

# *A Literature Review Based Analysis of Total Quality Management (TQM) Implementation towards Quality Improvement in Bangladeshi Hospitals*

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**Abstract** - This study intends to explore the current literature on TQM and its implementation in healthcare organizations, where the author plans to conduct a review of ten recent works of literature on TQM implementation in around the world and propose factors for successful TQM implementation in hospitals. A general literature review process has been adopted for this research. The literature used in this study has been published in the scientific peer-reviewed journals. Firstly, a total of 50 publications were considered for reviewing TQM or quality management implementation systems published from 2015 to 2019. Then further the 20 papers were examined for their empirical and review studies. Finally, the 10 research papers were reviewed for identifying the quality elements. All the TQM practices recorded from these ten papers for this present study.

**Keywords** - Total Quality Management; TQM; TQM Implementation; Hospitals; Healthcare Organizations.

## I. INTRODUCTION

Total Quality Management (TQM) is a management-based approach with the participation of all members of an organization in improving processes, products, services and the culture to achieve a higher level of satisfaction of customers and other associated stakeholders (Yeng, Jusoh, & Ishak, 2018). It is considered a significant factor for the long-term success of an organization. TQM implementation has been an essential aspect of improving organizational efficiency. Numerous scholars have investigated the links between TQM and performance. While examining the relationship between TQM and performance scholars have used different performance types such as financial, innovative, operational and quality performance (Laboso, 2016).

TQM has appeared as a prospective solution to develop the efficiency and effectiveness of health care demand. It is becoming progressively crucial for the successful operation of hospitals during the last couple of decades (Ahmed et. al., 2015; Ishfaq, 2016; and Alqasimi, 2017). The augmented concentration to quality is due to governmental regulations, manipulate of customers, and hospital management initiatives. So, the role of government as the primary source of healthcare services has changed. Besides, the healthcare market is altering from producer to customer-oriented market due to the rising influence of customers and public pressures. As a result, the patient is flattering a customer for the healthcare organizations, or more likely, a direct strategic partner who contributes in a decision-making process. The changes in the environment, society, and

political policies have significant impacts on management in hospitals as well. Healthcare organizations have many problems in a competitive marketplace with little support from official bodies, particularly in Bangladesh (Chowdhury et al., 2009; Salam et al., 2014; Islam et al., 2016).

Different approaches are being used to ensure and improve quality by adopting the best practices, tools, quality assurance mechanisms, and processes from other sectors where they have proved their worth (Natarajan, 2006). TQM is one such approach which tends to improve quality and reduce costs (Ovretveit, 2000). Many hospitals worldwide have implemented TQM successfully (Counte et al., 1995; Lemmink, 2000; Al-Marsumi, 2007; Kozak et al., 2007; Kunst, and Miller et al., 2009). Predominantly many Asian and African developing countries are implementing it as well (Al-Shdaifat, 2015; Jarrett, 2016; Ahmad et al., 2017; Milner, 2007; and HALIS, R. TWATI, & HALIS, 2017). TQM is implemented successfully in hospitals such as, Florida Hospital in Orlando; Community Memorial Hospital (CMH) in Canada; Baptist Memorial Hospital, Memphis, Tennessee; Rush-Presbyterian-St Luke's Medical Center, Chicago; West Jersey Health System, New Jersey; Apollo Group of Hospitals, India; Campden and Campbelltown Hospitals, New South Wales; St Mary's Hospital in Grand Rapids, Michigan; B.M. Birla Heart Research Centre, Kolkata; Max Super Specialty Hospital, New Delhi; Holy Spirit Hospital, Mumbai; and The Castle Street Hospital for Women (CSHW), Sri Langka.

On the other hand, the quality of hospitals in Bangladesh is not up to the mark in comparison to the high-income countries. TQM is a newly introduced Program in Bangladesh, which is hosting by the secondary District Hospital (DH) as a piloting project. 5S-CQI-TQM is the primary approach, step by step, improvement of the hospital environment will be the main focus for TQM implementation. This approach will be contributed significantly to improve the quality of hospitals in Bangladesh (Begum & Islam, 2015 and Islam et al., 2016).

5S-CQI-TQM activity for the improvement of hospital services is under the Hospital Section of Directorate General of Health Services. This activity is technically and financially supported by technical agencies including JICA, GIZ, UNICEF and WHO. The primary objective of this activity is to improve the quality of services to be measured by the better patient outcome and client satisfaction. Fifty-two hospitals are currently implementing the process. All these hospitals are at different stages of the long process and have made some progress in the improvement of the

working environment. It has been planned to scale up the concept throughout the country (MOHFW, 2015).

