Introduction

Good health, responsiveness to the expectations of its people, and financial contribution to the nation are the goals for health care systems of a country (WHO, 2000). An overview of the health scenario all over the world indicates that despite having numerous excellent health care facilities, there exists a sufficiently large gap between the demand and delivery. In India nearly one million people die every year due to inadequate health care and two-third population is deprived of specialist care (Article 1, 2009). The country spends US$ 29 per capita on health with only 6 physicians available per 10,000 persons (GHO, 2009). The global health observatory (GHO, 2009) also reports a per capita expenditure of US$ 215 on health in Iran. There are nine physicians working for every 10,000 persons in Iran.

With increasing competition, advances in medical sciences, and rising patient expectations, the health care systems have become complex organizations. They need to obtain an optimum balance between the resources and patient satisfaction. Total quality management (TQM) has a great potential to address quality problems in a wide range of industries and improve the organizational performance (Harrington, 2005; Zakuan et al., 2010).

The service sector, however, does not seem to have been benefited by the TQM practices to a great extent (Yasin et al., 2004; Samat et al., 2006). The situation is even more pathetic in sectors like health care where services are directed at customers. This situation draws attention not only in the developing countries, like India and Iran, but also in the developed world (Rad, 2005; Khamalah and Lingaraj, 2003; Ghahramani, 2000; Feng and Manuel, 2008). However, if implemented in its true spirit and format, TQM has proved its potential to improve business results and customer satisfaction even in health care organizations (Kunst and Lenimink, 2000; Øvretveit, 2000).

Juran (1995) has defined TQM as the system of activities directed at achieving delighted customers, empowered employees, higher revenues, and reduced costs. It is a philosophy aimed at continuously improving the quality and process to achieve customer satisfaction. Simply stated, it is the building of quality into products and process making quality a concern and responsibility for everyone in the organization (Stevenson, 2005).
The term organizational excellence appears to be used as a synonym of business excellence in the quality-related literature. Tracing the evolution of organizational excellence as a concept, McAdam (2000) reports that activities directed towards organisational excellence gained momentum in the early 1990s after the advent of quality awards like European Quality Award and Malcolm Baldrige Award. This has been defined as a key stage on the TQM journey and measures the effectiveness of TQM implementation (McAdam, 2000).

Organizational excellence is designed to permanently change an organization by focusing on the five important business pillars. Learning to manage them together is the key to success in the endless pursuit of improved performance (Harrington, 2005).

Kelley and Hurst (2006), in their project on health care quality indicators, refer to the manual of Organisation for Economic Cooperation and Development (OECD) and Institute of Medicine (IOM) to define the quality of health care 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”.

The Malcolm Baldrige criteria for performance excellence in health care organizations define (NIST, 2010) performance excellence as an integrated approach to organizational performance management that results in (a) delivery of ever-improving value to patients and stakeholders, contributing to improved health care quality and organizational sustainability, (b) improvement of overall organizational effectiveness and capabilities as a health care provider, and (c) organizational and personal learning.

The current state of research in the area of health care quality along with the inadequacy and cost of health care services in India and Iran has inspired the authors to develop and validate a framework for the health care industry to measure its quality practices and performance, the theme of the thesis.
Need for the Study

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 Baldrige 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. The literature review, conducted on the subject of the study leads to the following observations. Total quality management (TQM) has a great potential to address quality problems in a wide range of industries in the manufacturing sector and improve the
organizational performance (Harrington, 2005; Zakuan et al., 2010). Organisational excellence has been described a key measure of TQM effectiveness (McAdam, 2000).

For various reasons, the service sector does not seem to have been benefited by the TQM practices to a great extent (Yasin et al., 2004; Samat et al., 2006). The situation is even more pathetic in sectors like health care where services are directed at customers. This situation draws attention not only in the developing countries, like India ad Iran, but also in the developed world (Rad, 2005; Khamalah and Lingaraj, 2003; Ghahramani, 2000; Feng and Manuel, 2008). However, if implemented in its true spirit and format, TQM has proved its potential to improve business results and customer satisfaction even in health care organizations (Kunst and Lemmink, 2000; Øvretveit, 2000).

Though there are evidences of recent studies in India and Iran pertaining to total quality management and performance in health care (Maleki and Izadi, 2008; Hamidi and Zamanparvar, 2008; Manjunath et al., 2007; Duggirala et al., 2008; Padma et al., 2009), none of them claims for having addressed the issue in totality.

