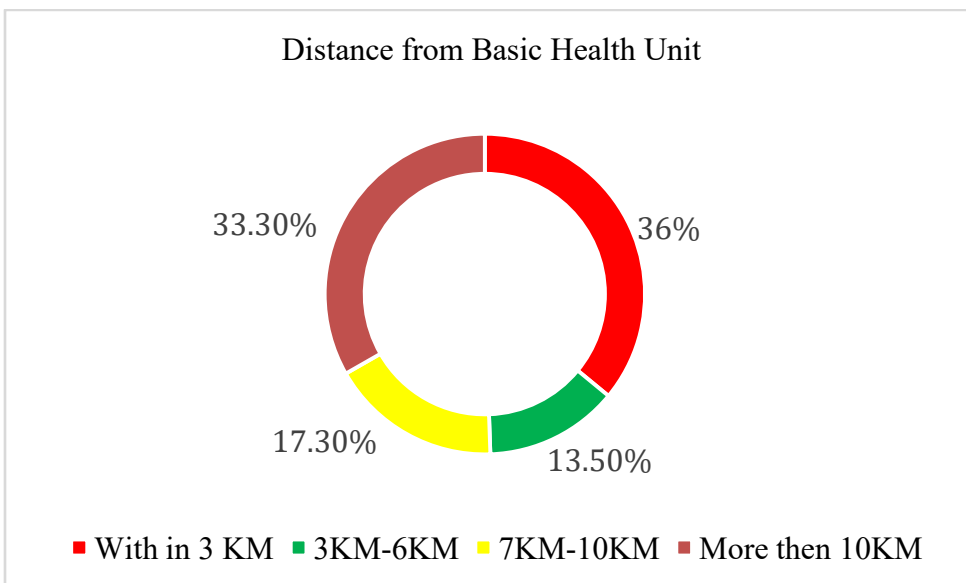


Figure 5: Distance from the Basic Health Unit

Figure 6, represents the distribution of personal and secondary experiences among the 400 respondents. Of the total respondents, 86.50% (346) shared their personal experiences, while 13.50% (54) shared secondary experiences as attendants of the patients.

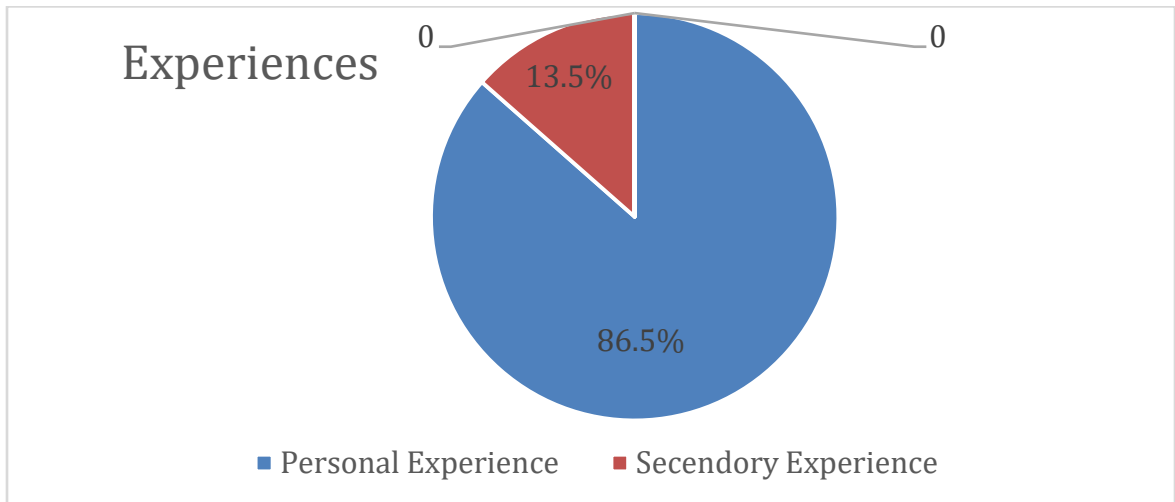


Figure 6: Respondents Experiences Distribution

Analysis of SERVQUAL Survey:

Table 2, presents the average scores of the individual SERVQUAL statements. The mean score for expectations in all dimensions ranged from 7 to 6.64. In contrast, the mean score for perception ranged from 4.05 to 1.16. The difference between perception and expectation was calculated for each statement pair using equation (1), and the results are displayed in the table along with the average scores for each statement based on both expectations and perceptions, indicating that expectations of public are higher than perception from the basic health units.

