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# Total Quality Management Implementation in Healthcare Sector, Its Impact on Performance of Hospitals

**Gaurav Puri, S. Hari Babu, Rahul Sharma**

***Abstract*: The focus of this article is to have a discussion on TQM implementation in the hospital sector and to find out the relationship between TQM practices and organization performance of hospitals. This research is based on literature review of Quality Management and various critical success factors namely leadership, communication, employee involvement, customer focus, organization culture, strategic planning and patient loyalty. This article has made an attempt to establish a positive relation between a second order construct of Total Quality Management and their influence on the organizational performance of hospitals in Punjab. The paper has been framed with a conviction that it may prove to be beneficial for academicians and managers to excavate a relationship between Total Quality Management practices and hospital performance. Although it is a commonly accepted belief that National Accreditation Board of Hospitals i.e. NABH accredited hospitals are quality oriented, still non-NABH hospitals can enhance their organization performance focusing on the critical factors and improving their quality. In this article structural equation modelling has been used to bring out a relation between quality practices and performance. In an original way this paper proposes the critical success factors affecting TQM and how the hospitals can improve their quality and ultimately organization performance including subjective and objective performance, by focusing on these measures. The article encourages reflections from managers and practitioners concerning Quality Management in hospital/healthcare sector. We request that medical practitioners follow the procedures for improvement in critical success factors affecting TQM and ultimately, enhancement in their quality management practices in order to achieve better organization performance.***

***Keywords*: TQM, leadership, communication, employee involvement, NABH.**

## I. INTRODUCTION

There has been immense growth in the healthcare sector owing to latest technology intervention, better medical professional studies, newer research dimensions in the medical field, medical tourism, rising awareness among the new generation and the high influx of the private corporate sector in healthcare. Development of cost effective and quality healthcare is the need of the hour. In the present scenario, patient awareness is increasing and his preferences, safety and choice of hospital is of utmost importance.

Rising healthcare expenditures have dented the pocket of common man to such an extent that the intervention of National Pharmaceuticals Pricing Authority (NPPA) is necessary. A major transformation in the healthcare sector is needed in order to minimize the cost and optimize the resource utilization in order to deliver quality care at an affordable cost. Ample number of studies have been conducted which shows the implementation of various quality management tools and practices in the healthcare sector like continuous quality improvement, ISO9000, and quality management systems(QMS). A traditional quality improvement system needs to be transformed into a customer oriented system in order to TQM implementation to be successful.

## II. LITERATURE REVIEW

Quality has emerged out as amongst the most crucial factor in global competitive environment today. Ever increasing global competitiveness and continually increasing demand for best quality by customers has caused service providers to realize the importance of providing quality services and great product in order to compete in the market share and sustain in the market. TQM may be referred to as the commitment of the organization to quality measures. Numerous studies have emphasized on the critical factors affecting Total Quality Management implementation in hospitals, leadership, communication, employee involvement, customer focus, organization culture, strategic planning and patient loyalty. Therefore, the review of past studies has been presented under following heads.

### A. Leadership and TQM

The main foundation of an organization is laid by a dedicated, passionate, zealous and enthusiastic leader, one who is intentionally committed to making fundamental and positive changes in the organization. In the absence of a passionate commitment by the strong leader, little else help may be possible. Leaders in any organization may be the top brass management or the founding forefathers of the organization.

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* Correspondence Author
**Gaurav Puri***, Mittal School of Business, Lovely Professional University, Phagwara, India.
**Dr. S. Hari Babu**, Management Block, Symbiosis Institute of Business Management, Nagpur, India.
**Dr. Rahul Sharma**, Mittal School of Business, Lovely Professional University, Phagwara, India.

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Commitment of the top management for maintaining quality processes and is accepted a way of working in the originations and it sets the foundation for the implementation of Quality [1] . Further, the research highlights that the aspect of quality is very important that it cannot be delegated, it has to be the responsibility of top brass management to get the best of quality in the processes implemented in the organization.

First of all, in the quality evolution process, the top management should understand the importance of quality and the benefits it will provide to the organization. Only then will they be able to appreciate the implementation of TQM. If the leaders are themselves not convinced, they won't be able to steer their workforce in the requisite direction for implementation of TQM. So, it is very critical that management is itself committed before involving any of the staff members into implementation of TQM.

[2] further extended the work by viewing various components of leadership styles as top management leadership and its effect on quality policy, visionary leadership, managerial support, quality leadership, visible support for adequate change in the organization and quality management system. This research points to the importance of leadership, commitment and vision in implementation of TQM. The work was divided into organizational leadership and public responsibility and citizenship. This points to quality citizenship and impact on society. So, the visionary leaders of the organization are the ones who take the initiative and implement TQM.