The current state of research in the area of health care quality along with the inadequacy and cost of health care services in India and Iran (GHO, 2009) seem to justify the present study entitled “Organisational Excellence in Health Care Industry: A Comparative Study of TQM Practices in India, Iran and the United States of America”. The purpose of including the United States in this study is to learn from their experiences and benchmark the Indian and Iranian services against those in the United States.

**Objectives and Hypotheses**

To address the issues covered in the topic of the research, the following objectives have been identified.

- To develop and validate a framework for the health care industry to measure its quality practices and performance.
- To compare, using this framework, the quality practices and performance of the health care organizations in India and Iran.
To benchmark the quality practices and performance of the health care in India and Iran with that of the United States.

The following three broader hypotheses are formulated and tested to answer the second objective of the study.

- India and Iran are not different in practicing the philosophy of total quality management for performance excellence in health care.
- Health care organizations have no difference in TQM implementation and its results whether they are government, semi-government, or private type.
- The size of hospitals does not affect the implementation and effectiveness of total quality management.

Methodology
In the light of the objectives listed above, an exploratory-cum-descriptive type of research design has been considered suitable for the study. While working for the first objective, the approach was exploratory, whereas, the rest of the work has been based on the descriptive design of research (Malhotra, 2007). The primary data are collected from India and Iran. In India, the researcher has contacted the Ministry of Health and Family Welfare in New Delhi seeking its permission and requesting the support required for this purpose. With the help of this office, 43 hospitals from all over the capital city and representing the government, semi-government, private, small, medium, and large types were initially contacted on convenience basis. The contact persons were mainly administrators and managers. 32 responses could be obtained from this city. Another 25 hospitals were approached for data collection in Aligarh, a district headquarter in the state of Uttar Pradesh, where the researcher is pursuing the work at the Aligarh Muslim University. These hospitals were identified using an official directory and the basis of including them in the sample has again been the convenience sampling method. 21 respondents completed the questionnaire. A similar procedure was adopted in Iran to collect data from the capital city, Tehran and the state Mazandaran, the researcher’s home town. After scrutinising and editing the filled-in questionnaires, 110 were finally complied for further processing. Out of which, 50 are from India and the remaining 60
from Iran. Prior to the actual collection of data, a pilot survey was done in Aligarh to judge the suitability of the questionnaire. For Iranian respondents, the questionnaire was translated in Persian to make it more compatible with their system. The translated questionnaire was first tested for its validity using a pilot study of 10 experts.

In addition to the information gathered through literature survey, two documents, namely, guidelines for hospitals in pursuit of excellence (AHA, 2009), and the Baldrige health care criteria for performance excellence (NIST, 2010) have been used as sources for secondary data. The primary data are gathered through a structured questionnaire that was initially developed based on these secondary data. The responses are gathered on a five-point Likert scale (Khamalah and Lingaraj, 2003; Schniederjans, et al., 2006). This questionnaire then has been modified using factor analysis and validated empirically as the first objective of the study. The primary data for this purpose were collected from the sample health care organizations in India and Iran. The primary data were further analysed for the second objective using analysis of variance (ANOVA) and post-hoc Turkey test. The results so obtained are compared, for the third objective, with that of the ten American health care organizations, which have received the Malcolm Baldrige National Quality Award during the period 2002-2009.

Analysis and Conclusions

Based on the literature available on the subject, a questionnaire consisting of 67 questions on quality measures and their results was designed to collect data. Another seven questions were included to know the respondent profile. The questionnaire considered mainly the Baldrige health care criteria for performance excellence 2009-10 (NIST, 2010). Another two major documents used in the background of preparing the set of questions are the performance measurement for health system improvement: experiences, challenges, and prospects (WHO, 2008), and hospitals in pursuit of excellence (AHA, 2009). The data were collected from 50 hospitals in India and 60 from Iran.

Using factor analysis, a model has been developed and validated for measuring quality and performance in health care organizations (Appendix-II). The model is referred to as
instrument for health care quality and performance measurement (IHCQPM). The instrument consists of ten constructs, namely, non-financial performance, patient focus, quality planning, workforce and process, goal setting, leadership, work environment, communication, knowledge management, and financial performance. The constructs are then compared with the Baldrige framework (NIST, 2010), a guide suggested by the American Hospital Association (AHA 2009), and the background document of the WHO European conference (2008) on health systems (WHO, 2008). The contents of the instrument are also verified with one of the seminal studies using the Malcolm Baldrige national quality award for comparing quality practices in different countries (Schniederjans et al., 2006). The constructs are found matching with the standards referred above and taking care of all major requirements outlined for health care performance systems.

