

ROLE OF TQM PRACTICES ON ORGANIZATIONAL PERFORMANCE OF HOSPITALS

Thesis Submitted for the Award of the Degree of

DOCTOR OF PHILOSOPHY

in
Management

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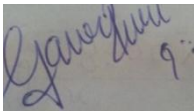


LOVELY PROFESSIONAL UNIVERSITY, PUNJAB

2023

DECLARATION

I, hereby declare that the presented work in the thesis entitled “Role of TQM Practices on Organizational Performance of Hospitals” in fulfilment of degree of **Doctor of Philosophy (Ph. D.)** is outcome of research work carried out by me under the supervision Dr. Rahul Sharma, working as Professor in the management department (Mittal School of Business) of Lovely Professional University, Punjab, India. In keeping with general practice of reporting scientific observations, due acknowledgements have been made whenever work described here has been based on findings of other investigator. This work has not been submitted in part or full to any other University or Institute for the award of any degree.



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CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis ‘Role of TQM Practices on Organizational Performance of Hospitals’ in fulfillment of the requirement for the reward of degree of **Doctor of Philosophy (Ph.D.)** in the Finance(Management), is a research work carried out by Gaurav Puri, Registration No. 11512758, is bonafide record of his/her original work carried out under my supervision and that no part of thesis has been submitted for any other degree, diploma or equivalent course.

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Phagwara

ACKNOWLEDGEMENT

First of all, I would express my gratitude to the Almighty for showering his blessings and showing me the path to complete this work. Further, I am grateful acknowledge the support of my parents without whom this tremendous task of would not have been possible. My father's silent support and my mother's love and care has motivated and pushed me to this stage of my life's achievement.

I am thankful to my supervisor Dr. Rahul Sharma whose consistent support and guidance has been a torch-bearer throughout the Ph.D. journey and kept inculcating good values in me towards achieving my goals.

My heartfelt gratitude to Dr. Sanjay Modi Pro Vice Chancellor, Lovely Professional University and Dr. Rajesh Verma, Head, Mittal School of Business for their immense support and motivation under whose guidance I was provided with ample opportunities to actively participate in the conferences. I would like to express my sincere gratitude to Dr. Suresh Kashyap for his insights into the concept of performance management and motivating me throughout my Ph.D journey.

I would like to express my gratitude to Dr. Nitin Gupta and Dr. Babli Dhiman, Professor and Head of Department of Finance, Lovely Professional University whose motivation and positivity guided me with an able approach to complete my thesis work. They have been an important part of the journey since the beginning of the course. Further, I would like to thank Dr. Harpreet Bedi, Professor, Management Department, Lovely Professional University for his insights into the concept of Structural Equation Modelling. He helped me with software and tools understanding for this degree.

Also, I would like to thank Dr. S. Hari Babu, SIBM Nagpur, who was my guide earlier being a part of the University. He had helped me in topic finalization and motivated and guided me to clear my evaluations in one go. He was also a guiding force to help me understanding the concepts and frame the desired objectives in the research work. Further, I would like to thank Dr. Pretty Bhalla for her insightful

comments during my annual presentations and Dr. Rohit Bansal for his friendly guidance towards the end of the degree.

At last I would like to thank my friends who made my journey worth enjoying during the entire course. At last, I would like to thank my better half whose consistent support in this journey was commendable.

Gaurav Puri

ABSTRACT

In this era of highly competitive world, healthcare organizations are trying to implement all the strategies to enhance the performance of their hospitals. One such practice to enhancing performance is being market oriented as well as improving service quality. In order to understand the latent needs of the customers, healthcare organizations are focusing on quality practices as well i.e. in order to provide quality in all the departments in the hospital ranging from in-patient care to diagnostic services to pharmacy to sonography etc. Does this enhancement in quality lead to various parameters of Total Quality management being enhanced and ultimately through the mediation of Market Orientation and Service Quality, is the performance of the hospital being enhanced?

Although the term Total Quality management has been coined in early days of Deming and Juran, but still we have studied this in terms of healthcare industry of Punjab. The study entails the operational definitions of Total Quality management, Market Orientation, Service Quality and Organization Performance. In the study, mediation effects of Market Orientation and Service Quality between Total Quality management and Organization Performance have been studied. Further, it has been noted that TQM acts as a mediation between MO and OP.

Going ahead, mediation of MO between SQ and OP has also been reviewed. The widely accepted definition of Market Orientation by Kohli & Jaworski (1990) and Narver & Slater (1990) have been put to work. The scale for the same has been adapted in view of healthcare systems in Punjab. Further, service quality scale has been adapted from Lee (2017) named HEALTHQUAL or service quality in healthcare systems.

In spite of increased interest in the scales of MO and SQ, there is dearth of these variables in healthcare context. This is in comparison to these variables being used in another industries.

This research begins with the introduction to the study in which healthcare sector, in general is discussed along with the introduction to the concept of TQM, Organization Performance, Market Orientation and Service Quality. Going forward, the study has the literature review which details the four constructs of Market Orientation, Service

Quality, Total Quality Management and Organization Performance. The inception of the constructs is highlighted and adapted from various existing ones.

Further, the research methodology used in the study has been discussed which includes sampling methods, outline of the research design, research instrument, operational definitions of constructs, operationalization of the constructs, content validity, pilot testing, data analysis tools used and limitations of the study. Further, the study deals with the measurement and validation of all the four scales, descriptive statistics of the scales, reliability and validity of all the four constructs.

The existing quality practices of the hospitals of Punjab have been discussed by having a discussion with the hospital owners, chief surgeons or the quality managers of corporate hospitals as well. The relation between quality and performance in case of hospitals of Punjab has been highlighted. The study provides a deep insight into those hospitals which are not NABH accredited to focus on sub-constructs of TQM like leadership and process management and achieve significant performance advantage in comparison to peers.

Going ahead, the study highlights the testing of the conceptual model, which includes the measurement model as well as the structural model. In the last, the mediation analysis in which the mediating role of SQ and MO is discussed between TQM and OP has been discussed. The study reveals that neither MO nor SQ mediates the relation between TQM and OP, but, however, TQM and MO possess a full mediation in the relation between TQM and OP. Further, mediating role of MO between SQ and OP is also discussed. Finally, the thesis has been concluded with findings of the study, discussion of the analysis, conclusion of the study and implications for the managers. The link between TQM and OP suggest that hospitals having higher quality are also accredited by NABH(National Accreditation Board of Hospitals) which in turn also enhances their performance as the rates received for procedures by NABH accredited hospitals are more than non-NABH accredited hospitals. Quality of services provided in the healthcare facility forms an important part of patient outcome. In order to assess the performance of the hospital for last 3 years, subjective and objective performance measures have been adapted from existing performance management scales. This indicator is a useful, low cost and user friendly tool to judge the performance of the hospital in relation to quality enhancement which can ultimately aid in decision making of the hospital. Further development can be done to include detailed

parameters like development of a Universal Model of Quality healthcare delivery across the globe, private public hospitals of varying bed strength.

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List of Abbreviations

TQM	Total Quality Management
SQ	Service Quality
MO	Market Orientation
OP	Organization Performance

CHAPTER 1

INTRODUCTION

1.1 Overview

Total Quality Management (TQM) has become a word in management and has been highly discussed in the industry over the past three decades. It is used as a quality method for change management and is favorably received by managers and quality practitioners (Arumugam et al., 2009). It has become an integral part of the company management philosophy. TQM was previously used in the industrial business. However, whether in the industrial or service industries, it has become a data set for corporate sustainability. Quality has emerged to be a significant part of the management practices employed by businesses (Prajogo and Sohal, 2003; Hoang et al., 2006).

Competition in today's global marketplace is increasing, as is the danger of replacements and new entrants; the needs of customers and suppliers are becoming increasingly complex as technology advances, and the internet is becoming more widely known and widely used around the world. To compete in the marketplace and ensure their long-term viability and growth, companies must take strategic decisions to improve their internal operational processes (Krajweski et al., 2007). TQM is a business concept that firms have adopted out of many others. TQM's most important endeavor is continuous quality improvement, which affects organizational success (Deming, 1986).

When TQM was first used, it was a huge success in the manufacturing industry. Customers are now more informed and able to negotiate better deals. A mouse click determines a company's fate in today's cyber age. Seeing their success, the service industry began to incorporate TQM in their business processes because of changing and increasing client demands. As a result, TQM is now being used in the banking, hotel, and educational sectors. TQM has a direct proportional influence on the financial health of various industries.

Healthcare is no longer lagging in the adoption and application of TQM principles in the business strategy of the industry. The growth of private and corporate

hospitals, the treatment of patients as consumers, and attention to patient satisfaction as input for ongoing process improvement have opened the way for the introduction of TQM in hospitals (Hart, 1996).

Better productivity through quality standards will be the result of TQM deployment across different production organizations.

1.2 Quality

As a marketing buzzword, "quality" is one of the most overused but also one of the most misconstrued. When we put forth the effort, quality naturally follows. It is a by-product of doing something else. It demonstrates our level of dedication to our work. High-quality at a low price, high-class at a low price, and so on.

1.2.1 Total Quality

Feigenbaum used the term 'whole quality' while reporting on quality control at a conference in 1969. Furthermore, the term was used to describe the major problems within an organisation. Any organisation, according to the opinion, should be involved in "company-wide quality control" that includes all personnel, from top management to the workers.

1.3 Total Quality Management (TQM)

The controlling of quality and its management came into existence in the 1980s and 1990s. Quality initiatives were introduced by western corporations once they saw Japan succeed at implementing them. Traditional Quality Management (TQM) is a catch-all phrase that covers a wide range of quality-oriented methods, programmes, and methodologies. TQM became the centre of the western quality movement during this time.

"TQM can give a clearly defined auxiliary edge to work in which all organizational action happens. This is an absolute must for self-coordinated or cross-utilitarian work put groups, multi-talented adaptable workforces, or dynamic working environment situations".

It was in the 1990s that a big number of scholars expressed their opinions about this TQM strategy, focusing on technical advancement. For the company's growth, management assistance was deemed to be essential. Several contributors to this topic

only delved into a few levels. What needs to be done before this is a thorough examination of the concept of quality and its relevance in the service sector.

The notion of quality management is based on a series of coordinated activities that aim to regulate and direct the nature of a product and the administration of a company. All of these aspects of quality management (QM) may be found in one place: the company's mission statement. Since "Hodgetts et al. (1994) depicted modern organizations as those that made an essential move from a Total Quality (TQ) worldview towards a Learning Organization (LO)" and later broadened this topic, recommending that "organizations must manage real improvements, keep up superior and point towards being a 'Phenomenal Reasonable' organization", this topic has been around for more than two decades." To ensure that all departments, including human resources, finance, and marketing, function efficiently and under control, the word "total quality management" (TQM) was born.

1.3.1 Operational definition of TQM

TQM is a management method focused on people, in which all members of the organization strive to maintain excellent work standards throughout the company's operations.

Organisations can increase their overall effectiveness and flexibility by implementing Total Quality Management (TQM). All divisions, all activities, and all individuals at all levels are involved in the process of TQM. All organization's members and activities have an impact on the rest of the organization if they are properly integrated.

TQM is a process to reduce the time it takes to accomplish tasks by involving everyone in the improvement process and eliminating waste. Organizations can use TQM strategies and procedures across the board. Every department of a business can benefit from them, whether it is finance, sales, marketing, distribution, development, manufacturing, public relations, or human resources.

An organisation can use Total Quality Management (TQM) for the implementation of strategies to enhance quality and managerial departments to maintain continuous improvements to the quality of its products and services. Organizational consistency and outstanding quality, in addition to mathematical models and processes, can make it easier to put quality-improving measures into

action. Products that meet customer needs are part of TQM, as are controls over processes to make sure that they can meet design requirements and make quality improvements to keep quality high.

All these elements are merged in a structured manner to continuously improve all the company processes. These goals include cost, quality, schedule, mission needs, and suitability. The overarching goal is to increase customer satisfaction. New developments in TQM are based on pioneering efforts.

1.3.2 Origin of TQM

To reflect the Japanese management style, the Naval Air Systems Command coined the term TQM in 1985. TQM's origins can be traced back to Japan's post-World War II desire to better the quality of its products.

Dr. W. Edwards Deming is typically credited with the establishment of the Total Quality Management philosophy, even though TQM techniques were used before World War II by several enterprises. While working as a summer employee in Chicago in the late 1920s, he saw that worker motivation methods were demoralizing and economically ineffective; incentives were related directly to productivity, and wasteful post-production inspection procedures were utilized to uncover defective goods.

After working with Bell Telephone Company statistician Walter A. Shewhart in the 1930s, Deming concluded that statistical control procedures might take the place of more traditionally employed management strategies. The statistically controlled management technique that Deming developed using Shewhart's theories gave managers a way to decide on practices of TQM. Overwhelmed military production plants could quickly apply his methods, since they were easy to teach engineers and workers.

Deming had been sent to Japan in the year 1947 to revive the country's economy, which had been destroyed by World War II. A receptive audience for Deming's management theories was discovered in Japan. The industries of Japan saw the introduction of Deming's statistical process control and statistical quality control systems. In the 1980s, Japan's industrial and service sectors were praised for a

commitment to quality and productivity that allowed the country to become a global economic powerhouse.

In contrast to Japan's mid-19th century quality initiative, most American companies continued to manufacture huge quantities of items using the same management strategies they had used for decades. As war-torn Europe turned to the United States for manufactured goods, the United States profited. Due to rapid improvement in the population of the country, the economy of the United States has grown rapidly. However, by the 1970s, numerous American industries were seen as subordinate or lower than Asian or European companies. A more competitive manufacturing sector in Japan decimated the US manufacturing industry throughout the 1980s as a result of rising economic globalisation enabled in part by superior information technologies.

U.S. firms hurried to implement quality and productivity measures that might restore their competitiveness in the wake of large market share gains made by Japanese corporations in the late 1970s and 1980s. For the first time in American history, Deming's concepts and systems were widely accepted. The "Deming Management Method" was elevated by firms willing to enhance quality. By the late 1980s, the word "Total Quality Management," which was coined by Deming and other management gurus, had become commonplace in American business.

1.3.3 Total Quality Management: The Evaluation

TQM's roots date back to 1949 when a group of Japanese researchers and architects formed a council comprised of academics, professionals, and government officials dedicated to improving Japan's profitability and quality of life following World War II, according to Powell (1995). As a substitute for "control" by "management," the word TQM may have been coined as a replacement for total quality control (TQC), which was previously used to describe quality control. "Consider that examination, the assessment ought to be successful and by Crosby (1979) who makes the argument that control isn't necessary when a zero-malformation level is achieved," Deming (1982) says. The term "control" is frequently interpreted as implying significant influence over the activities of the workforce.

Trying to pinpoint exactly when businesses and individuals began using management strategies is almost impossible. Being a part of society, knowledge and talent should be utilised to better control survival and growth. TQM is based on the same principles that have been utilised by individuals for a long time to compete in the modern technology world with more satisfied customers.

The concept of TQM did not emerge immediately. Getting into the position is in now, with global quality standards in place for various manufacturing and service industries around the world, took decades. Quality has been a part of human culture since the beginning of time. The Bible tells us that when God first looked at the world, he had made, he declared it "good," which means that it met his standards of perfection. In ancient times, artisans and craftsmen's talent and excellent work were recognized and praised.

Feigenbaum (1994) initially coined the term TQM, and the rest of the world soon followed suit. "Total Quality Control" was what he came up with (TQC). This concept has been taught for over 40 years by quality gurus like Deming, Juran, and Crosby, all of whom omitted the term "total." To emphasize the significance of comprehensive customer satisfaction, the European Foundation for Quality Management (EFQM) was founded in 1988. The TQM idea was first introduced in the United States in the early 1980s (Dahlgaard et al., 1998).

Table: 1.1 The Evaluation phase of Quality Management

S.NO.	PHASE	DESCRIPTION
1.	Quality Inspection (QI)	Measurement, examination, testing, and comparison of the results with established standards are used to determine if each attribute has been met.
2.	Quality control(QC)	Techniques and actions that are employed to meet the quality standards of the organization.
3.	Quality Assurance (QA)	Implementation and demonstration of quality-assured procedures as part of a quality system.

4.	Total Quality Management (TQM)	All employees are involved in a quality-focused management strategy; customer satisfaction is the primary goal, and the advantages to both the firm and society extend to both internal and external personnel.
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Source: Martínez-Lorente et al., 1998

Table 1.2 The characteristics of the different stages in TQM

STAGE	YEAR	CHARACTERISTICS
QI	1910	Retrieve, try to sort, corrective action, and figure out where the problems are coming from.
QC	1924	Self-inspection, product testing, process improvement, statistical analysis, and paperwork control are all components of a quality manual.
QA	1950	It includes third-party certification, system auditing, and system quality planning as well as the cost of quality manuals and the analysis of process control failure modes and effects for non-production operations.
TQM	1980	Internal customers, performance measures, preventive, company-wide application, interdepartmental barriers, and management leadership all go hand in hand with a laser-like focus on the future.

Source: Martínez-Lorente et al., 1998

1.3.4 Implementing TQM

Jablonski provides a five-step method for establishing overall quality management: preparation, planning, assessment, implementation, and diversification. Continuous improvement in quality and productivity is a long-term goal for each phase. One of many total quality management (TQM) systems, Jablonski's method contains the fundamental aspects of other prominent TQM systems.

- **Preparation-** As part of the planning process, management must decide on the implementation of TQM. The first stage in TQM implementations is to undergo employee training, hire quality consultants, design vision and goals through a properly charted corporate policy, plan the resources, and ultimately disseminate the knowledge throughout the firm.
- **Planning-** Planned implementation, including budget and timetable, is created in the planning stage, as well as infrastructure and resources needed to get started on a new project.
- **Evaluation-** With the help of consumers and clients, the organisation as a whole and each employee are assessed for their strengths and weaknesses.
- **Implementation-** The company can now begin to calculate the return on its TQM investment. Managers and employees are trained, as well as support staff, throughout this period. Employees need to be educated about what TQM encompasses and how it may benefit them and their employers. The functions and expectations of each worker are also laid out in detail in the programme's handbook.
- **Diversification** – The process includes bringing the company associates like suppliers, distributors, creditors, and debtors into the purview of quality management by using the experience of quality managers. Training the employees, deploying punitive actions or rewarding them, and forming partnerships and relations with the associates that help support the TQM initiative all come under the purview of diversification.

1.3.5 Critical factors influencing TQM

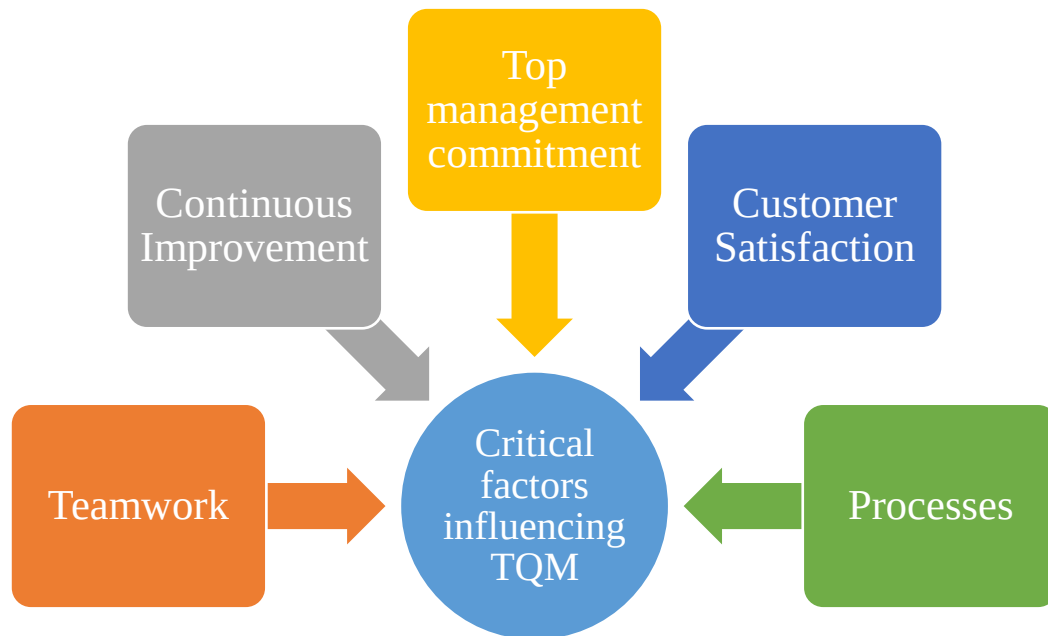


Figure 1.1 Critical Factors of TQM

- **Top Management commitment** - When it comes to implementing TQM, management is in charge of establishing and enforcing principles, goals, and procedures that are designed to have the customer needs met and improve organisational performance (Shores, 1992). With the support and contributions of the company's leadership, sufficient resources have to be allotted to expand actions that result in quality enhancement. This means that the company's quality will improve. According to Berman et al. (1996), to maintain TQM implementations, top management must identify quality improvement opportunities, such as enhancing teamwork or raising the standard of hospital services. In fact, hospital administrators are subject to normative demands to implement cutting-edge management techniques such as total quality management(TQM).
- **Customer satisfaction** - Customers are the primary focus of TQM, which places high importance on achieving or surpassing customer expectations in every single transaction (Kangis et. al, 1998). The inclusion of customers from design to development to check is of utmost importance to comprehend the needs and desires of customers. (Das et. al, 2008; Kumar et al., 2009).

Organizations can use TQM as an example of how they can achieve success through customer satisfaction (Arasli & Ahmadeva, 2004). Hospitals place a high priority on satisfying their clients' ever-increasing expectations (Das et. al, 2008).

- **Continuous Improvement** - In the pursuit of continuous improvement in addressing both external and internal consumer needs, continuous improvement is a powerful idea (Huq, 2005; Schalk & Dijk, 2005). To achieve quality improvement from the bottom up, Kanji argues that management must be based on facts and must enlist the help of all employees. All systems and processes should be managed with a mindset of continuous improvement to boost success and decrease failure.
- **Teamwork** - Having properly working process management and improvement, especially in the medical field, necessitates the participation of all the relevant departments; teamwork is necessary (Westphal et. al, 1997; Huq, 2005;). Sectionalism must be eradicated and cooperation must be strengthened to improve quality (Yang, 2003; Huq, 2005). "All-one team" is the most challenging part of TQM to achieve (Rad, 2005). According to the author, improving processes and carrying them out with vigor and effectiveness requires collaboration between everyone in the business.

- **Processes**

It is the goal of TQM to ensure that all processes are running efficiently and that all customers are completely satisfied. Improving the process requires that everyone in the TQM environment develop new skills to reduce sources of variation within the system (Eng & Yusof, 2003; Huq, 2005). An organisation's quality and performance criteria require a well-defined and well-designed process set. Healthcare organizations should work on integrating numerous processes at different levels including quality management and human resource management, in terms of meeting and surpassing customers' excitations as well as achieving organizational performance.

1.3.6 Total quality management in India

It is widely agreed that TQM is a good way to ensure quality in all aspects of business, from manufacturing to the service sector. It is a travesty that Indian corporations have not yet embraced this idea. TQM was introduced by Deming, Juran, and Crosby in Japan and the United States, but Indian firms were unable to take advantage of this because of their weak economic position following independence. TQM has only acquired traction in Indian organizations in the recent two decades. Introducing and implementing TQM in business operations is now the appropriate time for Indian enterprises, not only for sustainable growth but also to win customers' hearts and contribute to India's economic development.

1.4 Healthcare

Hospitals, primary healthcare centers, community healthcare centers, medicine stores, and diagnostic clinics are all examples of healthcare institutions. Any healthcare system around the globe is tasked with meeting the requirements and expectations of patients by providing high-quality healthcare services. High-involvement healthcare is concerned with a person's overall health and well-being. No matter where people are in the world, it's one of the fastest-expanding service industries. (Dey et al., 2006). By 2020, the Indian healthcare sector is estimated to generate USD 280 billion in revenues (The Economic Times, dated 1st September 2015; India Brand Equity Foundation, June 2017). Healthcare must be able to keep up with rising demand while having a limited supply of resources (Faezipour & Ferreira, 2013). The demand for healthcare services may increase in the future due to factors such as rising income levels, an aging population, increased health awareness, and a shift in attitudes toward preventive healthcare. In today's healthcare market, consumers are more knowledgeable and driven to absorb all the accessible information. Any healthcare system's primary focus should be on its patients. Clients of the healthcare system with a plethora of demands on their time. Rather than focusing solely on the medical aspects of a patient's treatment, healthcare facilities should take a more holistic approach to their work. Patients require high performance in all aspects of their care, including admission, treatment, and discharge (Angelopoulou et al., 1998). Customer loyalty and word-of-mouth referrals are both enhanced when a company's operations are at their peak (Youssef, 1996). As part of the evaluation process, one must

guarantee that patients are satisfied with their treatment. Patient's well-being is predicted to increase because of better healthcare services, and as a result, the number of patients may decrease.

1.4.1 Definition of Health

Physical, mental, and social well-being are all aspects of a person's whole health, not just a lack of disease or infirmity (“World Health Organization, International Health Conference, 1946”). The World Health Organization (WHO) believes that everyone has a fundamental right to the highest attainable level of health. Human health is an essential and universal human right to be free from disease or infirmity (Saracchi, 1997). a dynamic state of well-being defined by the physical and mental potential that meets the demands of daily life by one's age, cultural background, and sense of self-reliance (Bircher, 2005). More emphasis should be placed on the government's responsibility to ensure that the country's healthcare delivery system operates efficiently (The world health report, 2000).

