JOHAR – Journal of Hospitality Application & Research
16 (2) 2021, 63-82
http://www.publishingindia.com/johar/

THE CRITICAL DIMENSIONS OF TQM IN HOSPITALITY SERVICES

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Abstract

The current research paper uses an extensive literature survey to study the different dimensions of Total Quality Management. Using a self-administered structured questionnaire, a survey was carried out for premium segment hotels in Mumbai. One Hundred & Thirty-Four survey responses were obtained vide emails. Multiple Regression Analysis was used for investigating the influence of the dimensions of Total Quality Management on the Overall Total Quality. The important contribution of the current study is identifying the four critical dimensions for TQM that influences the Overall Total Quality for Hospitality: (i) Top Management Commitment, (ii) Organizational Culture (iii) Continuous Improvement & (iv) Servicescapes (Physical Environment & Facilities). Practitioners can focus on the limited dimensions like Continuous Improvement with concentrated attention at all the organization levels to improve quality performance. The current study endeavours to promote TQM in Indian Service Sector for both academia & practicing managers. The proposed framework of "The Critical Dimensions of TQM in Hospitality Services" can be a guide for Hospitality Service Managers to effectively implement TQM.

Keywords: *Total Quality Management, Top Management Commitment, Overall Total Quality, Organization Culture, Continuous Improvement, Employee Empowerment, Service Companies, Physical Facilities*

Introduction

Business Environment landscape is ever changing with customers being more quality conscious & customer loyalty becoming increasingly challenging. Demand for better product & services are ever increasing. Total Quality management influences business profitability with customer focus in the long run. Companies have increasingly used TQM as a vehicle for business growth in competitive situations. The management acronym TQM (V. Arumugam et al., 2009) is a well-established operations strategy for Customer Satisfaction. Many Quality experts & consultants like Edwards Deming, Joseph Juran, Armand Feigenbaum, Philip Crosby, Ishikawa, and others have contributed to the theories & practices of TQM, emphasizing continuous improvement & employee empowerment. A holistic approach to TQM popularised by Japanese management has become a conceptual and practical backbone for developing new products & processes. TQM signifies a cultural change with a focus on continuous improvement & customer satisfaction (Walid et al., 2013). TQM practices have improved service quality standards & design (Bhat & Rajashekhar, 2009). TQM integrates Business functions to achieve continuous improvement, employee & customer satisfaction.

Hospitality nomenclature including hotels is used to serve travellers food, drink & shelter away from home. Accommodation operations involve reservation, reception, housekeeping & billing. Food Services operations involve food production, service delivery & customer management. Since 1980s, TQM in hospitality companies have bridged the gap between service delivery & customer expectations. However, concepts of total quality management are not clear to practicing managers leading to poor implementation which in turn results in poor customer satisfaction (Breiter et al., 1995). Ambiguity amongst Managers on the critical dimensions of TQM will hinder the solution to both employee & customer complaints which in turn will impact customer satisfaction & loyalty. Research suggest that if a business can control the TQM dimensions, service quality, customer satisfaction, customer loyalty & financial results are bound to improve.

Literature Survey on Total Quality Management in Hospitality

TQM in Services has influenced Quality performance with increasing customer expectations. TQM approach has been recommended for continuous

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improvement of quality. TQM manages quality using holistic approach (Hafeez et al., 2006). There are both success & failure stories of TQM (David & Strang, 2006). It is therefore important to understand the correct set of dimensions for TQM for Hospitality. Some of the Hotels have implemented TQM while others are in the process of implementation.

Extensive literature is available on TQM in the Indian Service Sector. What constitutes the critical dimensions are reported differently by many authors. The critical Dimensions of TQM are latent variables that cannot be measured directly and thus differ for different Authors (Ahire et al., 1996). Because of the inconsistencies in the literature, it is difficult to derive meaningful conclusions on best practices (Ooi et al., 2008). The extensive literature is briefly summarized in tables below for a range of applications related to varied service organizations:

Table 1: Compilation of TQM Factors for Different Authors

Sr. No.	(Saraph et al., 1989)	(Ju et al., 2006)	(Arasli, 2002)	(Sila & Ebrahimpour, 2003)
1	Top management leadership	Top management commitment	Top management	Process management
2	Quality department	Adopting philosophy	Leadership	Quality measurement system
3	Customer focus	Quality measurement	Employee participation	Quality Training
4	Continuous improvement	Benchmarking	Teamwork	Process design (SQC)
5	Social responsibility	Process management	Employee satisfaction	Supplier quality management
6	Training	Product design	Empowerment	Quality department
7	Product/Service design	Employee training	Organizational change	Team work structures
8	Supplier quality management	Employee empowerment	Training	Customer satisfaction
9	Process management	Supplier quality management		Team work
10	Quality data and reporting	Customer involvement and satisfaction		Product and service design

