THE MODERATING EFFECT OF ORGANIZATIONAL CULTURE ON THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND QUALITY MANAGEMENT PRACTICES IN PUBLIC HOSPITALS IN SAUDI ARABIA

MOHAMMAD FALEH ALHARBI

DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
July 2012

THE MODERATING EFFECT OF ORGANIZATIONAL CULTURE ON THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND QUALITY MANAGEMENT PRACTICES IN PUBLIC HOSPITALS IN SAUDI ARABIA

By

MOHAMMAD FALEH ALHARBI

Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy

PERMISSION TO USE

In presenting this thesis in fulfillment t of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my thesis. It is understood that any copying or publication or use of this parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my thesis. Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ABSTRACT

The effectiveness of quality management initiatives resulting in sustainable competitive advantage and enhanced business performance has been a major subject of interest for business and academia alike. The quality management literature frequently cites the importance of leadership, but little research has been done to evaluate the linkages between leadership styles and quality management practices. This study examined the relationships between leadership styles (transformational, transactional, and laissez-faire), and quality management practices in Saudi public hospitals. The study also examined the moderating effect of organizational culture on these relationships. This study adapted and integrated a Deming-based quality management model with a multi-dimensional leadership model. It tied the foregoing to the organizational culture to reveal how organizational culture is related to leadership styles and quality management practices. A quantitative research design was adopted to collect data, test hypotheses, and answer the research questions. A cross-sectional survey method was used to conduct this study. A survey package was sent to 182 public hospitals in Saudi Arabia, and 140 were returned, giving a response rate of 77 percent. Results of the study revealed that the transformational leadership style has a significant, positive relationship with quality management practices. However, the transactional and laissez-faire leadership styles were found to significantly and negatively relate to quality management practices. Furthermore, the results showed that organizational culture has a moderating effect on the relationship between leadership styles and quality management practices. Based on the results, it is recommended that hospitals recruit leaders with transformational style, and also hospital directors may opt for a quality management approach that is suitable to the existing organizational culture or they may attempt to modify the existing culture.

Keywords: Quality Management Practices, Leadership styles, Organizational culture, healthcare Sector, Saudi Arabia

ABSTRAK

Keberkesanan inisiatif pengurusan kualiti yang menentukan kelangsungan daya saing yang mapan dan peningkatan prestasi perniagaan telah menjadi keutamaan dalam bidang yang berkaitan dengan perniagaan dan akademik. Literatur kajian berkaitan pengurusan kualiti kerap menyebut kepentingan kepimpinan, tetapi hanya sedikit penyelidikan dilakukan untuk menilai hubungan antara gaya kepimpinan dan amalan pengurusan kualiti. Kajian ini bertujuan untuk menentukan hubungan antara gaya kepimpinan (gaya kepimpinan transformasional, gaya kepimpinan transaksional, dan gaya kepimpinan *laizzez-faire*), dengan amalan pengurusan kualiti di hospital awam Arab Saudi. Kajian ini juga meneliti kesan moderasi budaya organisasi terhadap hubungan tersebut. Selain itu, kajian ini turut menyesuai dan menggabungkan model pengurusan kualiti berasaskan Deming dengan model kepimpinan pelbagai dimensi. Model ini mengaitkan budaya organisasi dan mendedahkan kaitan antara budaya organisasi dengan tingkah laku kepimpinan dan amalan pengurusan kualiti. Reka bentuk kuantitatif digunakan untuk mengumpul data, menguji hipotesis, dan menjawab soalan-soalan kajian. Kaedah tinjauan rentas telah digunakan untuk menjalankan kajian ini. Sejumlah 182 set soal selidik telah diagihkan ke hospital awam di Arab Saudi, yang mana 140 daripadanya telah dikembalikan. Ini memberikan kadar respons sebanyak 77 peratus. Dapatan kajian mendedahkan bahawa gaya kepimpinan transformasional mempunyai kaitan signifikan dan positif dengan amalan pengurusan kualiti. Walau bagaimanapun, gaya kepimpinan transaksional dan *laissez-faire* mempunyai hubungan yang signifikan dan negatif dengan amalan pengurusan kualiti. Selain itu, dapatan turut menunjukkan bahawa budaya organisasi mempunyai kesan moderasi separa terhadap hubungan antara gaya kepimpinan dengan amalan pengurusan kualiti. Berdasarkan dapatan, kajian ini mencadangkan agar hospital merekrut pemimpin yang mempunyai gaya transformasional, pengarah hospital juga boleh memilih satu pendekatan pengurusan kualiti yang sesuai dengan budaya sedia ada dalam organisasi atau cuba membuat penambahbaikan terhadap budaya pengurusan kualiti sedia ada.

Kata kunci: Amalan kualiti pengurusan, Gaya kepemimpinan, Budaya organisasi, Sektor penjagaan kesihatan, Arab Saudi

ACKNOWLEDGEMENTS

All praises are due to Allah, without His help this thesis would have been impossible to accomplish.

I would like to express my thanks and appreciation to a number of people who have directly or indirectly assisted and supported me during my studies. Hence, I would like to take this opportunity to show my gratitude to those who have assisted me in a myriad of ways. Firstly, I would also like to express my heartfelt thanks to my supervisor, Prof. Dr. Rushami Zien Yusoff ,for his guidance, patience, and faith in me. Thank you for your helpful advice and support. Thank you for your guidance and relaxed, thoughtful insight. You always foster my academic growth by challenging and inspiring me to reach deeper, to learn more, to expand my viewpoint, and to think critically. I also would like to express my sincere appreciation and thanks to my defence committee members, Dr. Fais Ahmad and Dr. Haim Hilman Abdullah, for their time, assistance and advice, and most importantly, for their understanding during the completion process of my thesis, which helped me to continue on the right track. My appreciation and thanks also go to all my friends, who have contributed to the completion of this thesis. I want to specially thank Dr. Abdulhameed Alenezi and Dr. Hamoud Alshammari for their help and support.

Last but not the least, I would like to express my sincere appreciation and thanks to all my family member, mother, brothers, sisters, my wife, and my children. My mother's love and sincere prayers have been the major source of fuel for me. No words can describe my real feelings toward my brother, Alhomaidi, who takes care of the

family, including me. He is a great man in every sense of the word. I feel indebted to him for the rest of my life. Another important person to me is my brother, Turki, who has been supportive of me in many ways. Finally, my appreciation and gratitude goes to my wife, Riham, my sons Rayan, Ziad, and Haitham, and my daughter, Rana. My wife has been a constant source of support and encouragement and has made an untold number of sacrifices for the entire family, and specifically for me to continue my studies. Hence, great appreciation and enormous thanks are due to her, for without her understanding, I am sure this thesis would never have been completed.

TABLE OF CONTENTS

CHAPTER SIX: DISCUSSION AND RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter underlines the background of the study, followed by the problem statement, research questions, objectives, significance, and scope of study. Then, definitions and concepts used in the study is offered. Finally, the organization of the remaining chapters is also offered at the end of this chapter.

1.1 Background

Throughout the world, the healthcare sector is struggling to provide quality healthcare to citizens while managing costs (Walston, Al-Harbi, & Al-Omar, 2008). Healthcare organizations recognize the need to provide quality services if they want to survive as a healthcare provider that is intended to meet the physical, psychological, and social needs of people seeking care (Raja, Deshmukh, & Wadhwa, 2007). According to Khan (2011), quality is the focus of most organizations as it is considered to be the main competitive and business practice; quality management has become a strategic tool to achieve superior performance and competitiveness. Top management support is essential and the most important factor for quality management in providing a clear direction to employees' satisfaction (Ng, Goh, & Eze, 2010). Antonaros (2010) argue that leadership is about the skills, abilities, behaviour, and knowledge necessary for the success of quality initiatives, which is significant given the number of organizations striving to weave quality programs into their overall strategic orientation. Additionally, Anderson, Rungtusanatham, Schroeder, and Devaraj (1995), Laohavichien, Fredendall, and

Cantrell, (2009) contend that leadership traits are essential to achieve quality improvements in product, processes, and services. Top management's commitment and involvement are necessary to bring about quality enhancement in any organization. Several studies show that continuous quality improvement implementation and similar strategies require a long-term commitment of several years in order to result in a successful outcome (Laohavichien et al., 2009).

Deming's definition of quality states that an organization should be able to meet or exceed customers' expectations (Fisher, Barfield, Li, & Mehta, 2005). Quality also refers to the extent to which the processes, products, and services are free from defects and constraints. The Deming Management Method and its 14 constituents influence organizations' quality performance and nine of Deming's Fourteen Points of quality deal directly with leadership (Khan, 2010). These nine points are institute training, institute leadership, drive out fear, breakdown barriers between departments, eliminate slogans, exhortations, and targets for the workforce , eliminate numerical quotas , remove barriers to pride of workmanship, encourage education and self-improvement for all employees, and take action to accomplish transformation (Metri, 2006).

Customer satisfaction is a measure of quality. In other words, organizations can theoretically survive by continually satisfying customers through innovative processes and services. Anderson, Rungtusanatham, and Schroeder (1994) emphasize the importance of organizational leadership, which impacts organizational practices, essential for achieving the organizational goals required for survival.

A notable aspect of successful quality management (QM) is leadership (Bass & Avolio, 1994). The Malcolm Baldrige National Quality Award's (MBNQA) Criteria for

Performance Excellence are some of the most widely used quality criteria for QM. One of the key categories in MBNQA is leadership (Idris & Ali, 2008) and it highlights the importance of leadership in achieving quality performance. This category emphasizes how senior managers can guide an organization and encourage superior performance. It also promotes visionary leadership as a core value and concept. Moreover, quality gurus stress that leadership is vital for effective implementation of total quality management initiatives (Khan, 2010).

Based on Yang's (2003) study, the healthcare services are met with many barriers to QM implementation. Some of these barriers are mentioned below:

1. Leadership Styles: Majority of healthcare organizations leaders specialize only in their profession. They have created an unchallengeable leadership that does not welcome inferior's opinions or advice.
2. Organizational Structure: Traditional healthcare organizations make use of a functional hierarchical structure as their basis and this causes poor communication among the sections of the organization.
3. Organizational Culture: The structure and leadership style of healthcare organizations are characterized as highly hierarchical, bureaucratic, and authoritarian; elements which clashes with the empowerment belief.
4. Lack of Consensus: Physicians believe that QM practices are just invaluable to administrative efficiency and service quality as opposed to medical treatment.

Suffice it to say, the right leadership in an organization can stimulate a group to articulate innovative ideas. These are known as the "strong forces" of leadership, which can shift the focus from quantity to quality and speed (Bass & Avolio, 1999). Quality

and speed can provide an organization with a competitive edge; these two factors can be responsible for the long-term success of an organization. Leadership can facilitate qualitative change by changing associates' viewpoints (Campbell, 2008). Hence, leadership style influences the quality environment.

Leadership includes management commitment as an integral part of QM (Ahire, Golhar, & Waller, 1996; Ahmed, 2009; Anderson et al., 1994; Black & Porter, 1996; Lakshman, 2006; Latham, 2008; Salaheldin, 2009; Saraph, Benson, & Schroeder, 1989; Sila & Ebrahimpour, 2005; Wahid & Corner, 2009). When the focus is on quality, the organization must examine its leadership capability and culture (Mauro & Mauro, 1999). Organizational leadership characteristics that affect QM are important issues. According to Laohavichien et al. (2009), leadership characteristics influence employees, thereby enhancing quality performance or processes and products. Thus, leaders must have the ability to realize formulated vision by managing quality elements to transform the firm into using quality managerial practices. This is possible through a transformational leader, who has the capability to inspire and direct subordinates (Idris & Ali, 2008).

Transformational leaders are challenging, inspirational, intellectually stimulating, development oriented, and visionary (Bass & Avolio, 1999). Transformational leadership is associated with quality improvement as it provides the visionary leadership necessary to achieve the quality desired. Some researchers have found that transactional leadership can reduce quality because contingent rewards and punishments encourage employees to pursue their own goals rather than corporate goals (Avolio, 1994; Avolio & Bass, 2004). On the other hand, transactional leadership does

not affect the core and infrastructure practices as it has been found to be used more by successful rather than unsuccessful firms. Hence, some suggest using a mix of both transformational and transactional leadership to achieve the desired quality.

Management issues are evident in the healthcare sector. In emerging economies, the healthcare sector has to change its management style to survive in the competitive business environment (Tabish, 1998). Survival has particularly become an issue due to the high expenses of medical technology installation. Furthermore, patients have a growing awareness about their rights to obtain good quality treatment. Since extending quality treatment is expensive, hospitals can no longer afford to offer free services. Such factors have led to an increase in current challenges of healthcare professionals in Saudi Arabia. Despite the fact that theoretically, the employment of QM practices is a significant component in business performance enhancement, in reality, organizational culture leads to many organizations failing to implement quality programmes if prevailing organizational culture not compatible with the values and basic principles of TQM approach (Rad, 2006). The result is parallel with Hackman & Wageman's (1995) study where it was revealed that TQM programs involve more than the implementation of technical management practices and call for reinforcement of culture and attitude of organizational members aiming to provide customers with products and services to satisfy their demands; for example, if a company is desirous of adopting TQM practices but does not have the suitable culture to reinforce such adoption, its employees may feel overwhelmed and may not be able to halt the production line when defects are noticed coming off the line which results in the program's failure.

The connection between QM success and organizational design may be varied in different cultural values (Rad, 2006). Davies, Nutley, and Mannion (2000) define organizational culture as an organization's values, norms, and beliefs that shape its behaviours. As healthcare organizations experience key reforms in their processes of care delivery, they are increasingly putting greater emphasis on organizational culture and its role in driving innovation, facilitating change as well as bringing about transformation in the healthcare system (Ingersoll, Kirsch, Merk, & Lightfoot, 2000; Shortell, Gillies, & Deverset, 1995a). Shortell, Levin, and O'Brien (1995b) assert that successful quality care implementation inherently calls for a significant devotion to a culture that emphasizes risk taking, autonomy, and empowerment. Various studies have consistently found the significance of organizational culture in successfully driving QM (e.g. Dean & Bowen, 1994; Hackman & Wageman, 1995; Metri, 2005; Powell, 1995; Sahney & Warden, 1991; Wardhani, Utarini, Van Dijk, Post, & Groothoff, 2009). According to Rad (2006), the success of QM practices as an organizational change largely depends on the organizational culture. Indeed, a central function of organizational culture—namely, leadership—creates and manages QM. Leadership imposes the organizational purpose, beliefs, behaviours, and leaders' values on the organization's employees (Oqbannan & Harris, 2000; Schein, 1985; Senge, 1990; Shaw, 2002). According to Khan (2010), effects of visionary leadership on customer satisfaction is dependent on creating and sustaining a quality focused organizational culture.

As much as an organizational culture's leadership affects the culture, an organizational culture affects its leadership as well (Bass, 1998, p. 63). Through the

influence of daily practices, behaviours and tasks, the leadership style and values of the leaders shape the organizational culture (Sengupta, 2004; Hofstede, Neuijen, Ohayv, & Sanders, 1990). Individual leadership motivations may also influence cultural styles. If a leader prefers aggressiveness and outcomes, he/she may be motivated to develop an innovative form of culture (O'Reilly, Chatman, & Caldwell, 1991).

Culture is a collection of enduring covert and overt rules, principles, and values that guide organizational behaviour (Burke & Litwin, 1992, p. 532). Schein (2004) defines organizational culture as a dynamic phenomenon in constant flux. He adds that employees' interactions with one another create an organizational culture; leaders' behaviours within a structured set of norms direct and constrain such behaviour, thus shaping it. Thus, leaders must pay attention to the beliefs, assumptions, values, and rites embedded in the organizational culture (Bass, 1998, p. 532).

In summary, the concepts of leadership styles and quality management practices (QM) are very critical in organizations. The application of these concepts often determines how organizations achieve their goals and objectives (Khan, 2011). Even though these concepts are related to a greater extent, they also differ in terms of their meaning and application in the organizations. It is important to point out that in as much as they may be different concepts, the success of each of these approaches in the organization depends on the working of the other; that is, when applied in a given organization, the two are rarely separable because they are intertwined (Goetsch & Davis, 2011). Moreover, DeBerry (2010) claims that the behaviours of leadership play a vital role in the organizational culture that has been established, and it is important that leaders are consistent in their drive for quality improvement in the organizations.

Hence, leadership requires many things, but the most important is service to others. The combination of competencies, characteristics, traits and methods of each style will yield an effective leadership mode capable of driving quality management and sustaining long term evolution in the organization. A synthesized integration of these leadership styles will drive forward the leader's ability to effectively influence the organization and therefore impact quality management practices. To begin with, it is important to understand the role of the leadership styles and organizational culture on the quality management practices in public hospitals in Saudi Arabia, especially when the results of studies on specific leadership styles have not been clear or consistent.

1.2 Problem Statement

In 1993, national guidelines for quality assurance in healthcare were established in Saudi Arabia. One of the main aspects of this national quality assurance programme is QM practices (Al-Ahmadi & Roland, 2005). However, since the initiation of a quality assurance program, little information has become available about the quality management of health care in Saudi Arabia. According to WHO (2006), upon evaluating the Saudi healthcare system, the QM outcomes of the healthcare system have been negatively influenced by leadership decisions at the public hospitals due to lack of quality training programmes for the top management. Also, there is a lack of national health information system to provide data required for good decision-making on quality management practices. Hence, Al-Ahmadi and Roland (2005) call for future researches to make a more objective assessment of the quality management in health services and identify interventions that are effective in improving healthcare quality.

Damanhouri (2002) investigated TQ management standards and related indicators in public hospitals in Saudi Arabia. He found that the application of QM in Saudi Arabian hospitals is very weak and at a low level. The author found that:

- The quality systems do not meet the employees' satisfaction as indicated by 76.4% of respondents.
- The study indicated that a large percentage of the employees indicated that there are no quality standards and indicators in their work (87.6%, 92% respectively).
- 84.9% of the employees indicated that QMS need to improve the human resources management in hospitals.
- The percentage of participants in TQM programmes is low (27.1%).
- 44% of respondents indicated they are not allowed an opportunity to be creative in their jobs.
- In analysis of each hospital the results show that between 63% and 97.6% of the respondents indicated that they do not use TQM tools.
- Results indicated were lower than expected in the involvement of Employees in decision making regarding quality and in conducting meetings to Exchange opinions about quality.

Damanhouri reasoned lack of top management commitment and vision as problems that hinder the application of quality. He also emphasizes future studies to be carried out to examine the effect of other elements of leadership that are not included in the study to determine the stage of the implementation of quality management in public hospitals in Saudi Arabia. This conclusion is consistent with Al Touri's (1998) study, which found that QM programmes in Saudi Arabian hospitals are ineffective and at low level of

implementation. Al-Touri also suggested that quality improvement could be developed for hospitals within Saudi Arabia by comprehensively investigating the QM programme issues. Therefore, the issue of QM would be investigated in the reported theoretical gap to overcome the aforementioned practical problem.

From the theoretical perspective, there has not been an adequate examination of the issue of QM practices in health services. As far as the significance of leadership to QM is concerned, a strong consensus exists among the quality movement founders, as evidenced in the writings of Crosby (1979), Deming (1986), Feigenbaum (1983), and Juran (1994). The view of all these founders is that quality is a leadership responsibility. They also view TQM principles as leadership principles. Similar concern is echoed by Hackman and Wageman (1995). The significance of leadership such as senior management commitment, top management, senior management understanding, and visionary leadership, as a successful QM aspect is well documented by authors (e.g. Anderson et al., 1994; Awan, Bhatti, Qureshi, & Bukhari, 2009; Chowdhury, Paul, & Das, 2007; Feigenbaum, 2007; Karuppusami & Gandhinathan, 2006; Motwani, 2001; Ng et al., 2010; Saraph et al., 1989). Any organization or individual wishing to take the first steps on the journey toward quality management has to start with a myopic view of the ability of the organization's leadership (Mauro & Mauro, 1999, p. 37). Indeed, a recent study by Idris and Ali (2008) on the impact of best practices in quality and leadership style on organizational performance revealed that performance can be enhanced by transformational leadership and mediated by best practice quality management. In other words, an effectual management approach can result in much-

needed organizational change. Transformational leaders set the vision and motivate followers to attain it through effective communication.

Despite the importance of leadership in QM initaives, little research has evaluated the linkages between leadership styles such as transformational, transactional, and laissez-faire leadership and QM practices (Avolio, 1994; Berson & Linton, 2005; Laohavichien et al., 2009; Ryan, 2004; Sousa & Voss, 2002). Therefore, the present research investigates the three constructs individually in consistence with the significant previous studies in the area of leadership styles (Alammaj, 2000; Almailam, 2004; Bodla & Nawaz, 2010, Chen, 2004; Elenkov, 2002; Erkutlu, 2008; Janis, 2003; Jung & Avolio, 2000; Xirasagar, 2008).

According to Laohavichien et al. (2009), transformational leadership theory has not been utilized in the area of QM. They state that a major portion of the QM literature failed to utilize constructs of leadership theory in their evaluation of the importance of leadership in QM. These authors assert that further research is necessary to incorporate both transactional and transformational leadership into QM models. Also, Lakshman (2006) asserts that the leadership role in quality management is mostly untouched in studies concerning leadership. As such, quality management as a significant leadership role, has been largely ignored. The author emphasizes that his theoretical framework opens the door to further research in the leadership behaviors by examining the behavior of both specific and general behavioral dimensions associated with total quality management philosophy which have not been addressed in the traditional behavioural paradigm of leadership research. A similar recommendation is offered by Berson and Linton (2005), who highlight the need for future research in examining the relationship

between leadership styles and quality management practices. Ovretveit (2005) asserts that some of the existing research has raised questions about the amount of influence managers have over quality improvement, and the evidence proving which management actions are effective for quality improvement is not sufficient and need further study. Sousa and Voss (2002) also suggest that further research should be conducted to examine the relationship between QM and leadership styles. Thus, based in the gaps identified, the researcher is interested in investigating the effect of leadership styles specifically related to transformational, transactional, and laissez-faire leadership on QM practices in Saudi Arabian hospitals.