A proper study must be carried out to ensure that the adoption of TQM is a worthwhile initiative in Bangladeshi hospitals. Most of the hospitals have always been criticized for their poor service quality and implementing quality improvement programs. Management in hospitals may not be aware of the benefits of adopting and implementing a quality improvement program. Many hospitals are in the process of redefining their strategies, methods, and competences through re-engineering, ISO9000 systems, and TQM (HASEGAWA, 2006). Particularly 5S, which is the first initiative of TQM, is being implemented by different hospitals all over the countries to improve healthcare quality, and results are encouraging (JICA, 2015; DGHS, 2016). They have realized that TQM implementation is the means for survival and is more cost-effective. In the literature review section of this paper, the survey of TQM implementation in a healthcare organization has played a significant role. Thus, the purposes of TQM are to satisfy customers, prevent poor quality, develop an attitude of continuous improvement, understand the value of measuring performance to identify opportunities and maintain gains and eliminate sources of inefficiencies and costs (Mosadegh Rad, 2005).

In this paper, the author intends to conduct a review of the literature on TQM implementation and propose a framework for successful TQM implementation in hospitals. The results of this study will help the healthcare organizations in planning a better TQM approach through the body of literature on implementing TQM and the use of the proposed framework. The framework will improve hospital performance and patient care. Further, researchers and practitioners will be able to use this framework in their organizations and can test their applicability practically.

This paper discloses as follows. First, the author presented the objectives of the study, followed by a short review of the literature on TQM and its implementation in hospitals. At last investigated the critical elements for TQM implementation in Bangladeshi hospitals is presented. In conclusion, managerial implications, and the possibility for future research is offered.

## **II. OBJECTIVES OF THE STUDY**

This study intends to explore the current literature on TQM and its implementation in healthcare organizations. Notably, the objectives of the present study are dual:

- To review the literature on TQM and its application in hospitals, and
- To investigate the critical elements for TQM implementation in Bangladeshi hospitals.

### **TQM Key Elements On Healthcare Organizations Identified From Recent Study:**

Extracting the factors influencing Quality awareness and TQM practices in hospitals Nithya (2018) adopted TQM key variables on his recent quantitative study on hospitals of Tamilnadu, India. The findings are of various TQM practices like top management quality, customer focus, knowledge and training, continuous process improvement, employee involvement, process management, quality systems and culture, employee encouragement, teamwork, and communication. The factor analysis was employed to the 60 items which have extracted ten factors as a result of the factor reduction method. These factors were designed to meet variation like network hospitals. Thus, the network hospitals can create their quality framework based on these ten factors to develop hospital quality management for quality delivery of service.

Determining the effect of the characteristics of Total quality management (TQM) on Managerial Performance of Health Workers in Tolikara Hospital, Indonesia Penggu, Rantetampang, Msen, & Mallongi (2018) explored to measure performance in a modern organization. Providing an essential mechanism for employees to use in explaining performance goals and standards and motivating individual performance over time can be used for total quality management in the form of customer focus, quality obsession, scientific approach, long-term commitment, teamwork, continuous improvement of systems, education and training, freedom of control, unity of purpose and the involvement and empowerment of employees. Based on the results of this qualitative descriptive study, the researcher found significant relations with these variables to improve quality within this hospital.

Exploring the current literature on TQM and its implementation in the healthcare industry, Shah (2017) projected to review the literature on TQM and its application to find out a model for TQM implementation in the healthcare industry. There are five best practices in TQM implementation identified from the review of literature, namely, top-management commitment or Leadership, teamwork, process management, customer focus and satisfaction, and resource management. These applications of TQM implementation will be achieved an

upgraded quality of service, improved health care quality and patient satisfaction, reduced operating costs of health care institutions, employee satisfaction, and patient safety.

Creating an effective communication or service system between doctors and patients with assuring high level of quality, Md. Rafiquzzaman & Fahim Ahmed Touqir (2017) identified the problems and how to improve quality in the Bangladesh healthcare industry. Researchers conducted a quantitative study during two public and two private hospitals and showed the performance measurement through 5S (Seiri/Sort, Seiton/straighten/set, Seiso/Shine/Clean, Seiketsu/Standardize, and Shitsuke/Sustain) in order quality tool, which is the preliminary stage of implementation of TQM.

Balasubramanian (2016) found fundamental metrics from the literature review (Theodorakioglou, D, 2000) for raising quality in healthcare such as customer focus, error prevention, employee participation, teamwork, systemization, Leadership, and continuous quality improvement. This study defined a professional view, and TQM views in the area of conflict to implement the fundamental metrics of TQM. The researcher also showed within this study in healthcare organizations that the traditional Indian culture, leadership style, and the mentality of the medical professionals are somehow the barriers to the adoption of TQM.

Concerning TQM–Lean strategy in public healthcare by analyzing the deployment path for implementation, Chiarini & Baccarani (2016) projected to contribute the possible benefits that can be achieved, and the encountered pitfalls. Three case studies were drawn from three large Italian hospitals with more than 500 beds each and structured with many departments.

