

Total Quality Management Practices in Malaysia Healthcare Industry: A Survey Result

Md Fauzi Ahmad¹, Phoi Soo Nee², Nik Hisyamudin Muhd Nor³

Chan Shiau Wei⁴, Mohd Fahrul Hassan⁵, Nor Aziati Abdul Hamid⁶

^{#1,2,4,6}Faculty of Technology Management, University Tun Hussein Onn Malaysia (UTHM), Parit Raja, Batu Pahat, Johor, Malaysia,

¹mohdfauzi@uthm.edu.my

²fauzimdtqm@gmail.com

⁴swchan@uthm.edu.my

⁶aziati@uthm.edu.my

^{#1,2,4,6}Faculty of Mechanical Engineering, University Tun Hussein Onn Malaysia (UTHM), Parit Raja,

¹nhisham@uthm.edu.my

²fahrul@gmail.com

Abstract— Total quality management (TQM) is the management strategy that involves all organizational functions with the purpose on satisfying customers and achieving the vision and mission of the organizations. The aim of total quality management (TQM) is to achieve customer satisfaction. Healthcare industry is very important in Malaysia for providing good healthcare services to public. However, failure to improve quality and efficiency is a big challenge in a healthcare industry in order to increase quality healthcare services. The objectives of this research are to identify the extent level of TQM implementation; and to determine the impact of TQM implementation on business sustainable in healthcare industry. Quantitative approach has been chosen as the methodology of this study. The survey respondents targeted in this research are staffs in Malaysia private clinic. 70 respondents have participated in this research. Data were analysed by Statistical Package Social Science (SPSS). Analysis result showed that there was a positive significant relationship between TQM practices and business sustainable ($r=0.774$, $P<0.05$). All TQM factors have significant relationship with business sustainable factors. The findings of this research will help healthcare industry to understand a better and deeper valuable information on the impact of TQM implementation towards business sustainable in Malaysia healthcare industry.

Keywords— Total Quality Management, Healthcare Industry, Private Clinic, Survey, Clinic

1. Introduction

Medical industry is a vital sector in Malaysia in providing services that appropriates to the population's health needs. Medical industry is the fastest growing service among developed and developing countries [1][2]. Regardless of Malaysia's amazing economic growth in the last two decades, the Malaysian healthcare sector is still developing. Currently 117 public and 224 private hospitals operate [1][3]. Healthcare in Malaysia is classified into private and public sectors. Malaysian Government emphasizes on enlargement and growth of healthcare, setting 5% of the government budget into public healthcare [4][5]. The budget is more than RM 2 billion [4][6]. Malaysia became ageing residents and government should improve not only infrastructure and facilities but also the quality of services in health industry. Over the last couple of years, Malaysia have promoted Malaysia as medical tourism amongst foreign patients to receive medical treatment [7][8]. The foreign patients looking for medical treatments in Malaysia are from Indonesia, India, Singapore, Japan, Australia, Europe, the USA and the Middle East [7].

Total quality management (TQM) is the management strategy that involves all organizational functions with the purpose on satisfying customers and achieving the vision and mission of the organizations [9]. Kanji [10] defined TQM "as the way of life an organization committed to customer satisfaction through continuous improvement". Berry [11] defined the TQM process "as a total corporate on meeting and exceeding customer expectations and significantly reducing costs resulting from poor quality by adopting a new management system and corporate

culture". Besterfield [12] defined TQM as "the mutual cooperation of everyone in an organization and associated business process to produce products and service which meet the need and expectation of customer's. Juran [13] defines TQM as "philosophy aimed at achieving business excellence through the use and application of tools and technique, as well as the management of soft aspects, such as human motivation in work". Many medical organizations increasingly implemented TQM practices for improving their quality and efficiency of healthcare service delivery [9]. In healthcare system, understanding the practices of TQM implementation not only can provide insights in order to develop approaches to facilitate, TQM practices also improve the successful TQM implementation within local culture [14][15]. In addition, TQM implementation in medical industry resulted in higher quality care, improved patient satisfaction, better employee morale and increased productivity and profitability [16][17]. In order to improve the quality standard through TQM practices, governmental, non-governmental and private organizations have to embark on reforms and programmes to continuously improve medical service quality [18][19]. Hence, organizations identify and understand current and future patients' needs, meet their needs and exceed their expectations through high quality and efficiency in work process. Medical industry in Malaysia has been growing rapidly and steadily since the beginning of 90's and has been identified as one of the National Key Economic Areas (NKEA) under the 10th Malaysia Plan (2011-2015) [20].

