LITERATURE REVIEW

Total quality management (TQM) is the system of activities directed at achieving delighted customers, empowered employees, higher revenues, and reduced costs (Juran, 1995). A recently published study (Bou-Llusar et al., 2009) reviews the variety of definitions of TQM available in the literature (Oakland, 2000; Dale, 2003; Eriksson and Garvare, 2005) and concludes that it is a management approach which prescribes guidelines for organizations to operate and achieve high performance. The literature suggests that organisational excellence is a key stage on the TQM journey. Furthermore, it is often applied to TQM enabling actions as an effectiveness measure (McAdam, 2000). To practice the guidelines in a systematic way many quality awards and excellence models like, Deming Prize, Malcolm Baldrige National Quality Award (MBNQA) and Excellence Model by the European Foundation for Quality Management (EFQM) have been evolved. The scope of TQM and models of performance excellence has not been restricted to any particular region or a particular sector of industries. To further study the TQM approach and its application in the health care industry of India and Iran, the theme of the present research, previous studies have been reviewed and presented in this chapter.

2.1 Factors of Total Quality Management and Organisational Performance

Based on an extensive literature review of conceptual as well as empirical studies (Flynn et al., 1994; Powell, 1995; Ahire et al., 1996; Black and Porter, 1996; Zeitz et al., 1997), Motwani (2001) has identified seven factors critical to TQM implementation and 45 measures of TQM performance. The seven factors include top management commitment; quality measurement and benchmarking; process management; product design; employee training and empowerment; vendor quality management; and customer involvement and satisfaction. The factors are briefly explained below in the form of excerpts from the work by Motwani (2001).

(i) Top management commitment: The degree of visibility and support that management takes in implementing a total quality environment is critical to the
success of TQM implementation. Four distinctive ways that management can support TQM implementation: allocating budgets and resources; control through visibility; monitoring progress; and planning for change. There should be a focus on transferring management support to the shop floor. Management should plan to reduce traditionally structured operational levels and unnecessary positions. Simplifying the organization will lead to the establishment of an infrastructure of integrated business functions participating as a team and supporting the strategic vision of the company.

(ii) **Quality measurement and benchmarking**: A company must embrace strong acceptance and maintenance of a total quality measurement and benchmarking plan. Quality programs should measure the percentage or the number of parts that deviate from the acceptable in order to prevent the recurrence of a defect. The cost of quality could include relevant changes in market share, warranty costs, and inspection, reworks, and scrap costs. The cost of nonconforming raw materials could include lost revenue or productivity costs and would aid in vendor selection and certification.

(iii) **Process management**: This factor emphasizes adding value to processes, increasing quality levels, and raising productivity per employee. However, there were varied tactics emphasized to accomplish this factor. The list contains: improving work center methods and installing operator-controlled processes that lead to a lower unit cost, embracing kaizen (continuous improvement) philosophies, reducing the operator material handling duties, promoting a design for a manufacturing program, and achieving a compact process flow.

(iv) **Product design**: Design practices provide an ideal starting point for the study of quality performance. A wide range of possible choices exist till designs are finalized. Organizations should consider the factors when planning for the product design processes: understand fully the customer product and service requirements; emphasize fitness of use, clarity of specifications and producibility; involve all affected departments in the design reviews; and avoid frequent redesigns.

(v) **Employee training and empowerment**: Employees must be oriented to a company's philosophy of commitment to never-ending improvement, be informed of company goals, and be made to feel a part of the team. Proper training includes
explanation of overall company operations and product quality specifications. Specific measures for evaluating training include: the time and money spent by organizations in training employees and management in quality principles, problem solving skills, and teamwork. On the other hand, specific measures of employee empowerment include: the degree to which cross-departmental and work teams are used, the extent of employee autonomy in decision making, the extent of employee interaction with customers, and the extent to which employee suggestion systems are being used.

(vi) **Vendor quality management:** Many companies now support, at least in theory, the need to work more closely with their suppliers. Partnerships with suppliers have the greatest appeal to most companies due to the shared risks associated with the development of new products. Vendor partnerships should be based on a quality program and accepted documentation of progress towards continuous improvement in quality.

