

## TOTAL QUALITY MANAGEMENT PRACTICES IN HEALTH SERVICES

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### ABSTRACT

**Purpose-** The goal of this study is to emphasize the importance of total quality management practices in health services in order to ensure patient satisfaction and to create customer loyalty.

**Methodology-** The methodology of this study is a thorough literature review of Total Quality Management in health services.

**Findings-** Health services are a vital service area that does not accept mistakes and is directly related to human life. Due to the fact that its area of interest is human health and human life, quality in health services appears as a necessity rather than a choice. It is possible for societies to live in health and well-being if the individuals that make up that society are healthy. Protection of individual health and investments and sanctions aimed at protecting this are the most fundamental steps in the health of the society. The implementation of patient rights within the health system has brought the concept of "Quality Health Care" to our agenda. Quality in health care; it includes the diagnosis and treatment services to be in accordance with modern medical science, scientific standards and norms, and the services provided to meet patient expectations.

**Conclusion-** The fact that health services are directly related to human life, the fact that mistakes to be made will cost expensive, the obligation to provide services with zero margin of error have made it obligatory to provide quality health services in health services and therefore in health institutions.

**Keywords:** Quality, total quality management, health, health services, patient rights.

**JEL Codes:** I10, L15, I19

## 1. INTRODUCTION

Since the field of interest in health sector is human health and human life, quality in healthcare services is an obligation rather than a preference. Service quality is the capability of an enterprise to meet or exceed the expectations and needs of customers. In other words it is to provide the best service to meet customer expectations (Feigenbaum, 1991). Today the definition of quality highlights customer viewpoint and meeting the constantly changing demands and needs of customers is evaluated as quality. Increasing the service quality, providing customer satisfaction and desires of creating loyal customers have directed enterprises to increase the quality with all their shareholders. Studies of increasing the service quality have brought forward the concept of Total Quality Management (TQM) (Andani et al., 2021; Lim et al., 2022).

Enterprises which not only concentrate on products but also aim to operate all production processes in a reliable, productive and effective way always try to catch the better through compliance with specifications and meeting customer demands. In order to provide a quality service it is necessary to meet the service expectations of customers and even provide service beyond these expectations. Most enterprises operating in the area of service sector try to beat out their rivals and catch an advantage in competition with a strategy of producing and distributing service of different and requested quality. However, what is more important is to provide a service meeting the quality expectations of consumers.

Consumers will compare the service provided to them and the service they expect. If the service provided is beyond their expectations, they will be more satisfied and continue to receive that service. This will provide loyal customer which is the greatest expectation of enterprises (Komurcu et al., 2014). TQM is a systematic approach to the sense of perfectness. There is no last stop on the road taken (Alumran et al., 2021). It constantly requires renewing and improving the self and learning.

It is very important to adopt total quality management in order to provide service with zero harm in health institutions. So this study aims to reveal the effects of the total quality management in health sector.

In this context, firstly, the history of quality, evaluation and measurement of quality in health services are mentioned in the study. Besides the concept of total quality management, its advantages for the individual and the institution, the reasons for failure due to malpractice and total quality management practices in health are explained. In the conclusion part, when the total quality management is applied successfully in the health sector, the customer expectations and the importance of providing service with zero harm are explained.

## 2. LITERATURE REVIEW

### 2.1. History of Quality

The concept of quality emerged from the goal of minimizing the mistakes and reaching the perfect as a result of the mistakes made by people and systems. It was derived from the Latin word "Qualitas". Applications related to quality are not new. They date back to the Hammurabi Laws in 2150, B.C. (Sheingold et al., 2014; Kuantova, 2021). Additionally in modern terms, the concept of quality appeared in the post-war Japan in the 1950s. With a principle called 'Kaizen' which means "better" in Japanese, the TQM applications stepped in. TQM is compared to an endless journey (Azzolini et al., 2018). The European Quality Organization (EQO) defines the concept of quality as "compliance of goods or services for the consumer's demands" (Psomas and Antony, 2017). The Turkish Standards Institute (TSI) defines quality as "sum of properties based on the capability of a product or service to meet specified or possible needs". The International Standardization Organization (ISO) defines quality as "sum of properties based on the capability of a product or service to meet specified or possible needs" (Muluk, 2000).

