



Application of Total Quality Management in Private Healthcare Institutions: A Case-Based Study

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Abstract:

Accessing healthcare services is an issue of the highest order since they have different quality criteria than other services because they are concerned with a person's life. This study aims to identify the application of total quality management (TQM) in private healthcare institutions and the difficulties they face in its implementation. One city served as the case study setting for 2021. Data were gathered using a self-administered questionnaire predesigned according to the objectives and hypotheses of the study. 50 employees from private healthcare institutions in Derna, a city in northeastern Libya, were chosen at random. The participants were asked to rate 25 statements on a Likert scale. The data were statistically analyzed using the SPSS program. A p-value below 0.05 was considered significant. This study found that private healthcare institutions in the city of Derna are keen to apply TQM, despite the difficulties and challenges they face. In order to ensure that the patient is satisfied with the standard of the medical care he receives and to understand his perspective on it, it is essential to emphasize the importance of maintaining an acceptable level of quality management (QM) and to make every effort to remove any obstacles that can adversely affect that.

Keywords: TQM, Private Healthcare Institutions, Derna, Libya

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Introduction

Quality is not something that can be taken lightly; rather, it is the outcome of intense interest and wise planning, and it is the consequence of earnest efforts and excellent execution [1]. Quality is defined as "an intangible product that provides direct benefits and benefits to the customer as a result of applying or using human or mechanical effort or energy on specific and specific people or things, and the service cannot be physically acquired or consumed" [2]. In addition, it is: "Any act or performance that can be achieved by one party to another party and is an intangible gem, and does not result in any ownership and that its production may or may not be linked to material production" [3]. The implementation of TQM is a global trend that attempts to continuously raise the standard of healthcare services in order to meet patient expectations and make the best use of available resources to

enhance care outcomes. Patient safety can be improved in the healthcare industry by using TQM procedures. In this regard, TQM has emerged as a viable strategy for increasing the efficacy and efficiency of the demand for health care [4]. Quality has become more crucial in healthcare facilities recently, and the spectrum of care has expanded, particularly in light of the competition from the private sector. Because health services have entered the realm of commercial business, they are no longer restricted to what the government offers. Quality requires continuous improvement in the work environment, services, and products. This can be achieved by recognizing and understanding the client's requests and matching them to the underlying needs, or by identifying the client's needs before experiencing them. The quality is appropriate to the standards established by the designer and suitable for business applications [5]. In order to develop a product and deliver it to the consumer in a way that meets his wants and expectations, a product's quality can be summed up in a few key qualities. Healthcare quality can be summed up as the use of research and medical technologies in a way that maximises benefits for the general public's health while minimizing hazards. Thus, the magnitude of the balance between risks and benefits determines the level of quality. As a result, TQM is an approach that relies on everyone's coordinated efforts [6]. It can also be viewed as a group of initiatives and projects to which all institution leaders and staff members are committed in order to meet the needs and goals of clients [7]. One of the most important core ideas of TQM is keeping the customer in mind and continually meeting his requirements and expectations. All staff members at healthcare facilities must embrace this concept and integrate it into the institution's culture while doing a careful examination of the requirements and preferences of the patients in order for this strategy to be successful [8]. The focus of TQM is on people and processes. Organizational success and consumer happiness are its objectives [9]. The main challenges facing today's health services institutions include rising healthcare costs, reliance on technology, and the requirement to adhere to international standards and licenses [10]. Another challenge is satisfying patient demands, which call for healthcare facilities to maintain a high standard of service. The impact of putting TQM concepts into action on an organization's overall effectiveness and performance has been the subject of numerous studies. Several research have found meaningful and positive correlations [11]. Executives and staff in general health services institutions are extremely concerned about the phenomena of inadequate implementation of comprehensive QM in order to improve the quality of health services. Public healthcare facilities have been found to be unprepared and vulnerable to man-made disasters, despite having a disaster plan and holding drills and simulations. The ability of the medical facility to provide patients with high-quality, secure care may be impacted by all of these factors [12]. This study aims to identify the impact of QM on the performance of health services at private healthcare institutions in the city of Derna. It also seeks to identify the major difficulties and challenges to implementation and provide suggestions for solutions.