Table 2: Perceived and Expected mean score of each SERVQUAL statement

| S.No | Statement | Perceived Score | Expected Score | Total gap Score |
|------|---|-----------------|----------------|-----------------|
| 1 | Basic Health unit should have up to date and well maintained equipment. | 3.05 | 6.77 | -3.72 |
| 2 | Cleanliness and hygiene in Basic Health Unit should be excellent. | 4.05 | 6.68 | -2.63 |
| 3 | The Paramedical staff and doctors should be clean and well-groomed. | 3.72 | 6.64 | -2.92 |
| 4 | The patient waiting room should be comfortable enough. | 2.48 | 6.95 | -4.47 |
| 5 | Basic Health Unit should provide treatment, diagnostic tests and other services in an acceptable time period. | 3.37 | 6.93 | -3.56 |
| 6 | When a patient has a problem, the Basic Health Unit should show sincere interest to solve it. | 2.87 | 6.93 | -4.06 |
| 7 | Doctors should explain health conditions, diagnosis and treatment in an understandable way. | 3.64 | 7.00 | -3.36 |
| 8 | Paramedical staff should explain to patients exactly when and what they are going to do. | 2.59 | 7.00 | -4.41 |
| 9 | If you are admitted, doctors should monitor your health status regularly/daily. | 3.54 | 7.00 | -3.46 |
| 10 | Doctors/nurses should respond immediately when called by patients. | 3.57 | 7.00 | -3.43 |
| 11 | Doctors/nurses should be willing to help patients. | 3.80 | 7.00 | -3.20 |
| 12 | Waiting time for daily service shouldn't be longer than 30 minutes. | 2.66 | 7.00 | -4.34 |
| 13 | Doctors should be competent. | 3.57 | 6.95 | -3.38 |
| 14 | Nurses should be skilful. | 3.74 | 6.93 | -3.19 |
| 15 | Patient should feel confident when receiving medical treatment. | 3.36 | 6.95 | -3.59 |
| 16 | Basic Health Unit should provide privacy during treatment. | 3.72 | 6.93 | -3.02 |
| 17 | Doctors/nurses should be respectful towards patients. | 3.82 | 6.92 | -3.10 |
| 18 | Doctors/nurses should have good knowledge to answer patients' questions. | 1.16 | 6.93 | -5.77 |
| 19 | Doctors, Paramedical and allied staff should be caring. | 3.90 | 6.93 | -3.03 |
| 20 | Doctors, Paramedical staff should listen you attentively. | 3.09 | 6.89 | -3.80 |
| 21 | Doctor should spend enough time with each patient. | 2.88 | 6.85 | -3.97 |

| | | | | |
|-------------------|---|-------------|-------------|--------------|
| 22 | Operating hours in a Basic Health Unit should be convenient for patients. | 3.03 | 6.84 | -3.81 |
| Mean Score | | 3.25 | 6.97 | -3.72 |

The table 3 indicates the top six expectations of the patients. These include the desire for a clear understanding of their health condition, regular monitoring during their stay, immediate response to their needs, and reduced waiting times for services.

Table 3: Six Highest Expectations for SERVQUAL

| Six Highest Expectations | Mean |
|---|------|
| Doctors should explain health conditions, diagnosis and treatment in an understandable way. | 7.0 |
| Paramedical staff should explain to patients exactly when and what they are going to do. | 7.0 |
| If you are admitted, doctors should monitor your health status regularly/daily. | 7.0 |
| Doctors/nurses should respond immediately when called by patients. | 7.0 |
| Doctors/nurses should be willing to help patients. | 7.0 |
| Waiting time for daily service shouldn't be longer than 30 minutes. | 7.0 |

The table 4 shows the six lowest expectations of patients, which include less emphasis on hygiene and cleanliness, less concern about the operating hours of basic health units, and reduced expectations for receiving sufficient time and attention from healthcare professionals.