In quality studies while "product quality" was in the foreground at the beginning (from the 1950s until the 1980s), service has begun to come into prominence since the 1980s (Çiçek et al., 2006). The concept of quality is perceived as a whole of studies which not only concentrate on the product, but also aim to operate all production processes in a reliable, productive and effective way (Elsaleh, 2018). This philosophy is based on customer satisfaction. It is because quality studies make it possible to gain a competition advantage by both increasing the customer loyalty and minimizing the customer's sensitivity to low cost. Principle condition to make this possible is continuous improvement (Prajogo, and Amrik, 2006).

In general terms it is possible to summarize the concept of quality as "compliance with specifications and meeting customer demands". The concept of quality has many definitions. Juran defines it as "suitability for use" and Crosby defines it as "compliance with conditions" (Efil, 2003). The common ground in all definitions related to this concept is that quality is to be suitable for customer expectations and needs. The concept of quality which is usually perceived as "the best and the truest" grounds on offering goods or services to customers in the most productive, useful and ergonomic way. Quality refers to suitability for use, compliance with conditions, state of meeting the needs, compliance with requested conditions timely and customer satisfaction. No matter how it is defined, quality is specified according to how the customer perceives the goods and services offered to them.

### 2.2. Healthcare Services

Healthcare services comprise all services offered to individuals or society to protect from diseases and preserve and develop well being. When the concepts of health and disease are handled with mental and socialness dimensions, the extent of healthcare services will undoubtedly expand. Considering from this point of view it is possible to define healthcare services as all kinds of services offered to individuals or society to fully reveal physical, mental and social well being (Çavmak and Çavmak, 2017; Sariatmi et al., 2020). The most general definition of the concept of health which is accepted worldwide is to have physical, mental and social well being. Within the frame of this definition healthcare services comprise preventive healthcare services, therapeutic healthcare services and rehabilitation services (Bitton et al., 2019; Ghebreyesus, 2020).

### 2.3. Quality in Healthcare Services

Healthcare services are a service area which is of vital importance, will not accept any fault and directly concerns human life. In healthcare services which have a dynamic structure, human behaviors and qualifications matter. Reliability in human is of prime importance. Healthcare services have a face-to-face relationship and the feedback received from the patient may create differences in treatment (Endeshaw, 2021; Lagrosen and Lagrosen, 2022). The synthesist approach developed by Vincent Omachonu stresses the quality of healthcare services as technical quality and treatment art. Here the technical aspect of quality refers to "compliance of diagnosis and treatment services with modern medical science and scientific standards and norms", while the artistic aspect refers to "capability of services provided to meet patient needs" (Omachonu, 2018; Hussein et al., 2021).

## 2.4. Evaluation of Quality in Healthcare Services

As numerous variables determine customer satisfaction, it is very difficult to measure the service quality. For consumers it is harder to evaluate service quality than evaluating the quality of goods. Perception of service quality arises from a comparison between consumer expectations and the actual service performance. Evaluation of quality is not only based on the outcome of a service but also comprises evaluation of the process of providing service. Therefore it is important to measure and evaluate the quality of the service provided in healthcare services and specify new road maps in the light of the data acquired (Rajiani et al., 2018).

A variety of methods are used in evaluating the technical quality of the healthcare service provided. Among these methods the most commonly used one is the Structure-Process-Outcome approach developed by Donebedian (Donabedian, 1996). The structure factor here includes the structure of financial resources of health enterprise, human resources of health enterprise and organizational structure of health enterprise. The process factor is aimed at presentation and contains activities conducted when providing healthcare service. In health enterprise the process factor contains activities such as examination of patients, identification of diseases and development and implementation of appropriate treatment plans. In evaluation of the technical quality of healthcare service the third element of the approach developed by Donebedian is the outcome factor. The outcome factor refers to the impact of the healthcare service provided on the health status of patients and society. If the services provided have made desirable changes in the patient's health condition, it is possible to state that the service outcome is good. In the healthcare service provided the quality is specified based on variables such as effectiveness, efficiency, productivity, optimality, acceptability, legality and equality (Zeithaml et al., 2020).

