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# **TOTAL QUALITY MANAGEMENT FOR BETTER HOSPITAL SERVICES IN ALGERIA**

### **Abstract:**

The last decades has witnessed a revolutionary array in health care dimensions. Terms like 'Total Quality Management', 'ISO-9000', 'Continuous Quality Management', 'Reengineering', 'Benchmarking' and 'Accreditation' have embraced and got incorporated in the delivery of health care services.

Health Care Systems throughout the world are undergoing significant changes. These changes are due to acknowledgment of either medical errors or system errors. Other factors responsible for these changes include: Legal obligation for quality management in some countries, assessment of service quality provision, the sophistication of medical care and increasing costs of health care.

This study attempted to examine the extent to which MUSTAPHA DAMERJI Hospital in Algeria, as a case study, implemented TQM constructs. The study also aimed at investigating if there were significant differences in the respondents` perception on TQM implementation due to demographic variables (gender, age, education, and years of experience). For this purpose, a questionnaire was developed and distributed to (280) employees. Number of (250) questionnaires were returned which comprises 89.28% of the target sample.

The study made some recommendations regarding TQM implementation that would assist management of hospitals to increase their organizational performance and effectiveness.

### **Keywords:**

Total Quality Management (TQM); TQM Factors. Government Hospitals. Factor Analysis.

**JEL Classification:** I00

## INTRODUCTION

When Algeria was first liberated, the Algerian health care system was skeletal, consisting of 1 physician per 33,000 people (or an estimated 300 doctors in all) and one trained paramedic per 40,000. The approach at the time was primarily curative rather than preventive. Since then the health care system developed in a great scale; for example, from 1975, new law enabled people to get national health care for almost free. Also, Algerian government in 1970s and 1980s started to adopt immunization programs which were not provided in 1960s. Rather than investing in expensive hospitals, the government emphasized health centers and clinics, so that patients could easily prevent diseases. From 1990s, health services started to become privatized.

And despite efforts by the state, saw the medical field reversals strong volume caused many of the practices represented in the deterioration of the status of various structures hospitalization and deterioration of services provided by, in addition to nag many doctors because of bad situation professional and social, and the emergence of private clinics competition.

In the past there was not much direct pressure to improve quality in medical sector especially in Algeria, but now public health services face increased competition from the private sector, along with rising expectations from patients who are more aware of what they need and what is available in terms of medical care. As a customer of health care, it is the patient who is the focus of the health care delivery system. In recent decades, total quality management (TQM) has become the buzz word in the management practice and organizations that seek proficiency to achieve the optimal accomplishments must rely on TQM to guarantee full satisfaction for all customers.

The main objectives of this research are to highlight the benefit of TQM implementation in the Algerian hospital by examining the basic principles of TQM in the healthcare. This paper aims to identify the major obstacles for TQM implementation in Algeria hospitals. The study will discuss the key TQM concepts and its importance in healthcare systems. In this study, we will intend to answer the following questions:

1. What is the stand of the Algerian's local hospitals today as regards TQM?
2. What are the quality levels of hospitals in Algeria ?
3. What are the problems possibly faced in the implementation of TQM ?
4. Who is likely to the effect of TQM implementation on the hospitals ?

### 1 - What is quality management?

Quality management (QM) is defined as the application of a quality management system in managing a process to achieve maximum customer satisfaction at the lowest overall cost<sup>i</sup> to the organization while continuing to improve the process.

Total quality management (TQM) can be defined as a management approach to long term success through customer satisfaction. TQM is based on all members of an organization participating in improving processes, products, services and the culture in which they work. The methods for implementing this approach are found in the teachings of such quality leaders as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa and Joseph M. Juran . The TQM can be also defined as the highest level of quality. The Total Quality Management is a way to develop and improve the quality of products and services through the involvement of all employees and to determine the role of each of them in coordination with other roles, It is an integrated system for the management always builds on the wishes of the client and

the process runs as a combination between quality as a strategic objective and competitive advantage, and between governance mechanisms can be used to achieve this<sup>ii</sup>. And confirms many as the continuous development of administrative processes and that audited and analyzed and the search for ways and means to raise the level of performance and reduce the time to accomplish by cutting out all the tasks and functions are useless and unnecessary for the client or for the process so as to reduce the cost and raise the quality level, relying at all stages of development on the requirements and needs of the client. And useful to consider the methodology to "total quality management" as an open system and an integrated Integrated Open system, and Jablonski indicates that the concept of total quality management, like other management concepts that vary concept and ideas about it, that this formal variation that is almost identical in contents aimed as It revolves around the target, which seeks to achieve the organization.