(vii) **Customer involvement and satisfaction:** Customer service should be addressed from two main areas: internal customer service and external customer assurance. Components of an internal customer service plan should include providing timely and dependable deliveries, presenting improvements or cost saving suggestions to management and authorizing employees to self-implement solutions, cross-training employees for mastery of more than one job and providing adequate technical training. An external customer service program should include providing customers with timely information and quick responsiveness to complaints, and maintaining a corporate goal to reduce the quantity of questions or complaints while recognizing all successful efforts by employees in providing outstanding service. Measures need to be those which show where improvement has been made and where improvement is possible, rather than merely monitoring people's work.

Factors which are critical to success or failure of TQM may be classified as *soft* and *hard*. Nofal *et al.* (2005) explains the soft factors as those which are intangible and difficult to measure. Such factors are related to leadership and employee involvement and include commitment and involvement of senior executives; comprehensive policy development and effective deployment of goals; entire workforce commitment to
quality goals of the organisation; supervisors, unit heads and divisional managers assume active new roles; empowerment; effective communication; internal customer-supplier concept; teamwork; system for recognition and appreciation of quality efforts; and training and education. On the other hand, systems and quality tools and techniques are referred to as the hard factors of quality. Benchmarking, performance measurement, quality control tools, cost of quality, supplier and customer management, and quality management systems are included in the hard category of factors. Combining various soft and hard factors, Al-Nofal et al. (2005) have proposed 19 elements of TQM. The elements include leadership; employee involvement and empowerment; middle management role; training and education; rewards and recognition; teamwork; role of employee unions; policy and strategy; resources management; communicating management; managing suppliers; accredited quality management system; organizing for quality; managing by process; benchmarking; self-assessment; cost of quality; quality control techniques; and measuring customer wants and satisfaction. They have examined the impact of such factors on the success of TQM implementation in different geographical contexts. They have found that top management commitment, maximising employee commitment; involvement and empowerment, managing by customer-driven systems and processes, and continuous improvement, are most essential and fundamental to effective and successful implementation of TQM.

Seetharaman et al. (2006) have investigated why TQM fails in many organizations despite the proven fact that it is an approach which leads to improvement in various dimensions of organisational performance. The research points out that, though most organizations start TQM efforts for their success, they are frequently exposed to the factors which may cause their TQM efforts to delay or even fail. TQM is a sure bet to reverse poor performance, but when it did not yield the expected results, it was deemed a failure. The review has been done to identify the common problems that lead to the failure of TQM implementation in the organization and has pointed out the critical success factors of TQM. Nevertheless, the overall results of this research imply that the understanding of the elements that cause failure to the TQM implementation can provide needed help for companies involved in long-term continuous improvement efforts. If the advanced TQM approach is properly followed, it will help the companies to achieve organizational excellence.
Literature on critical success factors (CSFs) of TQM has recently been reviewed and documented by Karuppusami and Gandhinathan (2006) using Pareto analysis. They have examined various empirical studies on TQM (e.g. Saraph et al., 1989; Anderson et al., 1995; Ahire, et al., 1996; Wilson and Collier, 2000; Wali et al., 2003) and have identified 56 critical success factors. Out of which, 14 CSFs have been found accounting for 80 per cent and accordingly have been labeled as vital few. The remaining 42 factors, accounting for 20 per cent of occurrences frequency, constitute the useful many category. The role of management leadership and quality policy, supplier quality management, process management, and customer focus and training has been among the vital few CSFs.

Al-Khalifa and Aspinwall (2008) have developed and validated a survey instrument to measure CSFs of TQM in the United Kingdom. The empirical results indicate that the manufacturing sectors in UK are embarked towards quality excellence.

An extensive literature survey of 28 different models of TQM available in the context of manufacturing sector has been carried out by Sharma and Kodali (2008). Based on this, the authors have proposed a list of TQM implementation elements which, they claim, will direct an organization towards manufacturing excellence, as well as ensuring that the elements withstand the test of time, pace of technology, market and customer changes. They have categorised the various frameworks into the following three broad categories.

(a) Award based: Although award-based frameworks are meant mainly for organizations seeking to be recognized as leaders in the quality management field. In this paper, Sharma and Kodali (2008) take the view that the award-based frameworks are more suitable for self-assessment as well as to gain recognition of a company’s effort towards applying for an award. Award-based models are but one of the tools within the spectrum of quality initiatives to be employed when an organization has reached a mature level of TQM implementation. Some of the frameworks included in their study are Malcolm Baldrige National Quality Award, European Foundation for Quality Management, and Deming Prize Model for TQM (Stading and Vokurka,
2003); Japan Quality Award (Ueda, 2001); Rajiv Gandhi National Quality Award (Tan and Khoo, 2002); and Iran National Quality Award (ISIRI, 2010).