Table 4: Six Lowest Expectations for SERVQUAL

| Six Lowest Expectations | Mean |
|---|------|
| The Paramedical staff and doctors should be clean and well-groomed. | 6.64 |
| Cleanliness and hygiene in Basic Health Unit should be excellent. | 6.68 |
| Basic Health unit should have up to date and well maintained equipment. | 6.77 |
| Operating hours in a Basic Health Unit should be convenient for patients. | 6.84 |
| Doctor should spend enough time with each patient. | 6.85 |
| Doctors, Paramedical staff should listen you attentively. | 6.89 |

The tables 5 describe the six highest perceptions of patients, which include a positive perception of the cleanliness of the basic health unit, satisfaction with the care provided by paramedical staff, appreciation for the nursing skills of healthcare providers, satisfaction with the grooming of healthcare providers, and an overall positive perception of doctors' ability to explain the patient's health condition.

Table 5: Six Highest Perceptions for SERVQUAL

| Six Highest Perceptions | Mean |
|---|-------------|
| Cleanliness and hygiene in Basic Health Unit should be excellent. | 4.05 |
| Doctors, Paramedical and allied staff should be caring. | 3.90 |
| Doctors/nurses should be respectful towards patients. | 3.82 |
| Nurses should be skilful. | 3.74 |
| The Paramedical staff and doctors should be clean and well-groomed. | 3.72 |
| Doctors should explain health conditions, diagnosis and treatment in an understandable way. | 3.64 |

The table 6 displays the lowest perceptions of patients regarding the healthcare system, which include dissatisfaction with healthcare providers' ability to answer their questions, discomfort with waiting areas, inadequate information or consent about the procedures being performed, perceived insincerity of staff in resolving issues, and a lack of sufficient time from doctors to attend to them.

Table 6: Six Lowest Perceptions for SERVQUAL

| Six Lowest Perceptions | Mean |
|---|-------------|
| Doctors/nurses should have good knowledge to answer patients' questions. | 1.16 |
| The patient waiting room should be comfortable enough. | 2.48 |
| Paramedical staff should explain to patients exactly when and what they are going to do. | 2.59 |
| Waiting time for daily service shouldn't be longer than 30 minutes. | 2.66 |
| When a patient has a problem, the Basic Health Unit should show sincere interest to solve it. | 2.87 |
| Doctor should spend enough time with each patient. | 2.88 |

The table 7 presents the results of a paired sample t-test for research study that aimed to assess the gap between customers' perception and expectations of service quality. The data is presented in five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy, as well as the total quality score.

Table 7: Results For Paired Sample t-test

| Dimensions | Perception (Mean ± SD) | Expectations (Mean ± SD) | Quality Gap (Mean ± SD) | T-test | P-Value |
|-------------------|-----------------------------------|-------------------------------------|------------------------------------|---------------|----------------|
| Tangibles | 3.32 ± 1.36 | 6.76 ± .22 | -3.44 ± 1.14 | 49.42 | .000 |
| Reliability | 3.20 ± .99 | 6.97 ± .79 | -3.77 ± .20 | 74.37 | .000 |
| Responsiveness | 3.34 ± 1.33 | 7.00 ± .00 | -3.66 ± 1.33 | 54.70 | .000 |
| Assurance | 3.23 ± .86 | 6.94 ± .13 | -3.71 ± .73 | 83.74 | .000 |
| Empathy | 3.22 ± .79 | 6.88 ± .20 | -3.66 ± .59 | 90.60 | .000 |
| Total Quality | 3.26 ± .75 | 6.91 ± .64 | -3.65 ± .11 | 109.99 | .000 |

According to Table 7, the results indicate a significant negative quality gap in all five dimensions of SERVQUAL. The Tangibles quality dimension had a negative gap of (3.44), with a mean expectation score of (6.76) and a perceived score of (3.32). The Reliability dimension had the highest negative gap of (-3.77), with a mean expectation score of (6.97) and a perceived score of (3.20). The Responsiveness dimension also had a negative quality gap of (-3.66), with a mean expectation score of (7.00) and a perceived

score of (3.34). The Assurance dimension had a negative gap of (-3.71), with a mean expectation score of (6.94) and a perceived score of (3.23). The Empathy dimension had a negative gap of (-3.66), with a mean expectation score of (6.91) and a perceived score of (3.22).