Total quality management (TQM) is an approach adopted by hospitals that are anxious to reduce operating expenses created by poor care and wish to provide high-quality care at competitive prices. TQM emphasizes both process and outcome and requires a dramatic shift in many established health care management values and concepts. TQM is based on the following concepts<sup>iii</sup>:

- Change must be based on needs of the customer, not the values of the provider.
- Lack of achievement most likely is caused by system failure rather than by individual performance; therefore, problem solving focuses on the process and joint responsibility rather than on improving individual output.
- Decisions for improvement must come from providers of the service (product) rather than from top managerial authority.
- The emphasis must be on continuous improvement rather than on meeting a specific standard. TQM calls for flexible planning and a climate of continuous change.

TQM begins with a simple idea and an assumption that everything can be continuously improved<sup>iv</sup>. TQM is a philosophy as well as a set of guiding principles and practices .that represent the foundations of a continuously improving organisation. It integrates fundamental management techniques, existing improvement efforts, futuristic quality plans, innovations and their successful implementation .

Quality improvement in health care organizations is considered as a means to better meet the needs and expectations of patients. adopting TQM in the health care industry is not as smooth or successful as in the manufacturing or service industries. today hospitals are being challenged to look at their operations and find more efficient ways to do business. Many hospitals are turning towards TQM for cutting costs and overall improvement in the quality of the services provided. The concept became popular in the health care industry during the late 1980s . Patient satisfaction is becoming increasingly important for the successful operation of private and public hospitals . further argues that the use of TQM has provided a partial cure to service quality problems in healthcare organizations. In US healthcare, TQM is associated with the Baldrige model and has been viewed recently by some as too ambitious for healthcare, while in Japan, healthcare services have not introduced TQM, but some hospitals have set up quality control circles which have been running successfully for some time<sup>v</sup> .

Past studies found that there was a growing consensus that patient satisfaction is an important indicator of health care quality. argued that determining the factors associated with patient satisfaction is a significant issue for health care providers. TQM further aims to provide organizations with a model for success through customer satisfaction. However, that there are some barriers encountered during the implementation of TQM in public and non-profit organizations due to the bureaucratic

culture and the passive behaviors. Consequently TQM initiatives must include an in-built culture of continuous improvement, which can help an organization satisfy the needs of its customers on an ongoing basis . Even the health care industry is bonded with the cultural background and the traditional professional style of leadership among physicians and other top management.

## 2 - TQM in Healthcare

In the 1860s, Florence Nightingale <sup>vi</sup> helped to lay the foundation for quality assurance programs by advocating a uniform system for collecting and evaluating hospital statistics. In 1910, a report by Abraham Flexner revealed the poor quality of medical education in the USA .

One of the key pioneers in assessing quality was Dr .E.A .Codman , who in 1914, studied the end result of care . His famous study emphasized the same issues that are being discussed today when examining the quality of care including<sup>vii</sup> :

- the importance of licensure or certification of providers.
- The accreditation of institutions.
- The necessity of taking into consideration the severity or stage of the disease .
- The issue of comorbidity ( two or more illnesses present at one time).
- The health and illness behavior of the patient , and Economic barriers to receiving care.

As in many other countries, TQM in healthcare came from industrial experience in the development of TQM concepts, theories and practices. However, to implement the same concept into the healthcare industry would be a disaster. Although anecdotal evidence suggests that the healthcare industry is not uniquely different from any other organisation or industry; closer examination suggests that the healthcare industry is, in fact, uniquely different on five major counts<sup>viii</sup>:

- its closer linkage to politics
- its complex organisational structure
- its inherent characteristics: intangibility, heterogeneity, inseparability, perishability, labour intensive, a credence product
- its objective is continually shifting, its environment is under siege from concurrent government changes
- differences in the perceptions, values and work ethic of the healthcare providers

Recognising these differences is imperative to the successful implementation and development of a TQM system in healthcare. Whatever the differences and problems, TQM should not be directly transferred into the healthcare industry. It is up to the quality professionals in healthcare to define principles, philosophies and techniques that will determine the quality standards appropriate for their own industry. The authors in this paper establishes the principles of TQM in a hospital setting, as TQM is very complex when implemented through the many processes and areas within a healthcare facility. In the authors' opinion, the following definition of TQM sums up the principal elements of TQM:

### 3 - Development of health system in Algeria

At independence the Algerian health care system was skeletal, consisting of one physician per 33,000 people (or an estimated 300 doctors in all) and one trained paramedic per 40,000. The approach at the time was primarily curative rather than preventive.