1.4.2 Definition of healthcare

As part of healthcare, doctors, and nurses are trained to identify and treat illnesses and disabilities to help people maintain or improve their overall health and well-being. There are healthcare providers who administer it. Dentistry, neonatology, midwifery, surgery, pharmacology, psychiatry, physical health, etc., all fall under the umbrella of health care, which also includes primary, secondary, tertiary, and public health care. Human capital, computer networks, financial systems, and essential structures, such as buildings, equipment, and materials, are all critical to delivering health care (Kleczkowski et al, 1984).

1.4.3 Significance of the Healthcare sector

- **Healthcare helps in increasing employment**

In terms of both direct and indirect employment, it is the seventh-largest employer in the state. The demand for healthcare services is expected to skyrocket as the population ages and more people become ill. As a result of this increase in demand, the healthcare industry will need to hire additional healthcare professionals and workers with specialized skills in the future years.

- **Healthcare helps in Increasing Productivity**

Human capital is dependent on a person's health. Investment in healthcare has a favorable impact on the economy in a wide variety of ways. In addition to increasing their physical capabilities, such as endurance and quality, it is also possible to increase their mental capabilities, such as their ability to think and their cognitive functioning. Consequently, the health of both skilled and unskilled workers must have a significant impact on profitability.

- **Medical tourism acts as a forex generator**

Several factors are contributing to India's rapid rise as a top destination for international patients: technological innovation, higher quality of care, international certification programs operated by medical institutions, and the cost advantage it provides. This, in turn, has bolstered our position in the global market by facilitating the flow of remote trade. Medical tourism has been demonstrated to be a way for India to take advantage of this opportunity and achieve a GDP offer of roughly 2% in the next 10 years.

- **Healthcare acts as a driver for innovation and entrepreneurship**

The growth of the economy can be helped along with development and business enterprise. With the rise of new and different healthcare models, such as health centers, diabetes clinics, diagnosing chain stores, and daycare centers, the area has become more entrepreneurial. This, in turn, is expected to create jobs, increase performance, and increase the number of people who can be helped by healthcare services.

1.4.4 Evaluation of the Healthcare Industry in India

Due to the Government of India's growing concern, the Indian healthcare sector has gone through three different stages.

- **Phase 1 (1960-1983)**

There were two guiding principles in this phase.

1. The state government will oversee providing healthcare for its residents.
2. No one should be refused access to high-quality healthcare.

Throughout the country's history of freedom, India has seen a variety of fatal diseases. Malaria, for example, was a major source of concern for the people of India. Only a few public sector hospitals existed during this period, while most private sector facilities were staffed by practitioners from the ISM (Indian Systems of Medicine). AIIMS was formed during this period to help with education and research.

A major difficulty that India faced after the end of the colonial period was restructuring and rebuilding its economy so that it could compete with the West in the provision of healthcare. Many people were drawn to Family Planning during the 1960s and 1970s. Traditional therapies were mostly ignored in India, which led to expensive allopathic cures that were confined to metropolitan regions.

- **Phase 2 (1983-2000)**

National health policy of 1983

As a result of this national policy, the primary healthcare delivery system of the government has become more accessible to the public. The pre-1983 policy helped curb numerous diseases and other obligations, such as keeping ahead of western healthcare standards, control of the population, and rural access to healthcare, spawned the National Policy of 1983. Because of the lack of available resources, private healthcare facilities were welcomed as an alternative to the government-run system. The urban-rural divide was narrowed during this period since rural populations had better access to healthcare. Several centrally supported programs strengthened primary healthcare facilities in rural areas and disease control programs to ensure the well-being of the populace. Schemes like these saved the lives of many people by eliminating diseases like guinea worms and others that were dangerous to humans. Spending on the health system was curtailed because of budgetary and economic constraints.

- **Phase 3 (Post 2000)**

National Health policy 2002

During this time in India's healthcare evolution, significant things happened. India's healthcare system suffered in three ways.

1. Rather than simply providing healthcare services, the state's role was elevated to that of a healthcare financier.
2. The deregulation of the insurance market increased the number of potential sources of funding for healthcare.
3. To achieve public health objectives, private sector resources were sought.

Restructuring public health institutions and increasing funding for the healthcare sector were the primary goals of this national healthcare policy, which aimed to ensure that everyone in the community had simple and equal access to the healthcare delivery mechanism.

- a. The primary goal of this program was to raise the health of the country's population to a satisfactory level.
- b. Furthermore, emphasis was placed on local government implementation of the healthcare sector convergence under a particular administration.
- c. In addition to AIDS/HIV, this national health care program addressed ailments like blindness, tuberculosis, and malaria, which were causing a considerable burden on the country's health.
- d. A decentralized public health system, congregating public health programs, and investment in public health was emphasized in the policy.
- e. Women's health was also recognized as a priority by policymakers. To do this, particular action was taken. There were additional initiatives aimed at boosting the distribution of food and medication.
- f. The assumption is that the national health database will contain scientific and modernized health statistics that are based on well-established accounting practices.

Overall, national healthcare policy calls for substantial budgetary support from the federal government to provide healthcare facilities at the district level.

1.4.5 Healthcare issues and challenges in India

Issue

- The public healthcare sector gives all Indians free healthcare, but the number of people who want it keeps growing.
- Heart conditions are causing more and more people to get sick and die.
- International norms and standards should be used in health care, but local healthcare needs should also be considered.
- To manage resources well in each specialty area, clear benchmarks and performance goals should be set.
- Increase patient compliance and recovery by enlisting them as partners in their care.
- Help improve the quality of care by getting regular input from patients.

Challenges

- Building a Customer-Oriented Culture.
- Decide on your goal, purpose, and values.
- This is the next phase after setting goals and establishing a long-term vision for a hospital. Transform your vision into measurable objectives that would help an organization succeed.
- Make sure the company has a strong team in place that can effectively manage resources by drawing on business management approaches and abilities.
- Public health framework for priority areas based on health care requirements that transcends political ties.
- Regular feedback is essential for gauging how happy patients are with their treatment.

1.4.6 TQM AND Healthcare services

As a part of TQM in human services, employees are encouraged to increase their productivity by implementing and changing procedures that are high-quality and consistent, resulting in greater satisfaction for all parties involved, including patients. TQM, or total quality management, is a critical component in every aspect of health care. TQM is used to improve patient satisfaction, lower costs, and reduce the number of restorative errors. In recent years, concern for TQM in the human services business has risen to the level of a notable concern for achieving overall quality. TQM relies on a sense of responsibility and the efforts of the association to improve its activities. Several factors go into making this possible, such as ensuring that workers are properly trained and that raw supplies are delivered to customers promptly. As a condition for the implementation of TQM in human service organizations, the administrator must implement several changes in the organization's structure, process, work, and workers that have distinct requirements for achieving its goals.

To enforce all of the program's criteria throughout the entire health association, senior management must take a strong stand. A growing number of businesses, industries, and government agencies have begun to recognize the value of Total Quality Management (TQM). Early adopters at TQM were driven by a sense of opportunity to produce societal benefits from the TQM philosophy. According to Hunt & Knickman (2008), the following is how stakeholders see healthcare quality:-

- a. As a healthcare provider, you have five rights: the right technical care, delivered promptly, in an appropriate manner, and with appropriate resources.
- b. Personal time spent with the patient is an important factor in a patient's overall satisfaction with the care they receive.
- c. Some aspects of policymakers' satisfaction, such as price, punctuality, and appropriateness, are communicated with payers.
- d. Health care providers: Patients are satisfied when they receive timely, adequate care at a reasonable cost. People's basic healthcare needs should be satisfied, as should the needs of society as a whole.

Medical services are intangible when it comes to timely response, according to the researcher. This complicates the process of conducting an assessment.

1.4.7 Need for TQM in the healthcare industry

TQM is a widely held belief among management thinkers and executives. Even though the TQM philosophy is widely used in modern enterprises, regardless of their business type, it has been proven to be a valuable method when properly implemented.

Patients' satisfaction, continuous improvement, and teamwork are all part of TQM's focus in the healthcare industry. Management and thinkers throughout the world agree that the TQM philosophy, when correctly implemented, is one of the most valuable approaches for success in today's competitive environment, regardless of the organization. Using TQM in the healthcare industry can be a great success. With the assistance and commitment of top management, it aims to increase the quality of care for patients while also striving for continual development. (Talib et al., 2011).

Successful TQM implementation in healthcare institutions has also been recognized in numerous studies (Short et al., 1995). These outcomes include enhanced service quality, enhanced healthcare quality, and performance, greater patient happiness, decreased operational costs for healthcare organizations, satisfied employees, and improved patient safety. TQM is now being implemented in healthcare facilities as a result. Quality improvement, profitability, competitive advantage, and staff dedication have all been shown to improve when the TQM philosophy is implemented in healthcare firms

1.4.8 The importance of TQM in the Healthcare Industry

A vast range of quality considerations goes into the provision of health care, all of which are critical. Doctors, hospitals, nursing homes, clinics, and the like are the sellers of medical services because they provide them for a set price. Health services are sold to clients or patients at a predetermined fee. Healthcare quality of performance may also encompass variables like food, housing safety and security, personnel attitudes, and other issues that emerge in connection with hospitals or nursing facilities. As a result, the time required to schedule an appointment, the time it takes to wait for services to be provided, and the scheduling involved in medical procedures and surgeries are all factors.

- The quality of the administration and management.
- The caliber of the medical professionals.
- The Standard of Care Provided in Hospitals.

1.4.9 Role of Total quality management in the Healthcare industry

Industries are now convinced that a decrease in quality has led to a decrease in global standing because of severe global competition and a decline in economic performance. After the publication of the British Standard (BS) 5750 in 1979, the National Quality Campaign came into being. Its agenda had been to awaken businesses regarding the significance of high quality when it comes to being competitive and thriving in today's global marketplace. As a result, the International Organization for Standardization (ISO) 9000 standard for quality management systems was adopted in 1987. Quality systems are defined by a variety of standards that outline the requirements for their documentation, implementation, and maintenance.

As a result, TQM has evolved into an even broader concept that focuses on the total performance of an organization, as well as on the value of procedures. A lot of research has been done to support the benefits of this method.

Countries around the world have worked for the improvement of quality. Coming to the verge of understanding the significance of quality, quality assurance, and quality control, these countries have devised a strategy to help their workforce adopt a long-term focus on achieving overall quality in all their activities. Companies are searching for employees who have a positive attitude toward TQM practices.

1.5 Organizational Performance

Various productive assets, including those on the balance sheet like physical assets, and people constitute an organization. These assets come together as an association to fulfill the dreams of a company (Jensen & Meckling, 1976). People who donate assets will only do so if they believe the value, they receive in return outweighs the worth of the items in question. As a result, creating value is at the heart of a great performance. For as long as the value provided by using donated resources equals or surpasses the value expected by individuals who contributed those resources, the organization will continue to exist. When it comes to an organization's overall performance, value

creation defined by a resource provider is the most important metric. When it comes to creating value, it's all about the process.

1.5.1 Operational Definition of Organizational Performance

It is defined as the difference between the actual output of a company and the intended output. An organization's interactions with its various constituencies fall under the broad framework of organizational behavior and performance.

Organizational performance, is basically, the comparison of actual results to intended results. It examines three main outcomes: "shareholder value performance; financial performance; and market performance".

With this broad concept, organizations can reflect on what they do and produce in service of the various stakeholders with whom they work. Strategists, operations, finance, legal, and organizational development specialists are just a few of the professionals who pay attention to how well an organization performs.

Performance in an organization is measured in terms of the goals or objectives that the organization's management has set for it. The fabrication, financial, marketing, and shareholder performance of the organization is all considered when determining the overall performance score.

When it comes to an organization's performance, both the internal and external environments play a role. Organizational performance depends on varied factors like the internal environment, human resources, technology, finances, production, and marketing. external factors such as government policies and support can have an impact on an organization's performance as well as cultural, social, and political aspects.

“A company's performance can be defined as its ability to convert inputs into outputs to meet specific goals. In terms of content, performance sheds light on the relationship between minimal and effective costs (economy), effective cost and actual output (efficiency), and output and achieved results (effectiveness)”.

Human resources must be a focal point of organizational performance. Employees need assistance from their employers in developing the knowledge and self-reliance they need to adapt to an ever-changing environment while also finding a sense of stability and support. A company's ability to succeed depends on its ability

to find and keep the best employees, as well as motivate and utilize those employees to their full potential.

1.5.2 TQM and Organizational Performance

TQM practices and company performance have been studied extensively by Powell (1995). TQM generates a competitive advantage in the long run for the firm and various elements of TQM like human resources, benchmarking, leadership, etc. yield advantages for the firm.

Ettlie (1997) found a correlation between the quality of technology and the performance Controlling for industry category; it was discovered that technology greatly attenuated the association between R&D intensity and TQM and market share. There was a substantial correlation between R&D intensity and market share in high-tech enterprises and a significant correlation between TQM and market share in low-tech firms The correlation between R&D effort and TQM was significant and inverse.

Performance has been strongly influenced by some but not all of the TQM methods. The most significant operational performance predictors were leadership, management of people, and customer focus.

1.5.3 Impact of TQM on organizational Performance

Researchers depict a substantial, affirmative relationship between quality performance and quality effectiveness (Terziovski & Samson 2000). Kaynak (2003) emphasized the link between TQM methods and quality performance indicators Similarly, Kumar et al. (2009) found that TQM activities improved the quality of processes, products, and services, and Abdullah et al. (2008) indicated that firms' performance improved when more TQM practices were implemented.

Studies have shown that TQM can be used to evaluate the performance of an organization (Fynes & Voss, 2001; Sila & Ebrahimpour, 2005; Wilson & Collier, 2000). Various theoretical and empirical questions are examined in these studies. Customer happiness increased internal communication, better issue-solving, and fewer errors are just a few of the benefits that can be realized when TQM practices are properly applied.

In a study by Hendricks &Singhal (2001), the researchers depicted that there has been a significant difference in the performance of the organizations that

implement TQM effectively and those firms which were in the control group. Thus, it was depicted a significant relationship exists between quality management and organizational performance.

1.5.4 A hospital's performance in terms of measuring organizational performance

Hospitals and other healthcare providers can benefit from micro-level performance measurement in the healthcare sector. Hospital performance can be evaluated in several ways and using several different criteria and parameters. It is possible to evaluate healthcare facilities' profit generation capacity by evaluating its profit margin, as well as its financial liquidity, capital structure, operational performance, and costs (labor and expenses) using economic efficiency.

Efficiency (both technical and allocative), output, and consequences can be traced back to the non-financial dimension, which reveals information about financial performance that is not reflected by conventional financial measurements. Hospital occupancy, the average length of stay, and the number of resources available per patient or service are some of the most used metrics for assessing technical efficiency in the healthcare industry. It is the allocation efficiency that determines which patients, health services, and disease entities will receive funding and how those funds will be dispersed. Therapeutic results can also be measured using indicators, such as the quality of the services offered.

A hospital's medical team is its most important stakeholder, following patients and their families. The social part of a hospital's performance, which is related to the fact that the hospital achieves its social goals can be compared with the fact that physicians are content with the profiles they consider most important.

Physicians' satisfaction with their work, as well as the quality of their patient's care, was found to be closely linked to meeting their own needs and those of their patients. As a result, physician job satisfaction is crucial to effective management. Employee satisfaction is a critical factor in determining the success of a hospital.

1.6 Service

Commercial activities are offered by one party to another in exchange for capital, time, and effort as well as dependent on time, outcomes are obtained for recipients, items, and other properties that are under the responsibility of buyers (Edvardsson et al., 2005). A service is defined by Kotler (2009) as an act or accomplishment that one entity might deliver to another that is primarily intangible and does not contribute to the ownership of anything. By their very nature, resources are intangible and heterogeneous. Resources, unlike things, are generated, supplied, and used simultaneously. In contrast to tangible things, services are essentially intangible. In the buyer-seller transaction, services are the procedures and operations that are developed by buyers.

1.6.1 Characteristics of Services

Quality can be defined as the quality of a product or service that an individual consumes. SQ has been referred to as an evaluation of the effectiveness of the service in meeting the expectations of the receiver. As service itself is subjective so its experience will likewise be subjective. Even if the source of service accomplishes exactly what the receiver might be disappointed with for another reason. It is commonly known that services have three distinct characteristics: tangibility, heterogeneity, and inseparability.

- **Intangibility** - Most services are intangible. There are no clear production criteria for uniform quality because they are performance rather than objects. For the most part, it's impossible to accurately track and measure the quality of a service before it's delivered to a customer. As a result of the intangibility of its services, the company may have difficulty assessing the quality of its offerings in the eyes of its customers. (Zeithmal, 1981).
- **Heterogeneity** – When it comes to services, especially those with a significant labor element, the quality typically differs from one provider to the next, from one client to the next, and even from one moment to the next. It's difficult to ensure uniformity in-service staff behavior, i.e., quality, as the services offered by the company may be differing from what the customer or the recipient perceives that to be.

- **Inseparability** – It is impossible to think of many services without the other. Consequently, the production facility does not engineer service quality, which is ultimately given unaltered to the customer. For example, in labor-intensive services, quality is often determined by interactions between the customer and the company's point of contact during providing the service (Lehtinen & Lehtinen, 1982). In situations like doctor appointments, where patients are heavily involved in the process, the service provider may find that it has less managerial control over quality. Consumers' reports of symptoms have a vital role in determining the quality of the service delivered in these cases.

1.6.2 Service Quality

Since the primary product being advertised is performance, the foundation of service marketing is high-quality service. Customers purchase performance because it is the product. Technical and functional aspects of service quality are essential to the success of a company. Technological precision in diagnosis and treatment is required for high-quality health care, according to the healthcare industry's technical perspective. According to the functional perspective, the quality of healthcare delivery has a direct impact on how well a system functions. Customers' trust in a company's brand, advertising, sales, and price is strengthened when the service is great. This promotes competitiveness for the company (Berry & Parasuraman, 1991). To quantify service quality, Lewis, & Booms (1983) defined it as "the degree to which client expectations are met." Consumers' perceptions of service quality are based on what they receive and how they receive it, according to Groenroos (1984). According to Webster (1988), the quality of service is defined as the degree to which the level of service provided consistently meets the expectations of clients. Service quality is defined as "assessed by consumers and arises from a comparison of their expectations of the services they will receive with their assessments of the performance of the service provider" (Parasuraman et. al, 1985). What customers expect from a service provider is referred to as "expectations." Customer appraisal of the service provider is what the term "perceptions" refers to.

The quality of a company's service is a significant part of its marketing strategy. The framework for measuring the quality of service differs from one service to the next because they are all different. For a service to be distinct, it must be defined and

measured differently. To design marketing strategies, service marketers consider numerous dimensions, such as service quality, customer happiness, and behavioral intentions (Padma et al., 2010; Mehra, 2011; Aliman & Mohamad, 2013; Chang et al., 2013). A firm can focus on areas that directly impact its competitive advantage, rather than wasting resources on areas that don't directly impact its competitive advantage. As a result, evaluating the quality of services is more difficult than doing so for products. According to consumer views, service quality assessment is not based on a statistical measure (Cunningham & Young, 2002).

1.6.3 Operational Definition of service quality

Quality and service are combined in a phase that emphasizes the availability of high-quality products and services to the end user. If an organization promises a certain level of quality, it is referred to as "quality." People can't draw a clear line between positive and negative. Quality can be generated indefinitely. Innovations in science pave the way for the production of high-quality goods. Fewer pauses between quality improvements as a result of increased innovation frequency.

An evaluation of the customer's perception of specific service dimensions, such as attentiveness, assurance, empathy, and tangibles is known as a service quality evaluation. Businesses can identify problems quickly, improve their service, and better understand their customer's expectations based on an assessment of customer service quality.

Service to evaluate a service's quality, a customer must differentiate between what he or she expects and what he or she perceives the service provider to provide.

In pure service systems, service quality is generally regarded as the output of the service delivery system. In addition, customer satisfaction is linked to a company's level of service quality.

"In the context of service quality (SQ), the comparison of expectations (E) about a service with its performance (P) is $SQ=P-E$ ". A company that provides excellent customer service while remaining economically viable is a win-win situation for both customers and the company. It is possible to boost the economy's competitiveness by improving service quality. This goal can be achieved in a variety

of ways, including understanding, improving the standard operating procedures, brisk identification of the problems, and ultimately solving the same.

1.6.4 Service quality and organization performance

As noted by Zeithaml et al. (1990), American organizations have been devoted to providing excellent customer service. Being different, productive, and efficient are all aided by providing excellent customer service, and doing so can pay off handsomely. The link between quality and profitability has been confirmed through the studies done by the Project Information Management System (Buzzell & Gale, 1987; Phillips et al., 1983). Because of this well-documented link, businesses have the incentive to raise the bar on quality. Achieving superior quality provides three advantages over the competition, according to Buzzell & Gale (1987):

- (1) The premium rate of interest.
- (2) Research and development funding.
- (3) Better value for the customer.

The quality of products and services has been referred to as the most essential aspect in determining its success (Phillips et al., 1983). Because premium prices are linked to increased earnings, they argued, the company should focus on producing high-quality products to thrive. According to Buzzell & Gale (1987), quality affects both profitability and growth because of the perceived value it creates. Several years ago, Rust et al. suggested a methodology for improving service quality and profitability. If customer satisfaction is improved, it leads to retention of the employees, which increases the revenue of the firm, and ultimately increased profitability. Finally, a company's profitability benefits from high levels of customer service excellence.

1.6.5 Service quality in healthcare

One of the most pressing concerns facing the healthcare industry today is how to better monitor and improve the quality of the services provided (Garvin, 1983, Anderson & Zeithaml 1984). Healthcare services have a distinct position among other services because of their high level of participation. Healthcare quality is the way that maximizes the health benefits along with minimizing the risks (Donabedian, 1980). When deciding on a hospital, service quality is a significant consideration for

consumers (Lynch & Schuler, 1990). In healthcare, a product or service's quality can be described as its capacity to meet stated and/or implied needs (Korwar, 1997). Whether or not the patient is content with the service is a good indicator of how effective it is (Dey et al., 2006). Care that exceeds patients' expectations and produces the best feasible clinical outcomes with the resources can be defined as "quality of care." Ovretveit (1992) proposed three dimensions to increase total healthcare quality; professional quality, customer quality, and management quality. Customer satisfaction can only be achieved if proper processes and procedures are used to meet the needs of the consumer. SQ can be measured by how satisfied the beneficiaries are with the outcomes. The term "management quality" refers to a company's commitment to providing services in a manner that is both time and resource-efficient. When it comes to providing high-quality healthcare to patients, it's all about being technically proficient, communicating well with one another, making decisions together, and being sensitive to the needs of different cultural groups. Several factors contribute to the quality of healthcare services, including how well doctors and patients interact with one another and the quality of care that is provided (Martinez, 1999).

1.6.6 Significance of service quality in hospital

Patients are the primary clients of a hospital. Customers' expectations are compared to the service level provided by the hospital, and "service quality measures how well the service level is given fits the patients' expectations," according to early writing on the topic of customer satisfaction in the healthcare sector. Providing excellent customer service implies meeting or exceeding the expectations of customers regularly."

Patient perceptions of service quality are measured by the magnitude and direction of the gap between what patients receive and what they expect. There are several ways to define quality, including the difference between "technical quality" and "functional quality" (the way the therapy is delivered) and "process quality" (the quality of the primary treatment itself), and "output quality" (judged after the treatment).

Too much innovation can be detrimental rather than beneficial. Problems include a lack of effective communication, the expansion, and complexity of service offerings, the selection and training of service providers such as doctors and

paramedics, as well as a focus on the short term. A hospital can survive and thrive in any kind of financial crunch if it provides a high-quality treatment service.

1.6.7 The invention of service quality in healthcare

Between 1983 and 1988, a team of American researchers led by “A. Parasuraman, Valarie A. Zeithaml, and Len Berry” developed the gaps model, better known as SERVQUAL, as part of a comprehensive study on customer service quality. Service quality, according to Parasuraman, is the difference between what clients expect and what they think they get.

1.6.8 The SERVPERF scale

In the SERVQUAL model, customer expectations are compared to the service performance the customer receives. Many issues have been addressed in past studies when it comes to determining the discrepancy between customer expectations and their perceptions of service delivery. According to Brown et al. (1993), Cronin and Taylor (1992) proposed SERVPERF model was designed to address the shortcomings of the SERVQUAL concept. This scale was created primarily based on customer perceptions of service performance because they considered that customers' expectations of service performance did not accurately reflect "their comprehension of service excellence." "The SERVPERF model provides more accurate estimation, higher convergence, and greater divergent validity, as well as more significant explained variance, and therefore less bias than SERVQUAL" (Cronin & Taylor, 1994). Because SERVQUAL does not adequately measure service quality, they presented the SERVPERF model as an alternative. A total of 22 metrics (measures) are broken down into five categories in the SERVPERF criteria: First and foremost are tangibles, second is reliability, third is responsiveness, and fourth is assurance. Equipment, facilities, and the physical appearance of employees are all examples of tangibles. To be responsive, a company must be ready to respond to customer needs quickly and efficiently.

Customers' confidence in the work of a company is bolstered by the assurance that its staff has the necessary skills and knowledge to do so. Finally, empathy focuses on the care and attention given to the client base. Each of these 22 criteria can be responded to in two ways, based on the SERVQUAL scale; that means 44 data must

be collected from each individual. There is a total of 22 data points required per individual for the SERVPERF scale, which measures solely how well someone perceives their performance. This SERVPERF function aids in the collecting of data by making it easier. This architecture and SERVPERF criteria are not always efficient, according to a literature assessment (Andaleeb, 2001). It may therefore be required to exclude, change, or include certain criteria (Mosadeghrad, 2014). Thus, hospital services and other healthcare facilities have adjusted. New interpretations of various SERVPERF scale criteria may be necessary because of the different healthcare situations during infectious outbreaks. Accordingly, experts' opinions have been used to alter the SERVPERF scale criteria in health services considering the current pandemic situation.