The total services quality gap was (-3.65), which indicates that the services provided did not meet the expectations of the service users. These negative gaps in all dimensions suggest that improvements need to be made in order to meet the expectations of the customers and improve overall service quality.

CHAPTER V: DISCUSSION

Enhancing healthcare services is important for the well-being of beneficiaries, patients, service providers, and healthcare authorities (Fésüs et al., 2012). Our study focused on evaluating the service quality of primary healthcare services in the Layyah district and gathered the perspectives of the recipients. The study revealed a notable gap between the patients' expectations and their perception with the Basic Health Units in the Layyah district, with a discrepancy of (-3.65). In our study, we found negative gaps in all dimensions of SERVQUAL: Tangibility (-3.44), Reliability (-3.77), Responsiveness (-3.66), Assurance (-3.71), and Empathy (-3.66) gap score.

Our study's results align with those of a previous Iranian study examining the quality of primary healthcare services where Tangibility (-3.71), Reliability (-4.0), Responsiveness (-3.79), Assurance (-3.83), and Empathy (-3.86) gap score. (Rahmani et al., 2022). Similarly, a Brazilian study revealed negative gaps in all service quality aspects (Tangibility -0.65, Reliability -1.19, Responsiveness -0.56, Assurance -0.91, and Empathy -0.52), indicating low levels of customer satisfaction (Andrade et al., 2019). Sharifi et al., 2021 also found a negative gap between expectations (4.97) and perceptions (3.26). Policymakers' attention and emphasis on these services in the community may serve as a motivating factor for providers to improve their offerings compared to other centers (Byrne, A. T., & Just, D. R., 2022). However, it is important to note that all primary healthcare centers in Pakistan are publicly funded, with no commercial sector involvement (Khan, N. N., & Puthussery, S., 2019). Despite the

absence of competition among primary healthcare centers and the lack of a well-defined framework for evaluating service quality by policymakers, involving the private sector in primary healthcare appears to be a promising strategy for improving service quality. Unfortunately, the quality of primary healthcare services in Pakistan is lower than that of hospital services (Ali et al., 2021). In Iran, a significant concern in the healthcare system is that people tend to avoid receiving treatment at primary healthcare centers and opt to visit hospitals for the same services (Hosseinnejad et al., 2022). Despite the vital role that primary healthcare plays in enhancing health in Pakistan, recent government prioritization has favored hospitals over primary healthcare (Zaidi et al., 2019).

Our study identified negative gaps between expectations and perceptions in all SERVQUAL elements, consistent with studies from other nations.

Our study found that empathy had the largest gap among the other dimensions, whereas the tangible component had the smallest gap. Lack of attention to the needs of service consumers is a significant factor affecting empathy, as employees at primary healthcare centers do not make an effort to meet their needs (Wesso, A. D et al., 2014).

One of the weaknesses among primary healthcare staff is the lack of professional ethics. It is essential for service providers to take into account client requests (Mittelstadt, B. 2019). However, Wesso, A. D et al., 2014 indicates that service recipients at primary healthcare centers may not be adequately informed about the full range of services available in these facilities, potentially due to a lack of relevant information. On the other hand, the absence of proper information on the part of service recipients can result in

low-quality services. By frequently assessing service recipients' requests and reducing asymmetric information, the quality of services may be enhanced.