Since then the country has made tremendous progress in health care. From 1975 onward, a new system of almost free national health care was introduced. Hospitalization, medicines, and outpatient care were free to all. In 1984 the government formally adopted a plan to transform the health sector from a curative system to a preventive one more suited to the needs of a young population. Rather than investing in expensive hospitals, the government emphasized health centers and clinics, together with immunization programs. The results were impressive: whereas the infant mortality rate was 154 per 1,000 live births in 1965, it had fallen to sixty-seven per 1,000 live births by 1990<sup>ix</sup>.

By 1991 Algeria had about 23,000 physicians, or one for every 1,200 inhabitants, and one nurse per 330 people. About 90 percent of the population had access to medical care, and only in remote rural areas did people have difficulty reaching health care services. Algeria also had 2,720 basic health units, 1,650 health centers, thirteen university hospitals, 178 general hospitals, and eighteen specialized hospitals. Overall, there was one hospital bed for every 380 people. The average occupancy rate of hospitals was 55 percent, while the average length of stay was six days.

In 1993 most health services were provided by the public sector, although a small private sector comprising some 20 percent of Algerian physicians also existed. A network of hospitals and ambulatory facilities was organized into health districts. The districts consisted of a general hospital, one or more urban and rural maternity centers, health care centers, and dispensaries. These facilities were complemented by specialized clinics and teaching hospitals. Three regional public pharmaceutical enterprises oversaw the wholesale purchase and distribution of drugs, a public company imported and maintained medical equipment, and a number of pharmaceutical units produced a limited quantity of serums, vaccines, and other drugs.

Expenditures for this health care system increased at an annual average rate of 14 percent during the 1980s. Estimates for health services expenditures were 5.4 percent of Algeria's gross domestic product (GDP--see Glossary), compared with a 5.2 percent average for countries with similar middle income, and 7.2 percent for some of the lower income Organization for Economic Cooperation and Development (OECD) countries. Funding came from the state budget (20 percent), the social security system (60 percent), and individual households (20 percent). In 2010, the government outlined a plan to invest over 28 billion dollars into improving sanitation and hygiene. More treatment centres focusing on cancer and maternity care will be created. And a greater number of ophthalmology centres are required; trachoma, which causes blindness if left untreated, has been a serious problem in the country<sup>x</sup>.

The Hospital management and administration is concerned with the organization, coordination, planning, staffing, evaluating and controlling of health services for the masses. The primary objective is to provide quality healthcare to people and that too in a cost-effective manner. Professional hospital administrators have proven how institutions can be managed proficiently, economically and successfully in a given time period<sup>xi</sup>.

Total Quality Management (TQM) is still in its infancy stage in the Algeria health system, Although TQM has become a must in Algeria hospitals, until now, it has not

been effectively implemented. TQM implementation in Algeria healthcare organizations derives its essence from the rapid global changes and challenges facing the healthcare industry.

#### 4 - Methodology and Procedure

- Population and Sample

The University Hospital of Tlemcen, "Mustafa Dmarja" one of the oldest and largest hospitals on the local level and the national construction dates back to the colonial era, where a hospital over a wide area and far away from the population, but the passage of more than half a century, but its features and non-also of the geographical distribution of the population and buildings. Is among 13 university center a hospital<sup>xii</sup>dispenser on the national territory and is one of the largest hospitals in the state level, the only one that contains the various medical specialties. Receives a large number of more than 30,000 patients annually and operates more than 2,000 employees.

The survey questionnaire was distributed randomly to 280 employees, where 250 responses were received, representing a response rate of 89.28%. All received responses were considered statistically usable.

The questionnaire was distributed on a sample of patients where the respondents were asked to rate each of the quality critical factors as to their level of importance to a successful implementation of quality management processes in their organizations. The data have been gathered by using a five-point Likert-type scale, ranging from 1 (strongly disagree) to 3 (neutral) to 5 (strongly agree), was used to measure the research variables. The questionnaire covered two parts. The first part focused on demographic variables such as, gender, age, education, and years of experience, while the second part dealt with TQM implementation and included 33 statements covering the seven constructs of the study: customer focus, employee involvement, management commitment, teamwork, continuous improvement, training, and organizational culture. For the purpose of construct validity, four experts were approached and consulted with the questionnaire, and their remarks were considered. Data were evaluated for normal distribution, and the skewness for the constructs ranged, as shown on table (2), between (.003) and (.967), which indicated that the data were normally distributed. Cronbach`s Alpha coefficients were calculated for all TQM constructs and shown also on table (2). The values of Cronbach`s Alpha shown can be considered satisfactory and confirm the reliability of the instrument.