Material and Methods

The original study participants were director managers, administrative managers, and healthcare professionals. Private health centers and clinics served as the study's sample. 50 participants were chosen randomly. In order to get the most accurate results, we were careful to diversify the study sample in terms of gender, age group, educational level, job position, and work experience. The study sample was employed to collect data using a self-administrated questionnaire. The study response rate was 100%. An explanation of the subject, goal, and purpose of the questionnaire was provided to the respondents in the questionnaire. The personal information of the study sample participants was included in the questionnaire's first section. The questionnaire's second portion has 25 statements in it. The Likert scale, which has five levels, was used to ask the respondents to rate their agreement with each statement. The questionnaire's statements were distributed on the basis of the study's hypotheses, which were the following:

H1: Private healthcare institutions in the city of Derna do not apply TQM.

H2: Private healthcare institutions in the city of Derna do not face difficulties and obstacles in the application of TQM.

After the data had been gathered, it was loaded into tables that had been created specifically for that purpose. The mean values and the standard deviations of the responses were calculated. In order to find any significant differences between the answers of the study sample participants, one sample t-

test was performed to help the study reach its goals and prove its hypotheses. The statistical program SPSS was used to execute the study in order to produce results that were as accurate as possible.

Results and Discussion

Five tables with the study's findings have been created from the data that have been condensed. The first table displays the respondent's socio-demographic characteristics, while the second and third tables present the statements that are based on the hypotheses of the study. Tables 4 and 5 represent the results of the study hypotheses test.

Table 1: Respondents socio-demographic characteristics, n=50

Variables	Frequency	Percentage
Gender:		
Male	34	68
Female	16	32
Age (Years):		
< 25	3	6
25 – 35	7	14
36 – 45	13	26
46 – 55	22	44
≥ 56	5	10
Educational Qualifications:		
B.Sc.	11	22
M.Sc.	27	54
Ph.D.	12	24
Job Position:		
Director Managers	7	14
Administrative Managers	13	26
Healthcare Professionals	30	60
Work Experience (Years):		
1 – 5	5	10
6 – 10	21	42
11 – 15	19	38
≥ 16	5	10

Table 1 indicates that 68% of the respondents were male. The participants' ages, which made up 44% of the study sample, likewise ranged from 46 to 55. It should be mentioned that the answers provided for this study's questions ranged from 1 year to more than 16 years of experience in the relevant fields of work and specialisation. In terms of education, 22% of the respondents have a bachelor's degree, followed by 54% with a master's and 24% with a doctoral degree. As a result, the chosen sample had people with various levels of education and was free of illiteracy. According to the same table, the

targeted personnel are director managers, who make up 14% of the targeted workforce, administrative managers, who make up 26%, and healthcare professionals, who make up 60%. In this context, it should be highlighted that the different job positions in the study sample contained a range of responses and perspectives due to different experiences and tasks, which is a crucial aspect of the study's findings.

Table 2: Responses of the study sample that measure the application of TQM, n=50

SN.	Statements	\bar{X}	$\pm SD$
1	The health institution has a plan to improve the level of performance of the health service it provides.	4.4300	0.59152
2	The quality of health services is one of the most important strategies of the health institution.	4.3200	0.68836
3	The management of the health institution works to perpetuate improvement and training.	4.6300	0.51405
4	The management of the health institution trains its employees to provide distinguished health services.	4.3100	0.78983
5	The management of the health institution is keen to satisfy its employees.	4.0300	0.87727
6	The management of the health institution confirms the quality of the medical service provided.	4.2600	0.75069
7	The management of the health institution provides a modern information system.	3.8900	0.74745
8	The management of the health institution encourages teamwork.	4.5400	0.62765
9	The management of the health institution aims to ensure a high level of quality.	4.5600	0.70173
10	The management of the health institution has a council concerned with the quality of health services.	4.4700	0.74698
11	The management of the health institution always strives for excellence in providing health services.	3.5900	0.90179
12	The administration of the health institution focuses its attention on the patient.	4.1300	0.74203
13	The management of the health institution focuses on periodically measuring the degree of patient satisfaction.	4.5500	0.59382
14	The management of the health institution works to identify and address patients' complaints.	4.3000	0.62636
15	The management of the health institution emphasises providing services that are in line with the manager's expectations.	4.0700	0.67712
16	Patient satisfaction is a special priority for the health institution.	4.7200	0.61390
Total		4.3000	0.36273

It is clear from Table 2 that the average responses to the first hypothesis statements ranged from 3.59 to 4.72, while the standard deviations of the values ranged from ± 0.51 to ± 0.90 . This means that among the efforts of private healthcare institutions in the city of Derna to implement TQM, patient satisfaction ranked first, while maintaining improvement and training ranked second, ensuring high quality standards ranked third, and striving for excellence in performance came in last.