Our study also revealed deficiencies in certainty, Assurance, Reliability, and Responsiveness, all of which are associated with interpersonal interactions between healthcare providers and patients in primary healthcare facilities. Fornell, argue that gaps in these dimensions indicate serious concerns with service quality. To enhance service quality, low values in these areas should be addressed by providing frequent training to service providers, improving their compensation, and hiring new and specialized staff.

Limitations and Strength

Strength:

1. To the best of my knowledge, this was a first study in kind of its topic conducted in the district Layyah.
2. The validated questionnaire was used in the study to assess the quality from the patients perspective.
3. The large sample size of the study makes it appropriate to make statistical inferences and generalizing results.

Limitations:

1. The study had budget and time constrains.
2. The study was conducted only in one district.
3. This study assessed the only one aspect of quality at basic health units.
4. This study was only carried out at the basic health units of District layyah.

Recommendations:

- ❖ Primary healthcare providers should actively engage with patients to better understand their needs and preferences.
- ❖ Encourage healthcare providers to listen to patients actively, explain medical terms in simple language, and be responsive to their concerns.
- ❖ Enhance Access to Information because Patients need access to clear, concise, and accurate information about their health and the healthcare services available to them.
- ❖ Involve patients in their care by encouraging them to ask questions, express concerns, and take an active role in decision-making.
- ❖ Collect patient feedback, measure patient satisfaction.

CONCLUSIONS

In conclusion, our study highlights the significant negative gap between patients' expectations and their actual experience with primary healthcare services in the Layyah district, Pakistan. This gap is consistent with similar studies from other nations, indicating a universal concern with the quality of primary healthcare services. The largest gap was found in reliability, while the smallest gap was in the tangible component. Lack of attention to service consumers' needs, inadequate information, and deficiencies in interpersonal interactions were identified as key factors contributing to this gap. Policymakers should prioritize enhancing primary healthcare services by addressing these factors through frequent training for service providers, improving their compensation, and hiring specialized staff. In addition, involving the private sector in primary healthcare may be a promising strategy for improving service quality. Despite recent government prioritization of hospitals over primary healthcare in Pakistan, enhancing primary healthcare services is important for the well-being of beneficiaries, patients, service providers, and healthcare authorities.

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Appendix A: Informed Consent

Title of Study:

Assessing Quality of Primary Healthcare at District Layyah from patients perspective.

Researcher:

Muhammad Waqas. MSPH Scholar Al-Shifa School of Public Health, Rawalpindi.

Purpose:

The purpose of this research is to assess Quality of Primary Healthcare at District Layyah from patients perspective.

Procedure:

Respondent will complete the pre structured questionnaire with the best of his knowledge. Researcher will help him if respondent face any difficulty to understand the question. Researcher will translate the question as well if there is need.

Time Required:

It is anticipated that it will take approximately 15 minutes of your time to complete the survey.

Voluntary Participation:

Participation in this study is voluntary. You have the right to not open or complete the anonymous survey.

Confidentiality:

Data from the surveys will be completely anonymous and reported in aggregate form. Your name will not be collected at any time. After data collection, the survey and demographic responses will be password protected. Once submitted the researcher will not be able to withdraw responses due to anonymity and de-identified data.

Risks:

While the research survey poses minimal risk there is a risk of loss of confidentiality to participants. There are no anticipated risks in this study.

Benefits:

There are no direct benefits associated with participation in this study the potential benefit from this research is study that it will help to stakeholders to device polices according to the need of the community.

Payment:

You will receive no payment for participating in the study.

Right to Withdraw From the Study:

You have the right to withdraw from the study at any time before submitting the survey without penalty.