In addition to the role of leadership style in influencing QM practices, organizational culture effects need to be addressed for two reasons. Firstly, more than 70% of health workers in Saudi Arabia are foreigners from multicultural countries (Ministry of Health, 2006; Walston et al., 2008). For example, about four fifths of doctors and nurses and more than half of technicians in Saudi Arabia are non-Saudis (WHO, 2006). Of the total population of 22.6 million in Saudi Arabia in 2006, expatriates account for approximately 6 million (WHO, 2006). As such, a clash is likely to occur between the national culture and the organizational culture. According to Hofstede (1991), organizational culture is the shared perception of daily practices, while national culture represents the shared values of people within a certain national environment. National culture values are learned from the socialization process in which the individual participates as a member of society, while organizational cultural practices are acquired from socialization in the workplace. Researchers have developed cultural dimensions including group-orientation culture that has been considered as the

main cultural dimension underlying social interaction (Hofstede, 1991). Based on the study by Chen, Chen & Meindle (1998), the group orientation culture produces unity among group members and results in an effective relationship. On the other hand, individualistic culture tend to overlook relationships and stresses on tasks (Kim, Triandis, Kagitcibasi, Choi & Yoon, 1994). Therefore, the dimensions of national culture would not fit into the organizational culture as most health workers come from different backgrounds. Yet organizational culture has been found to play a vital role in knowledge-intensive organizations (Mathew, 2007). If the employees are not proactive, it can impede QM practices (Jung & Hong, 2008). In a hospital setting, different cultural types may exist in varying degrees. As this could affect QM practices, a need exists for a thorough investigation as to whether organizational culture influences QM practices in Saudi Arabian hospitals.

Secondly, many authors (e.g. Bass, 1998; Ogbannan & Harris, 2000; Schein, 1985; Rad, 2006; Senge, 1990; Shaw, 2002) claim that the administration of QM should be different in diverse organizational cultures. Rad (2006) argues that organizational culture should have the support of top management and be quality-oriented regardless of national culture. In addition, these authors have indicated that leadership style directly affects organizational culture. Schein notes that "leadership and culture are so central to understanding organizations and making them effective" (1985, p. 327). Furthermore, some preliminary findings and theoretical propositions suggest that organizational culture may be a harmonious combination variable that leadership uses to influence various organizational outcomes (Lim, 1995; Ogbannan & Harris, 2000). Therefore, the

researcher is interested in examining the moderating effect of organizational culture on the relationship between leadership style and QM practices.

1.3 Research Questions

The following research questions are examined in this study:

1. Is there any relationship between leadership styles and quality management practices?
    - 1.1 Is there any relationship between transformational leadership style and quality management practices?
    - 1.2 Is there any relationship between transactional leadership style and quality management practices?
    - 1.3 Is there any relationship between laissez-faire leadership style and quality management practices?

2. Does organizational culture moderate the relationship between leadership styles and quality management practices?
    - 2.1 Does organizational culture moderate the relationship between transformational leadership style and quality management practices?
    - 2.2 Does organizational culture moderate the relationship between transactional leadership style and quality management practices?
    - 2.3 Does organizational culture moderate the relationship between laissez-faire leadership style and quality management practices?

1.4 Research Objectives

The research seeks to achieve the following objectives and sub-objectives:

1. To determine the relationship between leadership styles and quality management practices.
    - 1.1 To determine the relationship between transformational leadership style and quality management practices.
    - 1.2 To determine the relationship between transactional leadership style and quality management practices.
    - 1.3 To determine the relationship between laissez-faire leadership style and quality management practices.

2. To investigate the moderating effect of the organizational culture on the relationship between leadership styles and quality management practices.
    - 2.1 To investigate the moderating effect of the organizational culture on the relationship between transformational leadership style and quality management practices.
    - 2.2 To investigate the moderating effect of the organizational culture on the relationship between transactional leadership style and quality management practices.
    - 2.3 To investigate the moderating effect of the organizational culture on the relationship between laissez-faire leadership style and quality management practices.

1.5 Significance of the Study

There is a lack of study about the relationship between leadership style, organizational culture and its effect on quality management practices in the health sector specially in the developing countries. The results of this study have provided an important addition to the body of knowledge on this topic when compared and construct with similar study results. Although Deming (1982, 1986) considers leadership to be of critical importance in quality-focused organizations, he does indicate specific leadership approaches to implementing his Fourteen Points (Sosik & Dionne, 1997). This is an important omission that needs to be re-visited because the effectiveness of leadership styles varies across situations and contexts (Bass, 1990; Sosik & Dionne, 1997).

Puffer and McCarthy (1996) suggest that visionary leadership from the top of the organization is a prerequisite for successful implementation of a quality-focused agenda. Many organizations stumble or fail in their efforts to adopt company-wide quality management programs (Wilkinson, Marchington, & Goodman, 1992) and often the failure is blamed on inadequate leadership (Puffer & McCarthy, 1996). But what kinds of leadership behaviors are likely to be most effective in organizations pursuing organizational objectives related to quality? A variety of propositions and approaches to answering this question has been offered (Anderson et al., 1994; Bass, 1985; Lakshman, 2006; Puffer & McCarthy, 1996; Sosik & Dionne, 1997). However, there is a paucity of empirical research to support the foregoing theoretical work. Research findings on the specific kinds of leadership behaviors most closely associated with the achievement of quality-focused organizational objectives should prove valuable to those wishing to evaluate quality management theories and have practical importance to those directly

engaged in quality management activities (Sosik & Dionne, 1997). Yet gaps exist in the literature, and to minimize or eliminate these gaps, it is important to examine the relationship between leadership styles and quality practices.

Moreover, the motivation for the study arose from the dire state of the hospitals in Saudi Arabia. It is expected that the outcome of the research will enable authorities to become conscious of needed change in the health sector. In addition, this study offers a unique opportunity to consider specific leadership styles, culture, and QM practices in the context of healthcare in Saudi Arabia. Furthermore, the leadership styles and its effect on the quality management practices in public hospitals in Saudi Arabia would provide meaningful data to administrators and staff members in different ways. For one, this study helps hospital directors to better realize their influence on quality management practices, and help them become more successful leaders. Leaders may possibly use the outcome of this study to modify their existing leadership styles to suit their staff members' perception regarding quality management practices.

This study further contributes to an understanding of leadership styles as transformational, transactional leadership and laissez-faire leadership styles have their own benefits and pitfalls. This study demonstrates whether one of these styles or a mix is essential to attaining quality management practices in the health sector.

Ultimately, the result of this study is important not only for academics, but also for regulators and investors by providing an integrated understanding of the relationship between leadership styles and QM practices in the Saudi Arabian healthcare sector. Moreover, this study may possibly be used to make better programs for hospital directors for the betterment of healthcare delivery of services. Finally, the present study

is significant because it adds to limited body of empirical research by focusing on the public health system in Saudi Arabia.

1.6 Scope of the Study

This study examines the relationship between leadership styles, organizational culture and quality management practices of public hospitals in Saudi Arabia. Participants of this study comprised quality department managers and other departmental managers. They were considered to be the right respondents for this study as they report to the director of hospitals, and hence would be able to provide feedback on leadership styles, organizational culture and quality management practices (Lagrosen, & Lagrosen, 2005; Lau, Zhao, & Xiao, 2004; Saraph et al., 1989; Shortell et al., 1995a; Wilson & Collier, 2000; and Wu, Wiebe, & Politi, 1997). Bin Saeed (1999) conducted a comparison among production industries and revealed that attempts to determine quality management figures in service industries are more challenging and complex specially in the healthcare sector owing to its nature and the activities conducted in providing healthcare services. Nevertheless, information concerning QM serves as a critical element in healthcare organizations. Hence, Public hospitals under the Ministry of Health were selected as they are the major provider of healthcare services, with 59% of hospitals and 57.7% of the beds being under their management in Saudi Arabia.

A quantitative cross-sectional survey was carried out for this study over a period of three months, from April 2011 until June 2011. Data were collected on demographic items, leadership styles, organizational culture, and quality management practices. The Multifactor Leadership Questionnaire developed by Bass and Avolio (2004) was used to

measure the full range of leadership styles (i.e. transformational, transactional, and laissez-faire). Quality Management Practices Questionnaire was used to measure the constructs of quality management practices (Douglas & Fredendall, 2004; LeBrasseur, Whissell, & Ojha, 2002; Saraph et al.1989; Shortell et al., 1995). The Organizational Culture Questionnaire developed by Cameron and Quinn (2005) was used to measure the constructs of organizational culture.

1.7 Operational Definitions

Several terms are used in this study. Definitions of these terms are provided to ensure better understanding of them throughout the study.

1.7.1 Quality Management Practices

QM practices refer to the process whereby the hospital transforms strategically to support continuous fulfilment of customer expectations through the use of statistical tools, techniques, and employee training that focuses on the principles of constant improvement of the health services. This process must necessarily be instituted by the senior management of the hospital.

1.7.2 Total Quality Management (TQM)

TQM refers to creating an organizational system which promotes learning and cooperation to facilitate process management practices' implementation that in turn brings about incessant improvement of products, services and processes, and employee fulfillment. These are critical to customer satisfaction and eventually to firm survival

(Andersons, Rungtusanatham, and Schroeder, 1994).

1.7.3 Total Quality

Total quality refers to the "application of quality to every task in the organization" (Jackson, 1990).

1.7.4 Leadership Style

Leadership style is the approach and manner of motivating people, implementing plans, and providing direction that the hospital director uses with his staff members toward influencing quality management practices in the hospital. Included in this study are three types of leadership styles: transactional, laissez-faire, and transformational.

1.8 Definition of terms

1.8.1 Transformational Leadership

Transformational leadership is

> “a process in which the leaders take actions to try to increase their associates' awareness of what is right and important, to raise their associates' motivational maturity and to move their associates to go beyond the associates' own self-interests for the good of the group, the organization, or society. Such leaders provide their associates with a sense of purpose that goes beyond a simple exchange of rewards for effort provided” (Bass & Avolio, 1997, p. 11).

1.8.2 Transactional Leadership

Transactional leadership refers to the "leadership that uses formal rewards and punishments to manage followers; they formally or informally engage in deal making and contractual obligations" (Nelson & Quick, 1995, p. 358).

1.8.3 Laissez-Faire Leadership

Laissez-faire leaders refer to leaders who avoid getting involved when important issues arise and avoid making decisions (Bass & Avolio, 1997).

1.8.4 Organizational Culture

Organizational culture refers to "some combination of artefacts (practices, expressive symbols, or forms), values and beliefs, and underlying assumptions that organizational members share about appropriate behavior" (Detert, Schroeder, & Mauriel, 2000, p. 851).

1.9 Organization of the Thesis

Chapter one sets the context of the study, provides the rationale and motivation for research, and discusses the significance of the study as well as the research aims and objectives. In other words, it provides a planned layout of the study. The second chapter reviews previous studies and literatures on leadership styles, QM, organizational culture, and the relationship between these parameters. Based on the literature review, a framework for the research is developed.

Chapter three presents the theoretical framework and hypotheses, while chapter four presents the research methodology including the research phenomenon, the research strategy, and the methodology adopted. Justifications for the chosen method are provided. Chapter five explains the proper analytical tests used to test the research hypotheses, and presents the results. The last chapter, i.e. chapter six, discusses the findings while simultaneously reflecting on the prior literatures reviewed and the impact of the findings. Also, this chapter summarizes the findings and presents the conclusions. Based on the conclusion, recommendations are made for future studies, and implications for practice are offered.

In the next chapter, the concept of quality management practices, principles of quality, historical development of leadership theories, and the concept of organizational culture will be presented. Previous studies that have been carried out to highlight the relation between leadership styles, organizational culture and quality management practices are also discussed.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a review and discuss of literatures related to organizational culture, leadership style, and quality management practices. It also examines the way in which the existing research is based upon prior theory and its extension.

2.1 Quality Management

2.1.1 Quality Management definitions

Quality management has become a global issue with more and more organizations (private and public, manufacturing and service) implementing quality management or are planning to do so. Increasingly, the strategic importance of quality is recognized in such a way that quality management is no longer considered as an operational issue. Organizations attempt to align their strategy with quality concerns and objectives in order to attain sustained competitive advantage (Anderson et al., 1995). This can be achieved only when the organization has the conviction that implementing quality management can lead to enhanced quality. But available research regarding this type of organizational change initiative has been mostly conducted in the private and manufacturing sectors. It has been noted that public institutions such as Saudi hospitals have also joined the movement towards quality management in an effort to combat organizational inefficiencies and shrinking budgets (Al-ahmadi& Roland, 2005). In addition, quality is very important in the health sector, as it is a basic human right to get

the best quality of health care, given the circumstances of the existing economic situation of the country.

Total quality management (TQM) is a management practice that can help improve the performance of healthcare organizations. Even though there is no universally accepted definition of TQM, it has been considered a philosophy for managing organizations (Dean & Bowen, 1994; Hill & Wilkinson, 1995). The American Federal Office of Management and Budget Circular 1999 (cited in Milakovich, 1990, p.209) defines TQM as "a total organizational approach for meeting customer needs and expectations that involves all managers and employees in using quantitative methods to continuously improve the organization's process, products, and services". This definition includes a number of concepts such as total approach, total management, the application of TQM, and the coordinated and committed overall management philosophy. According to Morgan and Murgatroyd (1994, p. 5), "TQM involves everything, a total system of quality improvement, achieving continuous performance improvement, TQM is a way of managing , so every job and process is carried out right, first time and every time". This definition considers TQM as an approach that looks at the overall quality improvement system at all levels and involving all organization employees.

In a similar vein, Ovretveit (2000) defines TQM as "an organization wide approach and philosophy, with a strategy for organization and personnel development and quality management and information structure". This definition considers TQM as a philosophical strategy that focuses on staff, management and structure. Similarly, Schmele and Foss (1989) defines TQM as a "systematic way of guaranteeing that

organised activities happen the way they are planned. It is a management discipline concerned with preventing problems occurring by creating the attitudes and controls that make prevention possible" (p. 31). In sum, the above definitions consider TQM as a method or technique that contributes to the significance of activities, planning and prevention of problems.

In the health sector, TQM is a relatively recent application, adopted from practices in the industrial sector. In health care, Shortell, Levin and O'Brien (1995, p. 151) define TQM as "an ongoing effort to provide care that meets or exceeds customer expectations". They further note that TQM is a promising approach for increasing value in terms of maintaining or improving the quality of care while containing costs. This understanding underscores the importance of TQM as a method of continuous improvement to different activities, considering the patient of health care as the aim of these improvements in health care, and the significance of cost.

For the purpose of the present thesis, quality management practice refers *to as the process in which a hospital transforms strategically to support continuous fulfilment of customer expectations through the use of statistical tools, techniques, and employee training that focus on the principles of constant improvement of the health services. This process must necessarily be instigated by the senior management of the hospital.*

2.1.2 Principles of Quality Management Practice

This section identifies and interprets the principles of quality management practice based existing literatures. It describes the principles of adopting quality management practices as a strategy that can be found in theories put forth by various authors.

Various authors maintain the significance of adopting TQM principles and practices in organizations. According to Rahman and Tannock (2005), if the quality and business excellence principles are applied to all aspects of the business operation and processes, they would contribute to customer and stakeholder satisfaction, and enable the organization to remain competitive while ensuring business survival. Similarly, Iaquinto (1999) contends that quality improvement leads to increased stakeholder satisfaction, profitability, and market shares. It also leads to a decrease in manufacturing costs, which could promote the company competitiveness. But to achieve these results, the company's strategy must be designed so that emphasis is placed on the continuous improvement of process, product, organization, and people. Even the seven Baldrige categories as per the MBNQA must be aligned for the successful management of overall performance (National Institute of Standards and Technology, 2009).

It is interesting to note that working frameworks or models along which organizations can establish their practices to achieve TQM are still rare, although they have been identified. These sets of practices or models, if embraced by organizations and applied in the right manner, can help them deliver quality products or services. However, simply applying any framework that is readily available is not the answer. Achieving TQM cannot rely on a one-size-fits-all model; hence, the criteria in the framework have to be interpreted in the correct manner or they will fail to mirror the TQM concept.

Most researchers have focused their scientific efforts mainly to enhance theoretical understanding of the critical factors and the right application of the available tools and models. According to Sila and Ebrahimpour (2005), these critical factors are

the best ways in which organizations and their employees can undertake different business functions and key processes. Empirical studies on TQM have increased after Saraph et al.'s (1989) study. Other related survey studies regarding critical success factors of TQM have been conducted by Anderson et al. (1994), Ahire et al. (1996), Black and Porter (1996), Wilson and Collier (2000), Flynn, Schroeder, and Sakakibara (1994).

The MBNQA, named after Malcolm Baldrige (1981-1987) who served as US Secretary of Commerce, was established by the US Congress in 1987 (Flynn & Saladin, 2001). The program, managed by the Commerce Department's National Institute of Standards and Technology in collaboration with private industries, was meant to enhance the performance and competitiveness of American organizations. The idea was to promote quality awareness, recognize the quality and business excellence that American firms were pursuing, and publicize the performance of these firms. Perhaps this is why Garvin (1991) refers to it as the "most important catalyst for transforming American business". MBNQA has since evolved from a framework for recognizing the best QM practices to a widespread framework for performance on the global level. It is now extensively used as a framework for (process) development (Flynn & Saladin, 2001) and is considered a useful form for attaining world category quality award (Juran, 1994). MBNQA focuses on overall business improvement rather than awarding quality. Based on MBNQA's success in the U.S., several other international quality awards have been developed based on the MBNQA criteria (DeBalyo, 1999; Ettore, 1996), including the Egyptian Quality Award, the European Quality Award, the Brazilian National Quality Award, the Mexican National Quality Award, and the Japanese Quality Award.

Various researchers have evaluated the validity and feasibility of the MBNQA based on their experience and perception of the tool. The evaluations can be categorized under two different headings, according to Flynn and Saladin (2001). First, the Baldrige model has been used as a framework for operationalizing quality management (Dow, Samson, & Ford, 1999; Handfield, Ghosh, & Fawcett, 1998). MBNQA is a universally accepted model as it is related to several quality management constructs. It is also a valuable model for studying quality management practices. Amidst the debates on how to categorize the elements of this holistic framework, Samson and Terziovski (1999) found it necessary to decompose it in some manner so as to facilitate the analysis. The second set of studies examined the validity of the MBNQA, which has been found to be the best and most accepted model for studying quality management practices in the world (Wilson & Collier, 2000). Moreover, Rao, Luis and Solis (1997) found that this model shows convergence in quality management practice.

The initial proposal for TQM practices was brought about because in recent years, a number of U.S. companies have found it impossible to accomplish world-class quality through traditional approaches of managing product and service quality (GAO, 1991, p. 2). Consequently, the earliest studies assessed the relevance and increasing importance of quality management practices. The 1991 GAO report was conducted at the request of the Honourable Donald Ritter from the U.S. House of Representatives (GAO, 1991, p. 1). The study was primarily commissioned to study those firms that have adopted TQM methods into their business practices and the impact of such adoptions on the performance of these companies. The TQM approaches "also reflected the criteria used in the Malcolm Baldrige National Quality Award" (GAO, 1991, p. 8).

The investigation included 22 companies or divisions that were privy to site visits from Baldrige between 1988 and 1989. The four areas that showed enhanced functional results were:

- greater customer satisfaction;
- better employee relations;
- increased financial performance; and
- improved operating procedures.

In almost all cases, organizations that applied TQM accomplished higher productivity, better employee relations, increased market shares, greater customer satisfaction, and improved profitability (GAO, 1991, p. 2). However, there were some caveats as well. The study did not involve tools and instruments to measure the effectiveness of TQM factors. Saraph et al.'s (1989) work was the first study in this area. They tried to recognize the critical factors of TQM that are imperative for a business that wants to accomplish an efficient QM. Saraph et al. aimed to provide a method for TQM critical factors, primarily because they identified the gap between philosophies of quality gurus and how they actually translated into outcomes that were measurable and impacted everyday business in a tangible manner. Today's scholars refer to this ground-breaking work as a fundamental empirical framework for evaluating TQM effectiveness (Motwani, Mahmoud, & Rice, 1994; Badri, Davis, & Davis, 1995; Quazi & Padibjo, 1998).

Saraph et al.'s (1989) objective was to create an instrument or tool to measure a manager's perception of quality management at the business unit level specifically, i.e.

the parameters of critical success factors (CSF). This was achieved through an intensive literature review of quality management literature, from which they developed 120 recipes for organizational success, grouping these into eight categories (i.e. Role of divisional top management leadership for quality, role of quality department, training, product/service design, supplier quality management, process management, quality data and reporting, and employee relations). To make sure of the authenticity of the content and validity of the study, professors and graduate students at the University of Minnesota critically reviewed the CSFs. In the pre-test phase, the CSFs were reviewed by practicing managers which reduced the number of CSFs from 78 to eight categories. Thus, the authors concluded that the eight critical factors identified were valid. In addition, it was clear that these factors provided managers with the much-needed tinted glass to appreciate the importance of quality management practices and gauge their impact. This could also be used to evaluate perceptions regarding quality management practices.