## 2.5. Measuring the Quality in Healthcare Services

The literature has many definitions of models concerning the measurement of service quality. However, the "SERVQUAL SCALE" which was developed by Zeithaml, Parasuraman and Berry and can measure five different dimensions of service quality comes into prominence among other scales developed to measure service quality. This measurement method has sections comprising 22 items. The measurement method primarily defines the expectations of customers from quality service and then tries to measure the quality of the enterprise to which service is provided for the same quality indicators. Differences between the expectations in the first section and the perceptions in the second section are specified as service quality. Questions are evaluated in five dimensions among themselves. Service quality is a measure of difference between desires or expectations and perceptions. A study conducted by Parasuraman et al. indicated that service quality has five dimensions. They are; physical properties, reliability, eagerness, trust and empathy. It is crucial for an enterprise to place themselves in the customers' position, show personal interest to them and give them confidence (Parasuraman et al., 1988).

There are five differences (spaces) indicating the presence of service quality problems. These differences are differences between the customer expectations and perceptions and the direction and size of differences define service quality.

Difference 1: Difference between the customer expectations and the management's perception of customer expectations,

Difference 2: Difference between the management's perception of customer expectations and the service quality standards,

Difference 3: Difference between the service quality standards and the service delivery,

Difference 4: Difference between the service delivery and the external environment and communications,

Difference 5: Difference between the expected service and the perceived service (emerges based on the first four dimensions).

The service quality score is tried to be determined by calculating the difference between the expected and perceived service quality ratio in the survey (Parasuraman et al., 1988). It is possible to explain the correlation between the expected service and the perceived service as follows:

1. If the perceived service is lower than the expected service; the perceived quality is not satisfactory and will not satisfy the customer.
2. If the expected service is equal to the perceived service; the perceived quality is satisfactory and will satisfy the customer.
3. If the perceived service is better than the expected service; the perceived quality is satisfactory and the customer will desire to continue to receive the service (Filiz, 2013).

Zeithaml, Berry and Parasuraman offered many applications for the Servqual Scale. However, the most important function of the scale is to follow service quality trends with periodic customer surveys. Also it can be used in marketing studies in order to compare the service of an enterprise with the service of a rival firm and define the dimensions of good or inadequate service quality.

## 2.6. Total Quality Management

Total Quality Management is a modern management style of customer satisfaction for increasing the quality, developing the competition power and lowering the costs. Propounded by Feigenbaum, TQM aims to provide the proper production or service on the first try and repeat this every time (Feigenbaum, 1991). For that purpose it grounds on providing the effectiveness of an enterprise as a whole, enabling it to have flexibility and increasing the competition power. Feigenbaum defines TQM as an effective system combining the quality development, quality protection and quality enhancement efforts of different groups in an organization to provide production and service at the most economic level based on customer/patient satisfaction.

The TQM system grounds on directing all units contributing to production and ensuring customer satisfaction in line with customer expectations (Akalin et al., 2002). TQM is a management approach which adopts a customer-oriented sense of quality, aims for continuous education and development under the leadership of top management. TQM focuses on supervision to prevent possible problems, attaches importance to the process instead of intra-organizational fears and sense of competition, adopts a horizontal organization instead of vertical hierarchical stages. Main objective of Total Quality Management is the satisfaction of those who serve and receive service.

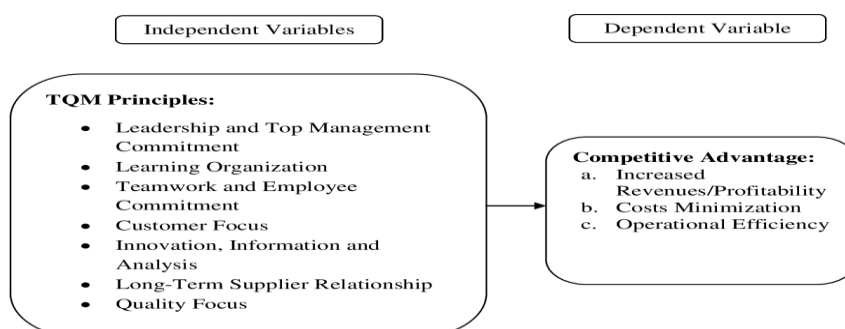
Total Quality Management is associated with a variety of concepts such as vision, mission, goals and zero error. Vision refers to the place and condition to reach and the direction to progress in time, while mission refers to the existence purpose of the organization. The PDCA (The Plan-Do-Check-Act) cycle also known as the Deming Cycle, is a popular TQM problem-solving tool. TQM studies are maintained via process enhancements and this cycle continues endlessly (Gökmen, 2001).