(b) Researcher/academic-based: Academic-based frameworks are those developed by academics and researchers mainly through their own research and experience in the field. The reviewed academic-based frameworks include Critical factors and performance measures of TQM (Motwani, 2001), Kano’s basics for TQM model (Sharma, 2004), and Components of successful total quality management (Tari, 2005).

(c) Consultant based: Basically, consultant-based frameworks are those derived from personal opinion and judgment through experience in providing consultancy to organizations embarking on the TQM journey.

Generally consulting companies either have developed their own frameworks or follow some other well-known framework to help them in their work. However, the focus of this paper is the award-based and academic-based frameworks.

The authors (Sharma and Kodali, 2008) have identified 36 frameworks of TQM and conducted a comparative analysis with an objective to develop a new framework that can guide organizations towards achieving TQM excellence. This, they consider, to be the starting point for an organization’s journey towards manufacturing excellence.

The main TQM elements as proposed by Sharma and Kodali (2008) are supplier focus/management, leadership, people/change management, process management, knowledge management, societal impact/responsibility, continuous improvement, performance measures, and customer satisfaction/focus.

There are plenty of evidences available in the literature, a few have already been presented above, to the effect that TQM and performance improvement have a positive relationship (Brah et al., 2000; Prajogo and Brown, 2004; Hermann et al., 2006; Soltani and Lai, 2007; Motwani, 2001; Montes et al., 2003; Brah and Lim, 2006; Demirbag et al., 2006; Kapuge and Smith, 2007; Sila, 2007). The Malcolm Baldrige quality award criteria too confirms such relationship between quality
management practices and business results (Evans and Jack, 2003). There are, however, some researchers who found that the implementation of TQM did not improve performance. For example, Dow et al. (1999); Singles et al. (2001); Samat et al. (2006).

Zakuan et al. (2010) have developed a model of TQM implementation in relation with organizational performance. Eight constructs of TQM, namely, quality leadership, customer focus and satisfaction, quality information and analysis, human resource development, strategic planning management, supplier quality management, quality results, and quality assurance have been identified by them. Satisfaction level and business results measure the organizational performance in their study. The study shows a positive impact of TQM effectiveness on organizational performance.

2.2 Cultural Differences and TQM
Several other researchers have examined the relationship of TQM and its effectiveness with cultural differences at national and organizational levels. A few are presented below.

Al-Nofal et al. (2010), have discussed TQM factors in Kuwait and compared the findings with their similar studies conducted in Malaysia, Palestine and Saudi Arabia. This comparative study has suggested that culture has big impacts on successful TQM implementation. Previously, Camison (1998) has suggested that TQM initiatives in an organization lead to changes in the organizational culture. The author analyses a system of values key to TQM programme, the available methods for the change, some essential supports in the process of introduction of TQM programme, and the conditions to assure the success of any initiative of this kind. Noronha (2003), using a sample of total quality management (TQM) companies operating in mainland China, Hong Kong, and Taiwan, has tested a TQM model explaining the influence of Chinese cultural values on TQM. The results indicated that the proposed model demonstrated satisfactory goodness of fit. The underlying Chinese values of abasement, adaptiveness, harmony with people, harmony with the universe, interdependence, and respect for authority were found to have important influences on four quality dimensions, namely climate, processes, methods, and results. A case study conducted by Boggs (2004) on TQM applications in a church reveals that TQM
implementation can lead to a balanced framework of competing values of an organisation. He has also found that both TQM principles and managerial ideology of TQM implementation can influence changes in the cultural profile. Rad (2006) has determined the impact of cultural values on the success of TQM implementation with reference to the Isfahan University hospitals in Iran. His findings include that TQM had the most effect on process management, focus on customers and leadership and management and less effect on focus on suppliers, performance results, strategic planning and focus on material resources. Human resource problems, performance appraisal and strategic problems were the most important obstacles to TQM success respectively. Also, the success of TQM in hospitals with organic organizational structure and medium organizational culture was found higher than mechanistic and bureaucratic hospitals with weak organizational culture. A comparative study of cultural differences and quality practices in Korea, USA, Mexico, and Taiwan (Yoo et al., 2006) suggests that collectivistic cultures, not power distance cultures, make a significant difference in employee empowerment which plays an important role in enhancing quality results. However, employee empowerment practices have not been uniform across the countries in question.