The same authors went on to investigate data from 152 managers in 77 business units from 20 companies. They framed two hypotheses to elucidate the relationship between organizational context and quality management: (a) Managers' perceptions of actual quality management are influenced by organizational contextual variables, and (b) Managers' perceptions of ideal quality management are not affected by organizational contextual variables. They subsequently proposed a model for quality management and investigated the two key aspects in the model, providing empirical support for the model's hypothesized relationship between quality context and managerial perceptions in terms of both actual and ideal quality management. The study

confirmed the results related to parameters of validity and reliability. Although ANOVA and factor analysis would have been a more rigorous methodology, the study represented the most comprehensive academic study of TQM constructs at that time and successfully established a benchmark by which all other empirical studies of TQM could be measured. The study was first conducted in the US. Since then, it has been replicated in three other countries: India (Motwani, Mahmoud, & Rice, 1994), the United Arab Emirates (Badri, Davis, & Davis, 1995), and Singapore (Quazi&Padibjo, 1998).

In the context of India, Motwani et al. (1994) pushed TQM studies beyond the confines of national boundaries, conducting a two-phase study. The first phase involved the synthesis of nine critical factors of TQM needed to achieve effective quality management in an organization. This was achieved through detailed literature reviews of the work done by quality management gurus. Although their analysis and synthesis were similar to Saraph et al.'s (1989) study, subtle differences emerged in their nine factors (i.e. role of the quality department, quality policies, training, vendor quality management, product design, process design/statistical process control, feedback, employee relations, quality data, and top management). The second phase involved treating these nine critical factors as independent variables in order to determine their impact upon the level of quality in the firm. The researchers used the instrument developed by Saraph et al. (1989) to measure the independent variables and Cronbach's alpha coefficient was used to determine internal consistency.

Motwani et al. (1994) revealed significant statistical support for quality data, training, role of the quality department, vendor quality management, and quality policies. In addition, it provided statistical support for process design/statistical process

control and top management. However, employee relations areas, feedback, and product received no significant statistical support. This gap revealed a lack of interaction between the two critical departments, namely, the manufacturing department and developmental research. Furthermore, it revealed that employee upgrades did not fully depend upon quality principles. They discovered that required quality could be present even though all nine critical factors were not present in an organization (1994, p. 46). The breadth of Indian managers who took the survey led to the conclusion that these critical factors were universally acceptable within Indian manufacturing companies.

Another study that utilized Saraph et al.'s (1989) critical factors, strengthening support for the recommended instrument by replicating their work, was the work of Badri et al. (1995), which aimed to afford more desirable awareness of quality management within the United Arab Emirates (UAE). The eight critical factors of QM were role of divisional top management and quality policy, role of quality department, training, product/service design, supplier quality management, process management/operating procedures, quality data and reporting and employee relations (Saraph et al., 1989). Badri et al. chose 845 companies for this research; 424 agreed to participate (response rate almost 50%). Of the participating firms, 47.4% were service firms and 49.5% were in manufacturing.

Participants to Badri et al's (1995) survey determined the level of QM practices in their respective business by using a five-point Likert scale. Internal consistency for all of the items connected with the eight critical factors was assessed; the results scored high and provided strong evidence of reliability (Badri et al., 1995, p. 39). Gutman's correlation coefficient provided evidence of internal consistency of all items. Like the

1989 study, the author used the Nunnally's method to evaluate the assignment of items to scales. The Nunnally's method considers the correlation of each item with each scale. If an item does not correlate highly with any of the scales, this indicates that the item should not be associated with that scale (Badri et al., 1995).

Nunnally's method verified that all items had been suitably correlated to scales. Subjective judgments concluded that content validity was comprehensive and valid. Criterion-related validity, or predictive validity, was found to be more positive and assigned with quality performance in business units. Finally, Badri et al.'s (1995) factor analysis supported their critical success factors in construct validity. Consequently, Badri et al. concluded that the practical results of the replication research conducted in the UAE showed the instrument to be a valid and reliable method of studying the quality management factors. They concluded that the eight critical factors were valid and permitted managers to obtain a deeper and more wholesome understanding of quality management practices. Moreover, this instrument could consequently be used to gauge perceptions of quality management in an international environment with equally successful results.

Another important study was made by Sila and Ebrahimpour (2005) that they used structural equation modelling to test 23 hypotheses. In setting up their study, they identified eight quality form factors: business results, strategic planning, information and analysis, customer focus, supplier management, human resource management, process management, and leadership. Seven of the eight evaluation critical factors constituted the MBNQA evaluation factors. From the eight factors, the authors developed 27 performance indicators and then created a survey using a seven-point

Likert scale. This survey was sent out to 1500 manufacturing firms which ultimately resulted in 220 usable results. The results showed that leadership, and information and analysis play a significant role in shaping the quality focus of companies (Sila & Ebrahimpour, 2005, p. 1137). Also of significance is that "TQM factors are holistic in that synergies must be created among them to achieve favourable business results" (p. 1137).

In the context of Tunisia, Lakhal, Pasin, and Limam (2006) studied Tunisian firms and their TQM implementations. They focused on two research questions: (a) Which quality management practices are critical?, and (b) How are different quality management practices related? (p. 626). They used the following management practices to define TQM: statistical quality techniques, employee training, organization for quality, employee participation, continuous support, supplier quality management, quality system improvement/information and analysis, customer focus, and top management commitment. The researchers framed seven hypotheses and designed a questionnaire that was sent to 133 Tunisian companies. Each firm was placed into one of three categories based upon performance: strong, medium, and weak. They examined the causal relationships among the variables using path analysis. They concluded that the "crucial role played by top management commitment and support is to clarify the relative importance and the interplay between infrastructure, core practices and organizational performance" (p. 640).

Furthermore, quality-oriented organizations also have another trait. They require special leaders as well as the application of specialized leadership characteristics. This premise was the focus of a study by Lakshman (2006), who observed that—while there

has been a lot of research in both fields (i.e. leadership and excellence as well as quality management)—there is not enough knowledge available linking the two in regard to how leadership evolves in a quality-focused organization. Lakshman's study examined 15 propositions about the relationship among various leadership characteristics and quality programs executed by the firm or the unit's performance, given the quality parameters. These propositions were based on the "three core principles of total quality management, namely, customer focus, teamwork and participation, and continuous improvement" (Dean & Bowen, 1994, p. 94). This study have developed broad theoretical propositions about leadership that incorporate the basic elements of the TQM movement.

In a related study, Mele and Colurcio (2006) examined the stage of implementation of TQM methods in 21 companies, using a qualitative case study method. This study is of relevance not only because it brings to the forefront the importance of "value," but also because it explores the many dimensions of value from different angles. According to Mele and Colurcio, it is possible to determine customer value, firm value and stakeholder value. They added that in TQM literature, there is a notable lack of studies analyzing the contribution of quality management to value creation and diffusion in the stakeholders' point of view. The authors found that "TQM produces two main influences: the first in enterprise culture, the second in management of a firm, the innovation pushes both in the cultural and in the management directions involving the entire business systemand its specific components" (p. 649). Six primary TQM principles were studied: learning, human resources, customer orientation, management by process, improvement, and, management by fact. The authors noted

that, of the six principles, customer orientation and improvement principles were implemented more heavily than the rest. They also learnt that TQM enables an organization to move along the path of innovation and excellence, creating value for firms.

In addition to the above studies, there are many other research works regarding the critical factors of total quality management. Primarily, such studies focused on an incorporated method to quality management implementation (e.g., Adam, 1994; Ahire et al., 1996; Ahmed, 2009; Anderson, Jerman, & Crum,1998; Awan et al., 2009; Black & Porter, 1996; Dow et al., 1999; Flynn et al., 1994; Lewis, Pun, & Lalla,2006; Antony, Leung, Knowles, & Gosh, 2002; Motwani, 2001; Ruggieri & Merli,1998; Salaheldin, 2009; Samson & Terziovski, 1999; Wahid & Corner, 2009; Yusof & Aspinwall, 2000). Researchers also used quality management literature and award criteria (e.g. the European Quality Award and the MBNQA) to create measurement items. The primary goal of most of these studies was to determine the TQM critical factors. More importantly, unlike other studies, these studies did not attempt to establish a relationship between specific leadership styles and other quality management practices (Laohavichien et al., 2009).

Therefore, the seven constructs that are the most common principles of quality management practices are included in this study. These constructs include employee focus, strategic quality planning, customer focus, quality information and performance, continuous improvement and innovation, process management, and role of the quality department

2.2 Leadership

2.2.1 Leadership Definitions

The term leadership is not easy to define as it has been a least understood subject. The elusiveness arises from the sheer number of definitions, processes, and theories that have evolved over the years (Levy, 2006). Understanding leadership in all its forms can be confusing and often leads to contradictions; however, these differing positions and principles are central to the very premise of leadership and helps explain and appreciate the concept better. They also help people understand how they are brought to life in an organizational setting or work environment (Witt & Ferris, 2003).

Among the more famous definitions presented by prominent leadership researchers over the years are the following:

1. Bass (1990) defines it as the "focus of group processes" (p. 38).
2. Yukl (2002) defines it as "the process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective effort to accomplish the shared objectives" (p. 2).
3. Northouse (1997) defines it as a process whereby leadership involves influence, leadership occurs within a group context, and leadership involves goal attainment (p. 3).

Although leadership has been defined in a large number of ways, analyses have revealed that the definitions and postulates can be divided into a number of tangible components. For example, Bass (1974) conducted a research to differentiate between attempted leadership, successful leadership, and effective leadership. He concluded that

an effort made to change the behaviour of others is classified as attempted leadership. When the others are reinforced or rewarded for changing their behaviour, this is effective leadership, and if the other members actually showed a change in behaviour, this is termed as successful leadership. In summary, leadership is an administrator's ability to help subordinates become more involved and motivated in doing their tasks toward common goals or purposes in their organization.

For the purpose of the thesis, the leadership styles will be used to mean *the approach and manner of motivating people, implementing plans, and providing direction that the hospital director uses with his staff members toward influencing quality management practices in the hospital.* Included in this study are three types of leadership styles: transformational, transactional, and laissez-faire.

2.2.2 Major Theories of Leadership

The theories of leadership have been the subject of deep study and discussion among scholars and researchers because these theories are instrumental in determining the success or failure of most organizations. Both early theories and the more contemporary situational ones tend to concentrate on the element of leadership effectiveness rather than focus on a simple attribute of leadership. A number of researchers in leadership (Bass, 1990; Bryman, 1992; Doherty & Danylchuk, 1996; Kent & Chelladurai, 2001; Yukl, 1989) have focused on four major approaches to leadership: trait theory; behaviours theories; contingency theories; and full range leadership. Figure 2.1 depicts the evolution of the concept of leadership, explaining the shift towards newer approaches in the theory of leadership. The proceeding section reviews each approach.

Figure 2.1
Basic Leadership Approaches
Source: Amos and Ristow (1999)

2.2.2.1 Trait Theory

Allport (1961) first developed the idea that leadership is a stable characteristic - one that is constant and consistent in multiple and differing situations. Allport believes that leaders intrinsically need to be outgoing, extroverted in nature, and able to communicate

freely with their surroundings. They should be able to actively participate in and influence diverse environments. During this time, the popular theory was the great man theory. The evolution of the trait theory takes into account that an individual's general characteristics behaviour, motivation, and capability are essential characteristics of an effective leader.

Stogdill (1948), on the other hand, identified eight characteristics to define and measure the effectiveness of a good leader. Mann (1959) studied these traits and narrowed them down to six. Stogdill (1974) subsequently concluded that eight characteristics are inadequate for defining a leader; thus, he developed ten traits to define leaders. Other leadership researchers, such as Lord, DeVader, and Alliger (1986), believed that only three attributes define a good leader. Finally, in 1991, Kirkpatrick, and Locke proposed the idea that only six traits are necessary to define leaders and differentiate them from followers. An analysis of the major theories prevalent and popular at the time shows that five traits are necessary for a good leader: (a) sociability; (b) determination; (c) self-confidence, (d) integrity; and (e) intelligence (Kirkpatrick & Luke, 1991).

However, a major disadvantage of the trait principle is that it does not consider other factors, such as education and upbringing, background, intellectual capacity, or other types of negative and positive characteristics of personality traits. All these characteristics are inherent in an individual, yet they can change; they are essential for becoming an effective leader (Matthews, Diary, & Whiteman, 2003). Another disadvantage of the trait theory is that it does not deal with the interaction between subordinates and leaders or the interaction between individual skills or the group as a

whole (Matthews, Diary, & Whiteman, 2003). A third disadvantage of trait theory concerns the needs of individual. Leadership traits are often confused with the importance of individual skills. Stogdill (1974) pointed out that the skills and technical abilities to perform functions are important, but the traits are in fact personal characteristics essential for being a good leader. Owing to the above disadvantages of Trait Theory, another interpretation of the leadership theory namely, Behavioural Theory is proposed by various authors. The theory is discussed in detail in the following section.

2.2.2.2 Behavioural Theory

Behaviour theory work toward developing a better understanding of what leaders actually do in their positions and how such behaviours relate to leadership effectiveness. The preponderance of theory and the vast quantity of research along these lines has depended upon the idea that the leaders must cope with two separate but interrelated aspects of their situation: they must accomplish the task, and they must do so through the effort of those they lead (Gibson, Donnelly, & Ivancevich, 2003).

A leader must behave, respond, and react differently to different situations. An important concept in behaviour theory (style) is to clarify how differently a leader reacts in different circumstances. This was one of the shortcomings of the trait theory. Therefore, behaviourally successful leaders are distinguishable from unsuccessful leaders (Bass, 1990; Hoy & Miskell, 1996; Northouse, 1997; Stogdill, 1974).

Leadership researchers were increasingly dissatisfied with the trait theory as time progressed. In the late 1940s, researchers focused their interest on the behavioural aspect

of leadership, which specifically revolved around understanding the relationship between the behaviour of a leader and subordinates job satisfaction. Studies essentially focused on whether there were any particular traits of an effective leader and whether they lead in a particular manner to reach high goals of productivity and morale (Bass, 1990; Hughes, Ginnett, & Curphy, 1999; Northouse, 1997; Stogdill, 1974).

Accordingly, three major researches were conducted to understand style approach. The first was carried out in the 1940s at the Ohio State University. It was based on Stogdill's results that behavioural considerations are more important to understanding leadership than those qualities proposed by the trait theory. The second study was conducted by the University of Michigan at around the same time as the Ohio studies; they found how leadership functions in a small group, not in large organizational settings. The third study was conducted in the early 1960s by Black and Morton. They showed how effective managers used two concerns to guide their leadership actions: concern for production and concern for people. This was known as the managerial (leadership) grid (Blake & Mouton, 1975).

By the late 1940s, some of the most widely known studies had been conducted by researchers at Ohio State University (OSU). Their studies revolved primarily around determining the different types of behaviours displayed by leaders and the effects of leadership style on performance of work groups and their satisfaction (Fleishman, 1957). The researchers initially developed a list of more than 1000 leadership behaviours. Using tools and methods of statistical analysis, this list was brought down to two categories: initiating structure and consideration (Robbins, 1994). Structure implies the sort of behaviour that deals with defining and organizing the work, work

relationships, and goals. The behavioural aspects were related to establishing respect, mutual trust, and relationship between the leader and his subordinates called consideration. In this category, the leader is described as someone who is always concerned about and aware of subordinates' needs. In the initiating category, the leader was described as someone who is often concerned with structure, duty, and routine (Reitz, 1981).

Unfortunately, the OSU researchers were not successful in identifying the traits of the most effective leadership style. It was also concluded that high consideration and high initiating structure do not always lead to effective leadership and are not universally true. The results of the study were not consistent; no single style emerged as the most effective under all circumstances. Consequently, this approach has received much criticism from others in this field. Despite a clear weakness, the effort behind the work still remains important. Moreover, the OSU contributions constitute the foundation for the evolution of a theory that allowed for describing the behaviour of leaders. In fact, these studies served as the foundation upon which future studies and research-oriented frameworks analyzing leadership were built (Ivancevich, Szilagyi, & Wallace, 1977).

At approximately the same time as the OSU research, other researchers were engaged in an important area of research and study related to leadership. A prominent study was being conducted at the University of Michigan in an effort to define which styles of leadership in particular, resulted in increased performance of a work group as well as an increased sense of satisfaction among employees. Similar to the OSU studies, researchers developed two different styles of leadership: production-centred and employee-centred (Ansari, 1990). The Michigan studies revealed that production-

centred leadership style emphasized close supervision, legitimate and coercive power, stringent routine, and performance. In essence, this style was perceived to be similar to 'initiating structure' as per the OSU dimension. Leaders with an employee-centred leadership style were described as more concerned about their subordinates as individuals; leaders who followed this style were generally more caring about their subordinates at an individual level. These leaders recognized the basics needs of their subordinates' needs such as welfare, advancement, and growth. The OSU dimension of consideration described similar behaviours (Ivancevich et al., 1977).

The Michigan study concluded that employee-oriented leadership style leads to both higher productivity as well as higher job satisfaction, while the productivity style of leadership leads to decreased counts on both parameters (Robbins, 1994). However, owing to their precursors, these studies were easily subjected to criticism. Hill (1973) challenged the proposition that the leader's behaviour varied from situation to situation. He argued that there was no conclusive evidence to support the view. These studies started to serve as a basis for a new, emerging branch of leadership research: situational theories.

On the other hand, Blake and Mouton (1975) classified and attempted to define leadership in terms of a managerial grid based on the leadership style dimensions of concern for production (task) and concern for people (relationship) in a model that has two interesting axis as we can see in figure 2.2. concern for production is illustrated on the horizontal axis and concern for people is illustrated on the vertical axis. Each ofthe axis is scaled as a 9-points on which a score of 1 represents minimum concern and 9 represent maximum concern.

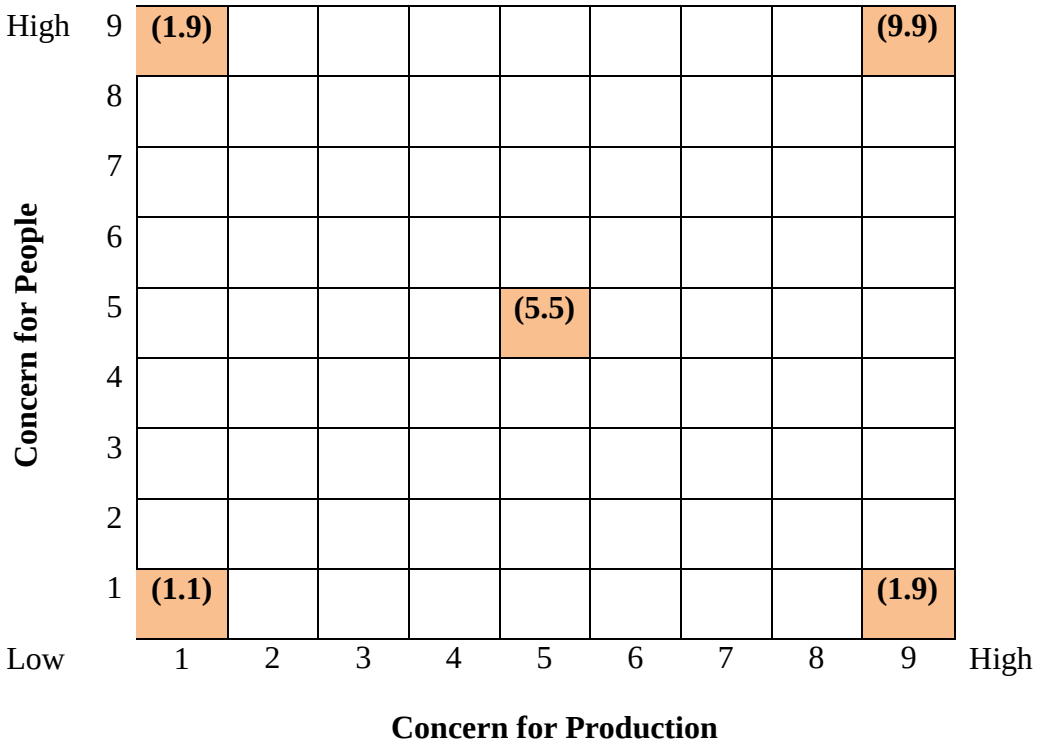

Figure 2.2
Managerial Grid Model
Source: Sowmya (2012, p.73).

There are five leadership styles were identified representing different connections of concern for production and people as follows:

- (1.1) Impoverished management :this style of leader has little concern for both production (task) and people (relationship), goes through the motions without any apparent commitment or involvement, and does enough to maintain group membership.
- (1.9) Country Club Management: this style of leader has high concern for people (relationship) and low concern for production (task), creates a friendly work environment even at the expense of production, and makes sure the personal and

social needs of followers are met.

- (9.1) Authority Compliance (obedience) Management: this style of leader has concern for production, and efficiency in operations result from arranging conditions of work in such a way that human elements interfere to minimum degree.
- (9.9) Team Management: this style of leader has high concern for both production (task) and people (relationship), promotes a high degree of participation in the organization, and satisfies employee's need to be involved and committed to their work.
- (5.5) Middle of the Road Management: this style of leader has intermediate concern for both production (task) and people (relationship), attempts to balance between goal accomplishment and worker satisfaction, and compromise is encouraged.

Based on the above rationale, concern for both production and people leads to effective leadership and demonstrates team management style while low concern for individuals and production is the Impoverished Management style, implying ineffective leadership.

From the above discussion, it is evident that leadership behaviour has to differ across situations. According to Hellriegel et al. (2004), there can be no set leadership style to suit all situations—an idea that gave rise to other forms of leadership. However, the behaviour of the leader can be determined—at least to some extent—by the specific circumstances in which the leader operates (Ivancevich & Matteson, 1993).

In sum, researchers investigating the behavior approach claimed that leadership primarily consists of two main kinds of behavior namely task behavior and relationship behavior. The main idea behind the behavior approach is the explanation of the way leaders integrate the two types of behaviors in order to influence their workers in an attempt to achieve a goal (Northouse, 2001).

The trait and behavioral leadership theories were proposed as an attempt to determine the best leadership style in most scenarios. In the 1960s, it was evident that a single best leadership style for all scenarios does not exist in a sense that managers are required to adapt varying leadership styles. This is because leadership success calls for the adaptation of leadership style for a given situation. As a result, the contingency leadership theory became the third main leadership paradigm and is discussed in the section below.