11	Employee relations			Process control
Sr. No.	**(Behra et al., 2001)**	**(Tahib & Rahman, 2010)**	**(Al - Marriet al., 2007)**	**(Sureshchamder et al., 2001)**
1	Compensation	Top-management commitment	Top management support	Top management
2	Benchmarking	Customer focus	Customer focus	Visionary leadership
3	Training	Training and education	Strategy	Organization culture
4	Empowerment	Continuous improvement / innovation	Benchmarking	Technical system
5	Technology management	Supplier management	Employee involvement	Information system
6	Assessment	Employee involvement	Recognition and rewards	Benchmarking
7	Process management	Benchmarking	Problem analysis	Continuous improvement
8	Teamwork	Quality information and performance	Quality technologies	Customer focus
9	Training		Service design	Employee satisfaction
10			Service scopes	Union intervention
11			Service culture	Social responsibility
12			Social responsibility	Service scopes
Sr. No.	**(Flynn et al., 1994)**	**Antony et al. (2002)**	**Brah et al. (2000)**	**Lakhal et al. (2006)**
1	Leadership	Management commitment	Top management support	Top-management commitment
2	Customer focus	Quality department	Customer focus	Organization for quality
3	HRM practices	Training and education	Employee involvement	Employee training

4	Quality improvement	Employee involvement	Employee training	Employee participation
5	Continuous improvement	Continuous improvement	Employee empowerment	Supplier quality management
6	Teamwork	Supplier partnership	Supplier quality management	Customer focus
7	Organizational culture	Product/service design	Process improvement	Continuous support
8	Social responsibility	Quality policies	Service design	Quality system improvement
9	Training and education	Quality data and reporting	Quality improvement rewards	Information and analysis
10	Union intervention	Communication	Benchmarking	Statistical quality technique
11	Employee empowerment		Cleanliness & organization	
12	Employee involvement			
13	Employee satisfaction			
14	Communication			
Sr. No.	**Ahire et al. (1996)**	**Talib and Rahman (2010)**	**Badri et al. (1995)**	
1	Top-management commitment	Top-management commitment	Top-management quality policy	
2	Benchmarking	Customers' focus	Quality department	
3	Internal quality information	Training and education	Service design	
4	Employee involvement	Continuous improvement/ innovation	Training	
5	Training	Supplier management	Operating procedure	
6	Empowerment	Employee involvement	Quality data	

7	Supplier quality management	Employee encouragement	Employee Relation	
8	Statistical process control	Benchmarking		
9	Design quality management	Quality information & performance		
10	Customer focus			
11	Supplier performance			
12	Product quality			

On the basis of the above set of tables and discussions with functional experts in Hotels, we develop conceptual framework/model with the following critical dimensions to examine their influence on Overall Total Quality in Hotels: (i) Top Management Commitment, (ii) Organizational Culture, (iii) Continuous Improvement, (iv) Involvement & Empowerment of Employees, (v) Servicescapes (Physical Environment & Facilities) & (vi) Good relations with Union.

The dimensions (i) Top Management commitment, (ii) Organizational culture, (iii) Continuous improvement, (iv) Involvement & Empowerment of employees, are observed to be frequently quoted in many of the earlier research. Hotel Managers & Experts have identified readily with the dimensions: Servicescapes & Good relations with Union in the Indian Context. In the conceptual framework, Overall Total Quality is taken as the dependent variable & the dimensions of TQM as independent variables.