1.6.9 SERVQUAL vs. SERVPERF

As a result, "SERVQUAL," a twenty-two-item scale and its adaptations, assessing the gap between the service seekers' expectations and perceptions on five dimensions (tangibility, reliability, assurance, empathy, and responsiveness) has become more widely applicable in a variety of industries. Many believe, however, that SERVQUAL can only be used in a certain context and that the instrument should not be universally applicable. For certain clients, the perceptions of services may exceed their modest expectations, including health care (Cronin & Taylor; 1992), according to another school of thinking. A high degree of predictability is sufficient to measure customer satisfaction with SERVPERF. Although SERVQUAL can identify service quality gaps, SERVPERF should be the primary instrument for comparing the performance of companies in the same industry (Jain & Gupta, 2004). Many more grading systems exist for assessing the quality of health care services besides these two.

1.6.10 SERVQUAL-Barrier

- **Limited Commitment** - All service providers must be involved and committed if TQM is to be implemented successfully in hospitals. However, because not all of the persons involved are employed by the hospitals, this commitment is problematic for them. Hospital-affiliated physicians typically have restricted responsibilities to the institution they are affiliated with.

- **Diffusion of Interest** - The majority of doctors think that their interests are unrelated to those of the institutions with which they are affiliated. Barriers to quality improvement in medical treatment may be the most significant single issue that stands in the way of its achievement.
- **Structure of the Hospital** - As a result of the structure of the hospital, it is difficult to involve physicians in TQM. Hospitals and medical staff typically exist as two distinct entities, each with its own set of internal tensions.
- **Physician's Resistance** - Physicians are unfamiliar with TQM's tools and processes, which they consider abstract and unrelated to patient care. Managers who want to successfully apply TQM in hospitals must therefore find a means to overcome physicians' opposition.
- **Avoiding Fear** - It is critical that doctors put patient care first. When physicians are involved in the early stages of the TQM program, they would be more likely to support the program's success since they will have a better understanding of what it entails.
- **Begin with the Loyalists** - Lopresti & Whetstone (1993) proposed that physicians be involved in the establishment of TQM by starting with a few enthusiastic physicians and expanding to others as their engagement gains support. Since doctors and hospitals are once again at odds, a new leadership style is needed to bridge the gap between them.'

1.7 Market orientation

"Market orientation" relates to how a company puts into practice the marketing concept, as defined by Kohli & Jaworski (1990). Customer focus, competition focus, and cross-functional cooperation are all aspects of market orientation. Customer orientation emphasizes the importance of a thorough understanding of target customers, competitor orientation highlights the importance of keeping tabs on competitors' strengths and weaknesses and their activities, and inter-functional coordination highlights the importance of coordination amongst the departments. Considering this, it's evident that any research on market orientation must also look at the previously indicated three elements of market orientation.

Market orientation in diverse contexts, such as different industries and different sorts of businesses, has attracted the attention of researchers in recent years in both established and emerging nations. Market orientation has been shown to boost an organization's success in the past. Furthermore, organizations can develop and implement new ideas, processes, and products, as well as increase their profitability, market share, and turnover. Rehabilitated in 1990, the marketing concept was renamed market orientation. Market orientation is being given such a high priority. The traditional view holds that the most direct route to bettering a company's performance is through meeting the wants and requirements of its customers. Market-oriented organizations cultivate a set of shared values and ideas about prioritizing the customer in business strategy, which leads to an impenetrable competitive advantage, decreased costs, and boosted profitability as a result. (Desphandé,1998). Market orientation is therefore concerned with the development, diffusion, and response to market data and information coordinated by businesses of business intelligence for efficient and successful marketing management decision-making. (Kohli & Jaworski, 1990,)

As per Kohli & Jaworski (1990) MO is defined as, “the process of gathering and disseminating market intelligence on present and future client needs across a business, as well as being responsive to that information”. As a result, the authors describe (and measure) this idea in terms of three key components: the development, dissemination, and reactivity of marketing information.

Narver & Slater (1990) on the other hand, offered a slightly different definition. A company's market orientation is defined as the culture it has in place that encourages the kinds of behaviors that lead to better value for customers and, consequently, better results for the company. Customers, competitors, and cross-functional collaboration are all included in the authors' definition of the construct's three basic (content/focusing) components. Two additional choice factors were added to the original three: a focus on the long-term and profitability.

This 5-factor instrument developed by Gray et al. (1998) integrates the models of Kohli, Jaworski, and Narver Slater. Inter-functional coordination, profit emphasis, competition orientation, customer focus, and responsiveness are all aspects of their instrument. Lado et al. (1998) proposed a 9-component model for the MO construct:

analysis and strategic actions (4 components each), and the 9th component as intra-functional coordination. They also added distributor orientation and environmental orientation. Analyses of the final customer, distributor, competition, and environment have been proposed to formulate the 9 components proposed by Gray et al. (1998). Coordinated inter-functionality Strategic acts aimed at the final customer, the distributor, the competition, and the environment are all examples of these types of actions.

1.7.1 Operational definition of Market Orientation

A company's ability to maximize profits by understanding and meeting the wants and needs of its customers is known as "market orientation."

Knowing the market's components and their patterns of movement is critical to achieving market orientation. It's better to know as much as possible about a market before deciding what to do in it.

A business approach known as "market orientation" emphasizes the importance of meeting the wants and needs of customers throughout the product development and creation process. It is a new approach to marketing that focuses on designing products that consumers want, rather than the traditional marketing approach. The approach of market orientation has been known to gather the needs of customers at the forefront of the product development and creation process.

Customer needs and preferences are central to the company's product and service development and sales strategy when using Market Orientation. The goal of this strategy is to maximize profits for the company by focusing on what its customers want. An approach to a business known as "market orientation" focuses on the identification of customer needs and wants and the development of products and services that meet those needs. Research for novice and critical products is a critical component for companies with a market orientation, as they consider their target market's viewpoint and necessities.

1.7.2 Antecedents of Market Orientation

The first group of antecedents concerns the organization's highest levels of management. Researchers have found that senior executives have a significant impact on the direction and values of their organizations (Hambrick & Mason 1984; Webster 1988). For a business to be market-oriented, its top management must communicate the importance of responding to client needs (Levitt 1969, Webster 1988). Top-level support for market orientation might motivate personnel inside an organization to stay abreast of rapidly changing markets, disseminate market knowledge throughout the business, and be responsive to market demands.

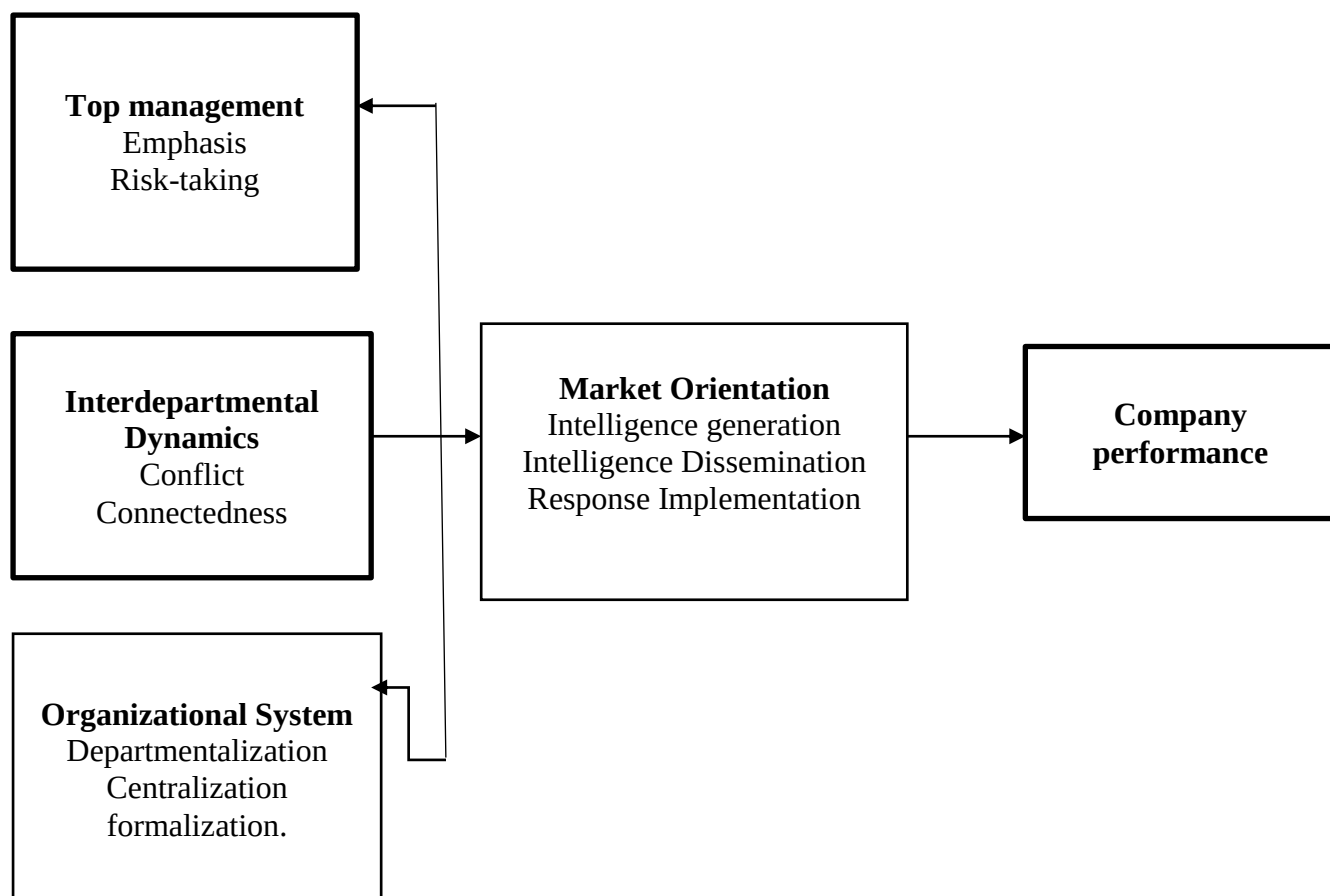
When it comes to market orientation, interdepartmental dynamics are among the second set of elements to be considered. Interdepartmental conflict, a source of tension between departments stemming from the incongruity of desired and real reactions, is a major effect on market orientation. Interdepartmental strife has been cited as a hindrance to a market-oriented strategy. As Ruekert & Walker (1987) point out, rivalry across divisions in a company makes it difficult to share knowledge about the marketplace. The tension between departments is also concerned with hindering the rapid reaction of departments to market demands, which acts as a roadblock to market orientation.

Managers' willingness to take risks is a second factor that contributes to market orientation. Adapting to the changing needs of customers necessitates the creation of new products and services to keep up with their demands. There is a higher chance of failure associated with new products and services than with established products, but this risk is lower for established products.

The processes and structures of an organization can also have an impact on its market orientation. Departmentalization, centralization, and formalization make up this collection of antecedents. Departmentalization divides a company's operations into distinct divisions, each with its own set of tasks and responsibilities. Decision-making capacity in an organization and the involvement of the employees in making critical decisions are the opposite of centralization (Aiken & Hage, 1968). The extent to which regulations regulate communications, authority relationships, procedures, consequences, and norms and duties is referred to as "formalization" (Hall et. al, 1967).

The measuring and incentive system of the organization is the final antecedent of market orientation. Employee behavior can be predicted using an organization's reward system, according to research (Anderson & Zeithaml 1984; Jaworski et. al, 1993). According to Desphande et. al (1993), a company's ability to establish a market-driven, customer-focused firm depends on the effectiveness with which managers are assessed and compensated” When managers are evaluated on short-term sales and profitability, they tend to lose focus on customer pleasure, which is critical to the long-term sustainability of any business. A company that places a high priority on customer satisfaction and market-oriented behavior as preconditions for governing rewards can expect its employees to have a better capacity for market intelligence production, dissemination within the company, and responsiveness to market needs.

Figure 2: Marketing orientation- Its antecedents and consequences



1.7.3 Consequences of Marketing Orientation

Value perceived by customers and value created by sellers are intertwined in the primary underlying premise of a firm's orientation in the market and its effect on performance. As a company strives to gain a competitive advantage through better value generation and delivery to customers, it must instill the firm's culture that benefits its ability to stay at the apex. Market-oriented organizations also develop competitive advantages by gathering and transmitting information among their various divisions.

Employees can also be affected by an organization's focus on the market. Employees gain from market orientation both socially and mentally, according to research (Kohli & Jaworski 1990). Market orientation is also said to result in a sense of pride among employees because they are part of a business that strives to meet the needs of its customers. As a result of this goal's achievement, employees feel a greater feeling of belonging and hence are more committed to their organizations.

Market turbulence is another external aspect that affects the relationship between market orientation and firms' performance. The rate at which consumer tastes and preferences are changing is a key indicator of market volatility. Companies are constantly modifying their products and services to meet the ever-changing needs of customers, and this market volatility plays a crucial role in meeting the different expectations of those customers. As a result, a company operating in a more stable environment is less likely to change its products and services because customers' tastes and preferences don't fluctuate much.

1.7.4 Evaluation of Marketing Orientation

- **Production orientation** - Rather than focusing solely on the delivery of product features and functionality, companies have evolved from being production-oriented to marketing-oriented as a result of this transformation. Rather than industry profits, many strategic company decisions are now driven by the wishes, concerns, and views of customers in today's corporate world.
- **Product orientation** - This is similar to the production orientation of marketing. During the 1950s and early 1960s, this attitude was widely accepted. With this process, the management puts its focus on the creation of

high-end products that can be put to sale at a premium price, maybe by ignoring the needs and wants of the customers who buy those products.

- **Selling Orientation** - For instance, instead of focusing on production or product development, a sales-oriented company concentrates solely on selling and promoting one product. If there is successful management of the relations with the clients, with the firm, and within the departments of a firm, it is referred to as effective selling.

In the 1950s and '60s, firms favored a sales-oriented approach to marketing. Production and product orientations have had a good chance of succeeding because of a growing population and a lack of major competition. Following WWII's latent demand, however, it became clear that things were no longer selling as easily as they had before. Selling was the best solution. The sales era, spanning the 1950s and the 1960s, is called the "golden age of sales."

- **Marketing orientation** - In a marketing-oriented company, products are designed to meet the wants, desires, and requirements of customers. Apart from the wants and desires, the product should be efficient, of good quality, and properly functional.

Brands mass-produce functional and durable products that lacked marketing components like add-on features and design because high-quality products were scarce. The rise of capitalism increased the number of rich and middle-class people.

1.7.5 The shift toward Market Orientation

Sales orientation models were criticized by academics during the 1970 era including Theodore Levitt, Professor from Harvard University, who stated that they were inadequate for creating customized products for individual customers' wants and needs. As opposed to simply producing things for the sake of making a profit, they suggest that companies should instead focus on creating items that satisfy the wants, needs, and opinions of their target market.

1.7.6 The invention of Market orientation in the healthcare industry

Various academics have come up with their definitions of the construct of MO. Narver, Slater, Jaworski & Kohli (1990) have both made significant contributions to the market orientation discussion.

Measuring market orientation

Market orientation now had a theoretical foundation, which necessitated that it be quantified. MARKOR, MKTOR, and DFW are the three most commonly used measurement systems. So-called Likert scales underpin all three approaches. Kohli & Jaworski (1990) defined market orientation as "the organization-wide generation of market intelligence, dissemination of the intelligence across departments and organization-wide responsiveness to it". Whereas, Narver & Slater (1990) consider market orientation as, "An organizational culture consisting of three behavioral components which are customer orientation, competitor orientation, and inter-functional coordination".

According to the MARKOR scale, a beginning point of 32 (32×1) and a final score of 160 (32×5) can be calculated using a five-point Likert scale to measure a respondent's level of market orientation. MARKOR is based on Kohli and Jaworski's behavioral model. Three characteristics of market orientation are defined by the scale: the gathering of information, dissemination of information, and response. The scale was originally comprised of 20 factors and later increased to 32 factors. (Kohli et al., 1993).

It is built on Narver and Slater's cultural perspective to create the MKTOR scale. Nevertheless, due to the difficulty in measuring cultural factors objectively, market orientation is defined by the scale's three dimensions which originally had fifteen but later expanded to seventeen behavior-based variables and indicators (Brettel et al., 2007).

Desphandé, et. al, 1993 established a 9-item scale (DFW) that measures consumer orientation, business culture, and organizational innovation to describe the degree of market orientation. After Desphandé and Farley updated their earlier findings and synthesized the three scales, they established a hybrid tool, MORTN, the 10-item scale which had its focus on customer orientation.

1.7.7 Why healthcare should be marketed?

It may appear superfluous to defend healthcare marketing activities because marketing has been established as a legitimate function in healthcare for a long time. Some healthcare executives and finance managers, on the other hand, continue to dispute the relevance and necessity of marketing. Throughout the years, the following justifications for marketing have been advanced.

- **Building awareness** - As new goods were introduced and consumers became more educated, healthcare companies had to promote awareness of their services and introduce their target audiences to their potential.
- **Improving market penetration** - Faced with an increasingly competitive industry, healthcare providers needed to boost patient volumes while also increasing revenues and expanding their share of the overall market. Marketers had a vital role in retaining current consumers and luring new ones away from competitors in many locations where there were few new patients available.
- **Increasing Prestige** - Success for many healthcare companies, particularly hospitals, was based on their ability to outshine their competitors in terms of reputation. If having the best doctors, the most up-to-date equipment, and the most aesthetically pleasing facilities may help a hospital earn prestige, then the general public should be aware of these advantages.
- **Influencing consumer decision-making** - Marketing's influence on healthcare decision-making was acknowledged as soon as healthcare companies discovered that patients had a voice in the process. Marketing was becoming increasingly crucial, whether it was to persuade customers to select the services of a specific business or to hasten the judgment process.
- **Attracting medical staff and employees** - As the healthcare sector grew, so did the competition for qualified employees. To attract new staff, hospitals, and other healthcare providers needed to highlight the benefits they offered.
- **Offsetting marketing strategies** - As soon as healthcare businesses learned that their competitors were using aggressive marketing tactics, many began to take a defensive marketing approach. By out-marketing their rivals, companies felt the need to respond to their threats.

1.7.8 Market orientation and the healthcare industry

Hospitals across the world are facing strong competition from various private partners functioning in their external environment. The market-oriented construct has attracted substantial attention in resolving various difficulties of health care and helping these organizations to obtain a sustainable competitive advantage. In the relevance of TQM, productivity, and quality have been equally regarded. Giving more relevant and high-quality healthcare services is associated with the efficacy of a hospital and providing these enhanced services to clients at a reduced cost is efficient. Hospital efficiency can be analyzed in three dimensions; human resources, financial & operations and the effectiveness of a hospital can be assessed considering four factors; marketplace, human resource management, operations, and finance. Researchers have reaffirmed the view that it would be plain short-sightedness if, in the healthcare sector, success would be measured in purely financial terms. As the nature of hospital performance is a multidimensional construct encompassing numerous variables. When assessing the aspects of market orientation and organizational performance, it is preferable to employ a multi-dimensional term instead. Indicators for management, finance, human resources, and the market can all be included in this evaluation as an exploratory analysis to identify the factors that influence hospital performance. Market orientation and organizational performance have been studied extensively in the healthcare industry.

The relationship between market orientation and performance has been extensively examined, and it has been discovered. In addition to several attempts to shed light on this connection, market orientation has not been sufficiently understood. Hospitals and the healthcare industry have not adopted the marketing concept. Traditional approaches like advertising and public relations are all hospitals still use to acquire market share because they lack a dedicated marketing department. Metropolitan areas are attempting to use various marketing techniques and ideas to make operations more effective due to the shifting dynamics of the healthcare business. In addition to emphasizing the significance of a hospital's market orientation, some common healthcare procedures also promote it. Trauma centers, outpatient clinics, a growing indigent population, and rising labor expenses make hospitals more susceptible today. To remain competitive, hospitals must come up with

new ideas and implement a variety of marketing methods to elevate the quality of their services. To help hospitals contribute to the bottom line, hospitals must continually collect consumer input, stay in touch with consumers, and successfully and efficiently meet the needs of consumers.

1.7.9 Market Orientation and organization performance

For the most part, management and marketing researchers agree that market orientation along with innovation in a firm and its learning orientation are all intertwined and have an impact on major company performance. Remarkably, know so little about how market-oriented, learning-oriented, and inventive Multispecialty Hospitals perform.

Some Multiheritage Hospitals were used to study the effect of a learning-oriented culture on firm innovation and productivity; further, they concluded that firm innovativeness positively influences company performance. "However, Calantone, et. al (2002) emphasized that their study was limited, and the broad concept can be adapted to other sorts of activities such as marketing and their linkage with organizational learning," they wrote. " Other cultures and industries could also benefit from the learning and innovation frameworks, they opined. Calantone, et. al (2002)'s market-oriented Capabilities in Multispecialty Hospitals model was modified in this study to incorporate the market orientation as a skeleton Capability in Multispecialty Hospitals.

Marketing is not attempting to sell someone something they don't want; rather, it is attempting to satisfy the wants of the consumer. A hospital must therefore try to focus on and assess the patient's needs. Peoples want to experiment to see if the adoption of market orientation can improve service quality in a different hospital (Chang and Chen, 1998). Although physical products are typically created and distributed in the same manner, this is not the case with services. A service's creation and use go hand in hand and cannot be separated. Customers are happier when service is high quality, and happier customers contribute to better business results (Cronin & Taylor, 1992; Lee & Hwan, 2005).

1.8 The interrelationship between MO, SQ, and OP

The quality-profitability relationship is well-supported by numerous research that has examined the issue. It has been shown that quality is the most important determinant of the performance of a strategic business unit (SBU). There is the existence of a substantial correlation between customer loyalty and the likelihood of customers switching to another one, according to Zeithaml et al. (1996). Superior customer service has been shown to increase revenue and profitability, according to Rust et al. (1995). In other words, a company's bottom line benefits from high levels of customer service excellence. To understand the relationship between market orientation and service quality, it is necessary to look at how these two factors are intertwined. A firm's ability to meet consumers' demands more effectively will improve because of the changes to its product offerings. Consumers who are more satisfied with the service provided by the firm will return and spread goods to other potential customers. The opportunity to better serve consumers by deleting or lowering non-essential services that have been discovered because of offering adjustments is another obvious result. The increased profitability of the service can be attributed to the increased revenue and lower costs that result from the service's improved efficacy and efficiency. As a result, the bond between MO and successful business will be determined by the additional effectiveness and efficiency that may be achieved through a market-focused effort. Service quality is a clear indicator of a service firm's effectiveness.

In addition to providing managerial implications for marketing professionals, these findings are likely to provide insight into the relationship between market orientation, service quality, and company performance.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter entails a discussion of the research methodology which has been adapted for the present study. Firstly, section 3.1 discusses the research design and in turn provides detailed research questions, objectives of the research, hypotheses, research setting, and profile of the sample taken. Further, section 3.2 deals with the methodology that has been used for the development of the research instrument. Section 3.3 has details of the operational definitions of the constructs of this research. Section 3.4 has discussed the scope of the study. Section 3.5 discusses the sample design. Section 3.6 discusses the operationalization of the Total Quality Management (TQM) construct. Section 3.7 discusses the operationalization of the Organizational Performance (OP) construct. Section 3.8 discusses the operationalization of the Service Quality (SQ) construct. Section 3.9 discusses the operationalization of the Market Orientation (MO) construct. Section 3.10 provides detail regarding the content validity of constructs. Section 3.11 discusses the pilot testing. Section 3.12 describes the approach for data analysis. And, section 3.13 discusses the research limitations

3.1 Design of the Research

A descriptive and causal research design has been adopted for the current study.

3.1.1 Research Topic

“Total Quality Management and its role on Organization Performance of Hospitals”

3.1.2 Research Questions

The present research article enlists an answer to:

1. Finding out the existing TQM practices in the healthcare industry.
2. The significance of the effect of Total Quality Management on Organization Performance
3. The mediation effect of Market Orientation on the relation between TQM and OP.
4. The mediation effect of SQ on the relation between TQM and Organization Performance.
5. The mediation effect of Market Orientation on the relation between SQ and OP.

3.1.3 Objectives of the research

1. To explore the existing TQM practices of the hospital industry.
2. To study the influence of Service Quality (SQ) on the Organizational Performance (OP) of hospitals through Market Orientation (MO).
3. To study the role of Service Quality and Market Orientation on the relationship between Total Quality Management practices and the Organizational Performance of hospitals.
4. To study the relationship between Total Quality Management practices and the Organizational Performance of hospitals

3.1.4 Hypotheses

For this research, the following hypothesis is framed:

Alternate(H1): TQM possesses a significant impact on OP. (Supported)

Null: There is no significant impact of TQM on OP (Rejected)

Alternate(H2): MO mediates the relation between SQ and OP. (Supported)

Null: MO does not mediate the relation between SQ and OP(Rejected)

Alternate(H3): SQ mediates the relation between TQM and OP. (Rejected)

Null: SQ does not mediate the relation between TQM and OP (Supported)

Alternate(H4): MO mediates the relation between TQM and OP. (Rejected)

Null: MO does not mediate the relation between TQM and OP(Supported)

3.1.5 Setting of the Research and Sampling

This is a hospital-level study in which various healthcare organizations across Punjab have taken part. The questionnaires were administered to various doctors, quality managers, and owners of the nursing homes who were in a position to answer the items related to quality management in the hospital. Out of a sample of 350 hospitals across Punjab, we were able to get responses from 332 respondents. The responses were later examined for their completeness and accuracy, seriousness in responses. After data cleaning and the removal of considerable missing values questionnaires, we were able to select 316 answers for analysis.