The introduction of TQM into medical systems had been supported by the World Health Organisation (WHO) and it had been transferred from developed to developing countries [21]. Medical services have been affected by globalisation [22]. Malaysia government has emphasized TQM as top priority in medical care industry, due to global issue and challenge such as increasing high costs, the new rising need in medical care, competitive global health services, increasing health awareness, and the demand for a higher quality of medical care [23]. The concept of TQM was first implemented in the manufacturing sector in early 1980s followed by the service sector and other sectors.

In order to solve most of the problems in industry, most of the workplace in medical industries have applied the principles and practices of TQM in the recent years. Total quality was a description of the culture, attitude and organization of a company which strives to provide customers with products and services to satisfy their need [14]. In medical industry, quality divided by two components which were content and delivery. Content quality is discussed about the medical

outcome that was achieved. Delivery quality reflected individual reflect an individual customer interaction with the medical system. From the review of literature, eight best practices have been identified in TQM implementation namely; (1) top management commitment, (2) teamwork and participation, (3) process management, (4) customer focus and satisfaction, (5) supplier management, (6) organizational behaviour and culture, (7) continuous improvement and (8) training and education [5].

The objectives of this study are:

- i. To determine the extent of TQM implementation in medical industry.
- ii. To determine the relationship between TQM implementation and business sustainable in medical industry.

2. Methodology

This research has used quantitative approach for collecting data. First, research problem has been identified as the basis for identifying the solutions. Secondly, literature related to the research topic was reviewed for better understanding according to research objectives. Then, based on literature review, conceptual framework and several hypotheses were developed. Questionnaire was designed and undergoes the stage of pilot test for further refinement. A seven-point Likert scale have been applied in the instrument for collecting data. The instrument has been validated by the experts in green practices. The survey respondents targeted in this research were staffs in private clinic in Malaysia. 70 respondents have participated in this research. Next, after the distributed questionnaires have been collected, data is analysed. Finally, the interpreted result is combined and reported.

3. Result

Demographic analysis section explains the demographic background of the respondents. Table 1 shows that the demographic analysis which consists of seven aspects; name gender, age, residence, marital status, educational level, respondent's years of working experience and the salary per month. A total of 70 questionnaires have been distributed to the private clinic in Perak, Malaysia. The results obtained were analyzed as shown in Table 1.

Table 1. Summary Results of Demographic Analysis

	Frequency (staff)	Percentage (%)
Gender		
Male	10	14.29
Female	60	85.71
Total:	70	
Race		
Malay	19	27.14
Chinese	30	42.86
Indian	21	30.00
Others	0	0.00
Total :	70	
Age		
18-30 years	45	64.29
31-40 years	15	21.43
41-50 years	7	10.00
51-60 years and above	3	4.29
Total:	70	
Residence		
Rural	12	17.14
Semi-Rural	24	34.29
Urban	27	38.57
Metropolitan City	7	10.00
Total:	70	
Marital Status		
Single	36	51.43
Married	32	45.71
Divorce	2	2.86
Total:	70	
Educational Level		
Undergraduate	15	21.43
Graduate	32	45.71
Postgraduate	3	4.29
Diploma	20	28.57
Total:	70	
Duration of Working		
Less than 3 years	27	38.57
Between 3-5 years	19	27.14
Between 5 to 10 years	13	18.57
More than 10 years	11	15.71
Total:	70	
Monthly Income (in RM)		
Less than RM2000	37	52.85
Between RM2000 to RM2500	24	34.29
Between Rm2500 to RM3000	7	10.00
Above RM3000	2	2.86
Total:	70	

Descriptive analysis is a technique which is used in describing the extent of TQM practices. The data is computed into means and standard deviation. Mean value obtained provides the average of respondents answered based on questionnaire [24][23]. While standard deviation is used to measure the dispersion of the data in which how close the entire set of data is to the average value. The lower the value of standard deviation, the closer is the data to the average value. Table 2 shows the level of mean measurement which is ranked by the central tendency level.