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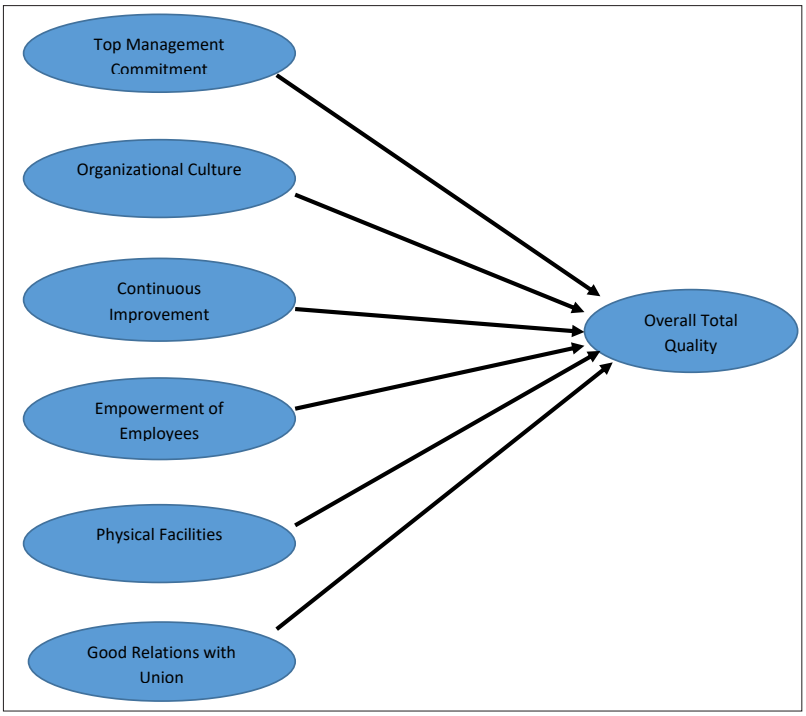

Fig. 1: Integrated Framework of Antecedents of Total Quality & Overall Total Quality

Operational Definition of Variables and Research Hypothesis

The Critical Dimensions of TQM

Top Management Commitment

TMC1. TQM Philosophy reflected in Vision & Mission Statement.

TMC2. Facilitating efforts of Continuous improvement.

TMC3. Employees recognized as assets.

TMC4. Encouraging problem Solving.

Organizational Culture

OC1. Encouraging Service to Customers.

OC2. Facilitating trust & collegiality amongst employees.

OC3. Prioritizing Customer Requirements.

OC4. Foster harmonious relation amongst employees.

Continuous Improvement

CI1. Practice incremental improvements at all levels.

CI2. Practice it as tool for competition.

CI3. Involvement of heterogeneous members for problem solving.

CI4. Encourage self-development.

Empowerment of Employees

EE1. Authorize employees to take decisions.

EE2. Facilitate process of feedback.

EE3. Support Innovative Methods to solve problems.

EE4. Encourage willing involvement of employees.

Physical Facilities

PF1. Encourage pleasant employee appearance.

PF2. Comfortable ambience for employee & customer.

PF3. Visually appealing infrastructure.

PF4. Elegant layout of facilities for employees.

Good Relations with Union

GRU1. Involvement of Unions while designing strategies of the organization.

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GRU2. Support of Union to foster service quality.

GRU3. Improving performance by fostering harmonious relations between Management & Employees.

GRU4. Grievance redressed involving union representative.

Overall Total Quality

OTQ1. Excellent Overall service.

OTQ2. Service of a very high quality.

OTQ3. A high standard of service.

OTQ4. Superior service in every way.

Regression Equation:

$$OTQ = \beta_0 + \beta_1 * TMC + \beta_2 * OC + \beta_3 * C\,I + \beta_4 * EE + \beta_5 * PF + \beta_6 * GRU$$

Where…

- OTQ = Overall Total Quality
- TMC = Total Management Commitment
- OC = Organizational Culture
- C I = Continuous Improvement
- EE = Empowerment of Employees
- PF = Physical Facilities
- GRU = Good Relations with Union

Research Hypothesis

Hypotheses Concerning the Associations between Antecedents of Total Quality Management and Overall Total Quality.

- H1a: Antecedent Total Management Commitment significantly influences Overall Total Quality.

- H1b: Antecedent Organizational Culture significantly influences Overall Total Quality.
- H1c: Antecedent Continuous Improvement significantly influences Overall Total Quality.
- H1d: Antecedent Empowerment of Employees significantly influences Overall Total Quality.
- H1e: Antecedent Physical Facilities significantly influences Overall Total Quality.
- H1f: Antecedent Good Relations with Union significantly influences Overall Total Quality.

Data Collection

Survey was carried out using Questionnaire with positively phrased statements (Parasuraman, Zeithaml & Berry, 1994). Hotel Managers were consulted for framing the statements which were based on the Operational definitions of the critical dimensions. The sampling unit comprises premium segment hotels in Mumbai. The respondents were asked to give their rating on a seven-point Likert scale defined with anchors 7 'Absolutely essential' & 1 'Not essential'. Data collection involved using: (1) self-administered instruments transmitted electronically (email) (2) interview or telephone conversation/discussion.