2.2.2.3 Contingency Theory

This theory contends that leaders must have the necessary qualifications to deal with the situation. This leader-match theory (i.e. *contingency theory* [Fiedler, 1967]) is the most recognized theory in this area. This theory suggests that an effective or successful leader should be able to change his leadership style based on the new situation. The Contingency Approach assumes that the effectiveness of the leader's personality, style and behavior is contingent upon the requirements of the situation.

The contingency model maintains that personal styles and situational characteristics combine to determine leadership. A proper match between styles and situations is essential.

Fiedler suggested two variables in his framework for the theory: task motivated and relationship motivated. These variables served as the platform to determine what Fiedler referred to as the Least Preferred Coworker (LPC) scale. High scores represented relationship-motivated leadership while low scores were an indication of a strong task-motivated leader. Determining these scores would help management place the right leader at the right place to support success. A database could be created of all leaders, which would make the task easier. Fielder's contingency theory can also explain why an individual can be successful in one organizational environment but not another.

The benefits of the contingency theory have been recognized far and wide. It is a reliable process for determining the most suitable leadership style. This theory has also been helpful in determining the impact that certain situations can have when a leader can or cannot manage the situation. However, the theory also has certain drawbacks. It fails to address why leaders are successful in one environment but fail in another. Moreover, the LPC has not been found to be a valid scale in some other leadership measures used by other researchers (Fiedler & Chemers, 1974).

Owing to the disadvantages of the prior discussed theories, there was evidently a need for further evolution of theories resulting in the proposal of various new leadership theories.

2.2.2.4 New Leadership Theories

As the situation demanded, new leadership theories started emerging. MacGregor Burns (1978) developed the transactional and transformational leadership styles while Bass (1985) expanded the development of the Multifactor Leadership Questionnaire (MLQ)

just a few years later. Avolio and Bass (1991) advanced the theory further when they introduced the full range of leadership models consisting of three leadership styles: transactional, transformational, and laissez-faire. Hartog, Van Muijen and Koopman (1997, p. 19) appreciated that this theory was a blend of several leadership theories, integrating ideas from trait, style, and contingency approaches of leadership while also incorporating and building on the works of sociologists such as Weber (1947) and political scientists such as Burns (1978). Each of these three styles of leadership is discussed at length below.

2.2.2.4.1 Transactional Leadership Dimensions

Transactional leadership involves the use of contingent rewards (leaders reward followers in exchange for attaining the desired performance levels). Another distinctive dimension of transactional leadership is that it practices management by exception (MBE), which can either be passive or active. In active MBE, as the name suggests, leaders monitor their followers' performance and take corrective actions as and when necessary. When leaders do not intrude unless some problems occur, it is known as passive MBE. The model shown in Figure 2.3 illustrates that transactional leaders demonstrate specific forms of leadership behaviour.

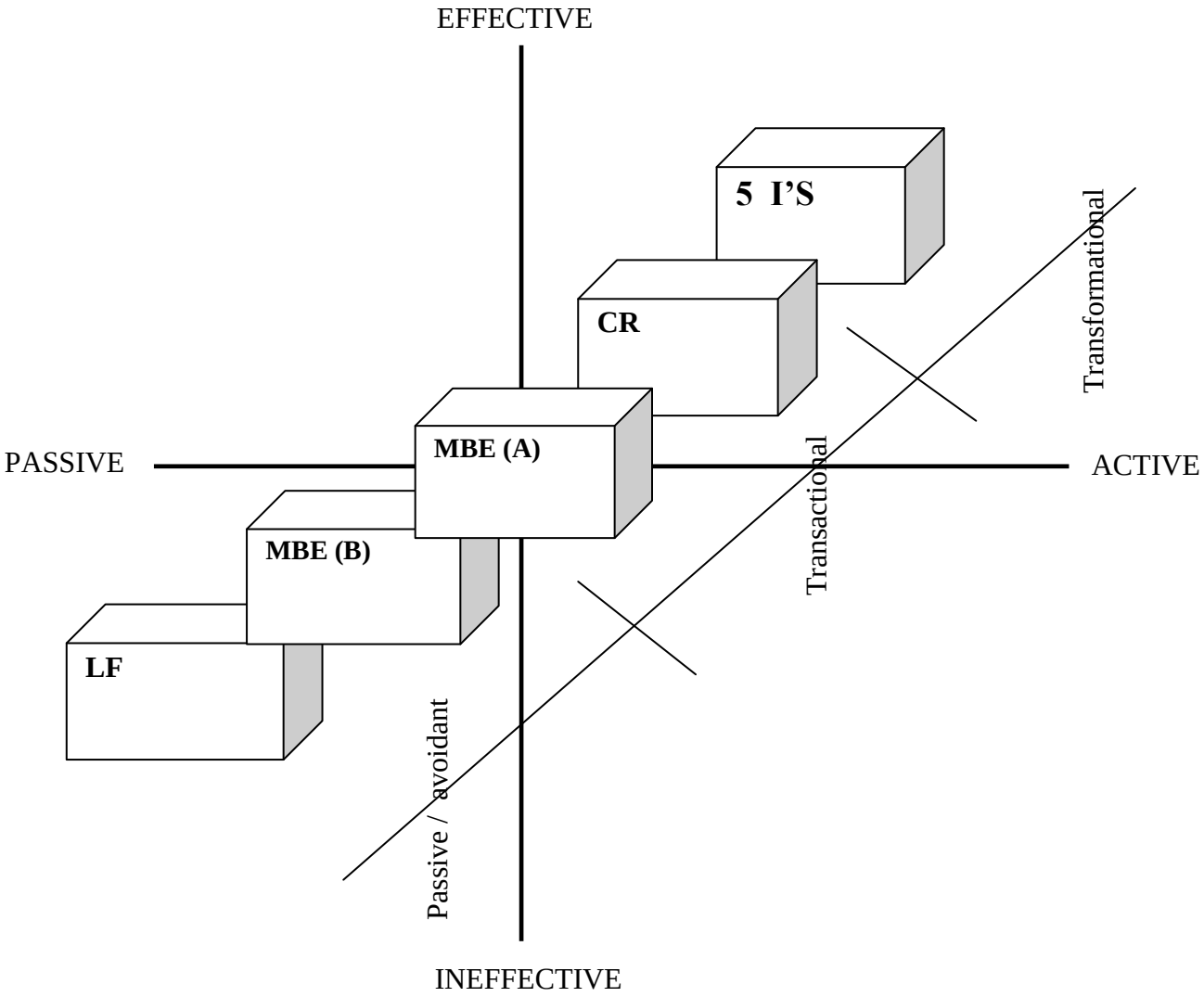

Figure 2.3
A Model of the Full-Range Leadership Development Theory
Source: Bass and Avolio (1994, p. 5)

2.2.2.4.2 Transformational Leadership Dimensions

Transformational leadership has five distinct characteristics according to Bass and Avolio (1995):

1. Idealized Influence (charisma-attributed)—when the leader exhibits the ability to instil pride and faith in followers and motivate them to go beyond self-interest;
2. Idealized Influence (behaviour)—when the leader has the ability to share values and beliefs with followers, informs them of the consequences of decisions, and motivates them to understand the sense of mission;
3. Inspirational Motivation—when the leader inspires the subordinates to have an optimistic attitude and pursue challenges with confidence, they learn to have confidence in their own ability;
4. Intellectual Stimulation—when the leader is able to stimulate the followers to be creative and innovative as well as develop problem-solving techniques; and
5. Individual Consideration—when the leader has the unique quality of respecting followers, treating them as individuals and responding in a timely manner to their needs.

2.2.2.4.3 Laissez-Faire Leadership Dimensions

Laissez-faire leaders are considered to be inactive when compared to the transactional and transformational leaders, who are supposed to be active leaders (Yammarino & Bass, 1990). Laissez-faire leaders have the tendency to avoid responsibility and decision-making. This style may be effective in certain environments, such as with a group of scientists or college professors (Sutermeister, 1969; Williams, 1978). However, it is generally agreed upon that this style actually indicates a lack of any leadership and,

hence, is considered inappropriate (Hartog et al., 1997).

2.2.2.4.4 Transactional and Transformational Leadership

Transactional leadership is based on an exchange relationship between the leader and the follower (Burns, 1978). Such exchanges could occur in economical, political, or psychological forms. According to Burns, because such leadership style does not bring together the leaders and followers, organizational goals become difficult to achieve because the focus is on the clarification of the task requirement and achieving the contingent rewards (Bass, 1990). Transformational leaders, on the other hand, work as a team with their followers and serve and motivate each other to the highest levels. Transformational leaders are those who can motivate others to do more than was originally expected (Bass, 1985). Burn's theory (transactional leadership) is more relevant to political settings while Bass's theory is related to applications in business organizations.

Carlson and Perrewe (1995) distinguished between Burn's (transactional leadership) and Bass's (transformational leadership) theories, stating that Burn's theory is restricted to those leaders who appeal to positive values whereas a transformational leader increases commitment of the followers irrespective of the final effect on the followers. In transformational leadership, the organizational goals take precedence over personal interests (p. 832).

2.2.2.4.5 Rationale for Using Bass's Model of Leadership

Sosik and Dionne (1997) found Bass's model of leadership superior to all other forms of

leadership while examining the relationship between quality management and leadership styles. They have strong reasons to support their assertion. Bass's model incorporates a range of leadership styles (transactional, transformational, and laissez-faire) compared to other models that are either multidimensional or portray a single leadership style. Sosik and Dionne further observed that Bass's model has been widely researched and its dimensions conform to leadership training. In addition, transformational leadership processes are congruent with the type of leadership advocated by Juran, Deming, and others (Waldman, 1994). Thus, Bass's model of leadership is justified to be used in the present study for the following reasons:

1. Being multi-dimensional in nature, this form of leadership encompasses several leadership styles whereas most other models have a single-dimensional continuum (e.g. House, 1971; Sims & Lorenzi, 1992).
2. Based on this model, several studies have been conducted on leadership styles across different industries and organizational settings (Avolio & Bass, 2004).
3. The psychometric properties and predictive validity of the model have been well-researched (Bass & Avolio, 1999).
4. The model has the provision to provide feedback to leaders for leadership training and development. (Avolio & Bass, 2004).

Following the above exhaustive discussion on the types of leadership styles and the justification of the type of model utilized in the study, the following section explains the relation between leadership styles and quality management practices.

2.3 Leadership Styles and Quality Management Practices

The present research draws from leadership style, and quality management practice theories. Theories of quality management practices form the basis of this research, particularly Anderson et al.'s (1994) theory that traced Deming's (1982) management method development. Review of literature indicates that Anderson et al. made the first attempt to synthesize quality management theory from Delphi method-based research, using it with both managers and academic sources closely related to quality (Rungtusanatham, Forza, Filippini, & Anderson, 1998; Fisher et al., 2005; Chowdhury et al., 2007). However, Anderson et al. pointed out that in Deming's management method, the basic premise is creating an organizational system that fosters quality management practices implementation including customer focus, continuous improvement, and teamwork, which all require effective leadership.

In addition, the leadership theory applied in the current research is drawn from Bass's (1985) theory. Bass's work on the theory of transformational leadership grew out of James MacGregor Burns's (1978) qualitative examination of charismatic political leaders (Howell & Avolio, 1993) as well as House's (1971) theory of charismatic leadership (Yukl & Van Fleet, 1982), which stemmed from ideas originating from the early work on charisma by Weber (Bass, 1990).

The development of leadership theories and quality management practices share the common objectives of improving organizational performance and enhancing the work experience of organizational members. But it is unclear what specific leadership styles are most effective in organization pursuing quality management practices. It is however evident that the role of leadership is a key factor in effective quality

management in organizations as all excellence models include leadership as an enabling driver. The role of leadership includes long-term commitment to innovation and creativity. Managing human resources is a strategic issue that requires managerial capability. Knowledge is an important organizational resource, and leadership plays a key role in facilitating the acquisition of that knowledge. Thus, leaders must have the ability to realize formulated vision by managing quality elements to transform the firm into using quality managerial practices (Idris & Ali, 2008). This is possible through a transformational leader, who has the capability to inspire and direct subordinates.

Moreover, authors have found that top management support is essential for quality improvement. Salaheldin (2009) concurred to this notion based on an exploratory study conducted on the specific problems that Qatar Steel Company faced in the implementation of the quality program. The study revealed that lack of support from top management was the biggest impediment to TQM implementation. When commitment and support from the top management was forthcoming, Quality Circles (QC) implementation led to an atmosphere of cooperation and brought in many positive results, like quality improvement, productivity increases, and improved management style.

Taylor and Wright (2003) focused on the commitment of senior managers in the implementation of a TQM program, highlighting the period when TQM outcomes should be measured. The authors contended that performance measures taken too soon after TQM implementation would render the results inconclusive. If taken too long after the fact, there could be other factors responsible for the outcome. To explore the degree of success achieved through TQM implementation over a five-year period, the authors

studied 113 organizations while looking into other factors that may be responsible for the high level of perceived TQM success. Although the size of the firm was not significant, the length of time for which the firms have been implementing TQM did impact their success. The most important factors were the initiatives taken by the senior management and employees' involvement. Taylor and Wright (2003) also conducted a longitudinal study to determine the link between TQM implementation and successful outcomes. They found that managers must understand the nature and purpose of TQM, its relationship to ISO9000, and the benefits that can be derived from this program.

Added to the importance of top management in TQM implementation, Deming predicted that visionary leadership was essential for an effective QM program. Several case studies support the claim that effective QM requires top management to provide a clear direction to employees (Laohavichien et al., 2009).

The importance of leadership has been highlighted even in the MBNQA (Anderson et al., 1995). Accordingly, Pannirselvam and Ferguson (2001) studied the strength of the relationships among the various quality management constructs as well as between quality management and organizational performance. They found that leadership considerably—whether directly or indirectly—affected all system units. However, informational management and strategic quality planning were not tested in this model. Top management support is essential for HR management (Flynn, Schroeder, & Sadao, 1995; Pannirselvam & Ferguson, 2001), and leadership also influences training and product quality. To enhance quality, employee involvement has also been found to be significant.

Meanwhile, Ho et al. (1999) focused on the adoption of TQM principles on quality achievement in the manufacturing environment. This study was based upon data collected from 50 managers in 25 manufacturing companies in Hong Kong. The study found that employees' relations and training directly impacted quality performance, which in turn impacted customer satisfaction. No significant relationship existed between top management support and core quality management practices, although quality assurance department had significant influence.

In the context of ASEAN countries, multinational companies (MNCs) have been very active in ASEAN countries and are responsible for the rapid industrial development in this region. However, advanced quality management becomes difficult with challenges such as different cultures, languages, and geographical diversity. The focus of one such study by Rahman and Tannock (2005) was small and medium enterprises (SMEs) in Malaysia. Based on case studies of three companies, the authors found—as with other studies—that top management commitment is essential for promoting quality at all levels. All other factors that contribute to TQM and improved quality performance were the same as other studies—namely, employee involvement, effective communication, customer-focused approach, training, and development—which have also been found among SMEs in Qatar (Salaheldin, 2009).

On a broader scale, Salaheldin's (2009) study involved the key TQM success factors (i.e., operational factors, tactical, and strategic). Twenty-four critical success factors (CSFs) were divided in these three groups. The study found that the CSFs of TQM implementation in the SMEs in Qatar were similar to those in developed countries, including Japan, the US, and the Far East. Leadership was found to be crucial

for organizational performance. The previously discussed study by Rahman and Tannock (2005) also found that reward and recognition systems should be in place. This immediately gives rise to the concept of transactional leadership, which has not been found to have a deep impact on quality improvement. This might be true for the SMEs, but not in general with the larger firms.

A more comprehensive effort was exerted by Anderson et al. (1995) who tried to develop a theory of quality management to describe and explain the effectiveness of Deming's Management Method. This is represented in Figure 2.4 below.

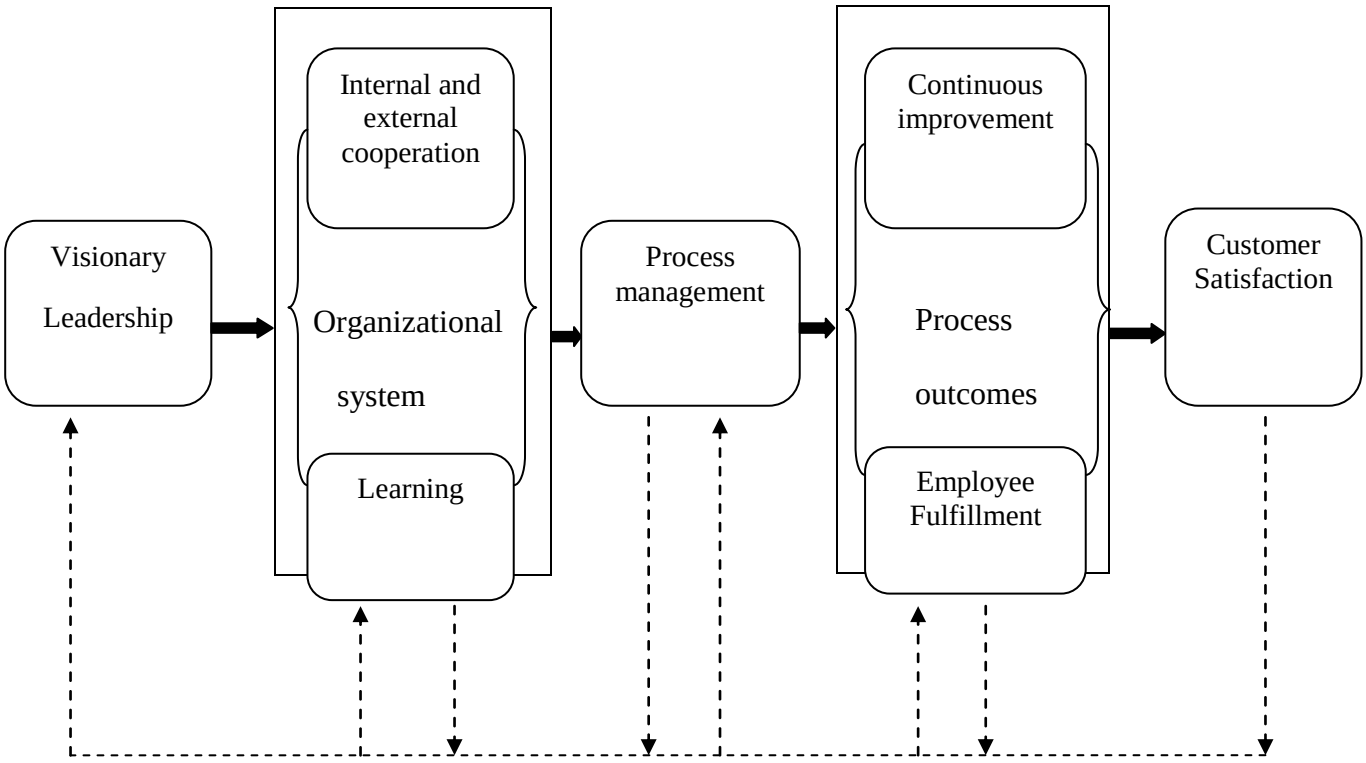

Figure 2.4
Proposed Theory of Quality Management Underlying the Deming Management Method
Source: Anderson, Rungtusanatham, and Schroeder (1995)

The seven constructs that could capture the essence of the Deming method include visionary leadership, learning, internal and external cooperation, process

management, employee fulfilment, continuous improvement, and customer satisfaction. The empirical study by Anderson et al. (1995) conducted in Japanese-owned and American-owned plants found that employee fulfilment is directly related to customer satisfaction. The authors emphasized that organizational leadership impacts the creation of organizational form and institutes organizational practices for the sake of organizational survival. The study concluded that innovation is essential for achieving quality improvements in product, processes, and services. This leads to employee satisfaction, which enhances customer satisfaction and consequently the theoretical survival of the organization. However, what is sought is not merely the survival of the firm, but TQM. Organizational leadership should be responsible for innovation, not just the survival of the firm.

In a related study, Berson and Linton (2005) examined the relationship between leadership style and the establishment of a quality environment in research and development settings (R&D). They found that both transactional contingent-reward leadership and transformational leadership lead to a quality environment in the R&D section of a telecommunications firm, but in the latter case, it is not significant. The role of contingent-reward leadership is less important than that of transformational leadership. Transformational leadership also leads to employee satisfaction. Leaders have to deal with uncertain goals and performance targets. Transformational leadership, which comprises inspirational leadership, can lead to multiple outcomes in technology environments and have an extraordinary impact on the employees, thereby impacting quality.

Another related study by Laohavichien et al. (2009) tested the influence of both transactional and transformational leadership on a firm's quality improvement. Through a study of quality managers in the United States, the study found that although transformational leadership affects infrastructure and core quality management, transactional leadership does not affect either. To date, no studies have used leadership theories to determine the impact on quality management practices; hence, Laohavichien et al.'s study is significant. Leaders influence employees and this enhances quality performance or processes and products. The study also found that transformational leadership provides visionary leadership for successful quality management. However, transactional leadership does not decrease the quality, according to this study, which is contrary to previous findings.

With regards to the impacts of leadership style and quality management practices on company performances, Idris and Ali (2008) carried out a study based on the empirical evidence from business firms in Malaysia. They found that the ability to adapt to change is critical to survive in the new global economic order. This ability, in the form of transformational leadership, combined with the best practice capability, could lead to organizational success. The study found that transformational leadership—mediated by best practice management—can enhance financial performance. In other words, an effective management approach can bring about much-needed organizational change. The transformational leaders establish the vision and through effective communication, they motivate followers to achieve that vision.