In the studies conducted throughout the world on TQM, organizational leadership was covered in all countries at least once [3]. Further, the work highlights the relationship between top management commitment and organizational leadership. Another dimension to the existing literature was added by [4] who compared the three types of health care organizations- private, government and semi-government amongst themselves and pointed that in private healthcare organizations and partially government aided hospitals, the leadership aspect is found significant thereby concluding that leadership plays a significant role in private organization implementation of TQM. The study found positive correlation between leadership commitment and financial performance. The research indicated that there is a lower correlation between leadership and non-financial performance in comparison to leadership and financial performance correlation. Financial performance of an organization can be judged by either subjective or objective measures [5] .

Another view of the importance of leadership in TQM implementation was added that bottom-up initiatives for TQM implementation can be incubated by keen employees in the organization without adequate managerial intervention and support [6] .

Absence of leadership in Quality Management implementation has been categorized into three major components being lack of senior managers' involvement and commitment, 'combined leadership' in large healthcare organizations, and the influence of an external 'political leadership' on public healthcare [7] . The research encourages inputs from healthcare practitioners and doctors concerning Quality Management. The research introduced the concept of 'monolithic' leadership, more prominent in large hospitals, to ensure a common platform for unitary TQM governance.

Since there are contradictory findings with some authors saying leadership is absolutely necessary for effective TQM implementation and others focusing on the bottom-up initiatives, there is a scope of further study which can be conducted on TQM implementation.

### B. Communication and Total Quality Management:

Communication is referred to as the interaction between two parties – be it manager and employee or among peers. To establish a close connection between leadership and communication, [8] highlighted that a top-down approach was followed in the organizations in which a strong internal communication flow happened from the management for implementation of quality techniques. An analysis of TQM, leadership and communication was also dug into by [6] , who viewed that "top-led" and "bottom-fed" TQM initiatives. Initiatives by the employees for TQM implementation at their own without adequate managerial support from the leaders of the organization gradually faded away. There is a positive correlation between communication from top management to subordinates and the work environment [4] .

On the contrary, [9] investigated the model of communication practice in Quality implementation. The research suggested prevalence of some patterns of communication practiced by the management during conveyance and dissemination of Quality messages, but highlighted absence of any specific guidelines. There is a still a lot of scope for further research to elucidate the role of communication on this issue in order to give an impetus to the candid success of Quality Management implementation.

Therefore, the gap in the findings of various studies can be highlighted and worked upon where some are focusing on communication as an crucial factor for TQM implementation and others contending that non-availability of adequate guidelines as an impending hurdle for the flow of information.

### C. Employee involvement and Total Quality Management

From the role of top management commitment and the leadership in implementing TQM, researchers spearheaded involvement of the physicians as a crucial step for successful Quality Management Systems implementation [10] . The study ascertained that in any healthcare organization physicians have the dominant power, and their working style influences the organization culture and relationship with fellow employees. Critical success of the TQM processes can be achieved by establishing a relation between employee involvement and commitment to the goals of TQM [11] .

High importance of the employee involvement is highlighted from the fact that the prominent innovation techniques and ideas emanate from people on the floor i.e. those who are actually doing the job [1] . The study analyzed the importance of the participation of the employees in the quality process in an organization. The author contended that the highest degree implementation of TQM can be done by the ground level employees, who are aware of the situation at the grass root level. It was [2] , who was of the view that human resource management,

including several factors like employee training, employee involvement, employee empowerment, employee performance appraisal are the crucial steps for fulfilling the objectives of TQM in any organization. Apart from employee involvement, [1] contends that in order to maximize employee involvement in quality improvement, major adjustments are required to be done by middle managers. It can be referred to as extension of the employee involvement element in TQM implementation.

Further, the work was extended by enhancing the interpretation of whistleblowing and its capacity to influence overall organizational quality [12] . The work highlighted the implementation of whistleblowing procedures by Italian National Health Services(INHS). The study highlights that the differences in procedures are primarily on account of cultural, administrative, organizational, and process barriers. The research intended that effectiveness of whistleblowing procedures can be achieved only if manager has the ability to build a sense of safety and commitment towards the employees and the organization. So, there are researches which contend that employees doing the job can effectively implement TQM while others are of the view that employee involvement in TQM process can lead to whistleblowing. This is the scope of future research which can be focused upon.Getting along the factors of employee involvement and customer focus, successful TQM implementation can be done by focusing on both these crucial variables - customer focus and employee involvement [13] .