Table 2. Level of Mean Measurement

Mean Range	Central Tendency Level
High	5.00-7.00
Moderate	3.00-4.99
Low	1.00-3.00

A. Descriptive analysis: TQM Factors and Business Sustainable Factors

Table 3 shows mean and standard deviation for TQM factors and business sustainable factors. Based on results, all factors in the survey questionnaire have a high mean score according to the central tendency level. For the independent variables, the highest mean is training and education, 5.75. It shows that training and education is most important factor in TQM practices. It is followed by resource management (5.69), Organization Behavior and Culture (5.60) and Team and Participation (5.60). Whereas the lowest factors is continuous improvement with mean 5.34. Meanwhile, the standard deviation of independent variables is in range of 0.82 to 1.02. However, for the dependent variable, economics variable is the highest mean among the three variables which is 5.61. The second highest mean variable is environment which is 5.39 and the less of them agree with social with the mean 5.37. Moreover, the standard deviation of dependent variable is in range of 0.95 and 1.01. Overall average mean score in both variables are 5.54 with the standard deviation of 0.94.

Table 3. Descriptive Analysis: TQM Factors and Business Sustainable Factors

Items	Mean	Stand ard Devia tion	Inter pretat ion
Independent Variables			
Top Management Commitment	5.41 (7)	0.99	High
Continuous Improvement	5.34 (8)	1.00	High
Customer Focus and Satisfaction	5.57 (6)	0.88	High
Process Management	5.59 (5)	1.02	High
Organization Behavior and Culture	5.60 (3)	0.93	High
Training and Education	5.75 (1)	0.82	High
Team and Participation	5.60 (3)	0.89	High
Resource Management	5.69 (2)	0.89	High
Dependent Variables			
Environment	5.39 (2)	0.95	High
Economic	5.61 (1)	1.01	High
Social	5.37 (3)	0.95	High
Average Mean Score	5.54	0.94	High

B. Correlation

Spearman correlation are used in analysing data from respondents to identify relationship between TQM factors and business sustainable factors. Significance value in this study is 0.05. From the

Table 4, there is positive correlation ($r=0.774$) between TQM factors and business sustainable factors at significant level 0.01. Table 5 shows all TQM factors are significant relationship with business sustainable factors.

Table 4. Correlation Analysis between Factors and Business Sustainable

		Business Sustainable	Result
Factors	TQM factors	0.774**	Positive
	Sig (2-tailed)	0.000	Significant

Table 5. Correlation analysis between TQM factors and business sustainable factors

		Business Sustainable Factors		
		Env	Eco	Soc
Top Management Commitment	Spearmen correlation	0.416**	0.400**	0.523**
	Sig.(2-tailed)	0.000	0.001	0.000
Continuous Improvement	Spearmen correlation	0.640**	0.658**	0.651**
	Sig.(2-tailed)	0.000	0.000	0.000
Customer Focus and Satisfaction	Spearmen correlation	0.495**	0.434**	0.447**
	Sig.(2-tailed)	0.000	0.000	0.000
Process Management	Spearmen correlation	0.635**	0.574**	0.638**
	Sig.(2-tailed)	0.000	0.000	0.000
Organization Behaviour and Culture	Spearmen correlation	0.638**	0.562**	0.528**
	Sig.(2-tailed)	0.000	0.000	0.000
Training and Education	Spearmen correlation	0.486**	0.539**	0.505**
	Sig.(2-tailed)	0.000	0.000	0.000
Team and Participation	Spearmen correlation	0.571**	0.471**	0.516**
	Sig.(2-tailed)	0.000	0.000	0.000
Resource Management	Spearmen correlation	0.680**	0.666**	0.659**
	Sig.(2-tailed)	0.000	0.000	0.000

** $p < 0.01$, * $p < 0.05$

Note: Env= environment, Eco= economic, Soc= social

4. Discussion

Research Objective 1: To determine the extent level of TQM implementation in medical industry.

Based on the data analysis, it showed that all factors of TQM practices were high interpretation with the mean of 5.00 above and the range of standard deviation of TQM practices was also very high which is 0.82 to 1.02. It indicates that TQM practices are important in medical industry because

it can lead to the organizational improvements and development of excellence service quality.

Research Objective 2: To determine the relationship between TQM implementation and business sustainable in medical industry.

Correlation analysis was used in this study to analyze the effects of TQM implementation on business sustainable in medical industry. It shows that there was a positive significant relationship between TQM practices and business sustainable which was 0.774 with the significance of 0.001.

4. Conclusion

This research had completed the research objectives through the distributing questionnaire amongst private clinic. This study proved that TQM practices is very important for business sustainable in healthcare industry. TQM practices will lead to the higher level of business sustainable performance. Top management should show their responsibility for quality and provide active leadership through well-developed, focused strategy and encourage the development of strong customer driven. TQM can be seen as a potential source of sustainable competitive advantage. According to this study, TQM implementation has impact on business sustainable.

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