Table 3.1 Sample profile of hospitals

Attributes	Frequency	Percentage
<i>Type of hospital</i>		
Super specialist	98	40.5
Multi specialist	144	59.5
<i>No. of daily patients served</i>		
Upto 30	118	48.7
30-50	82	33.9
>50	42	17.4
<i>Education profile of respondent</i>		
Graduation	124	51.2
Post-Graduation(MS)	57	23.6
Post-Graduation(MD)	33	13.6
Super- specialization(DM)	13	5.4
Super- specialization(M.Ch)	15	6.2
<i>Age of the hospital</i>		
<10 years	38	15.7
10-20 years	48	19.8
>20 years	156	64.5
<i>Bed strength of the hospital</i>		
Upto 20	38	15.7
20-40	32	13.2
>40	172	71.1

3.2 Research Instrument

Measurement of the existing variables has been done by the questionnaire method(Figure 3.1). The questionnaire includes 5 point Likert scale for measuring Total Quality Management (TQM), Organizational Performance (OP), Market Orientation (MO), and Service Quality (SQ). The dependent variable(DV)-organizational performance(OP) has been measured using sub-constructs subjective organizational performance(SOP) and objective organizational performance(OOP) concerning the previous three years of performance of the hospital. The OP scale is a 22-item, five-point Likert scale which has been adapted from the balanced scorecard approach given by Kaplan and Norton, 1992. Patient satisfaction, ability to meet financial obligations, and a sufficient number of doctors, nurses, and technicians, were measures of subjective organization performance, and bed occupancy rates, the average length of stay and OPD, and IPD visits were measures of objective organization Performance. In the framework below, TQM is considered a second-

order latent construct having 10 sub-dimensions. Further, MO has also been considered a second-order construct in terms of 7 sub-constructs. Likewise, SQ has also been measured as a second-order construct having 5 sub-constructs. The validation of the already existing scales was done as per the procedure given by Churchill(1979).

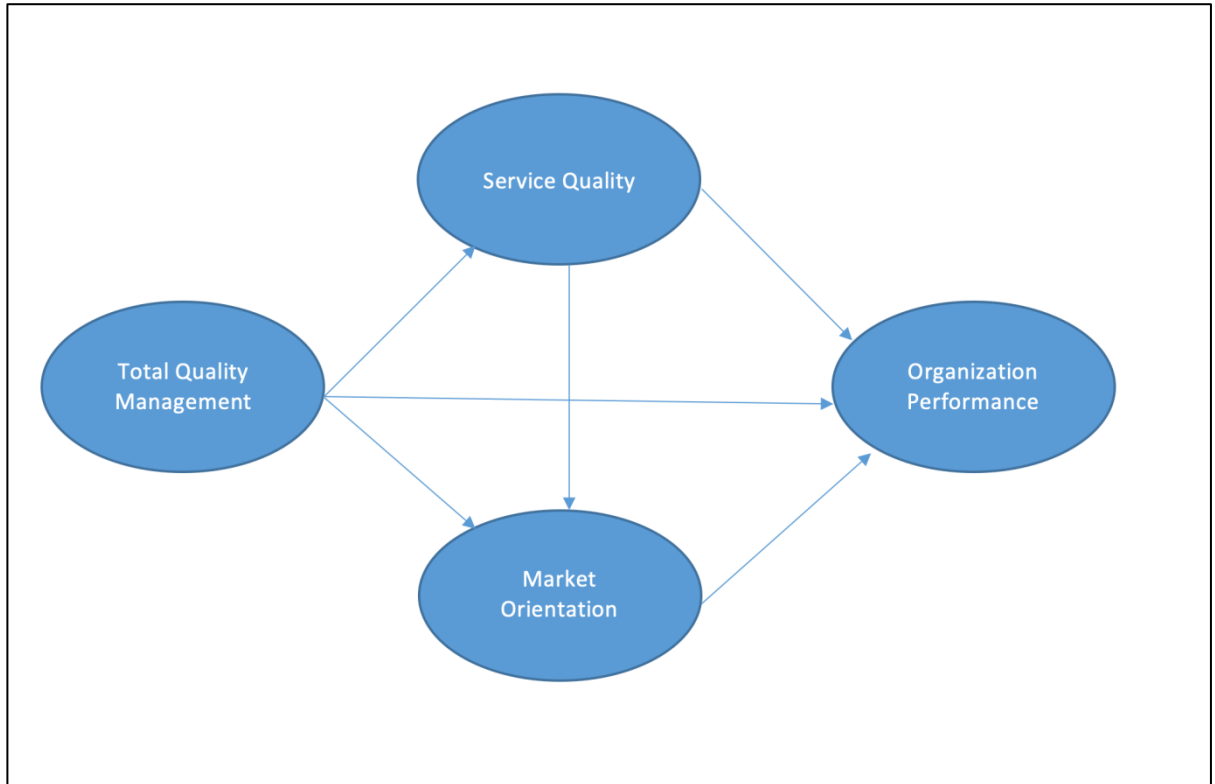


Figure 3.1 Suggested Conceptual Framework

3.3 Operational Definitions

3.3.1 Operational Definition of TQM: As per Sila & Ebrahimpour(2005), “TQM is an approach to managing organizations which emphasizes the continuous improvement of quality and customer satisfaction, entails the application of systematic tools and approaches for managing organizational processes with these ends in mind, and involves the establishment of structures such as quality improvement teams and councils for maintaining focus on these ends”.

3.3.2 Operational definition of MO: “The organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it” has been defined by Kohli & Jaworski (1990).

3.3.3 Perceived quality: Zeithaml(1987) defines perceived quality as, “It is the consumer’s judgment about an entity’s overall excellence or superiority”.

3.3.4 Operational definition of empathy: As per Lee(2017), “The quality aspect of empathy refers to an attitude of the care provider to serve better quality and have similar emotions with patients during care services”.

3.3.5 Tangibility: As per Lee(2017), “The tangible quality aspect refers to the use of the equipment and the physical environment to provide proper care services”.

3.3.6 Safety: As per Lee(2017), “The goal of safety quality aspect is to provide a comfortable and safe environment to patients, potential consumers, and employees”.

3.3.7 Efficiency: As per Lee(2017), “The efficiency quality aspect refers to activities for operational efficiency including supporting activities of the organization, departments, and improvement programs (e.g., education and training, accessibility and offer of information) to provide more convenient service”.

3.3.8 Degree of improvement of care services: As per Lee(2017), “The quality aspect of the degree of improvements in care services refers to a set of activities, such as communication and efforts to achieve effective treatments and to improve the result of care treatment”.

3.3.9 Operational definition of organizational performance: As per Tyagi(2017), “Organization performance is a hospital’s optimal use of inputs to yield maximal outputs, given its available resources”

3.4 Scope of the Study

The scope of this research has been bounded to the state of Punjab. The hospitals which are empaneled with any of the general insurance/ health insurance companies will be considered. The Promoters, directors, chief surgeons, and quality

directors/senior managers who have decision-making power for the quality improvement strategies in the organization, have been taken as respondents.

3.5 Sample Design

First of all, the Insurance Regulatory Development Authority website was seen for the list of non-life/health insurance companies. Then individually all the websites of these companies were seen and a list of hospitals empanelled with all of these insurance companies was made. Since one hospital was empanelled with multiple insurance companies, after removing duplicates, a total of 716 hospitals, located in all the districts of Punjab state were seen which constitute the universe for the study.

Out of those 716 hospitals, using proportionate random sampling, categorizing hospitals into specialty, multi-specialty, and super specialty, 400 hospitals were selected for the study. It was seen that out of 716 hospitals empaneled with any insurance company across Punjab, 517 hospitals were in 6 districts of Amritsar(144), Ludhiana(121), Jalandhar(108), Mohali(53), Patiala(51), Bathinda(40). Since ample representation of hospitals in these 6 districts is there, that is why these 6 districts were chosen for the study. Using proportionate random sampling and categorization into specialty, multi-specialty and super-specialty hospitals a sample of 400 respondents from these 6 districts was chosen for the study.

Managerial personnel having decision-making power in the organization (Promoters, directors, chief surgeons, quality directors/senior managers), have been taken as respondents from each hospital. Out of the sample size of 400, only 353 respondent organizations have been used for the study; whereby sufficient representation has been given to the hospitals of different sizes and belonging to six different cities of Punjab. Out of the remaining respondents, 12 questionnaires were having significant number of missing values which could not be incorporated. Rest 35 questionnaires were left unreturned by the respondents despite several reminders. So, it lead to response ratio of 88% which is sufficient.

3.6 Operationalization of TQM construct

TQM has been operationalized as a second-order multi-dimensional construct with its 10 sub-constructs as shown in Table 3.2. It has been operationalized from the healthcare organization's perspective. The sub-constructs of Total Quality

Management (TQM) have been measured with 36 items for all the sub-constructs on a 5-point scale. The identification of the items of the sub-constructs from the literature has been shown in Table 3.2.

Table 3.2 Items Selected to Measure Total Quality Management (TQM) Scale

Item Code	Statement	Source
	Top management commitment and leadership	
TQM1	“The hospital management is committed to the quality initiative”	Duggirala(2008), Shdaifat(2015), Sabella(2014), Baidoun et. al. (2018), Talib(2012), Xiaong(2017), Zakuan(2010)
TQM2	“The hospital management allocates adequate resources and time for implementation of quality in health care”	
TQM3	“The hospital management emphasizes providing the best-quality and cost-effective medical care”	
TQM4	“The hospital management ensures that medical, nursing, and paramedical staff stick to their commitments to the patients”	
	Human resource management in the hospital	
TQM5	“The hospital selects new staff/personnel with a positive attitude to providing health care”	Duggirala(2008), Shdaifat(2015), Talib(2012), Xiaong(2017), Zakuan(2010)
TQM6	“The hospital ensures that the right person is placed on the right job”	
TQM7	“Job training and development, with an emphasis on health-care quality, is periodically given to doctors, nurses, paramedical and administrative staff”	
TQM8	“The medical, nursing, and paramedical staff are sincere and regular”	
	Process management	
TQM9	“The formal process or system for overall quality management in the hospital is efficient”	Duggirala(2008), Sabella(2014), Baidoun et. al. (2018),
TQM10	“The acceptance of emergency cases is made easy and	

	simple”	Talib(2012), Xiaong(2017)
TQM11	“The waiting time for patients (before being seen by doctors) is kept minimum in the Out-Patient Department”	
TQM12	“The hospital has competent persons with a background in medical science to manage the patient records”	
TQM13	“The daily examination of each indoor patient is done by the attending physician/surgeon”	
TQM14	“The hospital personnel advise the patients upon discharge on the medical care to be taken after leaving the hospital”	
TQM15	“The effectiveness of medical treatment given to patients is assessed regularly for improving the quality of treatment”	
	Hospital facilities	
TQM16	“The hospital has effective layout and adequacy of different facilities (e.g. wards, beds, operation theatres, intensive/post-operative care units, reception lounge, administrative departments, vehicular parking, canteen, toilets, etc.)”	Duggirala(2008)
TQM17	“The hospital has guidance signs, symbols, boards, pamphlets and other artifacts that are appealing and useful to patients in reaching different wards/places inside the premises”	
TQM18	“The hospital has ample amenities (such as continuous electricity and water supply, housekeeping, sanitation facilities, and pharmacy) at comfortable ambient conditions (such as temperature, ventilation, noise, and odour) for patients and their attendants”	
TQM19	“The hospital is prepared for fire and non-fire emergencies”	
	Patient focus	
TQM20	“The quality of health care provided at this hospital is perceived to be good by the patients, in comparison with other competitive hospitals”	Duggirala(2008), Shdaifat(2015), Sabella(2014), Baidoun et. al. (2018),
TQM21	“The hospital management analyses feedback/complaints from patients as a means to initiate	

	continuous improvement in the hospital”	Talib(2012), Xiaong(2017), Zakuan(2010)
TQM22	“The cost of health care provided in the hospital is perceived to be reasonable by the patients, in comparison with other competitive hospitals”	
	Employee focus	
TQM23	“The hospital has a mechanism to measure the satisfaction of all hospital staff with respect to their salary, perks, and other financial incentives to reinforce their job performance”	Duggirala(2008), Shdaifat(2015), Sabella(2014), Baidoun et. al. (2018), Talib(2012), Xiaong(2017),
TQM24	“The hospital management gives regular and systematic feedback to all hospital staff, including doctors, regarding their performance on the job”	
TQM25	“The hospital possesses adequate staff personnel and maintains adequate staff-patient ratio”	
TQM26	“The hospital has organogram & staff orientation towards the same”	
	Hospital information system	
TQM27	“The hospital has an effective and functioning Hospital Information System, in terms of user-friendly data feeding process, analysis of data and good report generation”	Duggirala(2008), Sabella(2014), Baidoun et. al. (2018), Talib(2012), Xiaong(2017), Zakuan(2010)
TQM28	“The hospital ensures systematic feedback is given to doctors, nurses, and hospital staff about quality improvement processes and their outcomes”	
TQM29	“The hospital Patient Information System is operational and efficient, in terms of having relevant patient records over years”	
	Service culture	
TQM30	“The hospital management exhibits overall health care and concern in respect of its patients”	Duggirala(2008), Talib(2012),
TQM31	“The hospital management exhibits overall health care and concern in respect of its hospital staff”	
	Continuous improvement	

TQM32	“The hospital lays emphasis on continuously improving hospital facilities such as operation theatres, laboratories, equipment, and wards”	Duggirala(2008), Shdaifat(2015), Talib(2012),
TQM33	“The hospital assesses continuous health-care quality improvement strategies on the basis of factors such as cost of health care, time and overall hospital performance”	
	Benchmarking	
TQM34	“The hospital lays emphasis on benchmarking the processes related to patients (in terms of admission, stay, and discharge) with those of other competitor hospitals”	Duggirala(2008), Shdaifat(2015), Sabella(2014), Baidoun et. al. (2018)
TQM35	“The hospital lays emphasis on benchmarking the administrative processes (related to doctors, nurses, and paramedical staff) of the hospital with respect to those of other competitor hospitals”	
TQM36	“The hospital lays emphasis on benchmarking the level of patient medical care and treatment with those of other competitor hospitals”	

3.7 Operationalization of Service Quality (SQ) construct

Service Quality (SQ) has been operationalized as a second-order multi-dimensional construct with empathy quality aspects (EQ), tangible quality aspects (TQ), safety quality aspects (SQ), efficiency quality aspects(EQ), and degree of improvement of care services(DCS) as its sub-constructs. It has been operationalized from the healthcare organization's perspective. The sub-constructs of Service Quality (SQ) have been measured with 29 items for all the sub-constructs on a 5-point scale. The identification of the items of the sub-constructs from the literature has been shown in Table 3.3.

Table 3.3 Items Selected to Measure Service Quality (SQ) Scale

Item Code	Statement	Source
	Empathy quality aspects	Lee(2017)
SQ1	The employees of the hospital have polite attitude.	
SQ2	The employees are willing to explaining the details.	
SQ3	The employees listen to the patient.	
SQ4	The employees understand and consider the patient's situation	
SQ5	The employees possess a sense of closeness and friendliness	
SQ6	Hospital employees know what the patient wants	
SQ7	Hospital understands the patient's problems as empathy	
	Tangible quality aspects	
SQ8	The hospital is keen in securing advanced medical equipment	
SQ9	The hospital hires medical staff with advanced skills and knowledge	
SQ10	The hospital has convenient facilities	
SQ11	There is adequate cleanliness of employee uniforms	
SQ12	The hospital is overall clean.	
	Safety quality aspects	
SQ13	The hospital exhibits a comfortable environment for receiving treatments.	
SQ14	The hospital management puts in efforts for providing a comfortable and safe environment for patients.	

SQ15	The hospital has an environment that is safe from infection.	
SQ16	The hospital feels that doctors would not make misdiagnoses	
SQ17	The hospital feels that nurses would not make mistakes	
SQ18	The hospital is confident about the medical proficiency.	
	Efficiency quality aspects	
SQ19	The doctors have an attitude about not using unnecessary medication.	
SQ20	The doctors put in efforts for proving appropriate treatment methods.	
SQ21	The hospital has reasonable medical expenses.	
SQ22	The hospital has appropriate cost for medical services in comparison to competition.	
SQ23	The patient feels convenient to take treatment procedure in the hospital.	
SQ24	The hospital puts in efforts for reducing unnecessary procedures	
	Quality aspects in the degree of improvements of care services	
SQ25	The care service provided by the hospital are appropriate.	
SQ26	Recognition and efforts for the best treatment by the medical staff.	
SQ27	There is an improvement in medical condition as a result of efforts and treatment by the medical staff.	
SQ28	Doctors explain to the patient how to prevent related diseases	
SQ29	The hospital puts in efforts and is willing to prevent	

	disease.	
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3.8 Operationalization of Market Orientation (MO) construct

Market Orientation (MO) has been operationalized as a second-order multi-dimensional construct with its 7 sub-constructs as depicted in Table 3.4. It has been operationalized from the healthcare organization's perspective. The sub-constructs of Market Orientation (MO) have been measured with 33 items for all the sub-constructs on a 5-point scale. The identification of items of the sub-constructs from the literature has been shown in Table 3.4.

Table 3.4 Items Selected to Measure Market Orientation (MO) Scale

Item Code	Statement	Source
	Intelligence Generation	
MO1	“The hospital personnel meet with customers (i.e., physicians, businesses, insurance companies, and patients) at least once a year to find out what products or services they will need in the future”	
MO2	“Individuals from the hospital's operations department interact directly with customers to learn how to serve them better”	
MO3	“The hospital does a lot of in-house research”	
MO4	“The hospital survey customers at least once a year to assess the quality of services provided”	
MO5	“The hospital often talks with or survey those who can influence our patients, choices (e.g., physicians, health maintenance organizations)”	
MO6	“The hospital collects industry information through informal means (e.g. lunch with industry friends)”	
	Customer Satisfaction	
MO7	“The hospital entails dissemination of data on	

	customer satisfaction at all levels on a regular basis”	Raju(1995), Raju(2000), Raju(2001), Raju(2002), Desphande(1998), Kumar(1998), Wood(2000)
MO8	“Customer complaints fall on deaf ears in the hospital”	
MO9	“When the hospital management finds out that customers are unhappy with the quality of service, they take corrective action immediately”	
MO10	The hospital believes that business exists primarily to serve customers	
	Responsiveness to customers	
MO11	The hospital management is slow to detect changes in the customers’ product/service preferences	
MO12	“The hospital management is slow to detect fundamental shifts in healthcare industry (e.g., competition, technology, regulation)”	
MO13	“There is minimal communication between marketing and operations concerning market developments”	
MO14	“The hospital business plans are driven more by technological advances than by market research”	
	Responsiveness to competition	
MO15	“If a major competitor were to launch an intensive campaign targeted at the hospital customers, the hospital management would implement a response immediately”	
MO16	“The hospital management is quick to respond to significant changes in competitors’ pricing structures”	
MO17	“The patients hospital serves have numerous alternative health-care organizations that provide similar services”	
MO18	“The hospital faces intense competition for patients”	
MO19	“The competition for patients in the hospital’s market area is growing”	

	Inter-functional co-ordination	
MO20	“Various service units work close together to meet patients’ needs”	
MO21	“Various service units share business information with each other”	
MO22	“Business strategies are integrated between different service units”	
MO23	“All service units work together in offering value to the patients”	
MO24	“Different service units share resources with each other”	
	Long Term Focus	
MO25	The hospital adopts long term focus in matter of profits	
MO26	“The hospital aims for positive profit margin in the long run”	
MO27	The hospital discovers and implements new value for patients	
MO28	“The hospital tries to overcome any deficiencies in services”	
	Profit emphasis	
MO29	“Profit/performance is measured for each department”	
MO30	“The hospital requires rapid payback of new services/facilities”	
MO31	“Top managers emphasize improved performance relative to competitors”	
MO32	“All departments are required to be profitable”	

MO33	“Emphasis on earning revenues is sufficient to cover expenses”	
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3.9 Operationalization of Organization Performance (OP) construct

Organization Performance (OP) has been operationalized as a second-order multi-dimensional construct with its two sub-constructs as depicted in below Table 3.5. It has been operationalized from the healthcare organization's perspective. The sub-constructs of Organization Performance (OP) have been measured with 19 items for the two sub-constructs on a 5-point scale. The identification of items of the sub-constructs from the literature has been shown in Table 3.5.

Table 3.5 Items Selected to Measure Organization Performance (OP) Scale

Item Code	Statement	Source
	Objective Organization Performance	Sajadi(2017), Mahapatra(1994), Adhikari(2015)
OP1	Bed Occupancy Rate	
OP2	Average length of stay	
OP3	Bed turnover ratio	
OP4	Occupied bed- days	
OP5	Inpatient(IPD) visits	
OP6	Outpatient(OPD) visits	
OP7	Emergency visits	
OP8	Hospital mortality rate	
OP9	Number of surgeries	
	Subjective Organization Performance	
OP10	“Patients are satisfied with our healthcare services”	
OP11	“Our hospital is able to meet its financial	

	obligations”	
OP12	“Our system of remuneration and benefits is satisfactory”	
OP13	“In general the staff is satisfied with their respective department”	
OP14	“Our healthcare services are expanding”	
OP15	“Overall service quality is improving steadily”	
OP16	“Our profitability is rising steadily”	
OP17	“Patient evaluations of our performance have been improving”	
OP18	“In our hospital, the number of doctors is sufficient”	
OP19	“In our hospital, the number of nurses is sufficient”	
OP20	“In our hospital, the number of technicians is sufficient”	
OP21	“In our hospital, the number of administrative employees is sufficient”	
OP22	“In our hospital, the number care-takers(nurses, paramedic staff etc.) is sufficient”	

3.10 Content Validity

The evaluation done by the subject matter experts, researchers, and academicians to verify the contents of any documents based on its clarity in putting up the desired contents to the reader, the relevance of the contents, avoidance of duplication in asking multiple questions, and ultimately adjustments, as suggested by the experts, is content validation. Kimberlin and Winterstein (2008) have defined the concept of content validity as the appropriateness of items to operationalize the construct so that the items represent the correct measurement that it is intended to measure. Because of the absence of any stringent tools/tests to measure the adequacy of the questionnaire to cover the content area, content validity by the experts in that field becomes critical. The extent to which a scale contains the important aspects to measure a given

construct is referred to as content validity (Magasi et. al., 2012).

To go for content validity, an expert panel is referred to verify the constructs under the study. This panel of experts has been provided with the questionnaire and asked whether to remove, add, delete, or modify items. Their responses are evaluated and analyzed to decide between maximizing the efficiency of each item. While assessing the standardized scale content validity which has been adapted in the study, there are two objectives: finding out the relevance of the scale to the participants, and addressing if any additional areas according to the study's context are covered in the scale (Brod et.al. 2009)

All our 4 scales have been adapted from the previously existing scales, the references of which have been given above in the tables of all the scales. The items which were incorporated in the constructs were put forward to experts for content validation. Based on their responses, items were slightly modified in language to better represent the respondent.

3.11 Pilot Testing

A pilot survey was conducted in 50 hospitals in Punjab where self-administered questionnaires were given to quality managers, owners of the hospital, or the chief doctors involved there. As per the pilot survey, no major issue was reported in the understanding of the items of the questionnaire, delay in answering the questions, or inability to answer the questions. Further, in the pilot survey, the quality managers were inquisitive to know about the results of the study where TQM is affecting their performance.

3.12 Data Analysis

The data which had been collected from the respondents were put into Statistical Package for Social Sciences. Data cleaning has been performed, and the removal of outliers has been done. Evaluation of the descriptive statistics to understand the nature of data was exhibited (mean, standard deviation, skewness, and kurtosis).

In the study, various multi-variate data analysis tools have been applied, e.g. EFA has been used to explore the dimensions of the constructs viz. TQM, MO, SQ, and OP.

After EFA, CFA has been used. The application of CFA ensures the criteria for convergent, discriminant validity, and composite reliability of all the constructs. Finally, fitness indices have been used to validate the constructs.

The measurement model and structural model approach has been used to test the conceptual model. The mediation of MO between SQ and OP as well as MO and SQ between TQM and OP was tested using mediation analysis with bootstrapping. For analysis, Excel, SPSS, and AMOS 26 have been used.

3.13 Limitations of the Study

Because of the following limitations, the findings of the present study cannot be generalized:

1. The study has had a multi-stage purposive sampling rather than a random sample where hospitals were categorized into multi-specialty, super-specialty, and specialty for data collection in a proportion to their existence. So, the results of the study may pose a difference in the case of a random sample.
2. Cross-sectional data is the forte of this study. It means that data has been taken at a particular point in time. Therefore, the results depicted do not reveal the relationships of the constructs over a period of time. In case longitudinal data is used, results may differ.
3. Findings of the study are based on heterogeneity in hospitals like specialty, multi-specialty, and super-specialty. Likewise, only private hospitals which are empaneled with any insurance company have been taken into account. Results may differ if public hospitals or non-empaneled hospitals are taken into account.
4. The study has been restricted to the hospitals of Punjab. Because of this geographical limitation, results may vary across another geography.
5. The data provided on the organization's performance is subjective wherein the quality manager's perception has been evaluated. The healthcare organization's performance in the previous years and the perception of the quality manager have been noted. However, in absence of actual financial data, the results may vary if actual books of accounts are taken into consideration.

6. In the calculation of service quality, the perception of hospital owners has been taken which could result in the business of the owner towards his hospital. In future research, responses from the patients can also be incorporated.

CHAPTER 4

EXISTING TQM PRACTICES

Part A of the questionnaire contains items pertaining to achievement of objective 1 of the study. There are 8 questions whose responses have been analyzed using the percentages as depicted in the tables below.