### D. Customer focus and Total Quality Management

Customer focus may be referred to as the focus on the clients for better service delivery and patient satisfaction. Ground level hospital staff, working primarily to serve patient needs are the ones who attend the patient at the first [14] . Ground staff may include nurses, ward boys, compounders or hospital security people. These staff people are the ones who have direct interaction with patients during the entire hospitalization. So customer attention is of utmost importance and the ground level staff should be trained for such practices in order to successfully implement TQM practices. In the institutions that have adopted TQM, there has been a transformation of institution's culture into a total quality culture [15] . The work also focused on the other elements affecting TQM like teamwork and customer focus, employee involvement and participation, and process management. In addition to other critical success factors of TQM, [2] ascertained that other customer related factors affecting implementation of TQM included customer focus, customer satisfaction, customer analysis, close cooperation with customers, customer service, customer orientation, customer satisfaction orientation and customer feedback.

Foremost important step in quality improvement is customer identification, which is the required for enhancing the organization performance [15] . In a way, the work linked customer identification with organization performance.

So, the work by some authors suggest that customer focus may be a crucial factor for TQM implementation whilst some other researchers contend that customer identification is of prime importance. This is the scope of future research in this area.

### E. Organization culture and Total Quality Management

Organization culture is referred to as the ethics and ambience prevalent in the organization. It is a broad term which might include the values of the employees as well. The Quality Management implementation in hospitals is dependent on type of organization culture the hospital exhibits. The success of TQM in organic hospitals with stronger organizational culture has been found to be higher than mechanistic and bureaucratic with weak organizational culture [11] . The work on organization culture as a factor effecting implementation of TQM was further supported by [4], which found out strong correlation between quality planning, patient focus and workforce and process. Employees with a high level of innovative skills are precious for hospitals as they provide an ambience of group work, collaboration and participation which is of profound importance for incubation of innovation in the organization [16] . The work emphasized on leadership, organization culture, customer participation and employee involvement. The research concluded that TQM is a significant tool to enhance and develop the innovation skills of employees which may lead to positive and affirmative impact on the organization culture.

Organization culture in hospitals vary depending on occupation and group size [17] . Assessment of the organizational culture provides a deep insight into the perceptions of values to enhance and provide a positive impetus to good quality care.

On the contrary, [15] analyzed that organizations having adopted Quality Management have marked a change in their culture to a total quality focused culture that involves various elements like group work, customer focus, employee focus and participation, and more importantly, process management. Instead of organization culture of the hospital, the work used quality culture which is an issue to ponder upon.

### F. Studies relating to Total Quality Management and Organizational Performance

World class quality researchers, such as Deming, Juran and Crosby buttress an affirmative association amongst total quality implementation and organizational performance. There is a significant enhancement in productivity with improvement of quality whereas diminishing quality leads to loss of competitive advantage [18] . Furthermore, if entire focus of the organization is on making quality products, profit can be enhanced by an amount equaling to 5-10 percent of the revenue [19] . Researchers report ample number of success stories of organizations which implemented quality enhancement initiatives. Companies have conserved ample amount of money by reduction in errors, diminishing the cost of maintaining high quality, abolishing customer complaints, and reducing material handling overheads and costs [20] .

Organizational performance can be measured in terms of subjective organization performance or objective organization performance. Researchers can refer to either subjective and objective performance measures to measure business performance [5] .

The work depicts recommendations for decision makers regarding instrument for measurement of business performance in terms of financial and operational indicators. Dimensions of performance measurement depend on a limited number of Quality Management factors [21] . There exists a positive relation between TQM principles and Organization performance [22] . It means that the organization performance is enhanced if proper TQM implementation is done in the organization. The work was further supported by [23] who ascertained that Quality Management implementation improves the operational efficiency and performance of organizations, which in turn affects the other dimensions of performance such as financial and subjective performance. [24] introduced the concept of hard and soft quality management. The research work established that hard quality management may affect the innovation capability of an organization. However, soft quality management affects innovation indirectly through its effect on hard quality management. Soft elements of Quality Management referring to human resources, culture of quality, relation management, etc. are significant and positive determinants of performance in an organization [25] .It has been established that the quality elements etched as core values may have been considered as critical success factors of total quality management systems. The results of the research depicted that the subjective performance bears a positive relation with quality management variables, but there is a lacuna of significant relationship between financial performance and quality management. So, there is a scope for future research as some authors contend financial performance, while others contend non- financial measures for measuring the subjective business performance.