## 2.7. Fundamental Principles of Total Quality Management

Fundamental principles of Total Quality Management such as leadership in management, customer orientation, everyone’s participation and communication, continuous enhancement (Kaizen), management with goals and data, process management, prevention-oriented approaches and continuous education and organization also form the basis of the philosophy of quality management (Rouf et al., 2017). TQM gives place to current issues like participation, continuous development and importance of human resources. Conceptual Framework is shown in Figure 2. TQM not only tries to zero out negative quality elements, but also aims to constantly enhance positive quality properties. By this way it foregrounds lowering the costs, providing savings and offering quality service to customers at affordable price. One of the best indicators of the development level of a country is the quality of goods and services. Quality contains many different elements. Quality is customer satisfaction, productivity, flexibility and being effective. It refers to complying with a process, an investment and a program and doing things in time. In other words quality is a systematic approach to the sense of perfectness. For TQM, there is no last stop on the road taken. It requires to constantly renew and improve the self and learn (Shatrov et al., 2021).

It is possible to collect methods used in reaching total quality management under different topics such as quality circles, benchmarking, total quality control, quality assurance system, full participation, organizational culture, data and statistical process control (Lim et al., 2018; Feibert et al., 2019).

Figure 1: Conceptual Framework



Source: Hilmy, 2016.

## 2.8. Advantages of Total Quality Management

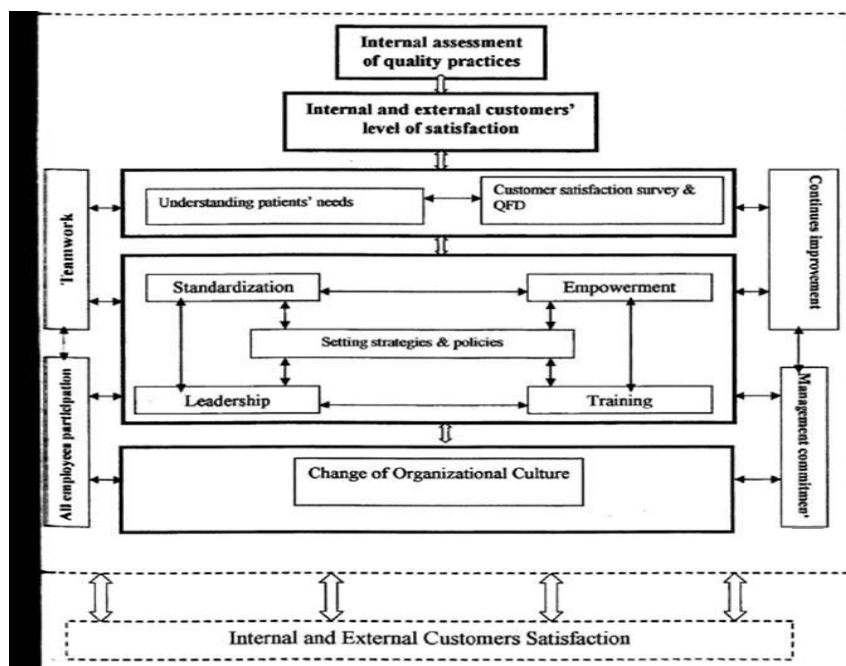
As long as conditions required for the success of total quality management are fully satisfied, the studies will provide positive outcomes. Advantages of a successfully implemented TQM model for the organization are both countless and extensive (Feibert et al., 2019). TQM increase in competitiveness level, profitability level and market share, development of team work and collaboration, decrease in customer complaints, increase in customer loyalty. Besides it provides continuous

enhancement of all processes, increase in employee motivation, increase in labor productivity, decrease in costs, decrease in production preparation periods, decrease in maintenance and repair expenses and decrease in outages, scraps, reprocessing-maintenance activities during production (Yatkin, 2014; Petrick and Furr, 2017). TQM aims to create a new organizational culture, include all employees in the organization in the system.