2.3 TQM Frameworks in Health Care

Health care organizations are peculiar in their nature of operations and customers. Good health is genuinely a common need for all and customers (patients) can not be segmented on the basis of social or economical factors unlike in case of other industries. The health care services are directed to individuals who belong to a wide range of income and need a variety of medical treatments. Service providers are expected to focus on moral and ethical aspects of business. TQM implementation and its effectiveness in health care has, therefore, been a separate subject of research in service sector. Researches in this area have been addressing the issues like development of survey instrument, framework of service quality, barriers and challenges, and adaptation of various TQM models like MBNQA and EFQM Excellence model (Vallejo et al., 2006; Bou-Llusar et al., 2009).

Good health is a vital necessity of human beings and poor quality of health care is crucial for their lives. Rising costs, technological advancements, aging population,
competitiveness, and commercialization of health services at the cost of business ethics have drawn attention of academicians, professionals and the governing bodies towards the management of health care performance.

Healthcare systems have made various efforts to manage their problems. The latest of the efforts has been the deployment of performance measurement, monitoring and improvement initiatives. Umbrella organizations such as the World Health Organization (WHO) and the Organisation for Economic Co-operation and Development (OECD) have taken an international lead in encouraging health system performance measurement (WHO, 2000; Smith, 2002; OECD, 2004a; OECD 2004b).

Many industrialized countries are seeking to measure and raise the productivity of their health systems through performance measurement. A number of countries have sought to manage this proliferation through the creation of theoretical frameworks through which measures can be organized and prioritized. The performance of health care systems in these theoretical frameworks has been classified by certain performance attributes, among them are the quality of care, access to care and the cost of care (Kelley and Hurst, 2006).

Quality of care can be defined as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (IOM, 1990; OECD, 2004b).

Extracted from various studies (Arah, et al. 2003; WHO, 2000; AHRQ, 2004; Donabedian, 2003; National Patient Safety Foundation, 2000; Juran and Godfrey, 2000), Kelley and Hurst (2006) have identified and described the following three major components of health care performance.

- **Effectiveness**: The degree of achieving desirable outcomes, given the correct provision of evidence-based healthcare services to all who could benefit, but not to those who would not benefit. Effectiveness is the extent to which attainable improvements in health are attained. Juran and other authors cite
effectiveness as the degree to which processes result in desired outcomes, free from error.

- **Safety**: The degree to which health care processes avoid, prevent, and ameliorate adverse outcomes or injuries that stem from the processes of health care itself. Safety is a dimension that is closely related to effectiveness, although distinct from it in its emphasis on the prevention of unintentional adverse events for patients.

- **Responsiveness or patient-centeredness**: Refers to how a system treats people to meet their legitimate non-health expectations. Patient centeredness is the degree to which a system actually functions by placing the patient/user at the center of its delivery of healthcare and is often assessed in terms of patient’s experience of their health care.

Huq (1996) has developed a framework consisting of 18 measurable TQM dimensions and validated the instrument through its application in six mid-western US hospitals. The study suggests that like any other business, health care organizations too must build distinctive competences to be successful in the market. For hospitals, such competences may mean quality care at reasonable cost, service features that are not easy to duplicate, or focusing on the provider-customer connections.

The survey (Huq, 1996) was able to identify the basic health of TQM programmes at the hospitals studied without consideration of the unique circumstances that prevail in these hospitals. These hospitals identified the need to adopt total quality management to survive in the rapidly changing health care environment. Most of these hospitals are currently two to four years into the implementation of TQM. During that time, a quality definition has been developed, quality management has been identified as a strategic directive, education of managerial personnel has taken place and teams have begun to operate with some of them having completed their work. Senior management in these hospitals made a major commitment to provide direction for the rollout of TQM. Accountabilities related to TQM were included in performance appraisals for senior and middle management. Efforts are being undertaken to identify projects in departments which previously have not participated.
Examining the applicability of TQM to health care in the USA and UK, Zairi and Feeney (1996) have explained the process of quality health care and its measurement. At that time the conclusion was that in the USA, TQM has already ingrained itself in the healthcare sector as a result of soaring health care cost, heightened participation of American patients in health care purchasing, increased competitiveness among hospitals, and rising malpractice litigation costs. In the UK, the concept of TQM was in its infancy stage but was expected to gain prominence as internal and external pressures mount. The recent changes in the UK health service have emphasized the importance of increased customer choice and patient satisfaction, making their arguments against TQM untenable.