## III. METHODOLGY

The study is descriptive and cross-sectional.

**Sampling unit:** Quality management practices are studied at the level of a hospital.

**Sampling Technique:** Multi stage proportionate sampling technique has been adopted for the collection of data.

**Sample size:** A total of 251 responses were obtained by attempting to receive 300 responses.

**Respondents:** The dimensions presented in the questionnaire had been administered to the doctors, hospital owners, or the quality managers in the hospitals in hospitals across major cities of Punjab.

**Inclusion basis of the hospitals:** The hospitals included were those empaneled with any insurance company, including NABH and non-NABH hospitals.

**Categorization of the hospitals:** There were 3 categories of the responding hospitals - specialty, super-specialty and multi-specialty.

In order to study the critical factors of Total Quality Management in healthcare organizations, a comprehensive questionnaire has been adapted taking into account key elements of quality management and organization performance. The literature review has revealed key factors describing quality in health care as viewed by the doctors, quality managers, or the owners of the hospitals in Punjab. On the basis of the identification of critical factors of health-care quality, a questionnaire is framed to bring out the key operating elements of TQM in health care and its effect on organization performance. This questionnaire has been administered to a sample of respondents including doctors and academicians in quality management field, who have tested the questionnaire for its validity.

Based on the responses obtained from the pilot survey done in 50 hospitals, changes have been made to the questionnaire, as considered appropriate, and the final questionnaire has been framed.

### A. Measures

**Reliability**

Reliability may be referred to as the extent to which a construct measures the dimension in the same way as it is intended to measure. If multiple measurements of the respondent's answers are taken, the reliable measures will suggest that all the measurements are nearly same. In other words, if the same measure is taken repeatedly, more reliable measures suggest that same results will come time and again. The widely used reliability coefficient that assesses the internal consistency of the items in the scale is Cronbach's alpha. The value of this coefficient lies between 0 and 1. It is appropriate to use internal consistency reliability for each dimension if multiple items are used to measure each dimension. In the present study, TQM in health care is measured using different dimensions of TQM, each of which is measured by several items, and hence computing the Cronbach's alpha to measure the internal consistency of each dimension is justified. The generally agreed-upon lower limit for Cronbach's alpha is 0.70 [26] . Table below shows the Cronbach's alpha values for TQM practices and organization performance. All the values are 0.80 and above, indicating a strong reliability measure.

The concept of convergent validity basically entails AVE scores of individual sub-constructs and composite reliability (given by Cronbach's Alpha). Convergent validity of constructs was achieved since the measured items have factor loadings above 0.5. Also, the square root of average variance extracted (AVE) for each construct was found greater than inter construct correlations and above the 0.5 threshold (TQM and OP) proving that multicollinearity did not exist among the various constructs in the measurement model and hence discriminant validity is confirmed as suggested by [26].

**Table I: Cronbach Alpha of various constructs**

| Construct | Cronbach's Alpha |
|---|---|
| TQM practices | .970 |
| Organization Performance (Subjective) | .955 |
| Organization Performance (Objective) | .811 |

**Validity**

The concept of validity refers to the degree to which a scale measures what it intends to measure. The most popular form of validity is content validity. BIt tries to access the individual items and the concept through ratings by expert judges. For the content validity of the items of quality management and organization performance, we have gone to doctors in specialty hospitals and academicians in field of TQM. This form of validity is also called face validity [26] . Changes as recommended by the experts have been incorporated.