In the context of Greece, organizations that were recipients of the European Foundation for Quality Management (EFQM) for commitment to excellence showed

lack of flexibility, and low utilization of employees' skills and knowledge and increased bureaucracy (Vouzas & Gotzamani, 2005), implying that these companies focus on the process as aspect of quality rather than on strategic quality issues covering all function of the organization. These firms did not even use their award as a marketing tool, which demonstrates a lack of initiative by top management. Sosik and Dionne (1997) suggested that laissez-faire leadership is incompatible with the leadership behaviours necessary for effective quality management. They cited research reviewed by Bass (1990) that connected laissez-faire leadership to a lack of task concentration, work quality problems, and poor productivity. Teamwork requires task and socio-emotional support from leaders while commitment to continuous improvement requires leaders to encourage subordinates to seek out new opportunities to improve the status quo (Sosik & Dionne, 1997). One may further posit that maintaining subordinates' focus on the needs and desires of customers requires leaders to actively espouse and reiterate this objective. Thus, each of Dean and Bowen's (1994) quality-supportive principles require the presence (not the absence or indifference) of leadership.

To sum up, the various studies concur as to what practices can be termed under quality and which factors are responsible for quality improvement. Literatures from different sources, pertaining to different industrial sectors and from different nations, have been reviewed. Top management support has been emphasized by most researchers and authors in regard to contributing to quality performance. The literature review suggests that quality improvement is influenced by several factors, including top management support, training, workforce management, process management, employee involvement, and overall employee relations. Customer relationships are an integral part

of the system for enhancing quality performance. Top management support and commitment, which most papers have discussed, are nothing but another name for leadership. Transactional leadership has not been found to be of significance in quality improvement primarily because this type of leadership is associated with rewards and punishment, and hence an exchange. Meanwhile, transformational leadership could impact quality management practices because top management or leaders play the role of motivators who guide subordinates. Overall, when an organization has transformational leaders, it is able to engage and involve the employees who—when motivated—give their best. This leads to product and process quality improvement in a people-oriented culture. In addition, when firms have a customer-centred approach, they focus on customer satisfaction. To derive customer satisfaction, firms must realize that internal customers (i.e. employees) need to be satisfied first. Thus, quality improvement is directly related to leadership styles.

When it comes to quality management practices, the culture of the organization has also been known to be a critical element. The following section provides an overview on this topic.

2.4 Organizational Culture

Although leadership styles are important in an organization, culture also influences the outcome of any practices in an organization, which is why Schien (1996) emphasized the importance of culture. Culture has become a concept studied in the field of organizational studies only in the last three decades (Detert et al., 2000). Researchers and authors differ on the definition of culture. Consequently, to date, there is no

appropriate definition of culture. The lack of consensus on what constitutes culture stems from the fact that researchers have borrowed cultural concepts from anthropological literature, and subsequently redefining them within the contexts of organizations and businesses (Van de Ven, Poole, & Scott, 1995). Moreover, most definitions of culture have similar concepts (Hildebrandt, Kristensen, Kanji, & Dahlgaard, 1991).

Despite the lack of consensus as what constitutes culture, it is generally accepted that culture is the sum total of the values, beliefs, attitudes, and behaviours shared by a particular group of people. Empirical studies have been based on the view that culture is an "enduring, autonomous phenomenon that can be isolated for analysis and organizational comparison" (Detert et al., 2000, p. 851). As a result, several concepts have been developed to examine the broader concept of culture, classify the various cultural types, and explain how culture influences an organization's development (Detert et al., 2000; Hawkins, 1997). Some perceive culture as a dynamic concept; hence, it should not be seen "as something an organization *has*, [but] rather an integral part of what an organization *is*" (Hawkins, 1997, p. 423). Organizational culture, according to these researchers, is a complex multi-level construct, although investigations can only be possible at one level and provide only a partial analysis.

Thus, for the purpose of this study, the definition of culture that is accepted states that the culture of an organization is "some combination of artifacts (practices, expressive symbols, or forms), values and beliefs, and underlying assumptions that organizational members share about appropriate behavior" (Detert et al., 2000, p. 851). This definition encompasses all the characteristics that are common to most definitions

of culture—namely, assumptions, beliefs, values, and behaviours. Consequently, organizational culture theory used in the present research is drawn from Quinn and Rohrbaugh (1983), who developed the Competing Values Framework (CVF). CVF specifies the culture of an organization and gives insights into how this culture may influence the organization's change management ability, which is generally associated with quality and performance improvement.

2.4.1 Organizational Culture Dimensions

Culture has a direct bearing on organizational performance and quality improvement. Quinn and Rohrbaugh (1983) developed the Competing Values Framework (CVF), which specifies an organization's culture and provides insights into how an organization's culture may affect its ability to manage change that is generally associated with performance and quality improvement. Specifically, two dimensions of culture have been identified. The first dimension pertains to organizational preference for structure along a continuum between stability and control and flexibility and change. The second dimension is related to organizational focus. The organizations can be differentiated along a continuum between an internal and external emphasis. The internal emphasis focuses on the well-being and development of people in the organization whereas the external emphasis is on the well-being and development of the organization itself. The intersection of these two continua creates four quadrants representing the four organizational culture types presented in Figure 2.5.

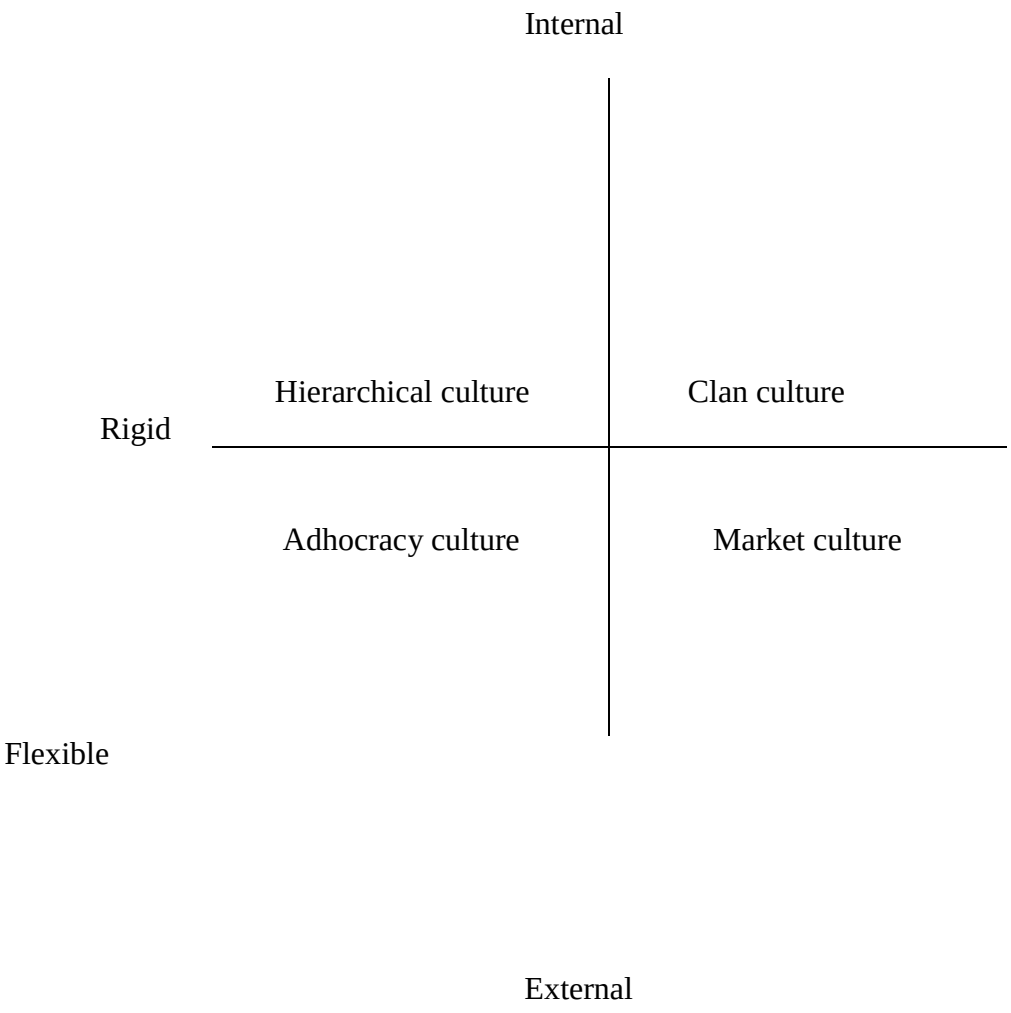

Figure 2.5
Four Quadrants Representing the Four Organizational Culture Types
Source: Quinn and Rohrbaugh (1983)

When it comes to culture in an organization, organizational leaders are responsible for communicating the corporate values and beliefs to employees to encourage quality behaviour. Organizations that have successfully implemented quality management have cultures in which information sharing takes place, teamwork is advocated, and learning is supported (Jabnoun & Sedrani, 2005; Jung & Hong, 2008; Latham, 2008; Mathew, 2007; Rabbani, et al., 2009; Rad, 2006; Yong & Pheng, 2008).

Those that sought short-term solutions to problems found difficulty implementing quality management. In such organizations, employees had a tendency to withhold information, and the environment is one of non-participative decision-making.

2.4.2 The Four Major Culture Types

According to Cameron and Quinn (2006), there are four types of organizational culture as follows:

2.4.2.1 Clan Culture

Based on the study by Cameron & Quinn (2006, p. 41), clan culture is considered as 'clan' owing to its similarity to a type of family organization. In Organizational Culture Assessment Instrument (OCAI), clan culture represents a friendly place to work in where workers share more regarding themselves. It is similar to an extended family. The clan culture stresses on internal issues, the flexibility of values and discretion as opposed to stability and control, interest for others and compassion for customers. Its goal is the management of environment through factors including teamwork, participation and harmony (Cameron & Quinn, 2006; and Berrio, 2003). It is where the organization is cemented through tradition and loyalty with high commitment and where leaders are considered mentors or parent figures (Cameron & Quinn, 2006).

2.4.2.2 Adhocracy Culture

Cameron & Quinn (2006, p. 43) stated that the word adhocracy stems from ad hoc-which means a temporary, specialized and dynamic unit. The culture of adhocracy stresses on external problems and a high level of flexibility, individuality and discretion,

with main values of creativity and risk taking as opposed to stability and control. The adhocracy culture has its basis on the rationale that is personified by an organizational world in the twenty-first century that is flexible in its reaction to dynamic conditions, innovations and success. It also has its basis on the reasoning that organizations are usually in business for the purpose of developing new products and services and preparing for the future and the management and effective leadership goals include the generation of vision, entrepreneurship, creativity and cutting edge activity (Cameron & Quinn, 2006; and Berrio, 2003). The culture of adhocracy as stated in OCAI, is a culture in the organization that epitomizes dynamism, entrepreneurship, and creativity (Cameron & Quinn, 2006, p. 45). Such organization possesses long-term success of rapid growth to obtain novel resources, which underlies its ability to produce of one-of-a-kind products and services (Cameron & Quinn, 2006; and Berrio, 2003).

2.4.2.3 Hierarchy Culture

The culture of hierarchy was proposed on Weber's theory of bureaucracy and it is characterized by tradition, consistency, cooperation and conformity (Cameron & Quinn, 2006; and Berrio, 2003). According to Cameron & Quinn (2006, p. 37), in the 1960s, management and organizational fields assumed that Weber's hierarchy or bureaucracy was the perfect form of organization as it resulted in a stable, efficient and greatly standardized products and services. In addition, guidelines for decision-making, rules and procedures and strict accountability were considered the way to success (Cameron & Quinn, 2006; and Berrio, 2003). The organizational culture of this type, as assessed by OCAI, epitomizes a formalized and strict workplace where procedures control people's actions (Cameron & Quinn, 2006, p. 38). This type of culture stresses on

internal against external issues and employs stability and control as opposed to flexibility and discretion (Cameron & Quinn, 2006; Berrio, 2003). The organization is highly concerned with stability, predictability and efficiency with formal rules and policies cementing the organization together. Moreover, the hierarchy culture is characterized by a leadership style comprising of coordinator, monitor and organizer (Cameron & Quinn, 2006; Berrio, 2003).

2.4.2.4 Market Culture

The market culture was commonplace in the late 1960s as organizations had to tackle new competitive issues. It has its basis on the work carried out by Oliver, Williamson, Bill Ouchi, and others (Cameron & Quinn, 2006; Berrio, 2003). The above scholars of organization conducted an identification of set of alternative activities that they considered as the basis of organizational effectiveness (Cameron & Quinn, 2006, p. 39). It epitomizes stability and control but stresses more on external market as opposed to internal issues. It considers the external environment as a threat and attempts at identifying threats and opportunities as it achieves competitive advantage and profits. The market's major concern is the carrying out of transactions in the form of exchange, sales and contracts with other entities in the hopes of developing a competitive advantage. The main objective behind the culture is profitability, bottom line results, significant market niches, stretch targets and strong customer base with the core values that underlie the organization being productivity and competitiveness.

This type of culture exists in a workplace that is results-oriented and it has a leadership style that is characterized as hard-driven, competitive, and productive with a

high stress on winning (Cameron & Quinn, 2006; and Berrio, 2003). In this type of culture, success is described in light of market share and penetration where competitive edge and market leadership is significant (p. 40).

2.4.3 Applicability of Competing Values Model with Quality Management Practices

Different facets of organizations have been examined highlighting that the Competing Values Framework also requires other attributes of organization to encompass cultural values and organizational forms which are depicted in Figure 2.6. They cover leadership roles, the condition of effectiveness, core management theories which are all closely linked with the four quadrants (Cameron & Quinn, 2006, p. 46). Majority of organizations created a specific cultural style and over 80% of the several thousand organizations made use of CVF and have been categorized as having one or more than one culture kinds. Those that have not been categorized with a leading culture type have ambiguous culture or they practise the four varying cultural types in an equal manner (Cameron & Quinn, 2006).

Flexibility and Discretion

Internal focus and Integration

External Focus and Differentiation

CLAN

Culture Type: CLAN
Orientation: COLLABORATIVE
Leader Type: Facilitator
Mentor
Team builder
Value Drivers: Commitment
Communication
Development
T**heory of Effectiveness:**
Human development and participation
produce effectiveness.

ADHOCRACY

Culture Type: ADHOCRACY
Orientation: CREATIVE
Leader Type: Innovator
Entrepreneur
Visionary
Value Drivers: Innovative outputs
Transformation
Agility
T**heory of Effectiveness:**
Innovativeness, vision, and new resources
produce effectiveness

HIERARCHY

Culture Type: HIERARCHY
Orientation: CONTROLLING
Leader Type: Coordinator
Monitor
Organizer
Value Drivers: Efficiency
Timeliness
Consistency and uniformity
T**heory of Effectiveness:** Control and efficiency
with capable processes
produce effectiveness.

MARKET

Culture Type: MARKET
Orientation: COMPETING
Leader Type: Hard driver
Competitor
Producer
Value Drivers: Market share
Goal achievement
Profitability
T**heory of Effectiveness:**
Aggressively competing and customer focus
produce effectiveness.

Stability and Control

Figure 2.6
The Competing Values of Leadership, Effectiveness, and Organizational Theory
Source: Cameron & Quinn (2006)

The Competing Values Framework is invaluable in the organization of different total quality management facets and its extensive nature (Cameron & Quinn, 2006). TQM is a topic that is increasingly addressed in literature and varying studies are dedicated to the descriptions of quality tools and methods including statistical process control, quality function deployment, pareto charting as well as philosophical discussions of management including Deming's fourteen points. However, on the negative side, a review of TQM literature by Cameron (1997) revealed that a major portion of the total quality initiatives end in failure. The scenario ends either two ways; no improvement in quality or abandonment of initiatives after a short time. The major reasons for this failure is attributed to partial deployment and failure of TQM integration into organizational culture. In some scenarios, only partial aspects of TQM are implemented; for instance, majority of organizations merely set up teams or collect customer satisfaction data and this is the extent of their TQM efforts. Other organizations set up novel statistical controls or recreate processes in their attempts for defect prevention but the rest of the processes remain the same. A more comprehensive set of TQM factors is depicted in Figure 2.7. If all these factors are integrated in a TQM project, the rate of success significantly increases – for instance, to facilitate the greatest levels of quality in organizations calls for the employment of different hierarchy culture activities including measurement improvement, process control and systematic problem solving and requires tools including Pareto charting, fishbone diagramming, affinity charts and variance plots (Cameron & Quinn, 2006). These are widely used quality tools. Nevertheless, world-class quality also calls for the employment of market culture activities like measuring customer preferences prior to and following delivery of product

and service, productivity enhancement, partnership development with suppliers and customers, and competitiveness enhancement that involves customers in planning as well as design. It should also encapsulate activities catering to clan culture like empowerment, team building, employee involvement, human resource development, and open communication (Cameron & Quinn, 2006). Cameron & Quinn (2006) asserted that a common belief holds that firms may not treat customers better than they do their employees. In addition, TQM must also encompass adhocracy activities like entertaining customers, developing novel standards of performance, expecting customer needs, fostering continuous improvement and implementing creative solutions to problems producing new customer preferences. In most TQM failed attempts, the four quadrants' elements are not fully implemented. It can be stated that the competing values framework helps in the identification of a more extensive method to quality only because it stresses on the main elements of the four main cultures underlying organizational performance (Cameron & Quinn, 2006).

Flexibility and Discretion

Stability and Control

Figure 2.7
The Competing Values of Total Quality Management
Source: Cameron & Quinn (2006)

Following the above discussion on the definitions, dimensions and types of organizational culture utilized in the study, the following section explains the relationship between organizational culture and quality management practices.

2.5 Organizational Culture and Quality Management Practices

Quality management has been recognized as an innovative methodology for improving organizational performance (Jung & Hong, 2008). However, the outcome of practicing TQM depends on a lot of factors, including organizational culture. The relationship between the organizational culture and TQM has been studied by different researchers from various perspectives.

Numerous debates and deliberations have been held on whether MNCs need to adapt to the local culture or impose the home country culture on overseas ventures. The five dimensions of organizational culture, as suggested by Hofstede (2007), have been known to influence the organizational culture at MNCs' local offices, as indicated by Jung, Su, Baeza and Hong (2008) in a survey of 186 MNCs in their cultural orientations. Although the study discussed other frameworks on cultural dimensions, the authors adopted Hofstede's dimensions as his works are more established. The author used five dimensional for organizational culture (power distance, individualism, femininity vs masculinity, uncertainty-avoidance, and long-term orientation). The authors then discussed the seven elements of TQM as per the MBNQA. To attain TQM, MNCs have to consider the organizational culture rooted in the organization. TQM calls for committed people and requires constant evaluation to enhance performance. However, different dimensions of organizational culture can impact the elements of TQM in various ways. The study found that, in high power distance cultures, TQM is easily implemented; in fact, strategic planning may be less effective in low power distance cultures. Individualism impacts business performance while managers from masculine cultures are result-oriented, valuing the final outcome the most. A long-term orientation

is necessary to enhance TQM in a firm. This study has significance because no previous study has linked TQM practices with organizational culture in MNCs.

In the software industry in India, cultural aspects were found to impact on productivity, as shown by Mathew (2007). This study is of special significance given the nature of the industry along with the fast growth and the high levels of competition prevalent in the industry. Moreover, productivity and quality are critical in the software industry. The cultural aspects in the software industry generate impacts right from the conception to the implementation of the project. Organizational culture, according to this study, was represented by five dimensions of culture identified as follows:

- empowerment;
- agreement (on issues on the basis of mutual give and take);
- integrity or core values;
- knowledge sharing or organisational learning;
- concern for employees and trust;
- mission (vision, strategic direction and emphasis on goals and objectives);
- . customer focus; and
- high performance work orientation.

The study found that organizational culture makes an important role in knowledge-intensive organizations. The authors used both qualitative and quantitative approaches. In the first part, 68 qualitative interviews were conducted on organization culture, productivity, quality and their relationship. The second part was a quantitative analysis of the relationship based on eight dimensions of culture, with data primarily

gathered from Indian software firms. The qualitative study found that the software industry is characterized by high levels of abstraction and organizational culture makes an important role in achieving high levels of productivity. A shared understanding of the vision can enhance productivity. In the context of the software industry in general, and with particular relevance to India, the study found that the people-oriented culture of expressing concern for employees and trust can serve to enhance employees' dispositions. This again corroborates Jung et al.'s (2008) findings that power distance plays a critical role in TQM. India is a high powered distance society, and employees need the personal indulgence of the management, which serves to motivate them.

Jung et al.'s (2008) study explored the relationships among organizational culture, TQM practice, and performance. This study focused on companies located along the US-Mexico border, known as maquiladora firms. Organizational culture, according to this study, was represented by organizational citizenship behaviour (OCB) and was hypothesized to impact TQM. They proposed that organizational effectiveness is expected when employees are proactive and benevolent to the organization. They found that the employees at the companies under study were not proactive and in fact even impeded the performance by showing their indifference. These companies experienced a high level of absenteeism and turnover, which could possibly be the result of undervaluing OCB. Unless OCB is enhanced, the authors argued that it would not be possible to encourage employees to devote themselves to organizational performance. However, this study focused on maquiladora firms, where labour comprises low salaried Mexicans. Hence, this outcome cannot be taken to be conclusive or applied to other firms or situations.

In the context of a hospital in Pakistan, Rabbani et al. (2009) examined the effect of the four cultural types (group, developmental, hierarchical, and rational) on quality care. The motivation for the study came from the findings that, in high income countries, organizational culture varies across hospitals, and a consistency exists in the way organizational culture is associated with performance. This study was conducted at a large private university hospital in Karachi in a clinical department with 54 full-time faculty members and 67 trainee residents. The authors used the same questionnaire related to perceptions on quality care that had been used in high income countries. The study found that all four cultural types—group, developmental, hierarchical and rational—are present in the organization, although the degree of each varies. While all four typologies are important, effectiveness depends upon the right balance and interplay among them. A similar assessment of high income countries revealed that the operating environment and local variables determine effectiveness. The outcome of the study was reliable; no biases were permitted in the data collection process as the age and gender of the respondents were not recorded, and the response rate of the faculty was as high as 97 percent.