Respondents were identified amongst practicing Managers using Convenience Sampling. The survey was sent to 186 numbers of respondents. Total 142 numbers of responses were received, that is response rate of 76%. However, it was found that few responses were not complete and seems to be filled without proper attention. So it was decided to exclude those responses. One Hundred & Thirty-Four responses were found useful and included in the further analysis. The respondents' demographic comprises; 67% male and 33% female managers with over 3 years' experience in hospitality related services.

Data Analysis

The hypotheses stated above called for multivariate analysis with Overall Total Quality as dependent variable and Total Management Commitment, Organizational Culture, Continuous Improvement, Empowerment of Employees, Physical Facilities, and Good Relations with Union as independent variables. Multiple Regression Analysis was carried out after checking for reliability and validity of the variables.

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Reliability

There are four methods to evaluate the reliability of a construct (Nunnally, 1967); (Sellitz, Wrightsman & Cook, 1976). Amongst the four methods, the internal consistency based on reliability coefficient Cronbach's Alpha is common (Nunnally, 1967). The Cronbach's Alpha was computed for all six independent variables and one dependent variable as summarised in the Table 2 below:

Table 2: Result for Reliability

Variable	Cronbach's Alpha	No. of Scale Items	Scale Item Removed
EE	0.625	4	Nil
TMC	0.566	3	TMC4
CIA	0.575	4	Nil
OC	0.624	3	OC4
GRU	0.719	4	Nil
PF	0.681	4	Nil
OTQ	0.610	4	OTQ4

Validity

To confirm the validity, confirmatory factor analysis was carried out and factor loading for all six independent variables and one dependent variable was noted. The Table 3 displays the factor loading and number of scale items for these variables.

Table 3: Validity Check

Variable	No. of Scale Items	Factor Loading
EE	4	0.596 to 0.808
TMC	3	0.742 to 0.782
CIA	4	0.508 to 0.759
OC	3	0.727 to 0.813
GRU	4	0.588 to 0.830
PF	4	0.697 to 0.744
OTQ	4	0.666 to 0.817

From the above analysis it can be concluded that both reliability and validity for the variables are acceptable and the measurement obtained from them are suitable for further analysis. The scores for each of the variables are the averages of the scale items.

Descriptive Statistics and Correlations

The Table 4 below shows the descriptive statistics for the variables:

Table 4: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
EE	2.50	7.00	5.37	0.86
TMC	3.00	7.00	5.73	0.82
CI	3.50	7.00	5.68	0.74
OC	3.33	7.00	5.86	0.82
GRU	2.00	6.75	5.11	1.04
PF	2.00	7.00	5.17	1.13
OTQ	4.00	7.00	6.01	0.67

The correlations among these variables are reported in the Table 5 below:

Table 5: Correlations

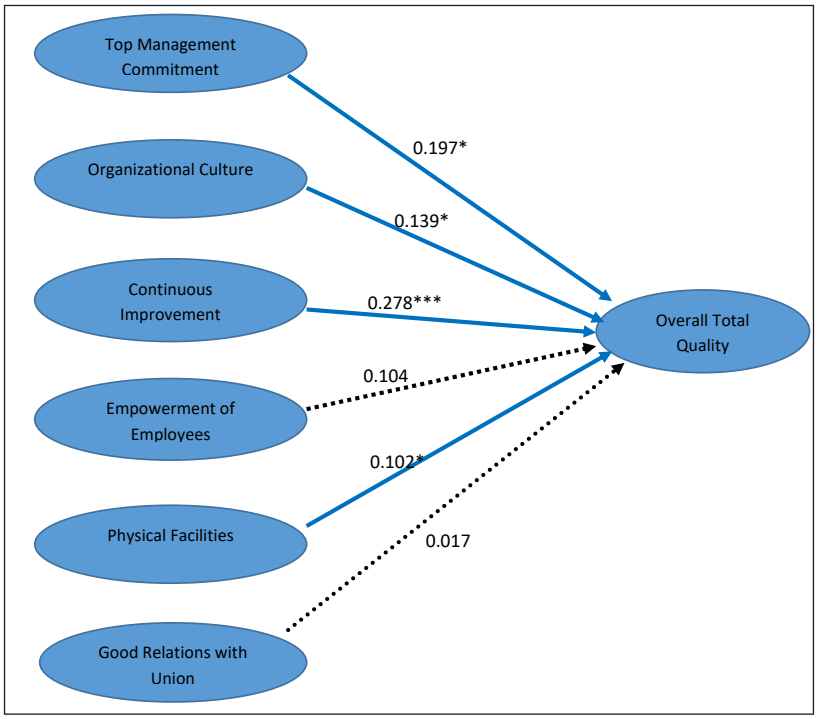
	TMC	CI	OC	GRU	PF	EE
TMC						
CI	.449**					
OC	.288**	.244**				
GRU	-.061	-.052	.189*			
PF	-.245**	.026	-.028	.285**		
EE	.681**	.405**	.271**	-.223**	-.261**	
OTQ	.477**	.515**	.353**	.047	.089	.419**