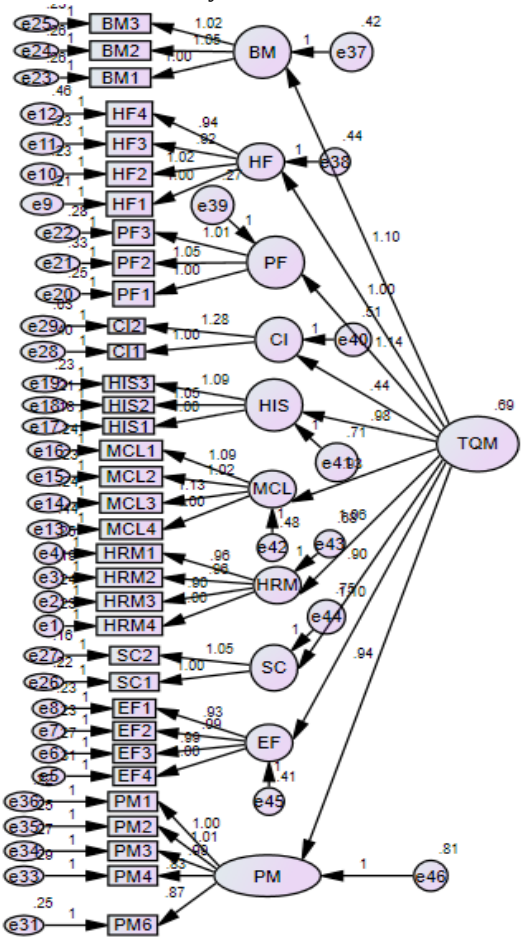
**Independent Variable**

TQM has been conceptualized as an independent variable. It has been operationalized using a 1-36 item scale(4 item referring to Top management commitment and leadership, 4 item referring to Human resource management, 7 item referring to process management, 4 item referring to hospital facility, 3 item referring to patient focus, 4 item referring to employee focus, 3 item referring to hospital information system, 2 item referring to service culture, 2 item referring to continuous improvement, 3 item referring to benchmarking). All the items have been sourced from extensive literature review.

The psychometric properties of the TQM constructs has been assessed by applying Confirmatory Factor Analysis.

To assess the measurement adequacy of the latent construct of Total Quality Management, a measurement model has been conceptualized and tested for its model fit and psychometric properties.

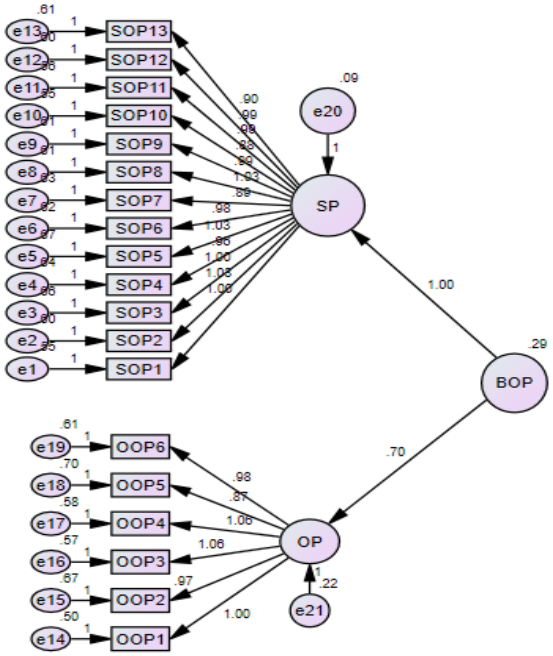
The measurement model reveals a Normed Chi-square of 704. 934, GFI = 0.873, AGFI =0.853, NFI =0.932, CFI =0.981 which are all significant and reveal a good fit. Further, RMR =0.055, RMSEA=0.037 are bad fit indices are less than 0.08 which indicate bad fit indices are as required. Standardized factor loadings meet the cut-off value of 0.5. AVE scores as shown in the table below support the convergence of scale items towards their latent constructs. High SRW, AVE and CR give a positive indication on convergent validity. CR of 0.91 for TQM construct, confirms the internal consistency of the scale items.




*** Figure 1: Confirmatory Factor Analysis of 2nd order TQM model**

**Dependent Variable**

Organization performance, a dependent variable, has been measured using a 19-point scale adapted from [27] . The scale measures 'Subjective financial performance' and 'subjective non-financial performance' of the hospital by evaluating the respondent's opinion about how the hospital has fared in the previous 3 years of operation. Bed occupancy rate, bed turnover ratio, IPD visits, OPD visits, emergency visits, and number of surgeries have been taken as indicators of objective business performance and another 13 indicators for subjective business performance.

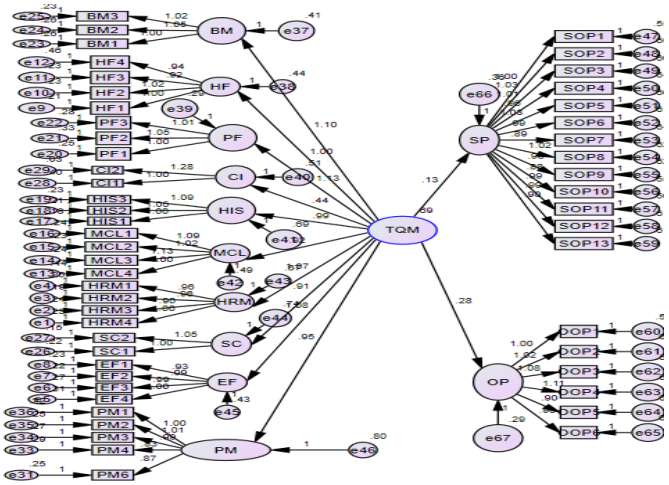



*** Figure 2: Confirmatory Factor Analysis of 2nd order Organization Performance model**

**Psychometric testing**

The confirmatory theory is applied for the assessment of measurement adequacy. TQM practices have been conceptualized as a multi-dimensional second order construct. Business performance has been conceptualized as a second order construct having objective and subjective business performance.