**2.9. Expectations from the Total Quality Management Application Project**

As a result of TQM applications it is expected to provide satisfaction to those who receive service, be reliable and up-to-date in service delivery, create an environment of trust, make zero-error production by constantly reviewing the service production processes. Also it is expected to create an appropriate organizational culture, provide a basis for the philosophy of learning individual and learning organization to settle in the organization, solve problems on site via the quality board, quality development team and quality circles of every unit (Lebcir and Sideras, 2021). Total Quality Management Implementation is shown in Figure 2.

**Figure 2: Total Quality Management Implementation—Framework Model**



Source: Balasubramanian, 2016.

TQM facilitates increasing job satisfaction, motivating to make decisions, have authorization and responsibility, constantly developing the knowledge and skills of employees, encouraging employees to see each other as individuals benefiting from service delivery and developing internal customer consciousness. It is expected that creating an understanding based on collaboration and enabling the personnel to see their deficiencies and improve themselves and promoting the personnel according to more objective criteria as a result of these values. (Lebcir and Sideras, 2021).

**2.10. Reasons of Failure in Total Quality Management**

Enterprises intending to establish a total quality system may sometimes fail to properly provide the mutual interaction and coordination of interorganizational units and face difficulties in achieving a specified goal on the road taken. Main problems in such enterprises are that it is usually ignored that everyone in the organization has work to do in routine (Petrick and Furr, 2017). Also other failures encountered in creating TQM are can be explained as follows: that employees do not adequately adopt the TQM process, TQM is tried to be created with the help of an advisor and this advisor is not informed of the dynamics of firms. Besides it importance is attached to quality but the total quality is not stressed adequately, top management leadership is inadequate and organizations embark on quality enhancement without a clearly specified strategy. Another reason for the failure of TQM systems is that the top management cannot establish adequate communication with employees and convey the organization which is tried to be created to employees adequately. Another reason is that education and innovation investments which actually are the first thing to be done cannot be made in time due to attaching importance to short-term profitability.

A quality service is necessary in every area. However, it is a must for the healthcare field (Kömürçü et al., 2014). It is because errors will be irreversible when it comes to human health. In this respect the effort of healthcare enterprises to catch quality

in service is an obligation rather than a need (Gill and Gill, 2005). In the delivery of healthcare services the concept of quality is not new. We can assume that the first studies on the concept of quality in healthcare services began in the 19th century. Florence Nightingale conducted studies on enhancement of hospital services in England in the 19th century (Talib et al., 2011). The system that Codman, one of the leading names in quality research, developed by examining both the process and outcomes of clinical care services provided by doctors and hospitals has formed a basis for minimum hospital standards developed by the ACS (American College of Surgeons). The Joint Commission for Accreditation of Healthcare (JCAHO) which is an important non-profit organization concerning quality was established in the USA in 1952. In health sector the Total Quality Management (TQM) applications have begun since the 1980s. In our country the concept of quality in healthcare services has begun to be handled at the national level with quality studies conducted by the Ministry of Health in healthcare organizations since 2005 (Lebcir and Sideras, 2021). The level of healthcare services is accepted to be an indicator of the development level of countries. Quality applications performed in health sector focus on patient satisfaction, continuous development, team work, process management, systematization, organizational culture, organizational structure and finally supportive leadership (Salaheldin et al., 2015). Also the studies conducted have demonstrated that creativity and innovation have a positive and significant impact on achieving total quality applications (Prakoso et al., 2017). If we precisely know what "internal customer and external customer" deduce and expect from quality in the philosophy of TQM, it is believed that the quality studies will be more effective (Rajiani et al., 2018). Comparative literature review of TQM is shown in Table 1.