If you have questions about the study, contact the following individual:

Muhammad Waqas

wrauf92@yahoo.com

Contact # 0305-8652035

CONSENT

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Name of Participant

Signature of Participant

Date DD/MM/YY

| | | | |
|----|--|------------------------------|----------------------------------|
| 15 | آپ کس قسم کا کسٹمر ہیں؟ کیا آپ کو اس سے کوئی خاص فائدہ ہے؟ | پریکٹس اور تھیوری (تعمیراتی) | تعمیراتی اور تھیوری، وضاحت و غور |
|----|--|------------------------------|----------------------------------|

| حصہ دوم | | | | | | | |
|--------------------------------------|--|----------|----------|----------|----------|----------|----------|
| SERVQUAL DIMENSION 1: Tangibility | | | | | | | |
| ردیف نمبر | مضامین | تعمیراتی | تعمیراتی | تعمیراتی | تعمیراتی | تعمیراتی | تعمیراتی |
| 1 | تعمیراتی کس قسم کے ہیں اور اچھے سے برے کی بات | | | | | | |
| 2 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 3 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 4 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| SERVQUAL DIMENSION 2: Reliability | | | | | | | |
| 5 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 6 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 7 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 8 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 9 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| SERVQUAL DIMENSION 3: Responsiveness | | | | | | | |
| 10 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 11 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |
| 12 | تعمیراتی کس قسم کے ہیں اور فائدہ مند اور فائدہ مند | | | | | | |

| ٹھٹھ ضے زى بڊر ى رتھب. | | | | | | |
|--|----------|----------|----------|----------|----------|---|
| SERVQUAL DIMENSION 4: Assurance | | | | | | |
| | | | | | | ٹھبڊهر كس ص ح كسب كٹٹل بٹل بڊرتھب. |
| | | | | | | ٹھبڊهر كس ص ح كسب بٹ بڊرتھب. |
| | | | | | | طج ص صولت / علاج طص ل كوت ے ولت ھر ى ط پرا عوبتھب. |
| | | | | | | ٹھبڊهر كس ص ح تے علاج كے ڊور اى ھر ى طكو رازڊار فرامز كى. |
| | | | | | | ٹھبڊهر كس ص ح كسب عل ھر ى ص كوں ے ص ب تھ طرام ص ص ى ش ى. |
| | | | | | | ٹھبڊهر كس ص ح تے ے ھل كور ى ص ورك ے ص و الاتك ے ھب ب ت ى كے ے ھى ے ھتھر ے رتھب. |
| SERVQUAL DIMENSION 5: Empathy | | | | | | |
| | | | | | | ٹھبڊهر كس ص ح كسب عل ے ھر ى ص و كى ص ب ل ركھب. |
| | | | | | | ٹھبڊهر كس ص ح كسب ے عل ے ھر ى ط كوت و ج ے ص ى. |
| | | | | | | ٹھبڊهر كس ص ح تے عل ے ھر ى ط كو ھب ص و ل ت ھب. |
| | | | | | | ٹھبڊهر كس ص ح تے ھر ى كسب ے اول ب ت ھر ى كسب ب ھل ے اور ٲڊو ب ھر ى ص ورك ے ھى ا ص بى اول بٹل ل ھول ى. |
| حصہ سو ىن | | | | | | |
| SERVQUAL DIMENSION 1: Tangibility | | | | | | |
| تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى |
| تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى | تھبڊهر ى |
| | | | | | | تھبڊهر كس ص ح ت ى ص ج ى ذ اور ا ھ ے ھر ى آلات ى. |
| | | | | | | تھبڊهر كس ص ح ت ى ص ھى ى اور ف ھب ى ص ح ت ھتھى ے. |
| | | | | | | تھبڊهر كس ص ح كسب ب ھب ب ص ت ھرا اور ا ھ ے ھب ھل ے. |
| | | | | | | تھبڊهر كس ص ح ت ى ھر ى ط كى تا ط ب ر گ كى ب ى آرام ڊ ے. |
| SERVQUAL DIMENSION 2: Reliability | | | | | | |
| | | | | | | تھبڊهر كس ص ح ت ے ھب ص و ل ت كے ے ا نر ص ب ت ھل كى ى. |
| | | | | | | تھبڊهر كس ص ح تے ے ھل ے ھر ى ط كے ے ھل ے كو ل كر ے ى ص ھب ب ھب ى كھى ى. |