A similar study was conducted at Isafhan University Hospitals in Iran by Rad (2006) to find out the influence of cultural values on the success of TQM. Questionnaires were used to collect data on the principles and barriers of TQM in Iranian hospitals. This survey involved 667 employees and 12 managers from different hospitals. Organizational culture, according to this study, was represented by eight domains of organizational culture: entrepreneurship, risk taking, uncertainty avoidance (stability), power distance, attention to details, individualism versus collectivism,

masculinity versus femininity and mechanistic versus organic structure. The study found that hospitals with weak organizational culture have low to medium TQM success, proving that TQM requires a quality-oriented organizational culture with the support, commitment, and involvement of the top management.

Prajogo and McDermott (2005) focused on the particular cultures that determine the successful implementation of TQM practices. They drew data from an empirical study of 194 organizations in Australia using the MBNQA criteria as the framework. This study took the stand that TQM is not a culture. They too used the four cultural types of the competing values framework that represented by group, developmental, hierarchical and rational. Denison and Spreitzer (1991), who developed this framework, emphasize that any organization is a combination of all four cultural types, although the exact combination may vary. With a final response rate of just 22.8%, which is considered poor as several industries and sectors were involved, the authors found the presence of mechanistic-type culture within TQM practices. The findings support the pluralistic view that different subsets of TQM practices are determined by different types of cultures. The hierarchical culture has a significant relationship with certain practices of TQM, suggesting that organizations must have different goals to ensure the flexibility to adopt different management styles (e.g., flexibility and control) between external and internal orientations.

In the field of higher education, quality assurance is also important and its relationship with organizational culture was evaluated by Trivellas and Dargenidou (2009). This study was conducted in Greece using questionnaires administered to the faculty and the administration members of the educational institution. CVF's four

cultural types (clan, adhocracy, hierarchy, and market) were used as the framework. The findings suggested that the institute's culture is characterized by a hierarchy followed by the group and the market types, with the adhocracy being the least favoured by the institute. An analysis of the culture helped evaluate the strengths and weaknesses of the organization. In hierarchical cultures, employees are unlikely to recognize problems, although procedures are standardized and can be depended upon. As adhocracy is the least favoured, the institute lacks entrepreneurship, creativity, adaptation, and innovativeness. Employees can be more productive when they are satisfied with their jobs, which are influenced by the organizational culture.

In Singaporean construction firms, a study of organizational culture and TQM implementation also revealed that firms with strong comprehensive culture implement TQM elements while those with weak hierarchical culture implement the elements of TQM at a moderate to low level (Yong & Pheng, 2008). The authors also emphasize that a balance of the four cultural types (clan, adhocracy, hierarchy, and market) is essential for the successful implementation of TQM practices.

Whether making use of Hofstede's framework or the CVF, the findings of all the studies demonstrate that a strong organizational culture can lead to effective TQM practices, which results in a quality outcome regardless of the industry or region in which the firms operate.

The next section demonstrates the relationship between the organizational culture and leadership styles.

2.6 Organization Culture and Leadership Style

In addition to the influence on TQM practices, organizational culture impacts leadership practices. Chang and Lee (2007) investigated the relationship among organizational culture, leadership, the operation of a learning organization, and employees' job satisfaction. The response rate in a survey of 1000 companies was merely 13.4%, which appears to be low considering the varied sectors—manufacturing, service, and financial insurance industries—from which the data were collected. All of these industries practiced transformational leadership more than transactional leadership and had bureaucratic cultures. The manufacturing industries demonstrated adaptive culture to some extent. Those with more effective operation of a learning organization performed better in leadership and had a stronger organizational culture and, consequently, higher levels of jobs satisfaction. Team learning activities were not found to be present. This study focused on Taiwanese industries in 2003, which suggests that the current situation in Taiwan may have undergone a change as well.

A related study in Taiwan conducted by Chen (2004) examined specific employee behaviours associated with transformational and transactional leadership in manufacturing and service industries. Since culture has become critical to the outcome of organizations, leadership has sought to enhance the process of cultural adaptation leading to higher levels of job satisfaction. The study found that leadership behaviour influences organizational commitment. If leaders have an innovative culture, it can result in a committed workforce, which translates into greater job satisfaction. In such a situation, organizational culture has no impact. Training of supervisors to exert transformational leadership can result in higher levels of employee commitment and job

satisfaction. This study focused on SMEs in Taiwan, which is a very important sector for the growth of the economy.

In Malaysia, Yiing and Ahmad (2009) studied the relationship among organizational culture, leadership, organizational commitment, performance, and job satisfaction. Apart from organizational culture, leadership was recognized as a critical factor for enhancing performance. Data were collected from 238 part-time MBA students and the researchers' working peers. The study found that leaders' supportive and participative behaviours can enhance organizational commitment. Innovative and supportive cultures have a stronger influence on employee commitment than a bureaucratic culture. Contrary to the studies in the West, organizational commitment does not enhance job satisfaction in Malaysia. However, the study in Taiwan by Chen (2004) demonstrated that organizational commitment leads to greater job satisfaction. Thus, although Taiwan and Malaysia belong to the Asian culture, where high power distance society prevails, differences do exist within the region. Although Malaysia is full of bureaucratic organizations, where directive leadership is prevalent, performance can be enhanced with supportive and innovative cultures.

In China, Taormina (2008) studied culture and organizational socialization based on the idea that some aspects of socialization (e.g. cooperation, employee enthusiasm) can impact an organization's culture. The study collected data from several companies on several variables through a questionnaire to evaluate their leaders. The author focused on the content areas of socialization, namely, co-worker support, training, future prospects, and understanding. The study took the stand that a control-focused leadership would be more positively correlated with these aspects of socialization. The study found

that the employees perceived their managers to be more control oriented. This implies the prevalence of a bureaucratic culture in China. In identifying the relationship between organizational socialization and leadership, the study found that innovative leaders focus on hiring people for their creativity and, hence, do not offer much of training. All the other leader behaviours, except the innovator, had strong positive correlations with training. This was the first study of its kind that highlighted the impact of organizational socialization and found that leadership behaviours and the domains of socialization predict organizational culture.

In Greece, Xenikou and Simosi (2006) studied the relationship between organizational culture and transformational leadership in large financial companies. This study was unique because it demonstrated that organizational culture mediates the effect of transformational leadership on business unit performance. The authors used two approaches: the achievement orientation and the humanistic orientation. The study found that transformational leadership and good social relations at work enable employees to meet personal goals, but have a negative direct effect on business unit performance. However, positive social and constructive relations at work associated with goal setting are conducive to organizational performance. Transformational leadership leads to an achievement in cultural orientation and can stimulate group expectations for higher performance, which impacts performance levels. This study implied that, through training and development programmes, managers should be made to realize the vital role that culture plays in enhancing organizational performance. However, this study was based on data from 300 employees of a single large financial

organization in Greece. Hence, it is likely that results could differ in other settings with different organizational cultures.

To conclude, to achieve TQM in MNCs, organizational culture can be used to bridge the gap between foreign employees' culture and national culture. Cultural influences help managers determine the best strategy to attain quality performance because issues like power distance impact the outcome in an organization. In the Asian economies and emerging economies, high power distance is prevalent, which implies that they would follow the instructions from the top management. This has been examined in different settings, like the hospital environment, the software industry, and the manufacturing and services sector. Whether taking the help from Hofsted's framework or CVF, the outcome of quality is directly related to organizational culture.

It is evident that to achieve TQM requires the right leadership. Studies have demonstrated that transformational leadership is more effective than transactional or any other type of leadership. Leadership behaviour influences organizational commitment. In other words, if leaders are innovative, they can motivate employees to be committed, thereby enhancing overall performance of the organization. However, managers/supervisors need to be trained in delivering or practicing transformational leadership. All studies have found that top management involvement and support are necessary to bring about any change in the organization. Bureaucratic culture gives a feeling of control whereas flexibility can fetch better results in terms of organizational performance. Thus, to attain TQM, cultural influences matter and the right leaders can lead the organization towards enhanced performance through the right leadership.

2.7 Summary

This chapter has reviewed some of the definitions of and approaches to quality management practices. The meaning of quality management is flexible in that it has different and numerous features, dimensions and measurement. Also, there are many models of quality management like the model of the American pioneers, the Japanese pioneers, etc.

This chapter has also reviewed the concept and major theories of leadership. The leadership theories reviewed disclosed some very important information in regards to leadership styles and traits. The theories provide a context for the development of Bass's (1985) theory of transformational, transactional and laissez-faire leadership style. This chapter has also reviewed some of the definitions of and approaches to organizational culture.

In addition, this chapter has presented empirical studies between leadership styles, organizational culture and quality management practices. In the next chapter, the theoretical framework and the related hypotheses will be offered.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.0 Introduction

This chapter describes the theoretical framework used in our research study. The question we are trying to address through this research is the impact of leadership styles on quality management practices in public hospitals in Saudi Arabia. The framework for our study is developed from previous research works done on subjects that analyze the interrelationship between organizational culture, leadership styles, and quality management practices. A discussion of the framework is followed by an overview of the research hypotheses.

3.1 Theoretical Framework

Organizations have increasingly recognized the strategic significance of quality management practices. Numerous researches in the past have studied the inter-relationship between an organization's quality of management practices, its culture, and leadership (e.g. senior management commitment, top management, senior management understanding, and visionary leadership). The present research study borrows from such studies to posit a new model in this field to look at the influence of leadership styles (independent variables) under various organizational cultures (moderator variable) on quality management practices (dependent variable) that an organization follows. Figure 3.1 presents the theoretical framework of the present study. Sosik and Dionne (1997) pointed out that Deming's management method calls for change agency, continuous

improvement, teamwork, and short-term goal eradication driven by effective leadership styles that will be considered collectively in assessing their relationship to the QM factors. Moreover, the importance of examining leadership from multiple levels of analysis has been suggested by Bass (1990), who calls for more empirical examination of such theoretical linkages between leadership styles and QM.

The prominence of Deming's Fourteen Points in organizations striving to achieve TQM outcomes is clearly evident (Gabor, 1990; Caroseli, 1991). The marriage of the leadership styles model with the QM factors derived from Deming's management method may provide managers with guidance concerning the type of leadership style(s) necessary to achieve TQM outcomes (Sosik & Dionne, 1997).

Based on the above discussion, literature review discussed previously in Chapter 2 and Anderson et al.'s (1994) model, the following diagram illustrates the theoretical framework of the present study.

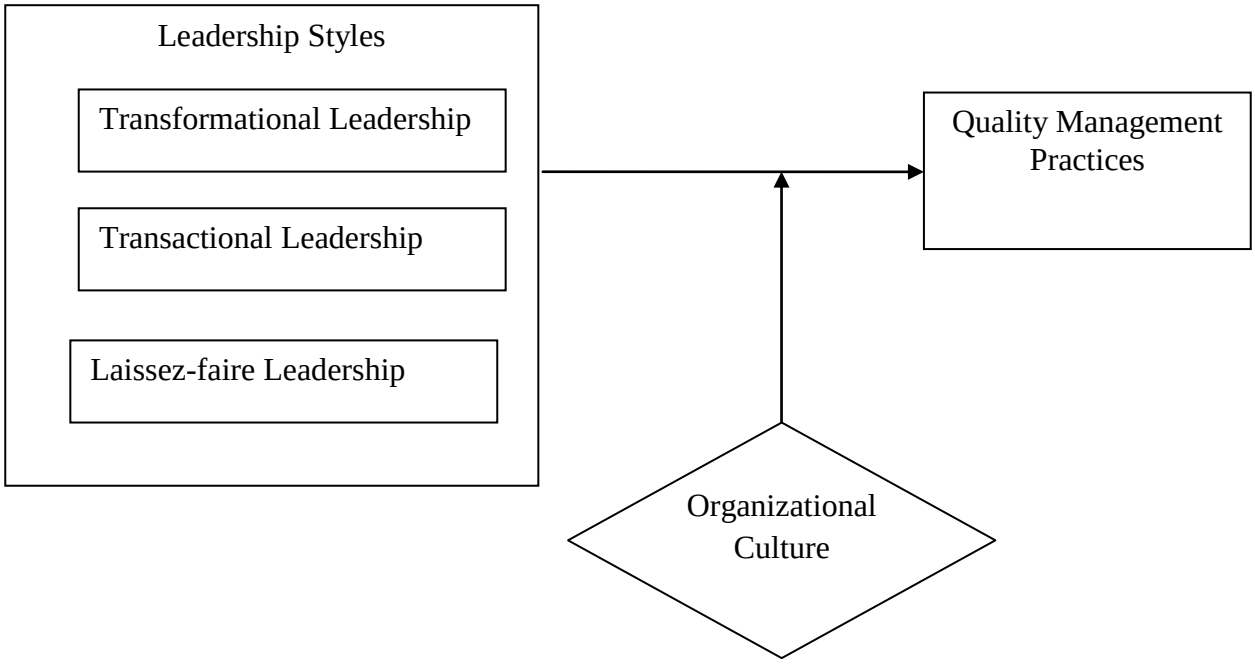

Figure 3.1
Theoretical Framework

Transformational theory of leadership by Bass (1985, 1990) stipulates that despite the fact that some people have inborn leadership qualities, one can also choose to become a leader and with time and experience, can learn leadership behaviors. The following are the types of leadership styles that people display, as identified by Bass:

1. Transformational leadership: This is where leaders believe that inspiring the workers to attain greater things brings good results for them and the organization as a whole. Transformational leaders are very passionate and place much energy in employee-motivation.
2. Transactional Leadership: Here, leaders presume that incentives motivate people. There is the creation of clear structures in the organization that explicitly inform

their subordinates exactly what is expected of them and implicitly inform what is not.

3. Laissez-faire Leadership: In this type of leadership, leaders assume that employees have enough experience to solve all their problems mutually and that the intervention of a leader is not necessary in such matters. This can also be regarded the type of leadership that shies away from decision making.

It can be a wonderful and an uplifting experience for workers to work for a transformational leader and this can make them put in an extra effort for their organization and thereby attain outstanding performance (Berson & Linton, 2005; Sousa & Voss, 2002). In an organization, such leadership styles can bring about quality management practices (Waldman, 1994). However, to verify this assumption, very little research exists on this subject. This gives us the foundation and the reason for our research study.

The basic aim of this research will be to test the proposition that transformational, transactional and laissez-faire leadership style have an association with the realization of quality management practices. DeBerry (2010) claims that the behaviours of leadership play a vital role in the organizational culture that has been established, and it is important that leaders are consistent in their drive for quality improvement in the organizations. This is consistent with Rad's (2006) findings. Rad researched on the impact of cultural values on the success of the implementation of TQM in Isfahan University Hospitals (IUHs). He found that successful implementation of TQM in an organization and its relationship with the organizational culture. Thus, if it

has to be successfully implemented, organizational culture should be attuned to TQM's basic principle and values. Furthermore, for successful implementation of TQM, top management's commitment and support is vital. The study however did not include various styles of leadership in the organizational culture to determine TQM implementation's success. It has been argued that culture has a direct bearing on quality improvement and organizational performance (Dean & Bowen, 1994; Hackman & Wageman, 1995; Metri, 2005; Powell, 1995; Sahney & Warden, 1991; Wardhani et al., 2009).

Quinn and Rohrbaugh (1983) came up with the Competing Values Framework (CVF) that specifies an organization's culture and gives insights into the way an organization's culture may influence its change management ability that is generally associated with quality improvement and performance. Their framework has two specific dimensions of culture. The first dimension relates to organizational structure preference along a scale between flexibility and change and stability and control. The second dimension pertains to organizational focus. The organizations can be differentiated along a continuum between an external and internal emphasis. While the external emphasis is on the organization's development and well-being, the internal emphasis is on the development and wellbeing of the people in the organization. These two continua's intersection led to the creation of four quadrants representing the four organizational culture type's hierarchical culture, rational culture, developmental culture, and group culture.

Furthermore, Anderson et al.'s (1994) model, like Bass' (1985) leadership theory, argued that a visionary or a motivational leader can affect an organization's

management practices quality; for instance, customer focus and continuous improvement. Literature review indicates that the first effort of synthesizing a quality management theory from research based on Delphi's method was by Anderson et al. (1994). They carried this out both on managers and on academic officers closely related with quality (Rungtusanatham et al., 1998; Fisher et al., 2005**;** Chowdhury et al., 2007).

The concern of the basic premise of Deming's management method is that an effective leadership is crucial in the creation of an organizational system that fosters the implementation of quality management practices such as teamwork, continuous improvement, and customers focus (Anderson et al., 1994). Therefore, the framework of Deming Management Method expresses effectiveness of the model through concerted leadership efforts toward the establishment of cooperative and learning organization systems that facilitates achievement of efficient quality management practices (Anderson et al., 1995; Douglas & Fredendall, 2004; Fisher et al., 2005; Khan, 2010; Rungtusanatham et al., 1998).

3.2 Research Hypotheses

Berson and Linton (2005) assert that leaders have to deal with uncertain goals and performance targets. Leadership styles, which comprise inspirational leadership, can lead to multiple outcomes in organizations and have an extraordinary impact on the employee satisfaction, thereby impacting quality (Berson & Linton, 2005).This finding is consistent with Laohavichien et al.'s (2009) study that found that leadership style influences and demonstrate employee behaviors, which enhances quality performance

on processes and products. The study also found that transformational leadership provides visionary leadership for successful quality management.

The impacts of leadership style and quality management practices on company performances were studied by Idris and Mohd Ali (2008). Based on empirical evidence from business firms in Malaysia, the authors found that the ability to adapt to change is critical to survive in the new global economic order. This ability, in the form of transformational leadership, combined with the best practice capability, could lead to organizational success. The study found that transformational leadership mediated by best management practice can enhance organizational performance. In other words, an effective management approach can bring about muchneeded organizational change. The transformational leaders establish the vision; through effective communication, they motivate followers to achieve that vision.

Based on the foregoing, and the literature review on the leadership style and quality management practices, the following hypothesis is offered:

H1: Leadership styles are associated positively with quality management practices.

Transformational leadership could impact quality management practices because transformational leaders are inspirational, intellectually stimulating, challenging, visionary, and development-oriented who guide subordinates (Bass & Avolio, 1999). In general, when an organization has transformational leaders, it is able to engage and involve the employees who—when motivated—give their best. This leads to product and process quality improvement in a people-oriented culture. In addition, when

organizations have a customer-centred approach, they focus on customer satisfaction. To derive customer satisfaction, organizations must realize that internal customers (i.e. employees) need to be satisfied first. Consequently, quality improvement is related to transformational leadership styles.

Although the importance of transformational leadership in relation to QM practices is evident in the above discussion, limited attention has been paid to investigate this relationship, particularly in the healthcare sector. Therefore, this research proposes that:

H1.1: Transformational leadership style are associated positively with quality management practices.

Transactional leadership, as a type of leadership style, is based on a transaction or exchange that reward and punishment are dependent on the follower exhibiting the preferred behaviors. Consequently, transactional leadership behaviour can lead to successful quality management practices because it rewards followers who participate to accomplish quality objectives, and punish those who do not (Podsakoff, MacKenzie, Moorman, & Fetter, 1990; Yukl, 1999). Additionally, Berson and Linton (2005) argue that transactional leadership may contribute to quality management perception because such leadership behaviour manages short-term objectives in relation to implementing the quality management process.

On the other hand, Sosik and Dionne (1997) contend that corrective transactional leadership (i.e. the active and passive forms of management by exception) is not supportive of effective organizational performance and thus could not be supportive of

quality management practices. Moreover, some researchers have found that transactional leadership can reduce quality because contingent rewards and punishments encourage employees to pursue their own goals rather than corporate goals (Avolio, 1994; Avolio & Bass, 2004). In addition, Sosik and Dionne mention that transactional leadership style are probable to result in unwillingness on the part of followers to take risks associated with change efforts or other improvement initiatives, or to engage in the teamwork necessary to accomplish such ends.

Based on the above literatures regarding the relationship between transactional leadership and quality management practices, limited evidence is available on the influence of this variable on QM practices. However, despite the limited literatures, it is expected that transactional leadership behavior affects QM practices because in general transactional leaders are able to shape employee performance, and hence QM practices. Thus, this research proposes that:

H1.2: Transactional leadership style are associated with quality management practices.

As for laissez faire leadership, a study of 10 Greek organizations that were recipients of the EFQM award for commitment to excellence revealed that these organizations had increased bureaucracy, low utilization of employees' skills and knowledge, and lack of flexibility (Vouzas & Gotzamani, 2005), implying that these companies did not integrate quality management or believe in employee involvement. Bureaucracy further suggests a lack of top management support which convinced the researchers of this type of leadership's exemplification of laissez-faire leadership. These

firms did not even use their award as a marketing tool, which demonstrates a lack of initiative by top management.

Additionally, Sosik and Dionne (1997) suggested that laissez-faire leadership is incompatible with the leadership behaviours which are necessary for effective quality management. Sosik and Dionne cited the research reviewed by Bass (1990) that connected laissez-faire leadership to lack of task concentration, work quality problems, and poor productivity. Teamwork requires task and socio-emotional support from leaders while commitment to continuous improvement requires leaders to encourage subordinates to seek out new opportunities to improve the status quo (Sosik & Dionne, 1997). One may further posit that maintaining subordinates' focus on the needs and desires of customers requires leaders to actively espouse and reiterate this objective.

Based on the above arguments and justifications of the relationship between laissez-faire leadership style and QM practices, the derived hypothesis is:

H1.3: Laissez-faire leadership style are associated negatively with quality management practices.