All indices are significant and reveal a good model fit. GFI, AGFI, NFI and CFI are above cut-off of 0.90. The badness of fit indices i.e. RMR and RMSEA are less than threshold of 0.08. The normed chi-square for all constructs fall below cut off 5. High AVE and CR show the convergence of scale items to the respective constructs. A significant degree of correlation has been observed among different dimensions of TQM practices.




*** Figure 3: Structural Equation Modelling Analysis of TQM – OP relationship**

**Findings and results**

To assess the impact of TQM practices on organizational performance, a model of TQM-OP has been conceptualized and examined. A multi-dimensional view of TQM(10 sub constructs) has been considered for predicting organizational performance.

Table below presents the results of structural model. It reveals a good model fit and provides sufficient evidence to support first hypothesis i.e. There is significant direct impact of TQM practices on organization performance.

**Table II: The goodness-of-fit results for the second-order structural models.**

| Goodness of fit thresholds | CFI >0.90 | GFI >0.90 | AGFI >0.90 | TLI >0.90 | RMSEA <0.08 |
|---|---|---|---|---|---|
| Second order model | 0.962 | 0.811 | 0.794 | 0.961 | 0.035 |

Note: CFI, the comparative fit index; GFI, the goodness of fit index; AGFI, the adjusted goodness of fit index; RMSEA, the root mean square error of approximation; and TLI, Tucker Lewis index. There was a high response rate to this survey (89%) in which 251 usable questionnaires were returned from the 300 originally distributed questionnaires and no missing values were detected. The descriptive statistical results obtained from SPSS revealed that most of the respondents agree on the level of implementation of TQM and their effect on organization performance at hospitals since the average mean for each of the research variables was approximately 5 with standard deviation (SD) close to 1.

A good level of internal consistency was measured using Cronbach's alpha coefficient ($0.811 < \text{Alpha} < 0.970$). Also, the results of composite reliability ($CR_{OP}$ and $CR_{TQM}$) were accepted and greater than the 0.70 threshold[26].

## IV. RESULT ANALYSIS

Basically, quality management practices and its effect on organization performance is of particular importance to health-care professionals who are concerned with honing their hospital management skills and assimilating knowledge which influence their attitudes and willingness towards improvement and enhancement in hospital performance.

Hospitals can develop the quality management profiles for the employees in accordance with implementation of strategies for quality enhancement. The objective of this research had been to determine the influence of soft TQM implementation on the organization performance hospitals in Punjab. For this, several critical success factors for measuring quality in hospitals had been used in the study.

The results obtained from this research has shown a positive and significant influence of good TQM practices on organization performance. Such findings are consistent with previous literatures that have found a positive relationship between TQM practices and performance [28] ,[29] .

For example, it has been stated that implementing Quality Management principles is beneficial for organizations that tend to enhance the quality of their services and inculcate an organization culture of innovation amongst the employees [30] . This can be attained through enriching employees to recognize the opportunity and enhance the service quality along with the training programs[31] .

In addition, the results of this study have also confirmed the positive influence of Quality Management Practices on Organization Performance. Many of the recent studies have emphasized the importance of implementing TQM practices within the organization such as leadership, employee involvement, training, teamwork, customer focus, collaboration, commitment, self-awareness, adaptability and problem-solving.

It has been observed in the study that the key to Quality Management success lies in the more intangible, behavioral factors of top management support, employee empowerment and employee involvement. Also, some of the more crucial TQM tools and techniques like customer focus and quality improvement rewards contribute to the successful implementation of TQM, as shown by the factor loadings. The research has identified critical aspects of TQM that can determine the success of a TQM program in a service environment. These factors include top management commitment, customer focus, employee focus and employee involvement.