4.1 Is your hospital accredited or ISO certified? If no, is there any plan to get it accredited or certified?

NABH Pre-accredited	NABH Fully Accredited	Non- NABH
72	33	248

Most of the hospitals which were non-accredited were either awaiting inspection from the Quality Council of India or they had applied for the NABH Safe-I pre-accreditation level. Sooner or later the healthcare industry has to realize the importance of quality inspection, quality control, accreditation. All the stakeholders are benefited from accreditation. Patients or healthcare receivers are the biggest beneficiaries. The major benefit of NABH accreditation is the high quality of care given to the patient, safety of the patient and ultimately patient satisfaction from the treatment.

Further, the accreditation also provides that the hospital employs credential medical staff which are of sufficient caliber. Patient's rights are given due importance. The evaluation of patients satisfaction from the hospital services is done regularly and maintained in a logbook.

The concept of continuous improvement is highlighted upon accreditation. The hospital enables itself in showing commitment to enhance quality of the care provided to patients. Furthermore, accreditation also raises the bar for community confidence in the services rendered by the healthcare facility. Upon increase of patient's confidence, foot fall increases and ultimately performance of the hospital also enhances. Accreditation also gives opportunity to the hospital to align its processes with the leading institutions in the same industry thereby leading to increased efficiency.

The accreditation also provides an opportunity to the staff members for continuous learning, ultimately increase in their skills, their growth and leading to their

satisfaction. A serene working environment, plausible culture, friendly leadership are all which are aiding in staff satisfaction. The staff themselves feel that they are process owners and it is their duty to perform well. It all enhances their professional development and provides quality improvement.

Above all, accreditation of a healthcare facility provides an increased chance for empanelment by insurance providers and third party administrators(TPAs). These all aid in increase in hospital performance, both objectively and subjectively.

4.2 How do you define quality in terms of healthcare perspective?

Statements	Reponses	Percentage
High standards of patient care	234	66
High employee morale	131	37
Delivering high standards of care throughout the organization	197	56
Promptness of service	161	46
Cleanliness of the hospital	211	60
Employee tidiness	81	23
Transparency in operations	178	50
Lower time lags in treatments	165	47
Availability of other specialties	31	9

Upon analysis of the responses, it has been found that high standards of patient care(66%), cleanliness of the hospital(60%) and delivering high standards of care throughout the organization(56%) are the main healthcare perspectives of quality as per the quality managers across the healthcare industry. Further, transparency in operations (50%) is also necessary for maintaining healthcare quality.

4.3 Does the hospital maintain the following data for measuring efficiency and effectiveness?

Statements	Reponses	Percentage
Length of stay of inpatient	171	48
Bed occupancy rate	261	74
Cost per patient	248	70
Cost per bed	197	56
Lock up of capital in drug store	123	35
Such data are not maintained properly	12	3

Upon analysis of the responses, it was observed that Bed Occupancy rate was maintained by 74% of the hospitals. It might be the conditional requirement for maintaining occupancy rate in order to get hospital empaneled with insurance companies. Moreover, it is the basic calculation for the profitability the healthcare organization is making. Apart from that, cost per patient is also majorly calculated by 70% of the hospitals. Further cost per bed to the hospital(56%) and length of stay of the IPD patient in the hospital(48%) is also important to be maintained by the hospital. It is evident that if more than 50% of the respondents are maintaining some data, it means that it is crucial for calculating the profitability of the healthcare organization. These are the major parameters to measure the efficiency and effectiveness of the hospitals.

4.4 What quality management approaches are practiced in your hospital?

Statements	Reponses	Percentage
Total Quality Management	153	43
ISO 9000 series	96	27
Process re-engineering	52	15
Standard setting	241	68

Audit approach	196	56
Inspection	181	51

Analysis of the responses reveals that majorly hospitals are interested in setting the standards for the hospital(68%). This process of standard setting is called the Standard Operating Procedure(SOP) for all the departments in the hospital. These are the written guidelines which need to be followed department wise in order to function properly and in accordance with guidelines provided from Quality Council of India or NABH. Further, these guidelines or SOPs also help in audit process to check whether the departments are functioning according to their SOPs or not. Apart from setting the standards, audit approach(56%) is being followed by majority of the hospitals. Audit approach refers to the inclination of the hospitals to get the audits of the departments conducted in order to find the loopholes of revenue leakage or any kind of risks associated with the department, to find the risk mitigation strategies, etc. Finally, inspection(51%) also plays a major role as a part of quality management approaches in the healthcare organization.

4.5 Who is responsible to take up quality management practices in your hospital?

Statements	Reponses	Percentage
Managing Director	181	51
Quality manager	201	57
Quality facilitator	165	47
Quality coordinator	146	41
All employees	102	29

Analysis of the responses to the question posed to the audience to find out the person in-charge of the quality practices in the healthcare organization revealed mixed responses. Majority of the responses revealed that either Quality Manager(57%), or Managing Director(51%) i.e owner/chief of the small hospital or MD of the corporate hospital play a vital role to implement TQM practices in the organization.

4.6 What are the methods adopted to implement quality?

Statements	Reponses	Percentage
Customer satisfaction survey	154	44
Quality improvement projects	221	63
Mission statement	123	35
Standard setting	208	59
Management training	189	54
Leadership training	121	34
Team building	156	44
Service Quality training	198	56
Clinical audit	232	66

As per the responses received from the respondents, clinical audit(66%) have been done to firstly find out the flaws or shortcomings in the existing quality practices, provide measures to improve them and do away with the shortcomings. Further, the respondents also adopted quality improvement projects(63%) in which a continuous effort is made to enhance quality. Apart from that standard setting(59%), management training(54%) and service quality training(56%) also play a vital role in implementation of quality practices in healthcare organization.

4.7 Which of the following practices are followed in implementing quality management practices?

Statements	Reponses	Percentage
Orientation provided to employees during induction about the quality management implementation.	156	44
Designed and disseminated SOP's(Standard Operating Policy) & WI(Work Instructions) for all departments in the hospital.	201	57
Organogram and hierarchy of the	121	34

organization is defined and disseminated across the levels of organization.		
Employee engagement activities are conducted to improve belongingness	179	51
Technology is updated to serve the patients effectively	126	36
Use various performance indicators to evaluate the efficiency of operations	184	52
Set up for fire and non-fire emergencies to manage fire disasters.	90	25
Follow the MCI guidelines to maintain bio-medical wastage.	102	29
Infection control mechanisms are in place as per MCI guidelines.	134	38
Hospital info. system is being used to bring transparency in operations	187	53
Displayed/disseminated performance indicators to all staff for sustaining efficiency.	191	54

In order to implement quality management practices in the healthcare organization, formulation of the SOP(Standard Operating Procedures) and the WI(Work Instructions) in all the departments(57%) is the most crucial step. Apart from that, various performance indicators are used to evaluate the efficiency of the departments(52%), correct usage and implementation of Hospital Information System(53%) is important, dissemination of performance indicators to the staff(54%) is of equal importance. Furthermore, conducting of employee engagement activities to increase belongingness(51%) is also crucial. These above are the activities which are undertaken by more than 50% of the hospitals in order to implement Quality Management Practices.

4.8 What could be the possible difficulties faced in the implementation of TQM?

Statements	Reponses	Percentage
Organizational/employee/management resistance to change	181	51
Lack of financial resources	198	56
Lack of human resources	138	39
Barriers between departments	151	43
Measurement of quality difficult	131	37
Services demand very high	124	35
Quality not seen as an issue by the staff	145	41
Lack of top management commitment	202	57
Lack of enthusiasm among employees	189	54
No difficulty in implementation	98	28

Upon analysing the responses probing the possible difficulties in implementation of Total Quality Management(TQM), it was seen that Lack of Top Management Commitment(57%) was the most important factor because of which TQM could not be implemented. Further, lack of employee enthusiasm(54%), and lack of financial resources(56%) were other factors that resulted in difficulty for incorporating TQM.

CHAPTER 5

MEASUREMENT AND VALIDATION

This chapter entails the development and validation of the four constructs examined in the present research. Section 5.1 explains the data statistics. Further, section 5.2 deals with the concept of reliability of all the constructs used in the study. Section 5.3 does the discussion on validation of all the four constructs. Section 5.4 presents the validation of Total Quality Management (TQM) construct. Section 5.5 deals with the validation of MO construct. Section 5.6 deals with the validation of SQ construct. Section 5.7 discusses the Organizational Performance (OP) scale.

The first and foremost step in order to perform the measurement testing is to apply Confirmatory Factor Analysis(CFA) on all the four constructs TQM, MO, SQ and Organizational Performance (OP) using software AMOS 20. The model fit indices were assessed. If the appropriateness of these fit indices for validating the model is not in the favorable condition, then items with low SRW and high MI are deleted (Anderson and Gerbing, 1988). After deleting the items, the indices become favorable and the model becomes fit. In case the validated. The measurement model is validated when the covariance arrows are drawn between the constructs whose items show a significant correlation among each other.

5.1 Descriptive Statistics

These statistics describe the basic features like mean, standard deviation, skewness and kurtosis. These statistics study the data of all the variables or constructs which has been collected on a 5-point scale. They indicate the summary of the responses to the items. Tables 5.1(a) to 5.1(d) represent the construct wise descriptive statistics.

Table 5.1(a) Descriptive Statistics for Total Quality Management (TQM)

Construct	Item Code	Number	Mean	Std. Deviation	Skewness	Kurtosis

Total Quality management (TQM)	TQM1	316	3.92	0.51	-0.01	-0.18
	TQM2	316	3.51	0.50	0.14	-0.13
	TQM3	316	3.91	0.39	0.19	0.16
	TQM4	316	3.21	0.47	0.22	0.14
	TQM5	316	3.88	0.52	-0.01	0.16
	TQM6	316	3.93	0.63	0.03	-0.11
	TQM7	316	4.12	0.31	0.13	2.18
	TQM8	316	3.11	0.51	0.17	0.19
	TQM9	316	3.23	0.63	0.11	-0.11
	TQM10	316	4.17	0.35	0.13	0.73
	TQM11	316	3.22	0.46	0.14	-0.01
	TQM12	316	4.23	0.48	0.08	0.03
	TQM13	316	4.67	0.32	0.18	0.84
	TQM14	316	3.42	0.31	0.11	0.17
	TQM15	316	3.22	0.41	-0.04	0.11
	TQM16	316	3.21	0.43	0.12	0.31
	TQM17	316	4.78	0.48	0.19	0.14
	TQM18	316	3.67	0.31	-0.08	0.08
	TQM19	316	3.45	0.49	0.09	0.18
	TQM20	316	4.34	0.51	0.06	0.11
	TQM21	316	3.56	0.63	-0.09	-0.04

	TQM22	316	3.34	0.39	0.15	-0.18
	TQM23	316	4.55	0.41	0.08	0.76
	TQM24	316	3.88	0.33	0.16	0.14
	TQM25	316	3.67	0.35	-0.18	0.26
	TQM26	316	3.45	0.41	0.16	-0.11
	TQM27	316	4.32	0.39	0.14	0.28
	TQM28	316	3.68	0.29	0.16	0.19
	TQM29	316	3.13	0.33	-0.11	-0.21
	TQM30	316	4.44	0.55	0.18	0.13
	TQM31	316	3.28	0.67	0.19	0.06
	TQM32	316	3.19	0.54	-0.11	0.12
	TQM33	316	3.21	0.34	0.13	0.19

Table 5.1(b) Descriptive Statistics for Market Orientation (MO)

Construct	Item Code	Number	Mean	Std. Deviation	Skewness	Kurtosis
Market Orientation (MO)	MO1	316	4.82	0.59	0.11	-0.18
	MO2	316	3.71	0.51	-0.13	-0.13
	MO3	316	3.62	0.29	0.16	0.16
	MO4	316	4.31	0.49	0.21	0.14
	MO5	316	4.78	0.51	-0.12	0.16

	MO6	316	3.63	0.63	0.13	-0.11
	MO7	316	3.52	0.39	0.03	2.18
	MO8	316	4.41	0.41	0.16	0.19
	MO9	316	3.13	0.33	0.13	-0.11
	MO10	316	3.27	0.35	0.23	0.73
	MO11	316	4.12	0.41	0.34	-0.01
	MO12	316	3.33	0.39	0.06	0.03
	MO13	316	3.47	0.32	-0.21	0.84
	MO14	316	3.22	0.31	0.13	0.17
	MO15	316	3.12	0.41	0.03	0.11
	MO16	316	3.11	0.43	0.11	0.31
	MO17	316	3.12	0.48	-0.18	0.14
	MO18	316	3.17	0.31	0.07	0.08
	MO19	316	4.15	0.51	0.03	0.18
	MO20	316	3.24	0.50	0.15	0.11
	MO21	316	3.86	0.39	-0.08	-0.04
	MO22	316	4.34	0.47	-0.15	-0.18
	MO23	316	3.85	0.52	0.18	0.76
	MO24	316	3.98	0.63	0.15	0.14
	MO25	316	4.37	0.31	0.17	0.26
	MO26	316	4.15	0.51	0.15	-0.11

	MO27	316	3.12	0.44	0.12	0.28
	MO28	316	4.98	0.32	0.13	0.19

Table 5.1(c) Descriptive Statistics for Service Quality (SQ)

Construct	Item Code	Number	Mean	Std. Deviation	Skewness	Kurtosis
Service Quality (SQ)	SQ1	316	4.76	0.39	-0.08	-0.03
	SQ2	316	3.14	0.47	-0.15	0.19
	SQ3	316	4.15	0.52	0.18	0.67
	SQ4	316	4.18	0.63	0.15	0.24
	SQ5	316	3.31	0.31	0.17	0.16
	SQ6	316	3.16	0.51	0.15	-0.13
	SQ7	316	4.11	0.44	0.12	0.26
	SQ8	316	3.89	0.32	0.13	0.18
	SQ9	316	4.81	0.39	-0.08	-0.14
	SQ10	316	3.31	0.47	-0.15	0.08
	SQ11	316	4.81	0.52	0.18	0.71
	SQ12	316	4.81	0.63	0.15	0.12
	SQ13	316	4.37	0.31	0.17	0.18
	SQ14	316	3.25	0.51	0.15	-0.21
	SQ15	316	4.14	0.44	0.12	0.18

	SQ16	316	3.81	0.32	-0.13	0.12
	SQ17	316	4.16	0.39	0.08	-0.14
	SQ18	316	3.14	0.47	0.15	-0.29
	SQ19	316	4.75	0.52	-0.18	0.15
	SQ20	316	3.87	0.63	0.13	0.13
	SQ21	316	3.47	0.31	0.15	0.14
	SQ22	316	3.15	0.51	0.16	-0.21
	SQ23	316	4.12	0.44	0.18	0.29
	SQ24	316	3.98	0.32	0.11	0.13
	SQ25	316	4.16	0.31	0.16	0.21
	SQ26	316	3.87	0.61	0.18	-0.24
	SQ27	316	4.14	0.41	0.29	-0.19
	SQ28	316	3.89	0.34	0.35	0.25
	SQ29	316	3.67	0.52	0.32	0.31

Table 5.1(d) Descriptive Statistics for Organization Performance (OP)

Construct	Item Code	Number	Mean	Std. Deviation	Skewness	Kurtosis
Organization Performance (OP)	OP1	316	4.71	0.31	0.19	0.15
	OP2	316	3.18	0.32	-0.07	-0.13
	OP3	316	3.13	0.43	-0.13	0.09

	OP4	316	3.17	0.41	0.17	0.31
	OP5	316	3.19	0.61	0.16	0.11
	OP6	316	3.26	0.23	0.18	0.17
	OP7	316	3.22	0.45	0.14	-0.12
	OP8	316	3.32	0.53	0.11	0.19
	OP9	316	4.56	0.31	-0.12	0.14
	OP10	316	3.43	0.32	0.09	-0.24
	OP11	316	3.21	0.43	0.14	-0.19
	OP12	316	4.33	0.51	-0.17	0.16
	OP13	316	3.45	0.56	0.12	0.14
	OP14	316	4.56	0.54	0.14	0.13
	OP15	316	4.43	0.31	0.13	-0.11
	OP16	316	3.32	0.31	0.14	0.27
	OP17	316	4.23	0.45	0.12	0.15
	OP18	316	3.22	0.42	0.18	0.27

All the 4 constructs have been measured on a 5-point Scale. The mean given in the above tables represents basically the average of the responses. The standard deviation represents the degree of variation of the responses i.e. how varying are the responses are from the mean of the data. Skewness depicts the data symmetry i.e the data is skewed towards the right or left of the mean whereas kurtosis means the peaked-ness of responses. The values of skewness and kurtosis have found to be in acceptable limits showing the symmetry of the data for analysis. The values of standard deviation were lying between 0.33 to 1.34.

5.2 Reliability

Upon dispensing the same set of questions to same respondents, the responses obtained are same as shown by the reliability results is termed as reliability. In other words, the consistency of repeated measurements of the same constructs with the same method. Upon continuous independent testings, if there is no significant deviation in the scores obtained by the researcher, the items are reliable. According to Nargundkar (2008), “reliability is the attribute in purview of which consistent results are achieved upon repetition of the measurement. A questionnaire administered to similar population and also produces similar results can be termed as reliable”.

Composite reliability, internal consistency reliability and item reliability are the measures used to study the reliability. Composite reliability and Cronbach’s alpha coefficient calculation of all the sub-constructs have been shown below. Cronbach’s alpha value of >0.7 shows moderate to high level of internal consistency. Further, composite reliability >0.7 indicates measure of high reliability values. In case the researcher wants to improve the reliability of the scale/construct, the items where inter-item correlation is less than 0.7 can be omitted. Item omission by the way of inter-item correlation is the best approach to improve the reliability statistics of the construct.

As there is an enhancement in the reliability, the relationship between construct and measured variable increases. This increase in the reliability indicates the construct explaining more variance in actual variable which it is intending to measure (Hair et al., 2010). Refer to Table 5.2 for reliability statistics.

Table 5.2 Statements of 4 scales and their reliability statistics

Construct	Code of the Item	Item with its Total Correlation	If Item deleted, value of Alpha	Construct Alpha
	TQM1	0.706	0.902	

Total Quality Management (TQM)	TQM2	0.657	0.901	0.912
	TQM3	0.767	0.907	
	TQM4	0.654	0.906	
	TQM5	0.676	0.904	
	TQM6	0.657	0.901	
	TQM7	0.765	0.907	
	TQM8	0.789	0.901	
	TQM9	0.761	0.903	
	TQM10	0.651	0.901	
	TQM11	0.631	0.902	
	TQM12	0.634	0.901	
	TQM13	0.743	0.900	
	TQM14	0.698	0.905	
	TQM15	0.734	0.904	
	TQM16	0.689	0.903	
	TQM17	0.745	0.906	
	TQM18	0.721	0.901	
	TQM20	0.621	0.902	
	TQM21	0.681	0.901	
	TQM22	0.743	0.903	
	TQM23	0.798	0.900	

	TQM24	0.729	0.901	
	TQM27	0.719	0.906	
	TQM28	0.628	0.904	
	TQM29	0.626	0.901	
	TQM30	0.723	0.906	
	TQM31	0.734	0.901	
	TQM32	0.632	0.903	
	TQM33	0.791	0.900	
	TQM34	0.619	0.901	
	TQM35	0.721	0.901	
	TQM36	0.643	0.900	
	MO1	0.718	0.901	
	MO2	0.654	0.903	
	MO4	0.759	0.902	
	MO5	0.655	0.905	
	MO6	0.431	0.901	
	MO7	0.621	0.902	
	MO8	0.771	0.901	
	MO9	0.643	0.901	
	MO11	0.688	0.901	
	MO13	0.619	0.900	

Market Orientation (MO)	MO15	0.699	0.905	0.917
	MO16	0.713	0.903	
	MO17	0.613	0.902	
	MO18	0.719	0.905	
	MO19	0.618	0.904	
	MO20	0.767	0.901	
	MO21	0.729	0.903	
	MO23	0.613	0.902	
	MO24	0.628	0.903	
	MO25	0.713	0.905	
	MO26	0.718	0.900	
	MO27	0.727	0.900	
	MO28	0.789	0.902	
	MO29	0.712	0.901	
	MO30	0.718	0.902	
	MO31	0.674	0.901	
	MO32	0.769	0.903	
	MO33	0.785	0.902	
	SQ1	0.671	0.901	
	SQ2	0.721	0.902	
	SQ3	0.791	0.905	

Service Quality(SQ)	SQ4	0.733	0.801	0.901
	SQ5	0.678	0.900	
	SQ6	0.659	0.905	
	SQ7	0.679	0.800	
	SQ8	0.673	0.902	
	SQ9	0.718	0.901	
	SQ10	0.654	0.800	
	SQ11	0.789	0.900	
	SQ12	0.675	0.901	
	SQ13	0.651	0.801	
	SQ14	0.761	0.902	
	SQ15	0.781	0.900	
	SQ16	0.613	0.802	
	SQ17	0.628	0.901	
	SQ18	0.639	0.901	
	SQ19	0.679	0.902	
	SQ20	0.713	0.901	
	SQ21	0.688	0.901	
	SQ22	0.654	0.901	
	SQ23	0.789	0.907	
	SQ24	0.675	0.902	

	SQ25	0.761	0.903	
	SQ26	0.611	0.907	
	SQ27	0.661	0.909	
	SQ28	0.712	0.901	
	SQ29	0.668	0.902	
Organization Performance (OP)	OP1	0.679	0.801	0.818
	OP3	0.639	0.801	
	OP5	0.643	0.813	
	OP6	0.618	0.801	
	OP7	0.644	0.805	
	OP9	0.639	0.801	
	OP10	0.655	0.902	
	OP11	0.611	0.813	
	OP12	0.711	0.805	
	OP13	0.721	0.809	
	OP14	0.739	0.808	
	OP15	0.712	0.800	
	OP16	0.722	0.801	
	OP17	0.723	0.802	
	OP18	0.612	0.803	
	OP19	0.789	0.805	

	OP20	0.672	0.807	
	OP21	0.681	0.803	
	OP22	0.682	0.901	

Cronbach's Alpha appears to be above 0.7 as depicted in the above data. This affirms the reliability of the 4 constructs. Alpha of the TQM scale earlier was 0.882. So, the items TQM19 (The hospital is prepared for fire and non-fire emergencies), TQM25 (The hospital possesses adequate staff personnel and maintains adequate staff-patient ratio), TQM26 (Availability of organogram & staff-orientation towards the same is adequate) that had lower values of correlation were deleted, which, in turn, increased the reliability of TQM scale to 0.912.

Alpha value of the MO scale earlier had been 0.891. However the items MO3 ("The hospital does a lot of in-house research"), MO10 ("The hospital believes that business exists primarily to serve customers"), MO12 ("The hospital management is slow to detect changes in customer's product/service preferences"), MO14("The hospital business plans are driven more by technological advances than by market research") and MO22("Business strategies are integrated between different service units") that had lower values of correlation were deleted, which, in turn, increased the reliability of MO scale to 0.917.

The reliability of SQ scale was found to be 0.901 so there was no need for item removal. Organization performance was having a reliability of 0.785 which was increased by removing items OP2(Average length of stay), OP4(Occupied bed days), OP8(Hospital mortality rate). After removal of these 3 items, the value of Cronbach's Alpha increased to 0.818 which is above the threshold limit. Thus, all the 4 scales were reliable.

5.3 Validity

All the 4 constructs have been validated using EFA and CFA by the scale development procedure Churchill(1979).

In order to develop a scale, the definition of the construct is given according to which the construct is conceptualised. Further, inductive and deductive approach is followed to generate items of that construct. The items thus generated are shown to the experts for content validity who, in turn, modify, add or delete items and enhance the constructs clarity and relevance in measuring the intended. Expert opinions are incorporated and the questionnaire heads to respondents for pilot testing. The data thus collected is then evaluated for reliability by assessment of inter-item correlation (Cronbach's Alpha).

In order to measure the dimensionality of the data, EFA is applied. EFA is used mostly to support the validity or uni-dimensionality character of newly developed scale or to measure the construct. EFA also determines the factor structure and combines the item groups into several factors.

Application of CFA is the next task to be performed. It validates or confirms the factor structure depicted by EFA. CFA tests the hypothesis about relations between variables. Finally, we have gone for construct validity. This is done through the processes of evaluation of three concepts of "Convergent Validity(CV)", "Discriminant Validity(DV)" and "Composite Reliability(CR)".

CV refers to the extent that the items are measuring or explaining the variance of that particular construct. Further, DV is the degree up to which different constructs are unrelated. The most common measure of discriminant validity is that the variance explained by the items of the construct are more than the shared variance with other constructs. This research has incorporated recommendations by Hair et.al.(2010).

Table 5.3 Criteria for validation of the constructs

Measuring Parameter	Criterion
Normed χ^2 (χ^2/df)	< 3
GFI	Greater than 0.90
AGFI Index	Greater than 0.90

CFI Index	Greater than 0.90
RMR	< 0.10
RMSEA	< 0.80
Factor Loadings	Greater than 0.50
AVE	Greater than 0.50
CR	Greater than 0.70

5.4 Validating the TQM scale

TQM is measured using a 33-item scale. EFA has been deployed to reduce the observed variables. Correlation matrix has also been examined for testing the suitability of data for application of factor analysis.

Enough correlations were found which basically mean that there are correlations between the factors that is why factor analysis is being performed. KMO-MSA is 0.913. Any value >0.85 of KMO is sufficient for applying factor analysis. KMO basically examines the strength of partial correlations.