| | | | | | | | | |
|---|--|--|--|--|--|--|--|----|
| | | | | | | | کٹاٹرز ے ہریط کی صحت کی حبل تنقیص اور علاج کی ہنصری اخص بھالہ بظ ہنری بوی کی۔ | 7 |
| | | | | | | | پیرہی فیکٹل ہٹبف ے ہریط کی صحت کی حبلت، نش ہنری ص اور علاج کی ہنصری اخص بھالہ بظ ہنری بوی کی۔ | 8 |
| | | | | | | | خبا دہر کس صحت یں ہریط لے بپکے دورای کٹاٹرز ے ہریط کی حبل کببٹب عزع بوی | 9 |
| SERVQUAL DIMENSION 3: Responsiveness | | | | | | | | |
| | | | | | | | خبا دہر کس صحت کے چول ے ے ہریط کی طرف ضے بلاے پر فوری جواة ردعول ہے۔ | 10 |
| | | | | | | | خبا دہر کس صحت کبب عول ہنصری کی ہنکے لہتی ہرت ہے۔ | 11 |
| | | | | | | | عول کے ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری | 12 |
| SERVQUAL DIMENSION 4: Assurance | | | | | | | | |
| | | | | | | | خبا دہر کس صحت کبب کٹاٹل ہنری ہنری ہنری ہنری | 13 |
| | | | | | | | خبا دہر کس صحت کبب کٹاٹل ہنری ہنری ہنری ہنری | 14 |
| | | | | | | | طجض ہولت / علاج حط لکت ہولت ہریط پرا عول ہے۔ | 15 |
| | | | | | | | خبا دہر کس صحت نے علاج کے دورای ہریط کو رازدار ہنری ہنری ہنری ہنری ہنری ہنری ہنری | 16 |
| | | | | | | | خبا دہر کس صحت کبب عول ہنری ہنری ہنری ہنری ض ہنری ہنری ہنری ہنری ہنری ہنری ہنری | 17 |
| | | | | | | | خبا دہر کس صحت کے چول ہنری ہنری ہنری ہنری ض والاکے چول ہنری ہنری ہنری ہنری ہنری ہنری | 18 |
| SERVQUAL DIMENSION 5: Empathy | | | | | | | | |
| | | | | | | | خبا دہر کس صحت کبب عول ہنری ہنری ہنری ہنری کبب۔ | 19 |
| | | | | | | | خبا دہر کس صحت کبب عول ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری | 20 |
| | | | | | | | خبا دہر کس صحت کے عول ہنری ہنری ہنری ہنری کو ہنری ہنری ہنری ہنری ہنری ہنری ہنری | 21 |
| | | | | | | | خبا دہر کس صحت ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری ہنری | 22 |
| ہنری | | | | | | | | |

Appendix C: IRB Letter

Appendix D: Budget

| Budget item | Transport | Stationery& internet | Printing | Publishing |
|-------------------|-------------|-------------------------|------------|-------------|
| Pilot testing | 1000 Rs/- | 1000 Rs/- | 1000 Rs/- | - |
| Data collection | 10,000 Rs/- | 2000 Rs/- | 4000 Rs/- | - |
| Thesiswrite-up | 1,000 Rs/- | 6,000 Rs/- | 3,000 Rs/- | 25,000 Rs/- |
| Total expenditure | 12,000 Rs/- | 9,000 Rs/- | 8,000 Rs/- | 25,000 Rs/- |
| Grandtotal | 43,200Rs/- | | | |

| Activities | September | October | November | December | January | February |
|-------------------|------------------|----------------|-----------------|-----------------|----------------|-----------------|
| | 2022 | 2022 | 2022 | 2022 | 2023 | 2023 |

| | | | | | | |
|--|-------|-------|-------|-------|-------|-------|
| Literature search | Red | Red | Red | Red | Red | Green |
| Synopsis writing and IRB approval | Red | Green | Green | Green | Green | Green |
| Pilot Testing | Green | Red | Green | Green | Green | Green |
| Data collection and entry | Green | Green | Red | Red | Green | Green |
| Data analysis | Green | Green | Green | Green | Red | Green |
| Write-up | Red | Red | Red | Red | Red | Red |
| Thesis submission | Green | Green | Green | Green | Green | Red |

Appendix E: Gantt chart