## V. CONCLUSION

In conclusion, this research has empirically proved that Quality practices have a significant influence on organization performance of hospitals. Although, there has been a limitation of less participation from the public hospitals in this survey, this research contributes to the private health-care sector in Punjab through providing empirical studies which can act as a reference for future studies. Also, the shift from towards good quality practices and increase in organization performance contributes significantly to the academic literature related to health-care quality as well as to the methodological part especially in terms of using Structural Equation Modelling analysis. Thus, future studies are suggested to extend the research geographically and include more hospitals especially from public sectors.

There has been existence of a significant and positive relation between Quality Management practices and Organization Performance.

Since the hospitals were reluctant to share the absolute financials with us, so we have taken a perception of the hospital owners regarding their objective and subjective performance in last 3 years. The absolute performance measures of public hospitals may be available and enhance the quality of the results. Our point of contention is that critical success factors affecting TQM are mainly leadership, communication and employee involvement, the literature view and the viewpoint of various authors on which has been discussed. Good leaders, interested in implementing TQM can steer the organization through difficult times and help in increasing the organization performance. Further, communication from top level management to bottom level employees is a critical factor affecting TQM implementation. Further, employee involvement is also a critical success factor affecting TQM, as employees are the root of the organization and implementation can be done only at the grass root level. The future researchers can try to find out the relation between TQM and performance in various geographies and compare the differences.

## REFERENCES


1 T. Thiagarajan and M. Zairi, "A review of total quality management in practice: understanding the fundamentals through examples of best practice applications - Part I," The TQM Magazine, vol. 9, no. 4, pp. 270–286, Aug. 1997.
2 I. Sila and M. Ebrahimpour, "Examination and comparison of the critical factors of total quality management (TQM) across countries," International Journal of Production Research, vol. 41, no. 2, pp. 235–268, Jan. 2003.
3 F. Talib, Z. Rahman, and M. Azam, "Best Practices of Total Quality Management Implementation in Health Care Settings," Health Marketing Quarterly, vol. 28, no. 3, pp. 232–252, Jul. 2011.
4 Gorji, A. M. H., &Farooquie, J. A. (2011) 'A comparative study of total quality management of health care system in India and Iran', BMC research notes, Vol. 4 No. 1, pp.566.
5 S. Vij and H. S. Bedi, "Are subjective business performance measures justified?," Int J Productivity & Perf Mgmt, vol. 65, no. 5, pp. 603–621, Jun. 2016.
6 A. Mohammad Mosadeghrad, "Why TQM does not work in Iranian healthcare organisations," International J Health Care QA, vol. 27, no. 4, pp. 320–335, May 2014.
7 A. Chiarini and E. Vagnoni, "TQM implementation for the healthcare sector: The relevance of leadership and possible causes of lack of leadership," Leadership in Health Services, vol. 30, no. 3, pp. 210–216, Jul. 2017.
8 A. Chiarini and C. Baccarani, "TQM and lean strategy deployment in Italian hospitals: Benefits related to patient satisfaction and encountered pitfalls," Leadership in Health Services, vol. 29, no. 4, pp. 377–391, Oct. 2016.
9 S. Samsudin, N. H. M. Jalil, and M. Ibrahim, "Exploring the Pattern of Internal Communication in Total Quality Management Implementation in Manufacturing Companies," SHS Web Conf., vol. 33, p. 00078, 2017.
10 V. Wardhani, A. Utarini, J. P. van Dijk, D. Post, and J. W. Groothoff, "Determinants of quality management systems implementation in hospitals," Health Policy, vol. 89, no. 3, pp. 239–251, Mar. 2009.
11 A. Mohammad Mosadegh Rad, "The impact of organizational culture on the successful implementation of total quality management," The TQM Magazine, vol. 18, no. 6, pp. 606–625, Nov. 2006.
12 M. V. Ciasullo, S. Cosimato, and R. Palumbo, "Improving health care quality: the implementation of whistleblowing," The TQM Journal, vol. 29, no. 1, pp. 167–183, Jan. 2017.
13 S. A. Brah, J. Li Wong, and B. Madhu Rao, "TQM and business performance in the service sector: a Singapore study," Int Jrnl of Op & Prod Mnagemnt, vol. 20, no. 11, pp. 1293–1312, Nov. 2000.