Furthermore, Bartlett's Test of Sphericity(BTOS) was conducted. It means that the null hypothesis taken is correlation matrix is unity or identity. The test results showed that the null hypothesis is rejected(Significance=.000). Therefore, it was concluded about the suitability for factor analysis. The concept of Principal Component Analysis was applied for extracting factors. 'Latent root criterion' was employed for extracting factors. Further, varimax rotation with was run. All the factors having loadings >0.5 were suitable for analysis. Only one factor was extracted which represented 58.39 percent of total variance. The factors which were extracted using EFA did represent TQM.

Table 5.4 EFA results for TQM construct

Total Quality Management (TQM)	KMO-MSA		0.913
	BTOS	χ^2	1231.513
		Deg. of freedom	44
		Significance value	0.0000
	Items and Loadings		
	Code of the item	Loadings	
	TQM1	0.771	
	TQM2	0.689	
	TQM3	0.682	
	TQM4	0.765	
	TQM5	0.708	
	TQM6	0.699	
	TQM7	0.705	
	TQM8	0.695	
	TQM9	0.786	
	TQM10	0.713	
	TQM11	0.665	
	TQM12	0.756	
	TQM13	0.731	
	TQM14	0.632	

	TQM15	0.666
	TQM16	0.789
	TQM17	0.721
	TQM18	0.689
	TQM20	0.734
	TQM21	0.732
	TQM22	0.745
	TQM23	0.786
	TQM24	0.697
	TQM27	0.683
	TQM28	0.765
	TQM29	0.781
	TQM30	0.687
	TQM31	0.734
	TQM32	0.712
	TQM33	0.779
	TQM34	0.642
	TQM35	0.665
	TQM36	0.761
	Eigen Values	5.839
	% explained variance till last item	58.390

	Cumulative explained variance	58.390
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* For detailed items see Table 3.2

Further, validation of the factors which has emerged through application of EFA, CFA has been applied. The values of fit indices were found to be favorable. It was also found that standardized regression weights were low for an item TQM13 or PM5(“The daily examination of each indoor patient is done by the attending physician/surgeon”) and there were a few modification indices. We arranged the modification indices in descending order and combined the first two to run the model again. Further, item purification was undertaken by eliminating TQM13 from the scale which improved the model fit indices as depicted in Model-II.

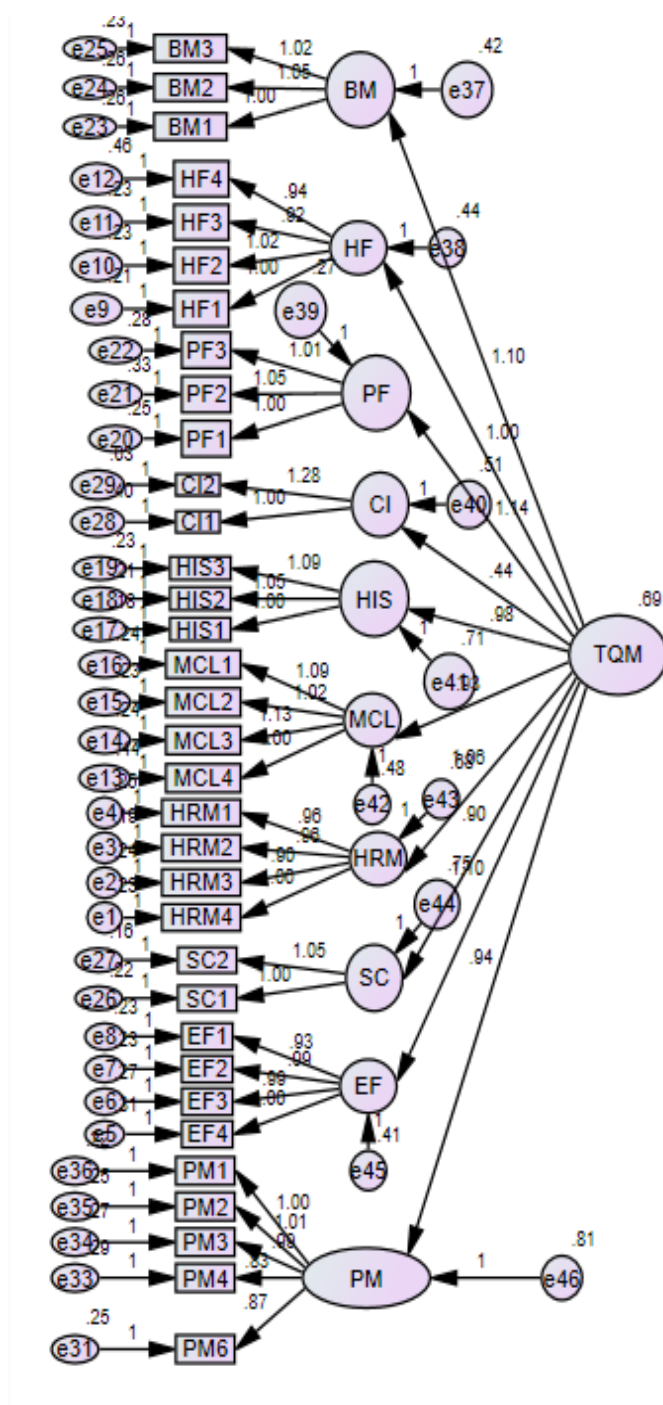


Figure 5.1 Total Quality Management (TQM) Scale

Below are the details of all 10 sub-constructs of Total Quality Management along with their calculation of Average Variance Explained and Composite Reliability. The conditions of $AVE > 0.5$ and $CR > 0.7$ as well as $CR > AVE$ are met for all the constructs. Hence, convergent validity holds true.

Table 5.5(a) Convergent validity results

	Top management commitment and leadership		
	Beta or r	r²	1-r² = Error
TQM1	0.82	0.67	0.33
TQM2	0.61	0.37	0.63
TQM3	0.72	0.52	0.48
TQM4	0.71	0.50	0.50
Summation	2.86		1.93
AVE		0.52	
CR		0.81	

Table 5.5(b) Convergent validity results

	Human resource management in the hospital		
	Beta or r	r²	1-r² = Error
TQM5	0.78	0.61	0.39
TQM6	0.69	0.48	0.52
TQM7	0.64	0.41	0.59
TQM8	0.78	0.61	0.39
Summation	2.89		1.90
AVE		0.53	
CR		0.81	

Table 5.5(c) Convergent validity results

	Process management		
	Beta or r	r²	1-r² = Error

TQM9	0.78	0.61	0.39
TQM10	0.58	0.34	0.66
TQM11	0.44	0.19	0.81
TQM12	0.87	0.76	0.24
TQM13	0.67	0.45	0.55
TQM14	0.89	0.79	0.21
TQM15	0.77	0.59	0.41
Summation	5		3.27
AVE		0.53	
CR		0.88	

Table 5.5(d) Convergent validity results

	Hospital facilities		
	Beta or r	r²	1-r² = Error
TQM16	0.63	0.40	0.60
TQM17	0.79	0.62	0.38
TQM18	0.61	0.37	0.63
TQM19	0.77	0.59	0.41
Summation	2.8		2.01
AVE		0.50	
CR		0.80	

Table 5.5(e) Convergent validity results

	Patient focus		
	Beta or r	r²	1-r² = Error
TQM20	0.61	0.37	0.63
TQM21	0.89	0.79	0.21
TQM22	0.71	0.50	0.50
Summation	2.21		1.33
AVE		0.56	

CR		0.79	
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Table 5.5(f) Convergent validity results

	Employee focus		
	Beta or r	r^2	$1-r^2$ = Error
TQM23	0.81	0.66	0.34
TQM24	0.65	0.42	0.58
TQM25	0.72	0.52	0.48
TQM26	0.82	0.67	0.33
Summation	3		1.73
AVE		0.57	
CR		0.84	

Table 5.5(g) Convergent validity results

	Hospital information system		
	Beta or r	r^2	$1-r^2$ = Error
TQM27	0.81	0.66	0.34
TQM28	0.78	0.61	0.39
TQM29	0.61	0.37	0.63
Summation	2.2		1.36
AVE		0.55	
CR		0.78	

Table 5.5(h) Convergent validity results

	Service culture		
	Beta or r	r^2	$1-r^2$ = Error

TQM30	0.78	0.61	0.39
TQM31	0.72	0.52	0.48
Summation	1.5		0.87
AVE		0.56	
CR		0.72	

Table 5.5(i) Convergent validity results

	Continuous improvement		
	Beta or r	r²	1-r² = Error
TQM32	0.81	0.66	0.34
TQM33	0.72	0.52	0.48
Summation	1.53		0.83
AVE		0.59	
CR		0.74	

Table 5.5(j) Convergent validity results

	Benchmarking		
	Beta or r	r²	1-r² = Error
TQM34	0.76	0.58	0.42
TQM35	0.67	0.45	0.55
TQM36	0.83	0.69	0.31
Summation	2.26		1.28
AVE		0.57	
CR		0.80	

Similarly, condition of divergent validity where AVE > MSV and AVE > ASV holds true for all the sub-constructs. Hence proving divergent validity.

Table 5.6 Divergent validity results

	Top management commitment and leadership	
Average Variance Explained	Maximum Shared Variance	Average Shared Variance
0.52	0.39	0.25
	Human resource management in the hospital	
AVE	MSV	ASV
0.53	0.41	0.24
	Process management	
AVE	MSV	ASV
0.53	0.41	0.38
	Hospital facilities	
AVE	MSV	ASV
0.5	0.49	0.34
	Patient focus	
AVE	MSV	ASV
0.56	0.52	0.42
	Employee focus	
AVE	MSV	ASV
0.57	0.5	0.39
	Hospital information system	
AVE	MSV	ASV
0.55	0.5	0.41
	Service culture	
AVE	MSV	ASV
0.56	0.48	0.41
	Continuous improvement	
AVE	MSV	ASV
0.59	0.49	0.39

	Benchmarking	
AVE	MSV	ASV
0.57	0.29	0.24

Table 5.7 Fitness indices of the CFA Model for TQM

CFA Default Model	GFI	AGFI	CFI	RMR	RMSEA	p- value	χ^2	df	χ^2/df
I	0.911	0.881	0.912	0.013	0.086	0.000	106.787	35	3.051
II	0.932	0.911	0.943	0.011	0.054	0.000	82.361	29	2.840

5.5 Validating the Market Orientation(MO) Scale

MO is measured using a 28-item scale. EFA has been deployed to reduce the observed variables. Correlation matrix has also been examined for testing the suitability of data for application of factor analysis.

Enough correlations were found which basically mean that there are correlations between the factors that is why factor analysis is being performed. KMO-MSA is 0.892. Any value >0.85 of KMO is sufficient for applying factor analysis. KMO basically examines the strength of partial correlations.

Furthermore, Bartlett's Test of Sphericity was conducted. It means that the null hypothesis taken is correlation matrix is unity or identity. The test results showed that the null hypothesis is rejected(Significance=.000). Therefore, it was concluded about the suitability for factor analysis. The concept of Principal Component Analysis was applied for extracting factors. 'Latent root criterion' was employed for extracting factors. Further, varimax rotation with was run. All the factors having loadings >0.5 were suitable for analysis. Only one factor was extracted which represented 55.21 percent of total variance. The factors which were extracted using EFA did represent MO.

Further, to validate the factor structure which has emerged out of EFA, CFA has been applied (Figure 5.2). The values of fit indices were found to be favorable. It was also found that standardized regression weights were favorable for the items and although improvement of fit indices could be done through descending order arrangement of few modification indices. Therefore, item purification was not needed as the results were already favorable.

Table 5.8 EFA results for MO construct

Market Orientation (MO)	KMO-MSA		0.892
	BTOS	χ^2	1132.413
		Deg. of Freedom	45
		Significance Value	0.0000
	Items and Loadings		
	Code of the item	Loadings	
	MO1	0.788	
	MO2	0.665	
	MO4	0.723	
	MO5	0.719	
	MO6	0.786	
	MO7	0.766	
	MO8	0.657	
	MO9	0.798	
	MO11	0.655	

	MO13	0.733	
	MO15	0.672	
	MO16	0.765	
	MO17	0.743	
	MO18	0.654	
	MO19	0.790	
	MO20	0.742	
	MO21	0.745	
	MO23	0.651	
	MO24	0.699	
	MO25	0.732	
	MO26	0.767	
	MO27	0.654	
	MO28	0.751	
	MO29	0.713	
	MO30	0.723	
	MO31	0.689	
	MO32	0.695	
	MO33	0.743	
	Eigen Values		5.521
	% of variance explained		55.210

	Cumulative % of variance explained	55.210
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*For detailed items see Table 3.4

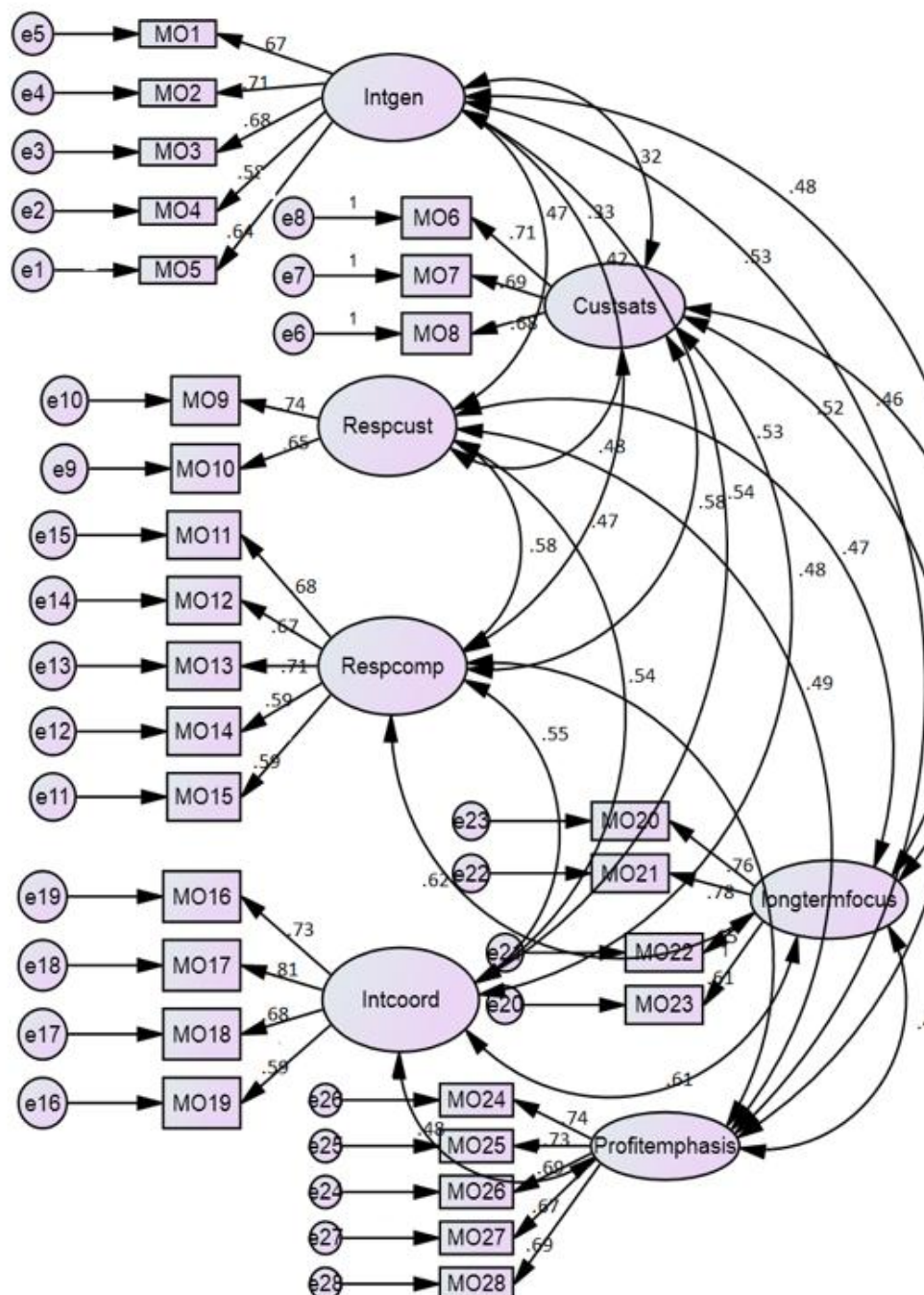


Figure 5.2 Market Orientation Scale (MO) Scale

Below are the details of all 7 sub-constructs of Market Orientation along with their calculation of Average Variance Explained and Composite Reliability. The conditions of AVE>0.5 and CR>0.7 as well as CR>AVE are met for all the constructs. Hence,

convergent validity holds true. **Table 5.9(a) Convergent validity results**

	Intelligence Generation		
	Beta or r	r²	1-r² = Error
MO1	0.89	0.79	0.21
MO2	0.71	0.50	0.50
MO4	0.78	0.61	0.39
MO5	0.58	0.34	0.66
MO6	0.64	0.41	0.59
Summation	3.6		2.35
AVE		0.53	
CR		0.85	

Table 5.9(b) Convergent validity results

	Customer Satisfaction		
	Beta or r	r²	1-r² = Error
MO7	0.86	0.74	0.26
MO8	0.78	0.61	0.39
MO9	0.62	0.38	0.62
Summation	2.26		1.27
AVE		0.58	
CR		0.80	

Table 5.9(c) Convergent validity results

	Responsiveness to customers		
	Beta or r	r²	1-r² = Error
MO11	0.72	0.52	0.48

MO13	0.84	0.71	0.29
Summation	1.56		0.78
AVE		0.61	
CR		0.76	

Table 5.9(d) Convergent validity results

	Responsiveness to competition		
	Beta or r	r²	1-r² = Error
MO15	0.61	0.37	0.63
MO16	0.71	0.50	0.50
MO17	0.69	0.48	0.52
MO18	0.84	0.71	0.29
MO19	0.68	0.46	0.54
Summation	3.53		2.48
AVE		0.50	
CR		0.83	

Table 5.9(e) Convergent validity results

	Inter-functional Coordination		
	Beta or r	r²	1-r² = Error
MO20	0.65	0.42	0.58
MO21	0.79	0.62	0.38
MO23	0.74	0.55	0.45
MO24	0.67	0.45	0.55
Summation	2.85		1.96
AVE		0.51	

CR		0.81	
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Table 5.9(f) Convergent validity results

	Long term focus		
	Beta or r	r^2	$1-r^2$ = Error
MO25	0.88	0.77	0.23
MO26	0.66	0.44	0.56
MO27	0.78	0.61	0.39
MO28	0.58	0.34	0.66
Summation	2.9		1.85
AVE		0.54	
CR		0.82	

Table 5.9(g) Convergent validity results

	Profit emphasis		
	Beta or r	r^2	$1-r^2$ = Error
MO29	0.89	0.79	0.21
MO30	0.71	0.50	0.50
MO31	0.64	0.41	0.59
MO32	0.62	0.38	0.62
MO33	0.64	0.41	0.59
Summation	3.5		2.50
AVE		0.50	
CR		0.83	

Table 5.10 Fitness indices of the CFA Model for MO

CFA Default Model	GFI	AGFI	CFI	RMR	RMSEA	p- value	χ^2	df	χ^2/df
I	0.891	0.951	0.932	0.012	0.051	0.000	186.787	92	2.030

Similarly, condition of divergent validity where $AVE > MSV$ and $AVE > ASV$ holds true for all the sub-constructs. Hence proving divergent validity.

Table 5.11 Divergent validity results

	Intelligence Generation	
AVE	MSV	ASV
0.53	0.38	0.25
	Customer Satisfaction	
AVE	MSV	ASV
0.58	0.42	0.24
	Responsiveness to customers	
AVE	MSV	ASV
0.61	0.49	0.38
	Responsiveness to competition	
AVE	MSV	ASV
0.5	0.48	0.34
	Inter-functional Coordination	
AVE	MSV	ASV
0.51	0.5	0.42
	Long term focus	
AVE	MSV	ASV
0.54	0.51	0.39
	Profit emphasis	
AVE	MSV	ASV

0.5	0.49	0.41
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5.6 Validation of the Service Quality(SQ) Scale

Service Quality(SQ) is measured using a 29-item scale. EFA has been deployed to reduce the observed variables. Correlation matrix has also been examined for testing the suitability of data for application of factor analysis.

Enough correlations were found which basically mean that there are correlations between the factors that is why factor analysis is being performed. KMO-MSA is 0.887. Any value >0.85 of KMO is sufficient for applying factor analysis. KMO basically examines the strength of partial correlations.

Furthermore, Bartlett's Test of Sphericity was conducted. It means that the null hypothesis taken is correlation matrix is unity or identity. The test results showed that the null hypothesis is rejected(Significance=.000). Therefore, it was concluded about the suitability for factor analysis. The concept of Principal Component Analysis was applied for extracting factors. 'Latent root criterion' was employed for extracting factors. Further, varimax rotation with was run. All the factors having loadings >0.5 were suitable for analysis. Only one factor was extracted which represented 56.48 percent of total variance. The factors which were extracted using EFA did represent SQ.

Further, to validate the factor structure which has emerged out of EFA, CFA has been applied (Figure 5.3). The values of fit indices were found to be favorable. It was also found that standardized regression weights were favorable for the items and improvement of fit indices need not be done. Therefore, item purification was not needed as the results were already favorable as shown.

Table 5.12 EFA results for SQ construct

Service Quality (SQ)	KMO-MSA		0.887
	BTOS	χ^2	1423.815
		Deg. of Freedom	41
		Significance Value	0.0000
	Items and Loadings		
	Code of the item	Loadings	
	SQ1	0.712	
	SQ2	0.678	
	SQ3	0.756	
	SQ4	0.733	
	SQ5	0.778	
	SQ6	0.744	
	SQ7	0.734	
	SQ8	0.678	
	SQ9	0.765	
	SQ10	0.799	
	SQ11	0.655	
	SQ12	0.734	
	SQ13	0.712	
	SQ14	0.697	

	SQ15	0.681	
	SQ16	0.767	
	SQ17	0.744	
	SQ18	0.665	
	SQ19	0.776	
	SQ20	0.767	
	SQ21	0.767	
	SQ22	0.723	
	SQ23	0.655	
	SQ24	0.686	
	SQ25	0.756	
	SQ26	0.723	
	SQ27	0.651	
	SQ28	0.723	
	SQ29	0.698	
	Eigen Values		5.648
	% of variance explained		56.480
	Cumulative % of variance explained		56.480

*For detailed items, see Table 3.3

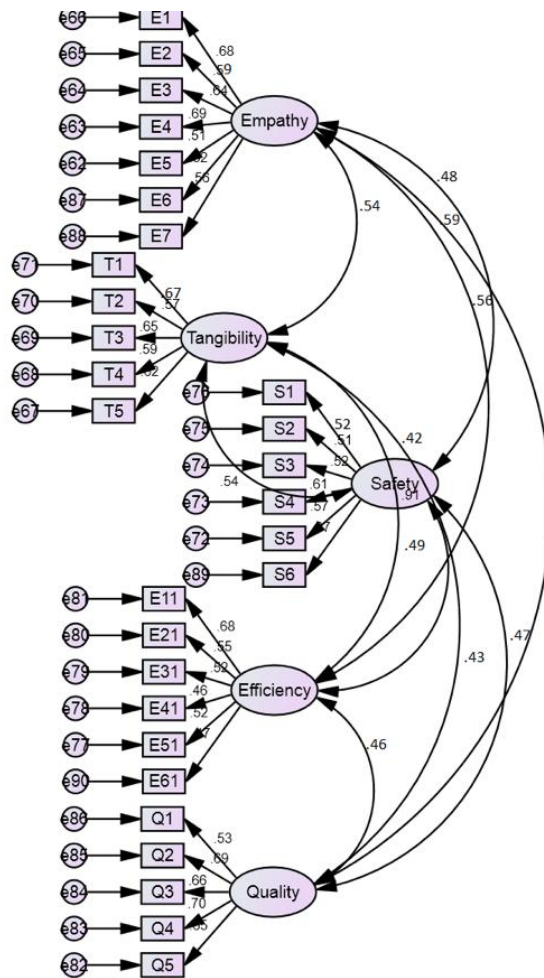


Figure 5.3 Service Quality (SQ) Scale

Below are the details of all 5 sub-constructs of Service Quality along with their calculation of Average Variance Explained and Composite Reliability. The conditions of $AVE > 0.5$ and $CR > 0.7$ as well as $CR > AVE$ are met for all the constructs. Hence, convergent validity holds true.

Table 5.13(a) Convergent validity results

	Empathy		
	Beta or r	r^2	$1 - r^2$ = Error
SQ1	0.89	0.79	0.21
SQ2	0.71	0.50	0.50
SQ3	0.78	0.61	0.39

SQ4	0.58	0.34	0.66
SQ5	0.64	0.41	0.59
SQ6	0.88	0.77	0.23
SQ7	0.65	0.42	0.58
Summation	5.13		3.15
AVE		0.55	
CR		0.89	

Table 5.13(b) Convergent validity results

	Tangibility		
	Beta or r	r²	1-r² = Error
SQ8	0.82	0.67	0.33
SQ9	0.66	0.44	0.56
SQ10	0.48	0.23	0.77
SQ11	0.88	0.77	0.23
SQ12	0.68	0.46	0.54
Summation	3.52		2.42
AVE		0.52	
CR		0.84	

Table 5.13(c) Convergent validity results

	Safety		
	Beta or r	r²	1-r² = Error
SQ13	0.89	0.79	0.21
SQ14	0.61	0.37	0.63
SQ15	0.78	0.61	0.39
SQ16	0.58	0.34	0.66
SQ17	0.44	0.19	0.81
SQ18	0.87	0.76	0.24
Summation	4.17		2.94

AVE		0.51	
CR		0.86	

Table 5.13(d) Convergent validity results

	Efficiency		
	Beta or r	r²	1-r² = Error
SQ19	0.91	0.83	0.17
SQ20	0.61	0.37	0.63
SQ21	0.88	0.77	0.23
SQ22	0.58	0.34	0.66
SQ23	0.84	0.71	0.29
SQ24	0.46	0.21	0.79
Summation	4.28		2.77
AVE		0.54	
CR		0.87	

Table 5.13(e) Convergent validity results

	Quality		
	Beta or r	r²	1-r² = Error
SQ25	0.79	0.62	0.38
SQ26	0.51	0.26	0.74
SQ27	0.88	0.77	0.23
SQ28	0.68	0.46	0.54
SQ29	0.74	0.55	0.45
Summation	3.6		2.33
AVE		0.53	
CR		0.85	

Similarly, condition of divergent validity where $AVE > MSV$ and $AVE > ASV$ holds true for all the sub-constructs. Hence proving divergent validity.