All the ten dimensions of quality and performance correlate significantly with each other. Among the strong correlations are quality planning - workforce and process, patient focus - workforce and process, and communication – work environment. Non-financial performance has got relatively better relationship with communication, patient focus, and financial performance. The leadership- non-financial performance correlation has been comparatively lower than that with financial performance. The study by Schniederjans et al. (2006), involving manufacturing, processing, and service companies, has also got significant correlations among all the nine dimensions, they have evolved.

A null hypothesis that “India and Iran are not different in practicing the philosophy of total quality management for performance excellence in health care” is tested using the analysis of variance. Except for goal setting and work environment the F-values did not show any significant difference between the two populations. The mean values on the ten constructs for Indian hospitals exhibit the following hierarchy of the constructs in order of their decreasing importance- work environment, leadership, goal setting, patient focus, knowledge management, quality planning, financial performance, workforce and process, non-financial performance, communication. In case of Iran, this hierarchy appears as following- non-financial performance, patient focus, work environment, knowledge
management, communication, financial performance, leadership, quality planning, workforce and process, and goal setting.

Comparative analyses of the means of the average scores on the ten constructs are also conducted by size and type of the responding organizations. The ANOVA indicates that whether a hospital is private, semi-government, or government, it does not have any significant effect on its perception and assessment about the quality measures.

A post-hoc Turkey test, comparing the three types of health care organizations with each other indicates that the private and semi-government hospitals are significantly different in patient focus, whereas, the leadership aspect is found significant when private hospitals are compared with the government ones. Comparison between the government and semi-government hospitals did not show any significant difference between them.

Analysis of variance is also conducted to test the null hypothesis of equal means among the three types of health care services considering the two countries separately. It has been found that the three types are significantly different in India on knowledge management with the government services being the best followed by the semi-government set ups. In Iran it is the leadership that makes a significant difference among the three types. Private services in Iran have got the best score on this construct.

According to the number of beds, the sample (110 hospitals) was divided into three categories- small, medium, and large. The size of a hospital, using ANOVA, is found influencing the scores on patient focus, communication, and financial performance. A pair-wise comparison using the Turkey test reveals that small- and medium-sized hospitals are significantly different from each other on patient focus, communication, and financial performance. To further examine the TQM scenario in hospitals of different sizes in the two countries, ANOVA is run for India and Iran separately. The results show that the size makes a significant difference among the Indian hospitals regarding their focus on patients. In Iran, however, one single significant difference is found for
communication, where, the medium-sized hospitals indicate a better mean than the remaining two.

Keeping the theme of the thesis in mind, the perceptions and assessments of the Indian and Iranian hospitals on TQM are benchmarked against the performance of those hospitals in the USA which have received the Malcolm Baldrige National Quality Award in the health care sector. The average scores of Indian and Iranian hospitals on different constructs of the IHCQPM model are compared with the major results achieved by the recipients of the MBNQ award. In no case the hospitals from India and Iran are found scoring close to the benchmarks.

Limitations and Future Research

The present study, with all its limitations, is likely to help health care organizations improve the quality of their services and simultaneously reduce the cost. This two-fold broad objective is expected to benefit both those who seek health care and those who provide it. The ultimate result of using the Baldrige framework for performance excellence in the health care industry can be seen in the form a healthy nation.

A cross-country study on Baldrige national quality award criteria has been recently undertaken by Schniederjans et al. (2006) in the context of both manufacturing and service industries. The countries in question were India, Mexico, and the United States. With an overall response rate of 23 per cent the final sample consisted of 555 respondents. The present research is based on 110 responses from two countries and that too from a single industry. The sample size, though seems to be reasonable, yet had a scope for further enlargement. A larger sample might have improved the quality of the comparative analyses, particularly with reference to size and type of organizations. The sampling adequacy though has been confirmed by the KMO test, a more reliable composition of factors possible with a sample size bigger than 110 as the number of items has been fairly high, 67.
The geographical coverage of the sample also limits the applicability of the findings of this study as hospitals only in the capital cities and their nearby places are covered. Inclusion of rural health care services would have added more value to the present work.

Though quite a large number of people visit outpatient departments of hospitals, the present research examines only the inpatient and emergency services. Moreover, the contents of the questionnaire are of general nature and do not address issues related to specialties. Some of the hospitals in the sample are attached to medical colleges which altogether have a different orientation. The findings are likely to have been affected by this fact also.

Such limitations may be taken care of by future researchers to widen the scope and improve the robustness of the instrument proposed to measure the quality and performance of health care services. The proposed instrument may be used by hospitals for self-assessment and benchmarking, by the governing bodies for evaluation purpose, and by patients to choose the right place for them to go.

References
Kindly refer to the thesis for the complete list.