The three hospitals used a similar performance measurement system (PMS) for TQM and lean strategy, measuring the improvements introduced by TQM–Lean initiatives. Results from the interviews show that there is a specific deployment path for TQM–Lean implementation. The hospitals have also achieved benefits linked to patient satisfaction and improved organizational performances. Problems related to organizational and cultural issues, such as senior managers' commitment, staff management, manufacturing culture and tools adaptation, could affect the benefits.

Adjei & Mensah (2016) intended to determine the extent of TQM initiatives that can improve the quality of services delivery at the medical records unit of the Korle-

Bu Teaching Hospital (KBTH), Ghana to help the expectations and aspirations of patients and customers of the hospital. The study was mostly quantitative. It employed a survey research strategy to all members of staff of the KBTH medical records department, the head of the records department, and the deputy. Findings from the study revealed that the medical records unit of the KBTH makes fairly good use of some of TQM initiatives, namely, teamwork, active and participatory leadership, people development and open and effective communication.

Providing an assessment of the quality of management practices and implementation in hospitals of Palestine, Sabella, Kashou, & Omran (2015) aimed to use the Malcolm Baldrige National Quality Award (MBNQA) criteria through a quantitative cross-sectional study which is focused on the seven MBNQA criteria. These are leadership, strategic planning, patient and sector focus, information and analysis, human resource focus, process management, and performance results. The finding is TQM practices would result in improving the performance of the hospital and its staff members, therefore attaining an ultimate goal of hospitals, satisfying patients.

El-tohamy & Raoush (2015) conducted to investigate the impact of applying TQM on the overall hospital effectiveness in the accredited governmental hospitals in Jordan that accredited from the Health Care Accreditation Council (HCAC). This study followed the TQM principles for data collection within health professionals through a cross-sectional quantitative design, the TQM principles are considered such as Leadership commitment to quality, Customer Focus, Continuous Improvement, Teamwork, Employee involvement, Education and training. The findings of the study also revealed that TQM principles had a significant positive impact on hospital effectiveness in the HCAC accredited governmental hospital in Jordan, which led to an increase in hospital performance.

Exploring the impact of TQM in Iranian healthcare organizations and identifying critical success factors of TQM implementation, Mosadeghrad (2015) collected data through a cross-sectional questionnaire survey from healthcare organizations that implemented TQM initiatives. Managers or quality managers of healthcare organizations in both public and private sectors in Isfahan province ran asked to participate in this survey. TQM enablers categorized into primary (initial) facilitators (i.e., employee, customer, supplier, resource, information, and process management) and secondary (supportive) enablers (i.e., Leadership, strategic quality planning, quality

culture and education and training). Both initial and supportive facilitators of TQM were inter-correlated and both jointly enhanced performance. There was a significant correlation between organizational performance and fundamental enablers and supportive enablers. The most important contributing factors to successful TQM implementation in the Iranian health sector were Employee management, Information management, Customer management, Process management, and Leadership.

### **III. METHOD**

A general literature review on TQM in healthcare organizations was the basis for achieving the above objectives. The literature review used the database of several international publishers and a basic search engine. The keywords used during the search were "Healthcare organizations," "Healthcare industry," "TQM in healthcare organizations," "TQM in the healthcare industry," "TQM in hospitals," and "TQM models." The literature used in this study has been published in the scientific peer-reviewed journals. Firstly, a total of 50 publications were considered for reviewing TQM or quality management implementation systems published from 2000 to 2019. The 20 papers were then further examined for their empirical and review studies. Finally, a total of 10 research publications were reviewed for identifying the quality elements. All the TQM practices recorded from these 10 papers for this present study.

### **IV. RESULTS**

Different findings and practical implications could be discerned from an in-depth study of the 10 selected research publications with varying terms of their specific study approach, objectives, methodology, sampling type and size, setting, and respondents were shown. Overall, there are seven best practices in TQM implementation identified from the review of literature, namely, 1) top-management commitment or leadership; 2) teamwork; 3) training and development; 4) process management; 5) continuous improvement; 6) resources and competency development; and 7) organizational culture. These practices were identified based on their frequency of occurrence in the literature review. The finding suggests that the above mentioned practices have significant importance if they are employed in any healthcare services in Bangladesh.

### **V. CONCLUSIONS**

The present study helps to understand the current situation of TQM and its implementation in the healthcare

organizations through peer literature review and provides insight into the development approaches that help to facilitate and integrate management practices needed to improve the TQM program. Giving due consideration and interest in TQM, this work presents basic elements for TQM implementation in the healthcare organizations that helps in better planning and implementing TQM activities for improved performance and patient care. The idea behind the seven TQM practices is that a high-quality standard can be attained if attention is consistently paid to these practices.

Finally, further study can be made to test the validity of the proposed framework empirically across the healthcare organizations, and further modification may be included within it. Besides this, qualitative research can give significant insight into the issues affecting the TQM implementation procedure.

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