Table 5.14 Divergent validity results

	Empathy	
AVE	MSV	ASV
0.55	0.52	0.45
	Tangibility	
AVE	MSV	ASV
0.52	0.42	0.40
	Safety	
AVE	MSV	ASV
0.51	0.49	0.42
	Efficiency	
AVE	MSV	ASV
0.54	0.36	0.28
	Quality	
AVE	MSV	ASV
0.53	0.29	0.24

Table 5.15 Fitness indices of the CFA Model for SQ

CFA Default Model	GFI	AGFI	CFI	RMR	RMSEA	p- value	χ^2	df	χ^2/df
I	0.959	0.921	0.956	0.011	0.056	0.000	58.787	26	2.261

5.7 Validation of the Organization Performance(OP) Scale

Organization Performance(OP) is measured using a 13-item scale. EFA has been deployed to reduce the observed variables. Correlation matrix has also been examined for testing the suitability of data for application of factor analysis.

Enough correlations were found which basically mean that there are correlations between the factors that is why factor analysis is being performed. KMO-MSA is 0.832. Any value >0.85 of KMO is sufficient for applying factor analysis. KMO basically examines the strength of partial correlations.

Furthermore, Bartlett's Test of Sphericity was conducted. It means that the null hypothesis taken is correlation matrix is unity or identity. The test results showed that the null hypothesis is rejected (Significance=.000). Therefore, it was concluded about the suitability for factor analysis. The concept of Principal Component Analysis was applied for extracting factors. 'Latent root criterion' was employed for extracting factors. Further, varimax rotation with was run. All the factors having loadings >0.5 were suitable for analysis. Only one factor was extracted which represented 51.67 percent of total variance. The factors which were extracted using EFA did represent OP.

Further, to validate the factor structure which has emerged out of EFA, CFA has been applied (Figure 5.4). The values of fit indices were found to be favorable. It was also found that standardized regression weights were favorable for the items and there was no requirement for modification indices. Therefore, item purification was not needed to be undertaken. Therefore, item purification was not needed as the results were already favorable.

Table 5.16 EFA results for OP construct

	KMO-MSA		0.832
	BTOS	χ^2	1419.215
		Deg. of Freedom	40
		Significance Value	0.0000
	Items and Loadings		
	Code of the item	Loadings	

Organization Performance (OP)	OP1	0.712	
	OP3	0.756	
	OP5	0.778	
	OP6	0.744	
	OP7	0.734	
	OP9	0.765	
	OP10	0.655	
	OP11	0.734	
	OP12	0.712	
	OP13	0.697	
	OP14	0.681	
	OP15	0.767	
	OP16	0.744	
	OP17	0.665	
	OP18	0.776	
	OP19	0.767	
	OP20	0.767	
	OP21	0.723	
	OP22	0.655	
	Eigen Values		5.167
	% of variance explained		51.670

	Cumulative % of variance explained	51.670
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*For detailed items see Table 3.5

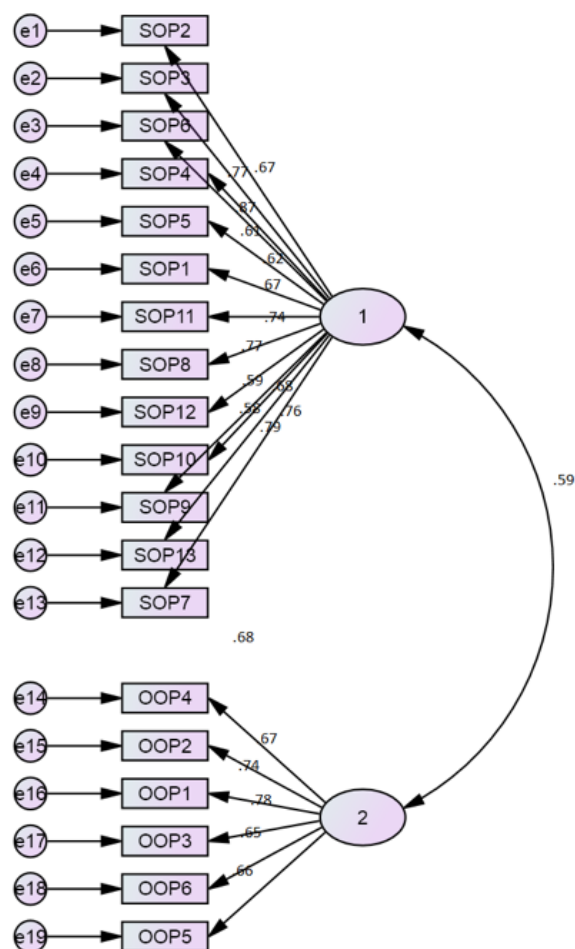


Figure 5.4 Organization Performance(OP) Scale

Below are the details of all 2 sub-constructs of Organization Performance along with their calculation of Average Variance Explained and Composite Reliability. The conditions of $AVE > 0.5$ and $CR > 0.7$ as well as $CR > AVE$ are met for all the constructs. Hence, convergent validity holds true.

Table 5.17(a) Convergent validity results

	Objective Org. Perf.		
	Beta or r	r²	1-r² = Error
OP1	0.49	0.24	0.76
OP2	0.61	0.37	0.63
OP3	0.88	0.77	0.23
OP4	0.76	0.58	0.42
OP5	0.81	0.66	0.34
OP6	0.63	0.40	0.60
Summation	4.18		2.98
AVE		0.50	
CR		0.85	

Table 5.17(b) Convergent validity results

	Subjective Org. Perf.		
	Beta or r	r²	1-r² = Error
OP7	0.87	0.76	0.24
OP8	0.51	0.26	0.74
OP9	0.78	0.61	0.39
OP10	0.66	0.44	0.56
OP11	0.83	0.69	0.31
OP12	0.91	0.83	0.17
OP13	0.89	0.79	0.21
OP14	0.78	0.61	0.39
OP15	0.88	0.77	0.23
OP16	0.56	0.31	0.69
OP17	0.66	0.44	0.56

OP18	0.45	0.20	0.80
OP19	0.32	0.10	0.90
Summation	9.1		6.19
AVE		0.52	
CR		0.93	

Similarly, condition of divergent validity where AVE> MSV and AVE>ASV holds true for all the sub-constructs. Hence proving divergent validity.

Table 5.18 Divergent validity results

	Objective Org. Perf.	
AVE	MSV	ASV
0.52	0.5	0.42
	Subjective Org. Perf.	
AVE	MSV	ASV
0.52	0.45	0.39

Table 5.19 Fitness indices of the CFA Model for OP

CFA Default Model	GFI	AGFI	CFI	RMR	RMSEA	p- value	χ^2	df	χ^2/df
I	0.931	0.981	0.934	0.032	0.046	0.000	76.787	35	2.193

CHAPTER 6

TESTING OF CONCEPTUAL MODEL

This chapter entails the testing of the conceptual model. Section 6.1 contains the testing of the measurement model. Further, section 6.2 displays the structural model for the cause and effect relationship, between TQM and OP.

The conceptual model is based on TQM and OP relationship. The conceptualized model studies the impact of TQM on OP.

6.1 Measurement Model (TQM $\leftrightarrow$ OP)

For assessing the validity i.e. convergent and divergent, the measurement model has been fitted. When the measurement model is fitted, the robustness of the model at item level is assessed. It also depicts that there is absence of multi- collinearity i.e. the constructs are not co-founded and items of 1 construct do not significantly explain the other construct.

Estimation of the measurement model needs to be done for assessing its strength and robustness of the items along-with their constructs. In case the items bear cross loadings with other constructs apart from their own, they are dropped in order to re-estimate the model. This practice is followed to ensure strength of the items at the measurement model level itself so that the items are strongly correlated to their constructs rather than other constructs. Both TQM and OP are connected with 2-headed arrow to find out the co-variance between the measured variables (Figure 6.1).

The convergent validity depicts that the items have high co-relation with their own construct and insignificant co-relation with other constructs. The divergent validity reveals that items of 2 different constructs are having no or insignificant correlation.

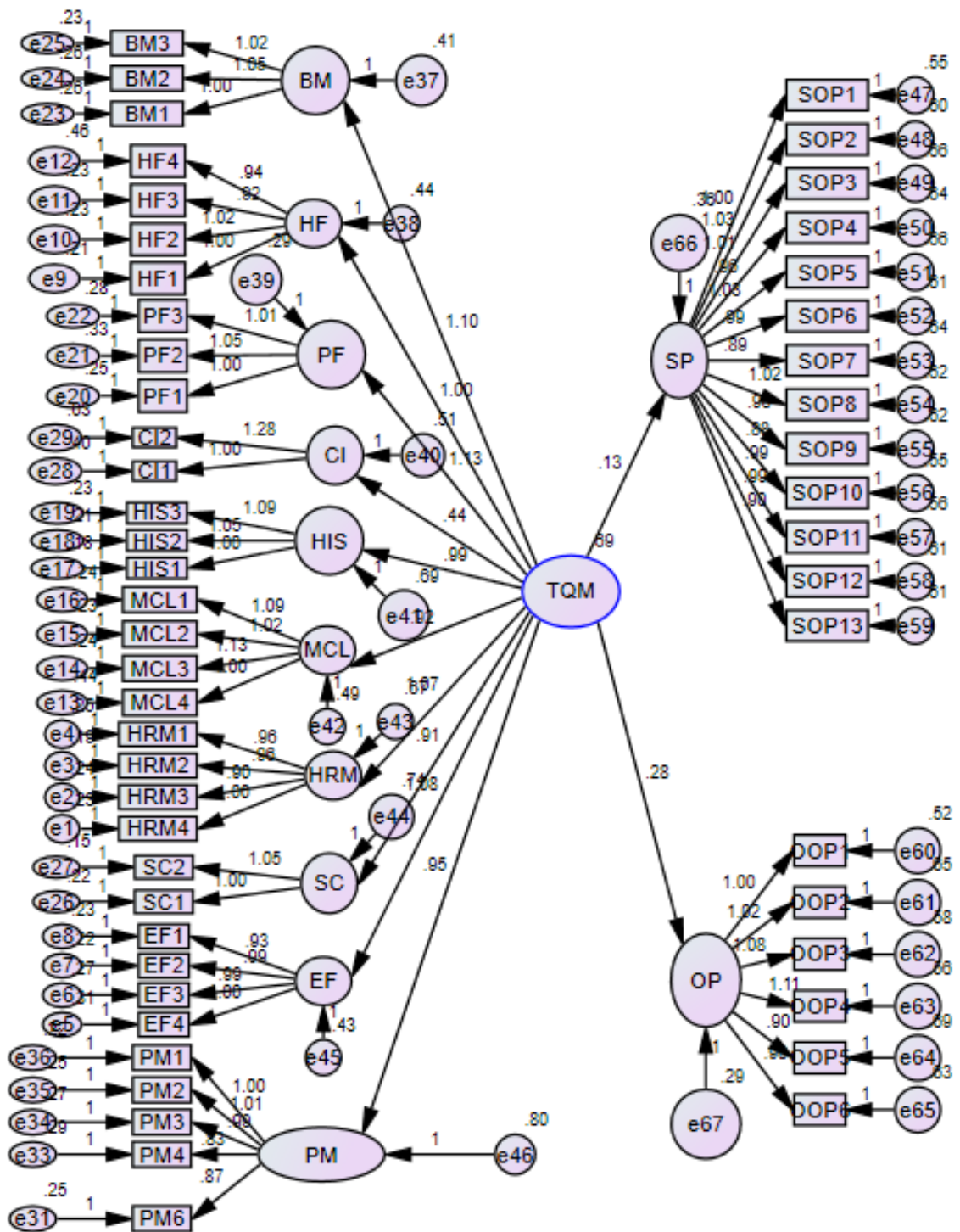


Figure 6.1 Measurement Model of TQM and Organization Performance (OP)

Table 6.1 Fitness indices for the measurement model

CFA Default Model	GFI	AGFI	CFI	RMR	RMSEA	p-value	χ^2	df	χ^2/df
I	0.892	0.853	0.912	0.021	0.049	0.000	406.787	351	1.159

Table 6.1 depicts the summary of the model fit indices and supports a good model fit. All the goodness of fit indices and badness of fit indices were in place.

The validity of the TQM-OP scale was tested using AVE, CR and DV as suggested by Fornell and Larcker(1981) . The following are the conditions as per Hair et. al. (2010) for the validity to hold true:

1. Convergent Validity CR greater than 0.7, AVE greater than 0.5 and CR greater than AVE
2. Discriminant Validity AVE greater than MSV and AVE greater than ASV

The AVE of TQM construct is 0.672, that is greater than required. It assures convergent validity of TQM construct. AVE of OP construct is 0.582. CR of TQM is 0.852 and CR of OP is 0.732. These conditions depict that convergent validity holds true.

The AVE was greater than MSV which depicts that AVE by the construct was more than that of the maximum shared variance as well as Average Shared Variance. This satisfies the divergent validity concept.

6.2 Structural Model(TQM $\leftrightarrow$ OP)

The first Hypothesis H1: “There is a significant positive relationship between TQM and OP” The hypothesis has been studied using SEM approach. The transformation from measurement to structural model happens by applying the structural theory in order to find out the relationships among constructs. In measurement model all the constructs bear non-causal relationships i.e 2 headed arrows represent the shared co-

variance between the constructs. Whereas, in structural model a single-headed arrow represents causal relation. The structural model does the application of structural theory by specifying the related constructs from literature(Hair et.al., 2010).

Since there was no change in the transition between the 2 models – measurement and structural, a good model fit was suggested. This indicated that structural model did not reduce the relation between the two variables. The standardized estimate for TQM→OP relation was 0.28 as shown in Figure 6.2 indicating that TQM positively affects OP.

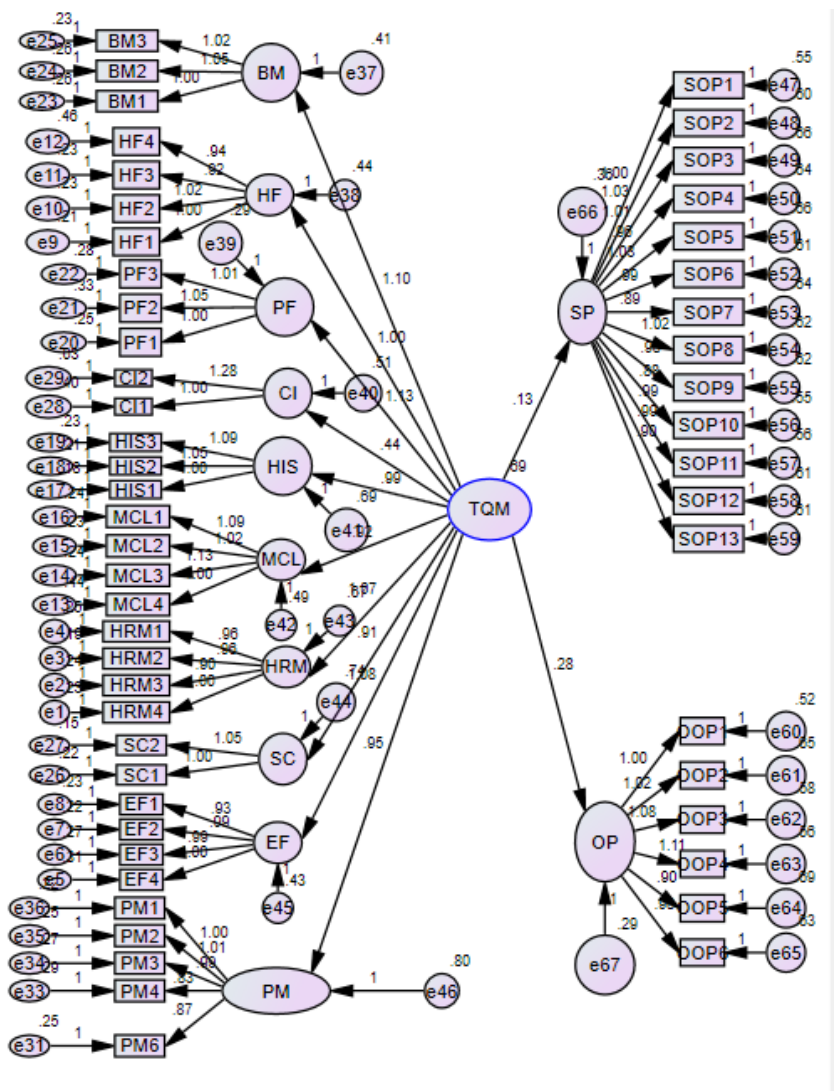


Figure 6.2 Validated Structural Model of TQM and Organization Performance (OP)

Table 6.2 Fitness indices for the Structural model

CFA Default Model	GFI	AGFI	CFI	RMR	RMSEA	p-value	χ^2	df	χ^2/df
I	0.892	0.853	0.912	0.021	0.049	0.000	406.787	351	1.159

The Table 6.2 indicates hypotheses H1 is supported.

CHAPTER 7

MEDIATION ANALYSIS

In this chapter, mediation of MO and SQ amongst the relation between TQM and OP is shown. Section 7.1 discusses the mediating role of MO. Section 7.2 discusses the mediating role of SQ.

The concept of mediation emerged from the fact that a variable/construct C called mediator effects the causal relationship between variable A and B. Each year new mediating variables are being introduced in all the relationships but in order to prove the mediation of a particular variable appropriate methods need to be followed. The relation within DV and IDV is mediated by a third variable called mediator.

As with time, mediation concept has evolved along-with which the literature using mediation introduces us to three concepts of direct, indirect and total effects.

As per the literature, numerous approaches to study mediation, like OLS(Ordinary Least Square) method and hierarchical regression etc. are prevalent. However, in our analysis, we have used mediation method suggested by Baron and Kenny(1986) approach, Sobel's Test and Bootstrapping. Baron and Kenny approach was based on the following assumptions:

1. Relation of the IV to the mediator
2. Relation of mediator to the DV
3. The significant reduction in the relation between IV and DV in the presence of mediator.

Mediation analysis can be studied even without assumptions of normality and large sampling using bootstrapping. To test mediation, Baron and Kenny(1986) approach has been followed.

All the three assumptions that TQM must be related to MO and SQ, MO and SQ must be related to OP, and relation between TQM and OP must be nullified or significantly reduced in presence of either MO or SQ have been made though literature review and verified in the model testing.

First, the direct effect of TQM and OP has been studied. Then, the mediators MO and SQ have been added, one by one, and the significance of the relation between TQM and OP is tested. It has to be done to find out whether the relation between TQM and OP turns insignificant by introduction of mediating variable or not. In the following

sections, Preacher and Hayes(2007) bootstrapping method is adapted to test the effect of SQ and MO on the relation between TQM and OP.

7.1 Mediation of Market Orientation construct

The second hypothesis H2: “Market Orientation (MO) mediates the relationship between Service Quality (SQ) and Organizational Performance (OP)” was tested using mediation analysis.

Mediation of Market Orientation (MO) on the relation amongst TQM and OP has been studied. It has been tested using the procedure by Baron and Kenny(1986).

Firstly, the direct effect of the variable/construct of TQM on OP is seen, while controlling of the to be seen mediating variable market orientation (MO) ($\beta = 0.35$ $p < 0.001$). Significance of the direct effect between these 2 variables is noted. Thus the first criteria of mediation is done.

Further, taking it to step 2, direct effect was calculated between TQM and OP ($\beta = 0.503$ $p < 0.001$) with the inclusion of the construct/variable of market orientation (MO) as a mediator. It was noted that direct effect between TQM and OP still remained significant and was not reduced. The step 3, in which the indirect effect from TQM→MO and MO→OP was seen which turned to be not significant ($\beta = -0.151$ $p < 0.00$).

The conclusion has been held that MO does not mediate the relation between TQM and OP.

Table 7.1 Mediation of Market Orientation (MO) in TQM→OP

Hypothesis	Direct significance without mediator	Direct significance with mediator	Indirect effect	Type of mediation observed
TQM→MO→OP	0.36*	0.512	-0.149	No mediation

*Sig at 0.05 level

It is concluded that, H2 is not supported. Further, there is a correlation between MO

and OP (Asomaning and Abdulai, 2015) but MO does not act as a mediator in TQM and OP.

7.2 Mediating role of Service Quality (SQ)

The third hypotheses H3: “Service Quality (SQ) mediates the relationship between Total Quality Management (TQM) and Organization performance (OP)” was tested using mediation analysis.

Mediation of SQ on the relation amongst TQM and OP has been studied. It has been tested using the procedure by Baron and Kenny(1986).

Firstly, the direct effect of the variable/construct of TQM on OP is seen, while controlling of the to be seen mediating variable Service Quality (SQ) ($\beta = 0.35$ $p < 0.001$). Significance of the direct effect between these 2 variables is noted. Thus the first criteria of mediation is done.

Further, taking it to step 2, direct effect was calculated between TQM and OP ($\beta = 0.323$ $p < 0.00$) with the inclusion of the construct/variable of Service Quality(SQ) as a mediator. It was noted that direct effect between TQM and OP was reduced but still remained significant. The step 3, in which the indirect effect from TQM→SQ and SQ→OP was seen which turned to be not significant ($\beta = 0.029$ $p < 0.00$).

That is why it has been concluded that Service Quality (SQ) does not mediate the relationship between Total Quality Management (TQM) and Organization performance (OP).

Table 7.2 Mediation of Service Quality (SQ) in TQM→OP

Hypothesis	Direct significance without mediator	Direct significance with mediator	Indirect effect	Type of mediation observed
TQM→SQ→OP	0.37*	0.412	-0.192	No mediation

*Sig at 0.05 level

Therefore, hypothesis H3 is not supported. Further, there is a correlation between SQ

and OP and it might be the case the TQM acts as a mediator between SQ and OP. In view of the inputs from the literature, it was decided to study the reverse causal relationship also.

To test the reverse causal relationship, TQM was treated as a mediator between SQ and OP. The mediating effect of TQM on the relationship between Service Quality (SQ) to Organization performance (OP) has been performed.

Firstly, direct effect between Service Quality (SQ) to Organization performance (OP) was studied, controlling for Total Quality Management (TQM) ($\beta = 0.21$ $p < 0.001$). Significance of the direct effect between these 2 variables is noted. Thus the first criteria of mediation is done.

Further, taking it to step 2, direct effect was calculated between SQ and OP ($\beta = 0.090$ $p > 0.001$) with the inclusion of the construct/variable of TQM as a mediator. It was noted that direct effect between TQM and OP was reduced and was not significant, thus fulfilling the 2nd condition for mediation analysis.

The step 3, in which the indirect effect from SQ→TQM and TQM→OP was seen which turned to be not significant ($\beta = 0.103$ $p < 0.001$).

That is why it has been concluded that TQM fully mediates the relationship between SQ and OP.

Table 7.3 Mediation of TQM in SQ→OP

Hypothesis	Direct significance without mediator	Direct significance with mediator	Indirect effect	Type of mediation observed
SQ→TQM→OP	0.38*	0.089	0.105*	Full mediation

*Sig at 0.05 level

7.3 Mediation of Market Orientation (MO) between SQ-OP

Similar to the above mediation analysis, firstly, direct effect between Service Quality (SQ) and Organization performance (OP) was thoroughly seen, controlling variable market orientation (MO) ($\beta = 0.32$ $p < 0.001$). The significance of the direct effect between SQ and OP fulfilled our first condition of mediation.

Further, addition of MO as a mediator reduced the direct relation between SQ and OP ($\beta = 0.086$ $p > 0.001$). It was seen that direct effect between Service Quality (SQ) and Organization performance (OP) was reduced and was not significant thus fulfilling the 2nd criteria for mediation analysis.

Thirdly, the indirect effect from Service Quality (SQ) to market orientation (MO) and market orientation (MO) to Organization performance (OP) was significant ($\beta = 0.103$ $p < 0.001$). That is why we came to conclude that market orientation (MO) fully mediates the relationship between SQ and OP.

Table 7.4 Mediation of MO in SQ→OP

Hypothesis	Direct significance without mediator	Direct significance with mediator	Indirect effect	Type of mediation observed
SQ→MO→OP	0.42*	0.093	0.135*	Full mediation

*Sig at 0.05 level

Chapter 8

FINDINGS, DISCUSSION, CONCLUSION AND IMPLICATIONS

This chapter provides a conclusion to the research depicting the detailed findings found in the study, conclusion of the research, contribution of the study and implications for the managers. Section 8.1 entails a discussion on the findings of this research. Section 8.2 provides a discussion of the findings along with the concurrent validity. Section 8.3 provides a detailed conclusion of the conducted research. Section 8.4 has a discussion on implications of this research work. Lastly, section 8.5 presents the suggestions for the future research to be conducted in this field.

8.1 Findings

1. TQM is positively related to OP.
2. Market Orientation (MO) does not mediate the relationship between TQM and OP.
3. Service Quality (SQ) does not mediate the relationship between TQM and OP. Rather, TQM is found to be mediating the SQ→OP relationship.
4. MO mediates the relationship between SQ and OP.