*** Significant Correlation at 0.001 level (2-tailed).
** Significant Correlation at 0.01 level (2-tailed).
* Significant Correlation at 0.05 level (2-tailed).

Multiple Regression Analysis

To address the hypothesis set for this research study, a Multiple Regression Analysis (MRA) was conducted. The MRA's ANOVA table indicated that

the MRA model fitting is good as F Test was significant. The Adjusted R Square value for the MRA model was found to be 0.378. The coefficient table indicated that the coefficient for TMC, PF, and OC are significant at 0.05 and coefficient for CIA is significant at 0.001. The results are displayed in Fig. 2:



Notes:

*** *0.001 level significance*
** *0.01 level significance*
* *0.05 level significance*

Fig. 2: Multiple Regression Analysis Results

MRA Assumption Check

- Auto-collinearity: Durbin Watson Statistics: 1.857 (Required: Between 1.5 to 2.5).
- Multicollinearity: The Variable Inflation Factor (VIF) values for all the independent variables were less than 10. Hence, suggesting the absence of any Multicollinearity in the model.

- Homoscedasticity: The residual plot indicated that the residuals are spread over complete range of the Predicted Value of OTQ. Refer Fig. 3.
- Linearity: The residual plot shows that the residual values are randomly spread and does not depicts any pattern which can negate the assumption of normality.

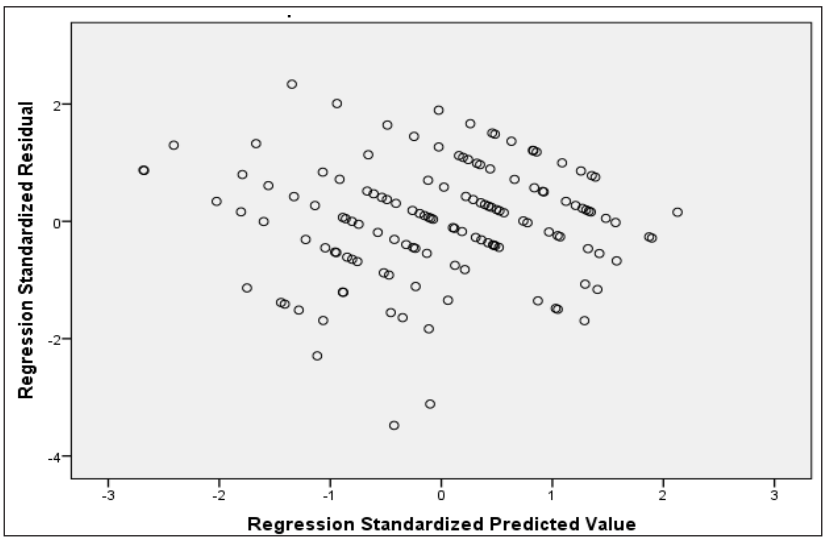


Fig. 3: MRA Residual Plot

Findings

Based on the MRA results the following conclusions were made for the hypothesis of this study.

- H1a: Antecedent Total Management Commitment significantly influences Overall Total Quality.
- H1b: Antecedent Organizational Culture significantly influence Overall Total Quality.
- H1c: Antecedent Continuous Improvement significantly influences Overall Total Quality.
- H1d: Antecedent Empowerment of Employees does not significantly influence Overall Total Quality.

- H1e: Antecedent Physical Facilities significantly influence Overall Total Quality.
- H1f: Antecedent Good Relations with Union does not significantly influence Overall Total Quality.