Bandyopadhyay (2008) surveyed hospitals in the Michigan city of the USA to explore the quality management policies and practices. The findings include that 90 Percent of the hospitals reported that they had focused on quality in their strategic plans, 80 Percent of the hospitals reported that they have a quality policy manual, 80 Percent of the hospitals reported that they have a quality standards, 85 Percent of the hospitals reported that they have a quality assurance department, and 85 Percent of the hospitals reported that they have at least one quality manager. The authors conclude that Majority of these hospitals have embraced Feigenbaum’s comprehensive approach to quality management commonly known as Total Quality Management (TQM) which encourages continuous improvement of Quality of health care services for achieving highest level of customers safety and satisfaction. Michigan hospitals are continuously upgrading their equipment through lease/purchase, and improving their nursing and other health care services through rigorous training, and upgrading their patient billing and recording services using state of the art information technology to become one of the finest hospitals in the USA.

Ghahramani (2000) has proposed a TQM model based on systems engineering approach. The author claimed that the model can significantly and objectively increase efficiency, productivity and profit margins of care providers in the health care industry. The model is customer driven and results oriented rather than based on individual employee performance. This model is an evolutionary and objective
approach to an industry that is in urgent need of improvements and is currently too costly to operate.

Sharing experiences from the European health care, Øvretveit (2000) finds that some hospitals have applied TQM ideas and have been successful to improve quality, given certain conditions. However, improving patient satisfaction and reducing costs have been least important reasons for using TQM methods.

In the context of Iran, Lameei (2005) has conducted a survey of 34 hospitals associated with medical colleges to assess their readiness for TQM implementation. In the Islamic Republic of Iran the health care system is completely integrated into its medical education system. Every university/school of medical sciences (USMS) is responsible for providing both education and health care services. In 2001, TQM was informally introduced in this integrated system of medical education and health care services. The findings revealed that 48% had 50 to 59% readiness, 26% were found 60 to 70% ready for TQM implementation, and the remaining 26% were more than 70% ready. Another finding was that, there was a discrepancy between top management teams, understanding of TQM and their actual actions in taking steps regarding its implementation. In conclusion, although the universities/ schools of medical sciences are taking steps toward setting the stage for TQM implementation, each one with its own pace, but the top management team must take more active role than the past in preparation for and implementation of TQM.

Rad (2005) has studied barriers to successful implementation of TQM in Irani health care organizations. Using two questionnaires- one each to study success factors and barriers, the survey was conducted in health care service organizations in the Isfahan province. The findings suggest that process management and focus on employees had a positive and the greatest effect on TQM success. Whereas, strategic and structural problems were the most important obstacles to successful implementation of TQM.

Two articles have recently been published from Iran which lead to comparative analysis of different hospitals, within and outside the country, on TQM implementation and organizational excellence. Maleki and Izadi (2008) have studied two ISO 9001 certified hospitals, Alborz and Panzdah-e-Khorad, situated in the
capital city Tehran. The data gathering tool consisted of an EFQM questionnaire filled in during group working sessions, interview with hospital managers, and also the available documents kept at different wards. Data were collected on four criteria of results- performance, customer, society, and people in the hospitals. The findings showed that Panzdah-e-Khordad hospital achieved a higher score (236.1 out of a total of 500 points) compared to Alborz hospital with 212.2 points. The authors conclude that the health care area is one of the best fields for application of the model towards the performance excellence and gaining better organizational results and hence, it seem that the model has a high potential in responding to problems commonly seen in health sector. Hamidi and Zamanparvar (2008) examined hospitals from Asia, Africa, North and South America, and Europe to study the appropriateness of various models and approaches of TQM. The authors found that the main purposes for which quality is promoted in the sample hospitals include improvement in service efficiency, delivery, quality of work life, and change in organizational culture. Regarding the approaches and models of quality management, the authors reported that cultural change, quality assurance, and ISO 9000 have been the major focus of the hospitals in question. The major problems revealed in establishing the quality management were resistance against the change, lack of commitment from the senior management, lack of strategic planning and lack of resources.