Table 3: Responses of the study sample about the difficulties faced in the application of TQM, n=50

SN.	Statements	\bar{X}	$\pm SD$
1	The lack of a specific strategy for applying QM.	4.6400	0.51405
2	Lack of expertise in the health institution capable of applying QM.	3.5400	0.80873
3	Lack of financial resources allocated for the application of TQM.	4.0100	0.75872
4	Absence of annual planning to determine the needs of the health institution	4.0600	0.77616
5	lack of qualified personnel in some medical fields	4.1900	0.61167
6	Shortage of cadres in the auxiliary medical fields	4.1500	0.81767
7	The absence of standard measures for the quality of health services	3.9100	0.88100
8	Inadequate training programmes and continuous improvement	4.1800	0.82505
9	The high costs of applying TQM.	4.7200	0.82118
Total		4.1556	0.39784

Table 3 shows that while the standard deviations of the values ranged from ± 0.51 to ± 0.88 , the means of responses to second hypothesis confirmations ranged from 3.54 to 4.72. This means that among measures of the difficulties and challenges faced by private health care institutions in the city of Derna to implement TQM, the high application costs ranked first, while the lack of experience in the health institution capable of applying TQM ranked last.

Table 4: Result of the first hypothesis test.

Calculated T	Tabular T	p-value	H0
25.341	2.009	0.000	Rejected

The one sample t-test was used, and the results of the test, as shown in Table 4, indicate that the value of calculated T is greater than its tabular value, and this means rejecting the null hypothesis (H0) and accepting the alternative hypothesis (Ha). This confirms that private healthcare institutions in the city of Derna apply TQM.

Table 5: Result of the second hypothesis test.

Calculated T	Tabular T	p-value	H0
20.526	2.009	0.000	Rejected

The one sample t-test was used, and the results of the test, as shown in Table 5, indicate that the value of calculated T is greater than its tabular value, and this means rejecting the null hypothesis (H0) and accepting the alternative hypothesis (Ha). This confirms that private healthcare institutions in the city of Derna face difficulties in applying TQM.

The total mean average was more than three in both hypotheses. This confirms the agreement of the study sample with the hypotheses' statements. This can be checked definitively by applying a one-sample t-test. According to tables 4 and 5, the calculated value amounted to more than the tabular one that equals 2.009 in each hypothesis at the level of significance (0.05). This indicates that there are statistically significant differences between the answers and in favour of the answers that agree

with the statements of all hypotheses. From the foregoing, we conclude that all hypotheses constructed for this study have been rejected. The findings of this study are somewhat consistent with previous studies, particularly when it comes to patient satisfaction as one of the efforts to implement TQM [4, 6, 10] and to the high cost of care as one of the obstacles and challenges that health managers must overcome while implementing TQM [10, 13, 14].

Conclusion

The purpose of this study was to determine the extent of TQM application by private healthcare institutions in the city of Derna as well as the challenges they have encountered. According to the analysis's findings, private healthcare institutions have a tough time implementing TQM because of certain practises they must follow. Due to the fierce competition among these institutions, it is ultimately vital to emphasise the necessity of implementing TQM in the private healthcare sector. The study concludes that it is important to focus on the patient because they are the centre of attention for healthcare institutions. In addition, the patient's satisfaction with the quality of the healthcare services that are provided to him helps to increase the market share of healthcare institutions and achieve profitability, which aids in the survival of the healthcare facility. The study suggests that Derna's private healthcare institutions should routinely assess their patients' levels of satisfaction. Health sector stakeholders would benefit from this study because it will improve organisational performance and the performance of healthcare personnel. In light of the limitations of this work, it is reasonable to suggest that future studies broaden the scope of this work by including studies conducted in other contexts and studies that employ different research approaches. It should also create a comprehensive TQM taxonomy to describe how and why TQM practises come together in environments that support improved performance.

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