- Results and Discussions

Based on the literature of the study and the statistical analysis made, specific results related to each of the study variables were drawn. This study examined, firstly, the extent to which Mustapha Damerji Hospital in Algeria, as a case study, implemented TQM constructs and secondly, it investigated if there were significant differences in the respondents` perception on TQM implementation due to demographic variables (gender, age, education, and years of experience).

The sample included (250) employees, almost (65.2%) of them were male and (34.8%) were female. As can be seen from table (1), most of the sample participants (38.4%) were aged between 15 and 39 years old.

Furthermore, the majority of participants (44.8%) were holding Bachelor degree, and almost (30 %) of them had a long experience ranging from (11-15) years. The mean score of TQM implementation in Hospital, as shown was (3.808) with a standard deviation (.411). Table showed that the lowest mean was for Training (3.622) with a standard deviation (.603) while the highest mean was for employee involvement (4.107) with a standard deviation (.670).

Furthermore, table (3) show that there are significant differences in the respondents` perception of TQM implementation in Algerian Hospital due to their education or experience, since the calculated f value (3.021 and 4.325) for education and experience consecutively, are smaller than the tabulated f value. The value of f significance for education and experience factors (.023 and .001) consecutively supports the researchers` decision of rejecting the null hypotheses. This decision is consistent with the logic that the more educated or experienced an employee became, the better would be his/her perception of TQM implementation.

**Table 1: Respondents Demographics**

Demographics		Frequency	percent
Gender	Male	163	65,2
	Female	87	34,8
Age	Less than 15 years	88	35,2
	15 – 39 years	96	38,4
	40 – 54 years	43	17,2
	55 years and above	23	9,2
Education	Primary school	11	4,4
	Secondary school	56	22,4
	bachelor	112	44,8
	Higher studies	71	28,4
Experience	under 5 years	68	27,2
	5 – 10 years	66	26,4
	11 – 15 years	75	30,0
	over 15 years	41	16,4
Total		250	100

**Table 2 : kewness and Cronbach`s Alpha for TQM Constructs**

S.N	Construct	Skewness	Alpha
1	customer Focus	- 292	.661
2	Employee Involvement	- 845	.663
3	Management commitment	- 539	.756
4	Training	- 109	.632
5	Continuous improvement	- 723	.741
6	Teamwork	- 412	.725
7	Organizational culture	- 456	.801
8	All constructs	- 823	.901

**Table 3 :The Effect of Demographic Factors**

Factors	Test type	Value	Sig
Gender	Independent sample	T = .321	.756
Age	ANOVA	F =.845	.442
Education	ANOVA	F = 3.021	.023
Experience	ANOVA	F = 4.325	.001

### conclusion

The need for service quality delivery and achievement of high organizational performance are vital tools for competitive advantage and survival of any firm in the present intense global competition which spread across industries including the health care sector. The health care service in Algeria has grown in the recent decade which raises the concerns of patients regarding the quality of services rendered to them and their quest for standard in medical care services to their expectation. The present study explore the possible way of improving hospital performance and customer retention through the practice of operation flexibility as a managerial capability to manipulate changes and overcome challenges both internal and external which in turn leads to excellence in the health care delivery system of Algerian hospitals. This study revealed that operational flexibility was highly implemented in hospitals and there exist direct and positive relationship between hospital performance and operational flexibility. The study also found that the level of implementation of operation flexibility have a direct influence on the level of hospital performance. In nutshell, increasing awareness of patients' needs and operational flexibility practices among the top managers and senior medical officials of hospitals is of paramount important for continuous improvement process. The top management should employ the involvement of all medical employees and pay a maximum attention in creating, adopting and managing changes flexibly. Thus, more researches are needed on operational flexibility and organizational performance using different hospitals and mediating variables to assess the effect of employee's attitude towards implementation of operational flexibility.

TQM must be grounded in a continuous improvement philosophy. It is geared to the continuous improvement of quality in a hospital. However, the literature is devoid of suggestions as to how to sustain this never-ending journey. The authors are of the view that for TQM to actually constitute a never-ending process, it must deliver on performance. Therefore, TQM must be result-oriented in order for employees/management to believe it actually delivers a transformational strategy.

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- xii There are many university hospitals in under way soon to be operated, programmed in desert regions and high plateaus to reduce the gap in the level of health coverage in Algeria.