14 E. Sadeh, "Interrelationships among quality enablers, service quality, patients' satisfaction and loyalty in hospitals," The TQM Journal, vol. 29, no. 1, pp. 101–117, Jan. 2017.
15 M. B. Sirvanci, "Critical issues for TQM implementation in higher education," The TQM Magazine, vol. 16, no. 6, pp. 382–386, Dec. 2004.
16 M. Aoun and N. Hasnan, "Health-care technology management: developing the innovation skills through implementing soft TQM among Lebanese hospitals," Total Quality Management & Business Excellence, vol. 28, no. 1–2, pp. 1–11, Jan. 2017.
17 H. Sasaki, N. Yonemoto, R. Mori, T. Nishida, S. Kusuda, and T. Nakayama, "Assessing archetypes of organizational culture based on the Competing Values Framework: the experimental use of the framework in Japanese neonatal intensive care units," International Journal for Quality in Health Care, vol. 29, no. 3, pp. 384–391, Jun. 2017.
18 Deming, E. (1986) 'Out of The Crisis. Quality, Productivity and Competitive Position. Cambridge, MA: Center for Advanced Engineering Study. [19] P. B. Crosby, Quality is free: The art of making quality certain, vol. 94. McGraw-hill New York, 1979.
20 P. B. Crosby, Quality Without Tears, New American Library. Penguin Books, New York, 1984.
21 E. L. Psomas and C. Jaca, "The impact of total quality management on service company performance: evidence from Spain," Int J Qual & Reliability Mgmt, vol. 33, no. 3, pp. 380–398, Mar. 2016.
22 B. I. Tan, "TQM adoption and organisational performance of family owned businesses: a literature review and proposed structural model," IJMOM, vol. 3, no. 1, p. 1, 2013.
23 J. García-Bernal and M. Ramírez-Alesón, "Why and How TQM Leads to Performance Improvements," Quality Management Journal, vol. 22, no. 3, pp. 23–37, Jan. 2015.
24 J. Zeng, C. Anh Phan, and Y. Matsui, "The impact of hard and soft quality management on quality and innovation performance: An empirical study," International Journal of Production Economics, vol. 162, pp. 216–226, Apr. 2015.
25 R. Dubey and A. Gunasekaran, "Exploring soft TQM dimensions and their impact on firm performance: some exploratory empirical results," International Journal of Production Research, vol. 53, no. 2, pp. 371–382, Jan. 2015.
26 J. F. Hair, R. E. Anderson, and R. I. Black, "Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, - Google Scholar," 1998.
27 S. Vij and H. S. Bedi, "Are subjective business performance measures justified?," Int J Productivity & Perf Mgmt, vol. 65, no. 5, pp. 603–621, Jun. 2016.
28 N. Bouranta, E. L. Psomas, and A. Pantouvakis, "Identifying the critical determinants of TQM and their impact on company performance: Evidence from the hotel industry of Greece," The TQM Journal, vol. 29, no. 1, pp. 147–166, Jan. 2017.
29 S. A. Brah, J. Li Wong, and B. Madhu Rao, "TQM and business performance in the service sector: a Singapore study," Int Jrnl of Op & Prod Mnagemnt, vol. 20, no. 11, pp. 1293–1312, Nov. 2000.
30 C. Zehir, Ö. G. Ertosun, S. Zehir, and B. Müceldilli, "Total Quality Management Practices' Effects on Quality Performance and Innovative Performance," Procedia - Social and Behavioral Sciences, vol. 41, pp. 273–280, 2012.
31 G. J. Young, M. P. Charns, and S. M. Shortell, "Top manager and network effects on the adoption of innovative management practices: a study of TQM in a public hospital system," Strat. Mgmt. J., vol. 22, no. 10, pp. 935–951, Oct. 2001.


## AUTHORS PROFILE

**Gaurav Puri** has done his MBA from Symbiosis International University, Pune and B.Tech in Computer Science Engineering. He is a Senior Research Fellow in Mittal School of Business, Lovely Professional University, Phagwara, Punjab. He has 3 years of experience in consulting as an internal auditor in KPMG and PwC prior to joining academics. He has been a consistent performer throughout his having qualified for NTSE exam in 10th standard and thereby a scholarship holder throughout his studies. Prior to joining MBA, he has done in training in Infosys Ltd. As an engineering graduate.

**Dr. Rahul Sharma** did his Masters in Commerce in 2006 from Lovely Professional University, Phagwara. Further, he did his Masters in Business Administration from Lovely Professional University in 2008. After that, he completed his PhD. In 2016 and is currently working as an Associate Professor in Marketing and heading the Academic Operations Team of Mittal School of Business, LPU, Phagwara.

**Dr. S. Hari Babu** is currently working as an Associate Professor in Symbiosis Institute of Business Management, Nagpur. He holds a PhD. in banking and insurance area. Prior to work in Nagpur, he has served in Lovely Professional University, Phagwara. He has several publications to his credit in the health insurance, banking insurance area.