Moving on to organizational culture, Bass and Avolio (1993) assert that the combination between leadership style and organizational culture results in full improved organizational outcomes, including organizational effectiveness and employee satisfaction. Culture is a collection of enduring covert and overt rules, principles, and values that guide organizational behaviour (Burke & Litwin, 1992, p. 532). Schein (2004) states that employees' interactions with one another create an organizational culture and leaders' behaviours within a structured set of norms direct and constrain

such behaviour. Rad (2006) argues that organizational culture should have the support of top management and be quality-oriented. Some preliminary findings and theoretical propositions suggest that organizational culture may be a harmonious combination variable that leadership uses to influence various organizational outcomes (Lim, 1995; Ogbannan & Harris, 2000).

In the context of Taiwan, Chen (2004) examined specific employee behaviours associated with transformational and transactional leadership. Since culture has become critical to the outcome of organizations, leadership has sought to enhance the process of cultural adaptation leading to higher levels of organizational outcomes. The study found that leadership behaviour influences organizational outcomes. If leaders have an innovative culture, it can result in a committed workforce, which translates into better organizational outcomes.

In a related study, Xenikou and Simosi (2006) examined the relationship between organizational culture and transformational leadership. This study was unique because it demonstrated that organizational culture mediates the effect of transformational leadership on business performance. The authors used two approaches: the humanistic orientation and the achievement orientation. The study found that transformational leadership and good social relations at work enabled employees to meet personal goals. Also, constructive and positive social relations at work accompanied by goal setting were conducive to organizational performance. Transformational leadership leads to an achievement in cultural orientation and can stimulates group expectations for higher performance, which impacts performance levels. This study implied that, through training and development programmes,

managers should be made to realize the vital role that culture plays in enhancing organizational performance.

Numerous debates and deliberations have been held on the effect of organizational culture on quality management (e.g. Bass, 1998; Ogbannan & Harris, 2000; Rad, 2006; Schein, 1985; Senge, 1990; Shaw, 2002) whereby the administration of QM should be different in diverse organizational cultures. In a hospital setting in Pakistan, Rabbani et al. (2009) examined the effect of the four cultural types on the quality management. The study found that all four cultural types—group, developmental, hierarchical and rational—were present in the organization and affected quality management, although the degree of each might vary. This finding corroborates Jung et al.'s (2008) study that found that different dimensions of organizational culture can impact the elements of TQM in various ways.

On the other hand, Prajogo and McDermott (2005) focused on the particular cultures that determine the successful implementation of TQM practices. The authors found the presence of mechanistic-type culture within TQM practices. Also, the findings support the pluralistic view that different subsets of TQM practices are determined by different types of cultures. The hierarchical culture had a significant relationship with certain practices of TQM, suggesting that organizations must have different goals to ensure the flexibility to adopt different management styles (e.g. control and flexibility) between internal and external orientations.

Based on the arguments that provide the relationship among leadership style, quality management practices the organizational culture, the following hypotheses are postulated:

H2: Organizational culture moderates between leadership styles and quality management practices.

H2.1: Organizational culture moderates between transformational leadership style and quality management practices.

H2.2: Organizational culture moderates between transactional leadership style and quality management practices.

H2.3: Organizational culture moderates between laissez-faire leadership style and quality management practices.

3.3 Summary

This chapter has described the theoretical framework used in this research. The framework for our study has been developed from previous research works done on the topic that analyzed the interrelationship between organizational culture, leadership styles and quality management practices. Based on these research works, the research hypotheses have been developed. In the next chapter the methodology used for the study will be explained.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.0 Introduction

The research design and the methodology adopted for the study are explained in this chapter. The purpose of the study is to determine the impact of leadership styles and organizational culture on quality management practices in public hospitals in Saudi Arabia. The methodology adopted for the research covers the issue of proper sampling, instruments to measure leadership, quality management practices and organizational culture, methods used for data collection, and the precautions taken for data analysis.

4.1 Research Design

The research design is meant to guide the researcher on how to carry out the research and the methods used. Once the purpose of the research has been identified, the researcher knows why the data has to be collected, and also what data is to be collected and how it should be collected.

While there are several methods or approaches to conduct a research, the qualitative and the quantitative methods are the two most common methods. A quantitative approach is primarily deductive and is best suited to prove or disprove a hypothesis. Moreover, the quantitative analysis is ideal for a single-subject analysis as well as for correlational studies (Cooper & Schindler, 2003). This study employed the quantitative approach owing to the mentioned reasons. Furthermore, this study intends to incorporate different variables (leadership styles and practices of quality

management) in the proposed model, and hence a co-relational design that focuses on a mathematical based approach is ideal (Cooper & Schindler, 2003). Besides, quantitative approach can measure the relationship between variables systematically and statistically (Cassell & Symon, 1994, p.2).

A cross-sectional survey design was used to conduct this study and the survey instrument was a self-administered questionnaire, which is a commonly used method of data collection in survey research (Bourque & Fielder, 2003).

4.2 Population and Sample Selection

Several different agencies are responsible for providing health facilities in Saudi Arabia. Amongst these, the MOH is the major provider with 59% of the hospitals and 57.7% of the beds being under its management. Other government agencies manage 10% of the hospitals and 20.3% of the beds while the private sector 31% of the hospitals and 21% of the beds. Table 4.1 shows the relevant statistics.

Table 4.1
Hospitals and Beds by Health Providers in Saudi Arabia

Facilities	MOH	Other government agencies	Private agencies
Hospitals	225	39	123
Beds	31420	10828	11271

Source: Health Statistical Year Book, Ministry of Health (2007)

The Ministry of Health (MOH) has been established with the main objective of providing health care to all Saudi citizens. MOH provides three levels of care - primary, secondary, and tertiary care - through hospitals and health centers throughout the

country, as shown in Figure 4.1. There are about 1,925 primary healthcare centers that serve both urban and rural areas, which also act as a gatekeeper to other healthcare facilities. Secondary level care is provided in 168 general hospitals and tertiary healthcare services in 57 specialist hospitals throughout the Kingdom of Saudi Arabia.

The targeted population for this study is 225 MOH public hospitals in Saudi Arabia. Probability sampling was used to select the sample because the MOH hospitals are spread across the country. According to the Health Statistical Year Book (2007), there are 225 MOH hospitals in Saudi Arabia, located in 21 health regions across the country. Probability sampling provides an equal probability of inclusion from each unit of the population. The sampling is thus a representative of the entire population (Bryman & Cramer, 1994, p. 100).

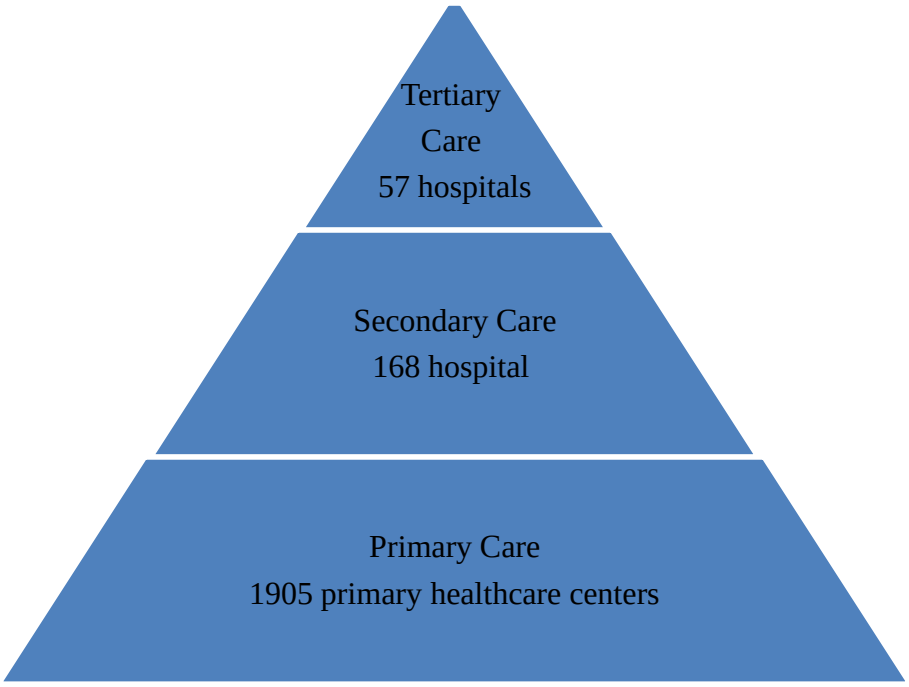

Figure 4.1
Levels of Healthcare Services Provided in the Ministry of Health
Source: Health Statistical Year Book, Ministry of Health (2007)

Random sampling requires that the samples are taken from a homogenous population. Hence the first step in random sampling is to make the population homogenous by dividing the non-homogenous population into a homogenous one at the onset. This can be done through stratified random sampling where the population is "subdivided into homogeneous groups, called strata, before the sample is taken (Remenyi, Williams, Money, & Swartz, 1998, p. 195). This study employed a dual stratified random sampling strategy. Based on this strategy, two different types of hospitals from different regions were selected. The reasons for this strategy are as follows:

1. Since there are general and specialist hospitals in 20 regions, the population is non-homogenous. The sample should be homogenous so that the study of the impact of leadership style and organizational culture on the quality management practices in all public hospitals in Saudi Arabia is effective.
2. This sampling strategy would ensure that all the different identifiable strata are taken into account (Hussey & Hussey, 1997, p. 146) so that every stratum is represented proportionally within the sample (Saunders, Lewis, & Thornhill, 2000, p. 164).
3. This strategy would reduce the possibilities of error of estimation.
4. Stratification of the population elements into convenient groupings also helps reduce the cost per observation in the survey.
5. There may be subgroups within the population and these subgroups may also have to be divided into identifiable strata.

In a quantitative study, to get near accurate results, the sample size should be reasonably large so that a subset of the larger population can be formed (Krejcie & Morgan, 1970, as cited by Sekaran, 2003). The desired sample size for this study is 144 hospitals which covers about 64% of the total population (Krejcie & Morgan, 1970, as cited by Sekaran, 2003). Through stratified random sampling, 108 general hospitals and 36 specialist hospitals[1] were included in this study. To determine the sample size in each region, the researcher applied the stratified random sample technique on the master's list. Table 4.2 shows the distribution of hospital within each stratum.

[1] Total population /desired sample size= 225/144=64%
General hospitals *64%= 168*64%= 108 general hospitals
Specialist hospitals *64% = 57*64% = 36 specialist hospitals

Table 4.2
Distribution of the Hospitals Within the Sample

**Region*	**General Hospital*	**Specialist Hospital*	*% General Hospitals per Region to Total General Hospitals*	*% Specialist Hospitals per Region to Total the Specialist Hospitals*	*N. of sample General Hospitals per Region*	*N. of sample Specialist Hospitals per Region*	*Sample Total*
Riyadh	30	10	17.86	17.54	19	5	24
Makkah	6	2	3.57	3.51	4	1	5
Jeddah	7	5	4.17	8.77	5	3	8
Taif	8	3	4.76	5.26	5	2	7
Medinah	14	3	8.33	5.26	9	2	11
Qassim	13	3	7.74	5.26	8	2	10
Eastern	14	4	8.33	7.02	9	3	12
Al-Ahsa	4	4	2.38	7.02	3	3	6
Hafr Al-	2	2	1.19	3.51	1	1	2
Asser	16	2	9.52	3.51	10	1	11
Bishah	2	1	1.19	1.75	1	1	2
Tabouk	8	2	4.76	3.51	5	1	6
Hail	7	2	4.17	3.51	5	1	6
Northen	6	1	3.57	1.75	4	1	5
Jazan	13	2	7.74	3.51	8	1	9
Najran	5	4	2.98	7.02	3	3	6
Al-Bahah	6	4	3.57	7.02	4	3	7
Al-jouf	4	2	2.38	3.51	3	1	4
Qurayyat	2	1	1.19	1.75	1	1	2
Qunfudha	1	0	0.60	0.00	1	0	1
Total	168	57	100.00	100.00	108	36	144

*Sources: Health Statistical Year Book, Ministry of Health, 2007

After choosing the participating hospitals for the sample and after dividing them into groups and regions, the researcher used simple random sampling. A random number table was used to determine the subjects. A random number table is a listing of random numbers where we can choose the quantity of random numbers desired, the maximum and minimum values of numbers in the table.

4.3 Respondents

Respondents who possessed the relevant information answered the questionnaires. This is an important criterion for any research because if the wrong person answers the questions, the research can be rendered invalid and misleading. Survey research usually seeks out an individual as a key informant for the research but there are no defined rules or standards for selecting the informant (Remenyi et al., 1998, p. 194). This selection process is subjective and can be flexible. Nevertheless, to make the research effective and to obtain useful information, the selection of the right respondent is important.

In the present study, the quality department managers and other department's managers were considered to be the right respondents for this study to represent the sample under study (Lagrosen, & Lagrosen, 2005; Lau, Zhao, & Xiao, 2004; Saraph et al., 1989; Shortell et al., 1995a; Wilson & Collier, 2000; and Wu, Wiebe, & Politi, 1997). This is because they are responsible for promoting quality achievement and performance improvement throughout the hospital. The MOH organizational chart (see Figure 4.2) clearly shows that the quality managers work under the direction and control of the hospital director. These quality managers are also responsible for the development, implementation, communication and maintenance of a quality plan to

ensure that the hospital quality system and policies comply with the quality system requirements.

Accordingly, the information on the MOH hospitals is obtained in two stages. Firstly, the quality department managers in Saudi Arabia's MOH hospitals answered all questionnaires comprising quality management practices, leadership style, and organizational culture. Secondly, other department managers working under the formers' direction and control answered the questionnaire comprising questions of

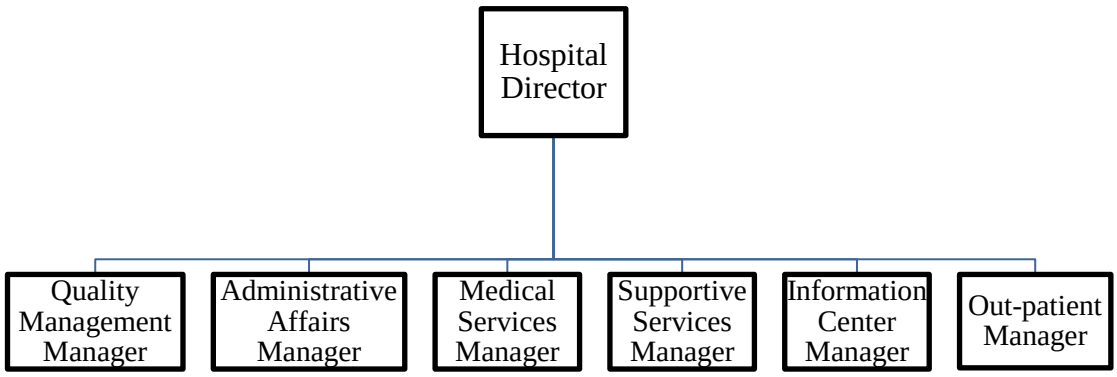

Figure 4.2
Sample Unit Within the Organizational Chart for the MOH Hospitals

leadership styles and organizational culture. A list of all hospitals from MOH was obtained to provide all details about the hospital including, name, location postal address, and the department manager's contact details.

4.4 Instruments

The three variables in this study include leadership style (independent variable), quality of management practices (dependent variable), and organizational culture (moderator variable). The questionnaire was suitably designed to include all the three variables.

4.4.1 Leadership Styles

Theory of transformational leadership proposed by Bass (1985) was further developed by Avolio and Bass (1995) who extended the theory by integrating a level-of-analysis framework. Avolio and Bass have also developed Multi-factor Leadership Questionnaire (MLQ) whereby its latest version (Form-5x-short) includes the full range leadership (Transformational, transactional, and laissez-faire) and was used in the present study to measure leadership styles. The Bass and Avolio MLQ scale was adapted in this research owing to its extensive development and validation of scale and because it is considered one of the best instruments available to evaluate leadership styles. The internal consistency, validity and reliability of the scale have been empirically tested. The reliability for all items and for each leadership factor scale was reported to range from .74 to .94 (Avolio & Bass, 1995) and exceed the standard reliability cut-off of .70, as recommended by Fornell and Larcker (1981).

The latest version of MLQ accommodates the suggestions and criticism of several scholars and hence it is considered more comprehensive than the original version (MLQ Form-5R). This form has been found to be effective even in research studies in diverse cultures such as in Asian and European cultures.

Thirty six items were asked, covering the entire range of leadership. The instrument begins from transformational at one end to highly avoidant at the other end. All the leadership styles had nine items and each was rated on a five-point scale, ranging from '1' (not at all) to '5' (frequently, if not always). Table 4.3 shows the variables and items of the Leadership Styles. The items under transformational leadership included inspirational motivation, idealized influence behaviour, intellectual stimulation,

individual consideration, and idealized influence attributes. Transactional leadership has only three items including management by exception active, contingent reward, and management by exception passive, while the laissez-faire leadership has just one item – laissez-faire.

Table 4.3
Variables and Items of the Leadership Styles

Variables Name	*Items*
Transformational leadership style	1. Re-examines critical assumptions to question whether they are appropriate. 2. Talks about his/her most important values and beliefs. 3. Seeks differing perspectives when solving problems. 4. Talks optimistically about the future. 5. Instills pride in me for being associated with him/her. 6. Talks enthusiastically about what needs to be accomplished. 7. Specifies the importance of having a strong sense of purpose. 8. Spends time teaching and coaching. 9. Goes beyond self-interest for the good of the group. 10. Treats me as an individual rather than a member of a group. 11. Acts in ways that builds my respect.

Table 4.3 (continued)

Variables Name	*Items*
Transformational leadership style	12. Considers the moral and ethical consequences of decisions. 13. Displays a sense of power and confidence. 14. Articulates a compelling vision of the future. 15. Considers me as having different needs, abilities, and aspirations from others. 16. Gets me to look at problems from many different angles. 17. Helps me to develop my strengths. 18. Suggests new ways of looking at how to complete assignments. 19. Emphasizes the importance of having a collective sense of mission. 20. Expresses confidence that goals will be achieved.
Transactional leadership style	1. Provides me with assistance in exchange for my efforts. 2. Fails to interfere until problems become serious. 3. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards. 4. Discusses in specific terms who is responsible for achieving performance targets. 5. Waits for things to go wrong before taking action.

Table 4.3 (continued)

Variables Name	*Items*
Transactional leadership style	6. Makes clear what one can expect to receive when performance goals are achieved. 7. Shows that he/she is a firm believer in "If it ain't broke, don't fix it." 8. Demonstrates that problems must become chronic before taking action. 9. Concentrates his/her full attention on dealing with mistakes, complaints, and failures. 10. Keeps track of all mistakes. 11. Directs my attention toward failures to meet standards. 12. Expresses satisfaction when I meet expectations.
Laissez-faire leadership style	1. Avoids getting involved when important issues arise. 2. Is absent when needed. 3. Avoids making decisions. 4. Delays responding to urgent questions.

4.4.2 Quality Management Practices

Data of quality management practices was obtained through the use of questionnaire. The seven constructs that are the most common principles of quality management practices were included with the exception of leadership owing to the independent investigation of this principle as the predictor variable (Adam, 1994; Ahire et al., 1996; Ahmed, 2009; Anderson et al., 1998; Antony et al., 2002; Awan et al., 2009; Black & Porter 1996; Douglas & Fredendall, 2004; Dow et al., 1999; Flynn et al., 1994, 1995;

LeBrasseur, Whissell, & Ojha, 2002; Lewis et al., 2006; Motwani , 2001; Ruggieri & Merli, 1998; Salaheldin, 2009; Samson & Terziovski, 1999; Shortell et al.,1995; Yusof & Aspinwall, 2000). These constructs include employee focus, strategic quality planning, customer focus, quality information and performance, continuous improvement and innovation, process management, and role of the quality department, as shown in Table 4.4. All these items were rated on a five-point scale, ranging from '1' "Strongly Disagree" to '5' "Strongly Agree." Table 4.5 shows the instrument that includes 41 items are selected after a careful review of the literature. The instrument has been tested, validated and refined with a focus in the context of healthcare.

Table 4.4
Theoretical Constructs, Measurement Scale, and Reliabilities

Construct	Source	No. of items	Cronbach's alpha	Brief definition
Employee Focus	Shortell et al. (1995)	4	.79	This discusses to what extent the hospital employees have been provided adequate education and training for quality improvement efforts.
	LeBrasseur et al. (2002)	4	.82	Employee's involvement and empowerment in the quality planning efforts of the hospital

Table 4.4 (continued)

Construct	Source	No. of items	Cronbach's alpha	Brief definition
Strategic Quality Planning	Shortell et al. (1995)	7	.87	Development of the strategic objectives and action plan by the hospital.
Customer Focus	Shortell et al. (1995)	6	.87	To what extent is the hospital able to effectively assess and meet customer requirements and expectations.
Quality Information and Analysis	Shortell et al. (1995)	6	.90	These items discuss the scope, the management, and the use of data and information. It goes on to demonstrate how these factors are important to maintain customer focus, quality excellence, and to improve operational and competitive performance.
Continuous Improvement	Douglas & Fredendall (2004)	3	.90	These items ascertain the extent to which the hospital is able to pursue innovative improvements of its process and services.

Table 4.4 (continued)

Construct	Source	No. of items	Cronbach's alpha	Brief definition
Process Management	Douglas & Fredendall (2004)	6	.92	The focus is on the methodological and behavioral practices, which shows that the management of process is more important than the results.
Role of the Quality Department	Saraph et al.(1989)	5	.83	The quality department needs quality staff for consultation and they must be granted visibility and autonomy.