Hospitals should provide a conducive environment for all the customers i.e. patients, their relatives and all the employees of the hospital. The practices followed in the hospital for infection control should be effective so that the patients do not get more ill instead of recovering. This is also done by getting the certification of NABH safe-I which is an Quality Council of India certification for the same. Patients should receive proper diagnosis first of all, then therapeutic treatment for the same. Even before that, the hospitals should concentrate on holding seminars and spreading awareness on disease prevention. The patients' needs and wants should be met, if possible exceeded, by the hospitals in order to achieve superior organizational performance. Doing the correct treatment at the first time can aid the healthcare facility to achieve patient satisfaction and even exceed customer expectation.

The research revealed a relation between the 4 constructs of TQM, SQ, MO and OP

and the relation between these 4 constructs. The measurement items for all these 4 constructs were proposed, although adapted from existing scales. In order to survive in this competitive environment, the critical factors like quality enhancement and TQM play an important role. The needs of the patient from a healthcare provider perspective can only be fulfilled if the leadership of the hospital i.e. owner, chief surgeon or the top management are interested to do the same. If the leaders understand the management concepts and strategies, have the inherent values to provide good service, only then the healthcare facility can flourish. Out of the 10 sub-constructs of TQM, leadership, process management and hospital facilities were the three most important factors affecting performance. These 3 factors had a positive, significant relation with organizational performance. Although the entire effect of the relation between TQM→OP was positive, these above 3 stated factors contributed to a major part in that. The main goals of improvement of quality in healthcare and enhancement of the accessibility to quality care were met through this study. As per the responses received, it was found that encouragement and onus for implementation of quality in the hospitals were mainly dependent upon the owners will and perception towards performance enhancement. Moreover, the inclination towards significantly increased monetary benefits with increased quality is the moving force for implementation of TQM. This research not only enhances the knowledge of the existing stakeholders in the hospital to comprehend patient's needs and enhance their quality in treatment but will also motivate them to implement TQM practices which were assumed to be unimportant earlier.

The questionnaire used for responses of the 4 constructs can be used for measuring TQM, validating its effect on organizational performance. This is a perception based study which can also be used for judging the perceptions of patients regarding the quality and their satisfaction level from the hospital. Apart from patients, the administrators can also judge the profitability from which sub-constructs is the most profitable. The instrument is also effective in judging the internal care quality of the healthcare organization. There can be a comparative analysis of the responses received from the hospital administrators as well as the patients and analysis of variance on these responses can be done.

The scores obtained in the service quality aspect can provide a tool for the patients to

evaluate which hospital is the best in terms of service quality and go for treatment in that healthcare facility. Although the scales adapted include majority of the items from the previous studies, the scale items may need modifications from time to time, which can be fruitful for both the administrators and patients. The scales can also be modified depending on moderation of variables like type of disease, size and type of hospitals, area or situation of hospitals etc. For improvement in quality and ultimately performance, the scales can be used to conduct comparative analysis depending upon the regions, countries, or various groups of patients, maybe having the same disease or different disease.

8.2 Discussion

The findings have suggested that TQM has a positive direct relation with OP. This finding lends support to a number of studies showing a positive relation between TQM and OP (Alshourah(2021), Gorji et. al, 2011), Lee and Lee(2022), Talib et.al (2011). The study concludes that hospitals employing TQM practices in any of its sub-constructs like good leadership, better HR practices, following a proper process management, etc. leads to a higher level of organization performance than the hospitals which do not implement TQM. The link between TQM and OP suggest that hospitals having higher quality are also accredited by NABH(National Accreditation Board of Hospitals) which in turn also enhances their performance as the rates received for procedures by NABH accredited hospitals are more than non-NABH accredited hospitals.

Further, the mediation of MO was studied amongst the relationship $TQM \rightarrow OP$. The results indicated the non-mediation of MO between $TQM \rightarrow OP$. This finding is in line with the findings of Wang et. al(2012), Faeq et.al (2021). The results suggest that there is a positive relation between TQM, MO and OP. Further, the results of mediation analysis provide empirical evidence that TQM mediates the $SQ \rightarrow OP$ relation.

Therefore, it is concluded that MO can enhance OP but TQM is necessary requirement to realize such benefits. These findings are in line with findings of Macinati (2008). Hospitals lacking TQM practices will find it difficult to enhance their OP even if they concentrate on MO. So mediation of TQM enhances the MO

capability to increase OP. According to Darroch and McNaughton (2003), knowledge about competitors, customers and further sharing this information within an organization are key dimensions of market orientation (MO). Organizations gather knowledge about competitors, customers and products existing in the market, store this knowledge and then use this knowledge to enhance the OP.

Further, the results have suggested that SQ does not mediate the relation between TQM and OP. Hospitals having good TQM practices in place can enhance OP without the significant intervention of SQ. The study suggests that positive relation exists between TQM, SQ and OP. Ahmed et. al. (2017), Kondasani and Panda (2015) suggested that there is a positive relation between TQM and SQ. The results of mediation analysis provide that TQM actually mediates the relation between SQ and OP.

SQ can enhance OP only when there is high TQM. These findings are in line with Kim(2017). Organization use their TQM practices to increase OP. Healthcare organizations which fail to implement effectively TQM practices are not able to retain a proactive outlook and ultimately find difficulty in managing OP even with a good SQ.

Market Orientation(MO) mediates the relation between SQ and OP. This has been found as the direct relation between SQ and OP is significant standalone whereas in the presence of MO as a mediating variable it turns to be non-significant. It means that MO fully mediates the relation between SQ and OP. The findings are in concurrent validity with Mittal et. al. (2017).

It has been observed that both the variables TQM and MO, have a full mediation in SQ→OP relation. In order to check this mediating relation, we have calculated a direct relation between SQ and OP. The sub-constructs of care services, followed by tangibility, followed by efficiency, safety and empathy are ranked as per their order of importance and their effect on organizational performance. It has been judged by regression analysis of the individual constructs of SQ on OP. It is implied that the service quality sub-constructs can be measured as latent variables, as indicated by component analysis and CFA. Based on the order of importance, the healthcare organizations can establish strategies to enhance organizational performance depending upon which factor out of service quality affects the organizational

performance the most.

Quality of services provided in the healthcare facility forms an important part of patient outcome. In order to assess the performance of the hospital for last 3 years, subjective and objective performance measures have been adapted from existing performance management scales. This indicator is a useful, low cost and user friendly tool to judge the performance of the hospital in relation to quality enhancement which can ultimately aid in decision making of the hospital. Further development can be done to include detailed parameters like development of a Universal Model of Quality healthcare delivery across the globe, private public hospitals of varying bed strength.

8.3 Conclusion

Although TQM is quite an old phenomenon when it was used in manufacturing industries, but its evolvement in healthcare industry is a thing not too old. The effect of TQM on performance has received some attention in the past studies but lesser studies have been conducted in the healthcare sector. In our study, we have gone through literature where standalone effects of TQM on OP, SQ on OP and MO on OP have been seen but here we combined to form a model in which mediating effects of MO and SQ were taken into account. This study is unique in kind of to empirically validate the dimensions of constructs of TQM, SQ, MO and OP in a healthcare context. Also, in this study, indirect effects of MO and SQ have been studied. The higher order constructs have been validated in the healthcare context.

MO scale has been taken from Narver and Slater(1990) and validated in the healthcare context of hospitals of Punjab. Similarly, SQ scale has been taken as HEATHQUAL scale from Lee(2017) and validated in context of hospitals.

In addition to the result given by the study, it reveals that quality programs can be structured in a way that motivates the professionals, quality managers, chief surgeons of the hospital to implement TQM practices instead of showing resistance to change in the working environment. The experience from data collection and interaction with quality managers across healthcare organizations of Punjab, revealed that there is a need to explain the benefits to the hospital owners of TQM implementation, not only in terms of performance enhancement but also in terms of quality in patient care, infection control practices, revenue management and ultimately enhance in service

quality provided.

8.4 Theoretical Contributions and Implications

The present research has integrated various dimensions of TQM which are the sub-constructs of TQM and their impact on organization performance along with the mediation of constructs of SQ and MO in the healthcare industry of Punjab. Based on the review of the existing literature and discussion regarding the model building, a proposed framework based on existing relations between the 4 constructs has been developed. The success in TQM implementation is measured in its impact on performance along with the mediation of SQ and MO.

Here we will discuss what the findings of the research mean for certain sub groups or populations which is beyond the data interpretation. This study not only provides mindful insights of the relationship between TQM and OP but also provides vitality to existing TQM literature. The study provides an extensive contribution to TQM literature. A framework has been developed which can prove to be fruitful to researchers keen to work in area of TQM and OP. The study provides a linkage between TQM and OP from healthcare perspective and contributes to quality management literature.

Social implications: Hospitals form an integral part of our society. Due to dearth in quality healthcare providers as per the NABH website only around 500 hospitals in the country are NABH accredited, this research plays a vital role in linking the quality practices with performance. The hospital indicators which have been developed across the globe, primarily focus on performance in relation with other hospitals or against standards fixed by NABH. Inspection by team of Quality Council of India, satisfaction surveys filled by OPD or IPD patients, and third party audits like internal audit for auditing processes and statutory audit for auditing books of accounts, and internal assessments by teams are done in order to provide certification to the hospitals which include NABH Safe-I, pre accreditation and full accreditation. The assessment and grouping of similar hospitals can be done on the basis of their peer group having similar facilities and similar bed strength. The composite index method to rank hospitals can be done on the basis of their equality across various norms like bed strength, quality of service provided, no. of patients seen in OPD, IPD daily etc.

This research provides a contribution to the existing literature by operationalizing the constructs and validating the scales for TQM, SQ, MO and OP. The adequate reliability and validity results of the scale provide that it is a valuable model for investigating quality practices in healthcare industry. The study fills the gap by connecting all the dots in the quality literature.

The study has developed the organization performance construct based on objective and subjective organization performance. In situations where the healthcare organizations are reluctant to share the actual financials, this scale can be used where the hospital performance is judged by the perception of the respondents regarding how the hospital has fared in terms of performance in last three years.

Practical implications: The study empirically validated the MO and SQ scales. The study contributes the checking of dimensions of MO and SQ scales in the healthcare context. The outcomes of present research reveal a proposition that Total Quality Management is not a mere philosophy, but is an important determinant in finding out its effect on enhancing performance of a healthcare organization. Thus it is imperative that quality managers should try to enhance TQM practices implementation in the healthcare facility to enhance its performance. Sometimes the quality managers perceive the environment to be hostile and compromise with quality in delivering the patient care. This might lead to temporary increased patient flow but ultimately, leads to loss in organization performance. Strong market orientation enhances the chances of profitability as well as it means the managers are more inclined towards customer orientation, competitor orientation and inter functional co-ordination. Only those healthcare facilities will thrive and grow which are proactive to comprehend market changes and are leaders in implementing those changes in their facility.

Quality managers should not consider the concept of MO as a mere business idea to fill their coffers but should approach intelligence generation, dissemination and responsiveness into practice so as to enhance the performance effectively. The impetus for change should come from the top level managers as their commitment is very crucial to implement TQM or MO practices.

The study also provides valuable insights for identifying service quality measures which affect the performance and the mediation of market orientation in that relation

between SQ and OP. Increase in service quality enhances OP. In addition to this, the research will provide guidance to the scholars working in the area to provide constructive criticism to the policy makers and thereby enhance policy making decisions.

Concluding the implications, the results highlight that MO mediates the relation between SQ and OP. Further, TQM mediates the relation between MO and OP as well as SQ and OP.

The limitations of the primary data collection included that data like wait times in the hospital for either getting the bed for IPD patient or to see the doctor for OPD patient, economic analysis of the patient, and infection control practices requiring additional hospital expenditure were not included in the study.

8.5 Suggestions for future research

Future research should incorporate the limitations stated in the research methodology chapter. In future, data collection can be done through international certification systems. The comparative research taking various moderating variables into account can be done. Longitudinal study can also be incorporated in the future whereby in a particular hospital effects of TQM on OP can be studied before and after deploying quality practices. Future researchers can also include different types of operational processes for different types of healthcare service providers depending upon their treatments and type of diseases. The present study focuses on developing a measure for the TQM construct and finding out its linkages between MO, SQ and its effect on OP. The future researchers can study the relations between TQM and OP in case of public healthcare institutions as well as small practitioners who are not empaneled with any insurance company. Further, moderating variables like hospital size, depending on the number of beds, no. of specialty offered etc. can also be taken into account.

By the usage of different research designs, the future researches can be carried out and the findings of this piece of work can be validated. TQM concepts can be further studied from other parts of the country as well except from Punjab where the current study is done. This can help find out whether any cross cultural differences impact the results of the study. Further, future studies can also be conducted to find out the cross-

cultural validity of this scale and the relationships between the constructs mentioned in the study. Future researches can also include patients in the hospitals to study their perception of the quality practices being followed in the healthcare organization.

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List of Publications

Total Quality Management Implementation in Healthcare Sector, Its Impact on Performance of Hospitals in International Journal of Recent Technology and Engineering

Environment Uncertainty – Business Performance Relationship:
 Mediating Effect of Entrepreneurial Orientation in International
 Journal of Recent Technology and Engineering
 Components of Total Quality Management in a Healthcare setting In
 India in Shodh Sanchar Bulletein
 A Comparative Analysis through export and import intensity on
 Indian Textile Sector in International Journal International
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Dear respondent

Following are a few statements regarding your hospital. Kindly spare your valuable time to give appropriate responses to the issues addressed in the questionnaire. Your answers will greatly help in contributing the research towards organizational performance of hospitals. All answers will be handled anonymously and confidentially and used for academic purpose only.

PART- A

1. Is your hospital accredited or ISO certified? If no, is there any plan to get it accredited or certified?	2. How do you define quality in terms of healthcare perspective? (Please tick if multiple responses are required) a) High standards of patient care () b) High employee morale () c) Delivering high standards of care throughout the organization () d) Promptness of service () e) Cleanliness of the hospital () f) Employee tidiness () g) Transparency in operations () h) Lower time lags in treatments () i) Availability of other specialties () j) If any other, please specify.....
3. Does the hospital maintain the following data for measuring efficiency and effectiveness? a) Length of stay of inpatient () b) Bed occupancy rate () c) Cost per patient () d) Cost per bed () e) Lock up of capital in drug store () f) Such data are not maintained properly () g) If any other, please specify.....	4. What quality management approaches are practiced in your hospital? (Please tick if multiple responses are required) a) Total Quality Management () b) ISO 9000 series () c) Process re-engineering () d) Standard setting () e) Audit approach () f) Inspection () g) None () h) If others, please specify.....
5. Who is responsible to take up quality management practices in your hospital? (Please tick if multiple responses are required) a) Managing Director () b) Quality manager () c) Quality facilitator () d) Quality coordinator () e) All employees () f) If any other, please specify.....	6. What are the methods adopted to implement quality? (Please tick if multiple responses are required) a) Customer satisfaction survey () b) Quality improvement projects () c) Mission statement () d) Standard setting () e) Management training () f) Leadership training () g) Team building () h) Service quality training () i) Clinical audit () j) If any other, please specify.....
7. Which of the following practices are followed in implementing quality management practices? (Please tick if multiple responses are required) a) Orientation provided to employees during induction about the quality management implementation. () b) Designed and disseminated SOP's(Standard Operating Policy) & WI(Work Instructions) for all departments in the hospital. () c) Organogram and hierarchy of the organization is defined and disseminated across the levels of organization. () d) Employee engagement activities are conducted to improve belongingness () e) Technology is updated to serve the patients effectively () f) Use various performance indicators to evaluate the efficiency of operations () g) Set up for fire and non-fire emergencies to manage fire disasters. () h) Follow the MCI guidelines to maintain bio-medical wastage. () i) Infection control mechanisms are in place as per MCI guidelines. () j) Hospital info. system is being used to bring transparency in operations () k) Displayed/disseminated performance indicators to all staff for sustaining efficiency. () l) If any other, please specify.....	8. What could be the possible difficulties faced in the implementation of TQM? (Multiple responses are allowed) a) Organizational/employee/management resistance to change () b) Lack of financial resources () c) Lack of human resources () d) Barriers between departments () e) Measurement of quality difficult () f) Services demand very high () g) Quality not seen as an issue by the staff () h) Lack of top management commitment () i) Lack of enthusiasm among employees () j) No difficulty in implementation () k) If any other, please specify.....

PART- B

PERCEPTIONS TOWARDS TOTAL QUALITY MANAGEMENT PRACTICES AND ITS INFLUENCE ON FIRM PERFORMANCE

- 1. Please share your level of agreement to the following statements regarding total quality management practices in your hospital**
(1=Strongly disagree, 2=Disagree, 3= Neither agree nor disagree, 4=Agree, 5= Strongly Agree)

Statements	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
1. The hospital management is committed to the quality initiative.					
2. The hospital management allocates adequate resources and time for implementation of quality in health care.					
3. The hospital management emphasizes on providing the best-quality and cost-effective medical care.					
4. The hospital management ensures that medical, nursing and paramedical staff stick to their commitments to the patients.					
5. The hospital selects new staff/personnel with a positive attitude to providing health care.					
6. The hospital ensures that the right person is placed on the right job.					
7. Job training and development, with an emphasis on health-care quality, is periodically given to doctors, nurses, paramedical and administrative staff.					
8. The medical, nursing and paramedical staff are sincere and regular.					
9. The formal process or system for overall quality management in the hospital is efficient.					
10.The acceptance of emergency cases is made easy and simple.					
11.The waiting time for patients (before being seen by doctors) is kept minimum in the Out-Patient Department.					
12.The hospital has competent persons with a background in medical science to manage the patient records.					
13.The daily examination of each indoor patient is done by the attending physician/surgeon.					
14.The hospital personnel advise the patients upon discharge on the medical care to be taken after leaving the hospital.					
15.The effectiveness of medical treatment given to patients is assessed regularly for improving the quality of treatment.					
16.The hospital has effective layout and adequacy of different facilities (e.g. wards, beds, operation theatres, intensive/post-operative care units, reception lounge, administrative departments, vehicular parking, canteen, toilets, etc.).					
17.The hospital has guidance signs, symbols, boards, pamphlets and other artifacts that are appealing and useful to patients in reaching different wards/places inside the premises.					
18.The hospital has ample amenities (such as continuous electricity and water supply, housekeeping, sanitation facilities and pharmacy) at comfortable ambient conditions (such as temperature, ventilation, noise and odour) for patients and their attendants.					
19.The quality of health care provided at this hospital is perceived to be good by the patients, in comparison with other competitive hospitals.					
20.The hospital management analyses feedback/complaints from patients as a means to initiate continuous improvement in the hospital.					
21.The cost of health care provided in the hospital is perceived to be reasonable by the patients, in comparison with other competitive hospitals.					
22.The hospital has a mechanism to measure the satisfaction of all hospital staff with respect to their salary, perks and other financial incentives to reinforce their job performance.					
23.The hospital management gives a regular and systematic feedback to all hospital staff, including doctors, regarding their performance on the job.					
24.The hospital has an effectiveness and functioning Hospital Information System, in terms of user-friendly data feeding process, analysis of data and good report generation.					
25.The hospital ensures a systematic feedback is given to doctors, nurses and hospital staff about quality improvement processes and their outcomes.					
26.The hospital Patient Information System is operational and efficient, in terms of having relevant patient records over years.					
27.The hospital management exhibits overall health care and concern in respect of its patients.					
28.The hospital management exhibits overall health care and concern in respect of its hospital staff.					
29.The hospital lays emphasis on continuously improving hospital facilities such as operation theatres, laboratories, equipment and wards.					
30.The hospital assesses continuous health-care quality improvement strategies on the basis of factors such as cost of health care, time and overall hospital performance.					
31.The hospital lays emphasis on benchmarking the processes related to patients (in terms of admission, stay and discharge) with those of other competitor hospitals.					
32.The hospital lays emphasis on benchmarking the administrative processes (related to doctors, nurses and paramedical staff) of the hospital with respect to those of other competitor hospitals.					
33.The hospital lays emphasis on benchmarking the level of patient medical care and treatment with those of other competitor hospitals.					

- 2. Please indicate to what extent you agree with the following statements on market orientation of your hospital.**
(1.Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4.Agree, 5. Strongly Agree)

Statements	Strongly	Disagree	Neither	Agree	Strongly
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	disagree (1)	(2)	agree nor disagree (3)	(4)	agree (5)
1. 1. The hospital personnel meet with customers (i.e., physicians, businesses, insurance companies, and patients) at least once a year to find out what products or services they will need in the future.					
2. 2. Individuals from the hospital's operations department interact directly with customers to learn how to serve them better.					
3. The hospital survey customers at least once a year to assess the quality of services provided.					
4. The hospital often talks with or survey those who can influence our patients, choices (e.g., physicians, health maintenance organizations).					
5. The hospital collects industry information through informal means (e.g. lunch with industry friends).					
6. The hospital entails dissemination of data on customer satisfaction at all levels on a regular basis.					
7. Customer complaints fall on deaf ears in the hospital.					
8. When the hospital management finds out that customers are unhappy with the quality of service, they take corrective action immediately.					
9. The hospital management is slow to detect fundamental shifts in healthcare industry (e.g., competition, technology, regulation) .					
10. There is minimal communication between marketing and operations concerning market developments.					
11. If a major competitor were to launch an intensive campaign targeted at the hospital customers, the hospital management would implement a response immediately.					
12. The hospital management is quick to respond to significant changes in competitors' pricing structures.					
13. The patients hospital serves have numerous alternative health-care organizations that provide similar services.					
14. The hospital faces intense competition for patients.					
15. The competition for patients in the hospital's market area is growing.					
16. Various service units work close together to meet patients needs					
17. Various service units share business information with each other					
18. All service units work together in offering value to the patients					
19. Different service units share resources with each other					
20. The hospital adopts long term focus in matter of profits					
21. The hospital aims for positive profit margin in the long run					
22. The hospital discovers and implements new value for patients					
23. The hospital tries to overcome any deficiencies in services					
24. Profit/performance is measured for each department.					
25. The hospital requires rapid payback of new services/facilities.					
26. Top managers emphasize improved performance relative to competitors.					
27. All departments are required to be profitable.					
28. Emphasis on earning revenues is sufficient to cover expenses.					

3. Please indicate to what extent you agree with the following statements on service quality of your hospital?
 (1.Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4.Agree, 5. Strongly Agree)

Statements	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
1. The employees of the hospital have polite attitude.					
2. The employees are willing to explaining the details.					
3. The employees listen to the patient.					
4. The employees understand and consider the patient's situation					
5. The employees possess a sense of closeness and friendliness					
6. Hospital employees know what the patient wants					
7. Hospital understands the patient's problems as empathy					
8. The hospital is keen in securing advanced medical equipment					
9. The hospital hires medical staff with advanced skills and knowledge					
10. The hospital has convenient facilities					
11. There is adequate cleanliness of employee uniforms					
12. The hospital is overall clean.					
13. The hospital exhibits a comfortable environment for receiving treatments.					
14. The hospital management puts in efforts for providing a comfortable and safe environment for patients.					
15. The hospital has an environment that is safe from infection.					
16. The hospital feels that doctors would not make misdiagnoses					
17. The hospital feels that nurses would not make mistakes					
18. The hospital is confident about the medical proficiency.					
19. The doctors have an attitude about not using unnecessary medication.					
20. The doctors put in efforts for proving appropriate treatment methods.					
21. The hospital has reasonable medical expenses.					
22. The hospital has appropriate cost for medical services in comparison to competition.					
23. The patient feels convenient to take treatment procedure in the hospital.					

24.The hospital puts in efforts for reducing unnecessary procedures					
25.The care service provided by the hospital are appropriate.					
26.Recognition and efforts for the best treatment by the medical staff.					
27.There is an improvement in medical condition as a result of efforts and treatment by the medical staff.					
28.Doctors explain to the patient how to prevent related diseases					
29.The hospital puts in efforts and is willing to prevent disease.					

4. Please indicate the level of agreement to the following statements regarding **the performance of the hospital in the past 3 years**. Please indicate whether there has been a considerable increase in the following parameters:

(1.Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4.Agree, 5. Strongly Agree)

Statements	Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
1. Bed Occupancy Rate					
2. Bed turnover ratio					
3. Inpatient(IPD) visits					
4. Outpatient(OPD) visits					
5. Emergency visits					
6. Number of surgeries					

5. Please indicate your degree of agreement to the following statements regarding the organization performance of your hospital.

(1.Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4.Agree, 5. Strongly Agree)

Statements	Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
1. Our hospital is able to meet its financial obligations					
2. Our system of remuneration and benefits is satisfactory					
3. In general the staff is satisfied with their respective department					
4. Our healthcare services are expanding					
5. Overall service quality is improving steadily					
6. Our profitability is rising steadily					
7. Patient evaluations of our performance have been improving					
8. In our hospital, the number of doctors is sufficient					
9. In our hospital, the number of nurses is sufficient					
10.In our hospital, the number of technicians is sufficient					
11.In our hospital, the number of administrative employees is sufficient					
12.In our hospital, the number care-takers(nurses, paramedic staff etc.) is sufficient.					
13.Patients are satisfied with our healthcare services					

PART C

Please provide the following details about your hospital:

Name of the hospital_____ No. of patients served daily(OPD/IPD)_____ Bed strength of the hospital_____ Type of the hospital_____ Age of the hospital(in years)_____ Email _____	Services offered in the hospital: a. In-patient services(Ophthalmology, Gynecology, Surgery, Medicine, etc. Any other please specify.....) b. Out-patient services(Ophthalmology, Gynecology, Surgery, Medicine, etc. Any other please specify.....) c. Community services d. Any other, please specify.....
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Thanks for your valuable time

Signature