**Table 1: Comparative Literature Review of TQM**

Authors	Year	Study Design	Study respondents	TQM predictors	Findings
El-Tohamy & AlRaoush	2015	Cross-sectional design	1290 healthcare professionals in accredited governmental hospitals in Jordan	Leadership commitment to quality, customer focus, continuous improvement, teamwork, employee involvement, education and training	A significant impact of all TQM principles on the overall hospital effectiveness.
Kumar et al.	2016	Experimental design	275 healthcare professionals in Pakistan hospitals	Training	Attitudes of healthcare professionals on waste management have increased significantly with training (TQM).
Nithya	2018	Empirical Study	1012 healthcare administrators in accredited governmental hospitals in India	Supplier management, leadership, strategic quality planning, information and analysis and also knowledge and education	Top management quality, customer focus, knowledge and training, continuous process improvement, employee involvement, process management, quality systems and culture, teamwork and communication are important on the overall hospitals.
Wang et al.	2019	Cross-sectional design	492 nurses in a Taiwan hospital	Training	Implementing TQM improves nurses' attitudes towards the patient-safety culture.
Babu&Thomas	2020	Cross-sectional design	265 health-care professionals (administrators, managers and heads of departments) in Kerala hospital	TQM practices measure and leadership	Leadership is acting as the key driver in implementing quality systems in the hospital, leadership and TQM practices considered in this study.
Alshourah	2021	Cross-sectional design	140 health-care professionals in Jordanian Hospitals	Leadership commitment and Support to Quality, strategic quality planning, information and data, training and participation, customer focus	The impact of hospital managers on TQM studies.
Lee & Lee	2022	Cross-sectional design	261 employees at general hospitals in South Korea.	Leadership, the role of the quality department, employee participation, education and training, and process and operational procedure	Role of topmanagement is essential for the successful implementation ofhealthcare activities (motivating employees for their active participation in the program, education and training and progress at the organization level)

In medical establishments the quality of healthcare services is to be specified based on basic characteristics of the healthcare service provided such as effectiveness, efficiency, productivity, optimality, acceptability, legality, equality, continuity, timely service delivery, participation and accessibility. The criteria of service quality in health include a number of elements such as nurse and doctor service, care quality perception, medical personnel's behavior, accessibility to polyclinic units, total time spent throughout the treatment, food service, noise in the hospital, room temperature, cleaning and parking lot in the hospital. Principles that customers/patients use when measuring the quality of the service they receive are defined as reliability, responsiveness, confidence, empathy, tangibility, ability, access, kindness, trust, communication and understanding and knowing the customer (Amelia et al., 2019). The determinant of quality is about "what" the services are and "how" they are offered. In healthcare services the determinant of service quality is mainly the human factor. Here the dimension of the communication established by doctors, nurses and other personnel providing support services (such as patient admission and registration) with patients plays a key role in the service quality perception of patients. Also the knowledge, skills and attitudes of the healthcare personnel having a role in offering healthcare service are noteworthy in this perception (Martin et al, 2021).

### 3. CONCLUSION

In medical establishments customer/patient satisfaction is crucial. A variety of factors such as humanitarian reasons, economic reasons and marketing strategies are effective on patient satisfaction. Apart from these doctor-patient relationship, doctor's behavior, personnel-patient interaction, patient care and quality, clear informing of patients and relatives by doctors, physical conditions of the space providing healthcare service, technology used, trust and the amount of the fee paid for the healthcare services received affect patient satisfaction. It is known that patients who are satisfied will display more positive behaviors in the treatment process. "Patient Loyalty" is a condition in which patients reuse or prefer the medical establishment when they need it. When there is patient loyalty, economic reasons rank second (Alumran et al., 2021). In healthcare services factors such as past experiences and expectations of individuals, attitudes and behaviors of those providing service affect quality and the compound of the perceived quality and technical quality determines the general quality level (high, low). In addition the perception and evaluation of patients concerning service quality play a role not only in their choices but also in the choices of other people. The studies have found that the recommendations of friends and relatives are gradually becoming more effective on the hospital choice of patients.

TQM grounds on respecting humans. Considering that the intended population in healthcare services is humans and there is zero tolerance for error, respecting humans apparently comes into prominence. In healthcare services it is crucial for employees to take part in TQM studies. It is necessary to meet expectations such as providing physical working conditions and fees to increase the effectiveness and success of healthcare professionals, creating an adequate environment of support, and progress in the profession, having clear job definitions, having distinct authorities and responsibilities.

In the healthcare field early diagnosis, early treatment, correct diagnosis, correct treatment and rehabilitation services, as well as physical spaces corresponding to patient expectations and patient and employee satisfaction have become essential applications for enterprises. As a consequence enterprises providing employee happiness and customer/patient satisfaction will come into prominence in the service sector which has an almost limitless competition environment.

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