Discussion

Total Management Commitment forms the backbone of TQM. Previous research (Teh et al., 2008) illustrates the importance of this dimension in most of the research papers in a variety of application. It is regarded as a people oriented approach to drive business excellence. It positively influences organization working at all levels (Arumugam et al., 2008; Prajogo et al., 2004).

Organization Culture is considered as a soft issue for TQM success. Gore (1999) demonstrates the strong influence of organization culture in fostering team work amongst employee which in turn facilitates problem solving. (Bose, 2004) opined on the influence of organization culture on individual behaviour, employee satisfaction & readiness to share knowledge amongst employee. (Yusof & Ali, 2000) explains how organization culture contributes to positive interaction amongst employees which in turn reflects in better financial performance.

Continuous Improvement was popularized as PDCA cycle by Edward Deming to improve processing methods required in transformation process. (Sadikoglu & Zehir, 2010) explained how improved methods reduced variability & improved output performance. (Corbett et al., 2000) reported continuous improvement as the best TQM tool for improving service quality.

Employee Empowerment is a pre requisite at all levels for improvement in service quality according to Edward Deming. (Ooi et al., 2008) have reported significant employee contribution to process improvement & decision making related to policy issues & business performance. However, in this study, the MRA result did not supported the above arguments.

Physical Facilities or Tangibles have been reported by Hotel managers as an important determinant of Service Quality for both employee & customer. The ambience of working has positive impact on the general wellness of all the stake holders.

Good Relation with Union fosters cultural environment of trust where all employees are committed to the vision & goals. Employee grievance can

be amicable resolved if there is trust between management & employee. The employees aspire for customer satisfaction without any Management monitoring & control. In the current study, the coefficient for this variable was found to be not significant.

Implications

Understanding Total Quality Management in Hotels & its treatment as a general management theory can supply answers to both academia & practicing managers on simple practices that can enrich both professional & personal life for all the stake holders. For the academician, the findings serve as support for the application of TQM concept in hospitality industry. The hotel managers will find the findings useful for prioritizing their efforts to improve the overall total quality & providing better services to their customer.

Concluding Comments

Although extensive literature is available on TQM in the Indian service sector, the current paper related to TQM in Hospitality bridges the gap between service delivery & customer expectations. The concepts of total quality management are not clear to practicing managers leading to poor implementation which in turn results in poor customer satisfaction. The research paper clarifies the critical dimensions of TQM that will facilitate the solution to both employee & customer complaints which in turn will improve customer satisfaction & loyalty.

The data for the study was collected from self-administered structured instrument for six dimensions of TQM and Overall Total Quality as a dependent variable. The responses were analyzed using multiple regression analysis. The result indicated that TQM Dimensions - Top Management Committment, Organizational Culture, Continuous Improvement and Servicescapes (Physical Environment & Facilities) have positive influence on Overall Total Quality. The result of MRA were checked for the assumptions of MRA and found to be acceptable.

Total Quality Management as advocated by past researchers is a multidisciplinary and a holistic problem solving approach. Many other dimensions are at play & therefore additional research would be required for developing a road map & implementation framework for improving hospitality service quality, customer satisfaction & customer loyalty.

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The critical factors of TQM should not be implemented piecemeal because of the nature of the correlation (Table 5) between the factors. Holistic implementation of TQM practices offers better performance of service quality.

The results of the study of critical factors (like Total Management Commitment, Organizational Culture & Continuous Improvement) validate similar research done in the Western countries and provides a base line measure for TQM practices.

Limitations and Future Research

Data cleaning was required to eliminate inadequate & incomplete responses which may have resulted in losing out useful information. Error in performance measurement may act as a barrier for TQM implementation. Interviews were not possible due to the Covid Pandemic & the study was heavily dependent on self-administered questionnaire & the responses were also not truly random. Since the results were based on responses of premium segment hotels in Mumbai, the results cannot be generalised for other service sectors.

Future research may be considered for other geographical regions & also for wider coverage of hospitality stakeholders. Mapping of the current study with Quality award models like Malcolm Baldrige, European, Deming Awards may also provide future research opportunities. Another possible research avenue is a structured model analysis to develop a structured relation between antecedents of TQM on service quality, customer satisfaction & customer loyalty. It is also recommended to carry out a more comprehensive global study (with leaders of Service Quality like USA) with deeper investigation of the critical TQM factors & their impact on overall total quality. Practitioners & Researchers in Academia & Industry may use the present approach to evolve an elaborate theory & practice related to service quality in non-hospitality service sectors like Banking, Health Care & Information Technology.

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