In Indian context, three recent articles have been found very relevant to the theme of the present research. In 2007, Manjunath et al. studied a 300-bed hospital in the southern part of the country to evaluate its performance and compare it with the MBNQA criteria. The case study illustrates the measurement of quality performance through MBNQA to the health care administrators that is the first step for managing and improving quality in health care organisations. It provides lessons for those hospitals that have already started quality initiatives. The results identify the strengths and opportunities for improvement through MBNQA criteria. The total points scored are 753 out of 1,000 points. This reveals that quality performance of case hospital is of higher level. However among all the seven criteria, the hospital has still more opportunity to improve the quality in the fourth criterion -measure, analysis and knowledge management (Manjunath et al., 2007).
Duggirala et al. (2008) have proposed a questionnaire for hospitals to examine the quality of care being delivered by them to the patients. The questionnaire was administered to the respondents in government and private hospitals located in major cities in the states of Tamil Nadu and Gujarat in India. The respondents included medical, nursing, and paramedical and support staff of the hospitals surveyed. A total of 100 responses have been obtained after sending out 300 questionnaires to different hospitals across India. This yielded a response rate of 33 percent. Hospitals with 50 beds and above have been chosen to be part of the study. The questionnaire is a seven point Likert scale (from 1 indicating very low to 7 indicating very high). The findings highlight 14 distinct dimensions of provider-perceived TQM and the relationships among them. Positive and significant relationships among the dimensions and hospital performance have been found using multiple regression analysis. The following are the critical factors of provider-perceived TQM in hospitals that have been identified in this paper- Top management commitment and leadership, Human resource management in the hospital, Process management, Hospital facilities and infrastructure, Patient focus, Employee focus, Measurement of hospital performance, Hospital information system, Errors, safety and risk management, Service culture, Continuous improvement, Benchmarking, Union influence, and Governance and social responsibility. The authors have also examined the impact of the 14 provider-perceived dimensions of TQM in healthcare on hospital performance. The level of hospital performance is operationalized in terms of seven dependent variables: patient satisfaction with overall quality of healthcare provided by the hospital to the patients over the last 1 year, satisfaction of doctors with respect to overall hospital functioning, satisfaction of nurses with respect to overall hospital functioning, satisfaction of paramedical and support staff with respect to overall hospital functioning, level of overall financial performance of the hospital, level of medico-legal cases against the hospital, and level of recognition of the hospital in society.

Extending the framework proposed by Duggirala et al. (2008), Padma et al. (2009) have developed a more comprehensive conceptual survey instrument to determine the quality of health care in India from the viewpoints of patients as well as their attendants. The eight dimensions of their framework of service quality in the context of health care include infrastructure, personnel quality, process of clinical care, administrative procedures, safety indicators, corporate image, social responsibility,
and trustworthiness of the hospital. The authors mention that items in every factor from the existing literature on healthcare services, related services, Malcolm Baldrige National Quality Award and Joint Commission International frameworks have formed the basis of their framework. Thus the study claims that the proposed model goes beyond the SERVQUAL dimensions and their items and can be used by hospital administrators and managers to measure the level of service delivered by them. A seven-point Likert scale (ranging from 1 indicating “very low” level of service to 7 indicating “very high” level of service) has been suggested to measure the perceptions of services offered.

2.4 Conclusions from the Chapter

Studies have suggested quite a large number of factors/elements/constructs/dimensions of TQM implementation. Many of them have appeared more frequently than others. TQM and performance improvement have a positive relationship, particularly, the Malcolm Badrige quality award criteria confirms such relationship between quality management practices and business results.

A study by Salaheldin (2009) indicates that there are many empirical studies which examine TQM practices-performance relationships in large firms but the small and medium firms still need a little more attention of researchers.

Culture, national as well as organizational, too has a big impact on TQM implementation and its effectiveness. The literature suggests both ways- TQM changes organisational culture and culture contributes significantly in effectiveness of TQM plans.

Service sector as such is found lagging behind in effectively implementing the TQM practices (Yasin et al., 2004; Samat et al., 2006) for various reasons. The situation worsens further when we look at the services, like health care, that are directed at customers (Khamalah and Lingaraj, 2003). While the literature concerning service quality dimensions in the healthcare industry is replete with studies from the developed world, researchers from developing countries have been exploring the applicability of the related models and frameworks in their specific context. In Indian
context, there is a dearth of an independent model of service quality as almost all the existing studies applied SERVQUAL framework, except that of Duggirala et al. (2008) (Padma et al., 2009). Iran too does not seem to have any established framework for measuring quality efforts and performance of its health care industry.

Zakuan et al. (2010) suggest that despite the number of publications and quantity of research on TQM, there is actually little empirical work that has been carried out in developing countries, particularly in the ASEAN region.