Table 4.5
Variables and Items of the Quality Management Practices

Variables Name	Items
Training and education	1. Hospital employees are given education and training in how to identify and act on quality improvement opportunities 2. Hospital employees are given education and training in statistical and other quantitative methods that support quality improvement. 3. Hospital employees are given the needed education and training to improve job skills and performance. 4. Hospital employees are rewarded and recognized (e.g., financially and/or otherwise) for improving quality
Teamwork and involvement	1. Teamwork and consensus are important in our hospital 2. Our hospital encourages employees to participate in decision making 3. Our hospital tries to understand the point of view of patients in defining the quality of health services. 4. Our hospital‘s senior management encourages teamwork across units and disciplines.

Table 4.5 (continued)

Variables Name	Items
Strategic quality planning	1. Hospital employees are given adequate time to plan for and test improvements. 2. Each department and work group within this hospital maintains specific goals to improve quality 3. The hospital's quality improvement goals are known throughout the organization. 4. Hospital employees are involved in developing plans for improving quality. 5. Middle managers (e.g., department heads, program directors, and first line supervisors) are playing a key role in setting priorities for quality improvement 6. External customers are playing a key role in setting priorities for quality improvement 7. Non-managerial employees are playing a key role in setting priorities for quality improvement
Customer focus	1. The hospital does a good job of assessing current patient needs and expectations. 2. Hospital employees promptly resolve patient complaints. 3. Patients' complaints are studied to identify patterns and prevent the same problems from recurring. 4. The hospital uses data from patients to improve services 5. The hospital does a good job of assessing physician satisfaction with hospital services.

Table 4.5 (continued)

Variables Name	Items
Customer focus	6. The hospital uses data on customer expectations and/or satisfaction when designing new services.
Information and analysis	1. The hospital collects a wide range of data and information about the quality of care and services. 2. The hospital uses a wide range of data and information about the quality of care and services to make improvements. 3. The hospital continually tries to improve how it uses data and information on the quality of care and services. 4. The hospital continually tries to improve the accuracy and relevance of its data on the quality of care and services provided. 5. The hospital continually tries to improve the timeliness of its data on the quality of care and services provided 6. The hospital compares its data to data on the quality of care and services at other hospitals.
Continuous improvement	1. Associates in the hospital try to improve the quality of their service. 2. Associates in the hospital believe that quality improvement is their responsibility. 3. Associates in the hospital analyze their work services to look for ways of doing a better job.

Table 4.5 (continued)

Variables Name	Items
Process management	1. Quality data (defects, complaints, outcomes, time, satisfaction, etc.) are available. 2. Quality data are timely. 3. Quality data are used as tools to manage quality. 4. Quality data are available to hourly workers. 5. Quality data are available to managers and supervisors. 6. Quality data arc used to evaluate supervisor and managerial performance
Role of the quality department	1. Visibility of the quality department. 2. Quality department's access to divisional top management. 3. Autonomy of the quality department. 4. Amount of coordination between the quality department and other departments. 5. Effectiveness of the quality department in improving quality.

4.4.3 Organizational Culture

Organizational culture was assessed through an assessment instrument developed by Cameron and Quinn (2005) that has 24 items. Table 4.6 shows the variables and items of the organizational culture. According to Cameron and Quinn, each organization demonstrates one or multiples of the four basic types of culture – clan, hierarchy, market, and adhocracy. The dimensions for organizational culture assessment

instrument ranges from dominant characteristics, management, organizational leadership, criteria for success, strategic emphasis to the organizational glue. The organizational culture items were adapted from Cameron and Quinn because of their extensive development of Computing Value Framework (CVF) which is widely used as a validated and reliable scale. According to Cameron and Quinn, the reliability coefficients showed that the adhocracy culture reliability was .80, the hierarchy culture reliability was .76, the market culture reliability was .77, and the clan culture reliability was .79.

According to Helfrich, Li, Mohr, Meterko, and Sales (2007) the Competing Values Framework has been the most widely used model in health services research to assess organizational culture. It has been offered as an explanation for organizational differences in implementation of quality improvement activities and quality of care. CVF instruments are generally presented as well-validated with reliable, generalizable subscale solutions. They have been frequently fielded among managers under the assumption that the results provide an accurate gauge of culture as experienced by the broader organization. Moreover, Cameron and Quinn (2006) have discovered through their own research that most organizations developed a prominent cultural style. More than 80 percent of the several thousand organizations Cameron and Quinn have studied use the CVF and have been characterized by one or more culture types.

The responses in the present study were measured on a five-point Likert scale, ranging from ‘1’ “Strongly Disagree” to ‘5’ “Strongly Agree.”

Table 4.6
Variables and Items of the Organizational Culture

Variables Name	*Items*
Dominant characteristics	1. The hospital is a very special place. It is like an extended family. People seem to share a lot of themselves. 2. The hospital is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks. 3. The hospital is very production oriented. A major concern is with getting the job done. People are very competitive and achievement oriented. 4. The hospital is a very formalized and structured place. Bureaucratic procedures generally govern what people do
Hospital leaders	1. The leaders of the hospital are generally considered to be mentors, facilitators, or parent figures. 2. The leaders of the hospital are generally considered to be entrepreneurs, innovators, or risk takers 3. The leaders of the organization are generally considered to be hard-drivers, producers, or competitors. 4. The leaders of the hospital are generally considered to be coordinators, organizers, or efficiency experts.

Table 4.6 (continued)

Variables Name	*Items*
Management of employees	1. The management style in the hospital is characterized by teamwork, consensus and participation. 2. The management style in the hospital is characterized by individual risk-taking, innovation, flexibility, and uniqueness 3. The management style in the hospital is characterized by hard-driving competitiveness, goal directedness, and achievement. 4. The management style in the hospital is characterized by careful monitoring of performance, longevity in position, and predictability.
Hospital glue	1. The glue that holds the hospital together is loyalty and mutual trust. Commitment to this hospital runs high. 2. The glue that holds the hospital together is orientation toward innovation and development. There is an emphasis on being on the cutting edge. 3. The glue that holds the hospital together is the emphasis on production and goal accomplishment. Marketplace aggressiveness is a common theme. 4. The glue that holds the hospital together is formal rules and policies. Maintaining a smooth running hospital is important.

Table 4.6 (continued)

Variables Name	*Items*
Strategic emphases	1. The hospital emphasizes human development. High trust, openness and participation persist. 2. The hospital emphasizes acquiring new resources and meeting new challenges. Trying new things and prospecting for new opportunities are valued. 3. The hospital emphasizes competitive actions and achievement. Measurement targets and objectives are dominant. 4. The hospital emphasizes permanence and stability. Efficient, smooth operations are important.
Criteria of success	1. The hospital defines success on the basis of development of human resources, teamwork, and concern for people. 2. The hospital defines success on the basis of having the most unique or the newest products. It is a product leader and innovator. 3. The hospital defines success on the basis of market penetration and market share. Competitive market leadership is key. 4. The hospital defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low cost production are critical.

4.5 Justification for Using Self-Administered Questionnaire

The most commonly used instrument for data collection is the self-administered questionnaire (Schwab, 2005), which is not only cost-effective but also enables the researcher to gather opinions and information in a timely manner (Bourque & Fielder, 2003; Vaus, 1995). To collect data from a professional sample of hospital managers, a questionnaire is therefore the preferred method (Bourque & Fielder, 2003).

While there are several modes through which questionnaires can be administered, mailed questionnaire has several advantages over other methods. Since it can cover a wide geographic distance, it is possible to reach a larger number of respondents in a shorter time. It is less expensive than other research methods and it reduces the number of research workers. Moreover, it is possible to distribute the questionnaire to all the respondents at the same time (Babbie, 1973; Bourque & Fielder, 2003).

The target sample for this study was spread all over the country, and hence, the postal survey technique would enable the researcher to cover a wider geographic area. This technique enables the researcher to obtain data from respondents without commitments of personal meetings. In addition, the self-administered questionnaires have another advantage of a lower cost outlay than other techniques like in-person and telephone interviews. As pointed out by Bourque and Fielder (2003), mailed questionnaire costs about 75% less than an in-person interview.

Lack of sufficient funds was the primary reason that this study was unable to conduct one-to-one interviews with managers in Saudi Arabia, which is a relatively large country. Mailed questionnaire, on the other hand, would permit the researcher to

target the selected hospitals across the country at a much lower cost. Lastly, it was assumed that the respondents would receive the questionnaires at almost the same time. This also led to the assumption that the influence on the circumstances and situations of the respondents would possibly be equal for all the respondents (Bourque & Fielder, 2003). With all these advantages, the self-administered questionnaires were considered to be the most suitable method for this research.

4.6 Content Validity

Content validity is considered as the extent of the examination of a measure or scale as a sample from the planned universe or domain content (Pallant, 2001). It can also be said that, data is regarded to have content validity if judges are unanimous on the fact that the instruments of the study contains items that are capable of encompassing all the variables being measured (Sekaran, 2003). The researcher made sure that the content validity of the questionnaire measurements applied to contingency factors, leadership styles, organizational culture and practices of quality management by sticking to the three stages of content validity which are: firstly – by defining the content domain, secondly - by determining the areas of the content domain of the test items and thirdly – by making a comparison of the structures of the given test with the structures of content domains (Murphy & Davidshofer, 1998). According to Sekaran (2003), three steps exist for measuring content validity: (1) judgment of those who construct the instrument or other experts that have knowledge of the topic, (2) the conceptualization of the behavioral domain or universe of interest, and finally (3) the high internal consistency reliability. Based on these objectives, the researcher sent a bilingual questionnaire

(which included both versions in English and Arabic) to four academics specializing in quality management in Saudi universities. This was an essential step in eliminating any ambiguity in the language used. In addition, it was necessary to test the instrument for appropriateness, clarity of questions, expressions, understanding, and estimated completion time. The comments of these professionals were used to refine the instrument in order to ensure the validity and reliability of the questionnaire, as well as to make it more user-friendly

4.7 Pilot Study

The questionnaires were randomly distributed to 20 hospitals in the pilot study. The purpose of the pilot study was to discover problems in the questionnaires and procedures before the main study began. As a result, the questionnaires were revised based on feedbacks from the pilot study with the main purpose to make the survey instrument more comprehendible.

The pilot study results show a high coefficient alpha for all variables, ranging from .75 to .91, which exceeded the standard reliability cut-off of .70, recommended by Fornell and Larcker (1981). Table 4.7 shows the reliability analysis of the research pilot study.

Table 4.7

Reliability Analysis of the Research Pilot Study

Variables	*Dimensions*	*Cronbach's Alpha (α)*
	Training and education	.904
	Teamwork and involvement	.880
Quality	Strategic quality planning	.808
management	Customer focus	.879
practices	Information and analysis	.859
	Continuous improvement	.847
	Process management	.774
	Role of the quality department	.874
Leadership styles	Transformational leadership	.867
	Transactional leadership	.830
	Laissez-faire leadership	.807
Organizational	Dominant characteristics	.871
culture	Hospital leaders	.754
	Management of employees	.869
	Hospital glue	.914
	Strategic emphases	.898
	Criteria of success	.765

4.8 Data Collection

Once the instrument was finalized and its validity tested, data collection was initiated. The questionnaire was translated into Arabic language using a back translation technique in order to achieve the measurement equal valences in both languages (Brislin, 1970).

The questionnaire was sent to two bilingual expert (English/Arabic) in order to insure that the two versions are harmonized as close as possible. The Arabic version was translated later back into English by another bilingual expert in order to remove or solve any differences. The Arabic questionnaire is depicted in Appendix B.

The questionnaires, that prepared in Arabic languages, were distributed in selected hospitals. A cover letter was sent along with the questionnaire informing the respondents of the purpose and the authenticity of the research. To prove the authenticity, the approval of Medical Research Ethical Committee, MREC from the MOH[2] was enclosed along with the detailed confidentiality clause.

The data collection started from April 2011 until June 2011. This duration was considered suitable as there were not too many holidays during this period and most employees were accessible for the purpose of the study. To ensure confidentiality, post-paid self-addressed envelopes were provided to the respondents along with the questionnaires. This facilitated the direct receipt of the completed questionnaires to the researcher. In addition, the researcher's direct email options and fax number were also provided.

[2] The researcher obtained an introductory letter from the director of the General Directorate for Health Research at MOH. The letter stated that the present research had been approved by the Medical Research Ethical Committee (MREC), and it encouraged hospital workers to participate in the research study.

The researcher sent reminder letters several times to the people who did not respond. Prior to the distribution of the mail questionnaires, the researcher obtained the direct contact numbers of the respondents through a checklist of all MOH hospitals. The researcher was therefore in a position to identify and contact those who had not responded to the initial survey and it was helpful to directly contact the respondents who were willing to take part in the research by sending them a copy of the questionnaire. Moreover, only the researcher had the access to the information contained in the survey forms.

4.9 Data Analysis Techniques

The data collected had to be processed to derive meaningful information. It becomes meaningful when it is effectively communicated and the receiver understands and receives the content exactly as was intended by the sender. This information, when analyzed by experts, becomes part of what we know as knowledge. Table 4.8 provides the data analysis techniques used in this research.

The first step before analysis was to filter the information – to segregate the useful data from the unwanted data. There may be incomplete questionnaires or there may be those containing frivolous responses (e.g. giving same score to all the items). Such questionnaires serve little purpose and may even deteriorate the quality of regression and factor analysis. This would ultimately affect the accuracy of the results. Hence, each questionnaire was manually checked at this stage before data from valid questionnaires were entered into the computer for analysis through data analysis software.

The researcher used SPSS v 18.0 for Windows as it is the standard software package used to analyze data in researches.

Table 4.8
Data Analysis Techniques Used in this Research

	Research questions	Analysis techniques
1	Does a relationship exist between leadership styles and quality management practices?	
1.1	Is there any relationship between transformational leadership style and quality management practices?	Product-moment correlation analysis
1.2	Is there any relationship between transactional leadership style and quality management practices?	
1.3	Is there any relationship between laissez-faire leadership style and quality management practices?	
2	Does organizational culture moderate the relationship between leadership styles and quality management practices?	
2.1	Does organizational culture moderate the relationship between transformational leadership style and quality management practices?	Hierarchical regression analysis
2.2	Does organizational culture moderate the relationship between transactional leadership style and quality management practices?	
2.3	Does organizational culture moderate the relationship between laissez-faire leadership style and quality management practices?	

4.10 Summary

This chapter has discussed the methodology, the design of the research, and the strategy and method of research. To test the hypotheses, the quantitative method was used owing to its suitability to the current study.

The current study involved public hospitals in Saudi Arabia, as identified within the Ministry of Health located in 20 health regions across the country. Therefore, the study used the list of the Ministry of Health in these health regions as a framework from which to draw the sample. Since the study involved a large number of population, stratified random sampling strategy and simple random sampling were used to select the appropriate sample from the population. Further, a pilot test was carried out before the distribution of the final questionnaire, to make sure the questionnaire was well designed and reliable. The next chapter will present the results of the data analysis and findings.

CHAPTER FIVE

DATA ANALYSIS AND FINDINGS

5.0 Introduction

This chapter presents data analysis and results of the questionnaire data. Scales and items were adapted from existing literature to create the survey instrument used for this research. This chapter is aimed to synthesize myriad of analyses and findings in order to make sense out of what all the results mean including the implications of the results. All analyses were aimed to comprehend factors that may lead to the quality management practices.

5.1 Survey Instrument Response Rate and Data Collection Process

For this study, the unit of analysis was hospitals in Saudi Arabia. A survey package was mailed to 182 hospitals on April 4th, 2011. Direct phone calls to remind the respondents of their delayed response were made to increase the response rate, as recommended by Sekaran (2006). Furthermore, reminder was carried out in May 11th. Also, another reminder by direct calls was placed on June 4th and by the end of June, 140 hospitals were sent a survey, out of 140 surveys, 107 came from general hospitals and 33 from specialist hospitals. The actions taken yielded a total of 140 hospitals for a response rate of 77 percent. According to Sekaran (2006), this is an acceptable rate. Table 5.1 presents the response rate.

Table 5.1
Response Rate of Hospitals

Response	Frequency/Rate
Number of distributed questionnaire	182
Total returned questionnaire	140
Useable and completed questionnaires	140
Response rate	77 %

5.2 Data Screening

5.2.1 Data Inspection

Data analysis commenced with the inspection and review of the data in order to ascertain its suitability for analysis. In order to carry out an exhaustive data analysis, it was considered proper to follow the procedures outlined by Hair, Black, Babin, Anderson, and Tatham (2006), which included examining data patterns that were missed out and adhering to statistical assumptions, identification of outliers, and a review of skewness and kurtosis.

5.2.2 Missing Data

Missing data in any research undertaking is a common phenomenon. Hair et al. (2006) hold that missing data implies a situation where valid values on one or more variables are not available for data analysis, especially in a multivariate analysis. It has been noted

by Sekaran (2006) that a situation of this nature occurs when respondents fail to answer some items in the questionnaire, thus leaving the items blank. Also this scenario on the part of the respondents could be a result of lack of understanding of the question, ignorance of the answer, unwillingness to answer etc. However, it is always important to take note of the missing data because of their unavoidable impact on the analysis. In order to effectively deal with the missing data phenomenon, Hair et al. (2006) observe that the primary concern is to identify the patterns and relationships underlying the occurrence, although the extent of missing data is a secondary issue in most instances.

Therefore, the practical impacts of missing data are reduction of the sample size available for analysis but then generalization becomes difficult because data bias is present. Nevertheless, there is no any other way to solve the problem as it depends on patterns, relationships and degree of emotion. However, Sekaran (2006) believes that the best way to handle the problem irrespective of its characteristics is to omit the case, especially if the sample is big. For instance, if only two or three items are left unanswered in a questionnaire of 30 items or more, this case can be dropped. Furthermore, Hair et al. (2006) equally note that the issue of missing data could be frustrating and damaging if not properly handled. Thus, they identify a four-step process of identifying and remedying this problem. These steps are: determine the type of missing data; determine the extent of missing data; diagnose the randomness of the missing data processes; and select the imputation method. However, the general rule of thumb on missing data as enumerated by Hair et al. (2006) includes that missing data under 10 percent for an individual case or observation can generally be ignored but the number of cases with no missing data must be sufficient for the selected analysis

technique. Variables with as little as 15 percent missing data are candidates for deletion, but higher levels of missing data, for instance 20 percent to 30 percent, can often be remedied.

After considering all the above recommendations, the researcher found no missing data.

5.2.3 Means and Standard Deviations

The ideal way to begin an analysis of multivariate data is to utilize a table of means and standard deviations. The results of the descriptive statistics revealed that all the variables were measured on a five-point likert scale, indicating that some respondents were dissatisfied with some of the items. Minimum and maximum scales indicate no out-of-range entries. The results also revealed that the mean of all variables range from 2.32 to 3.66 on a five-point scale; an above than average mean indicating that majority of the respondents are agreeable or are averagely satisfied of the services.

Researchers also acknowledge that descriptive statistics are good in detecting outliers. The proposed test for outliers is to change data into standardized scores to determine values over 2.5 for small samples and values over 3 or 4 for large samples (Hair et al., 2006). Z-scores' inspection will enable the identification of outlying cases which is invaluable in data screening. Z-scores over +3 and less than -3 are outliers (Coakes & Steed, 2007).

Using the recommended test outlined above, the researcher did not find any outliers.

5.3 Goodness of Measures

To confirm the efficiency and the effectiveness of the adopted measures, certain procedures have to be carried out prior to the main analysis, including validity tests (reliability and exploratory factor analysis) for the different variables. The findings relating to reliability and exploratory factor analysis for the entire items measured for independent and dependent variables were included in the study.

5.3.1 Reliability Test

Pallant's (2003) research concluded that new measures of scales should have reliability to the extent of minimum 0.60. Reliability implies the reference to making assessments of the extent to which there is uniformity amongst the varied measurements of the variables (Hair et al., 2006). Thus, it can be said that this process serves as a means to measure levels of consistency of the given performance levels and behaviours. According to Sekaran (2003), Cronbach's alpha has been very frequently used as an indicator for representing the appropriate indication levels relative to reliance and internal consistency. It is mostly agreed that the most widely accepted value for Cronbach's alpha turns out to be 0.70, although it may decline to 0.50 in some exploratory studies (Hair et al., 2006).

Table 5.2 below summarizes the reliance tests of the different items. As evident, the Cronbach's alpha in terms of measurements related to the lower limits of acceptance is found to be such that $\alpha > 0.70$. In view of such circumstances, all measures were found to be having considerable reliability.

Table 5.2
Reliability Results

Variables	**Dimensions**	**No. of items**	**α**
Quality management practices	Employee focus	8	.906
	Strategic quality planning	7	.801
	Customer focus	6	.889
	Information and analysis	6	.888
	Continuous improvement	3	.898
	Process management	6	.917
	Role of the quality department	5	.822
Leadership styles	Transformational leadership	20	.779
	Transactional leadership	12	.894
	Laissez-faire leadership	4	.878
Organizational culture	Dominant characteristics	4	.802
	Hospital leaders	4	.885
	Management of employees	4	.881
	Hospital glue	4	.916
	Strategic emphases	4	.884
	Criteria of success	4	.890

5.3.2 Exploratory Factor Analysis

Factor analysis is carried out for the purpose of decreasing the several variables to a lesser number, constructing the summary of the pattern of correlation between the dimensions, and making the variables easily manageable. Also, to check the validity of

the questionnaire, factor analysis is tested whether the questions are in the right construct.

The instrument items listed in Appendix A were explored to confirm the level of dimensionality. At first, the examination was conducted through Exploratory Factor Analysis (EFA) by utilizing the principal components methods like Principal Components Analysis (PCA). PCA is a factor extraction process that relates to the formation of uncorrelated linear combination of the variables (Everitt & Dunn, 1983).

The first element was revealed to have the maximum variance. Successive components contributed to the lesser portions of the variance as they were not correlated with each other. The first factor solution was acquired through the utilization of principal components analysis. Following the suggestions of Coakes and Steed (2003), an individual factor analysis was carried out on each of the scales as the ratio of five subjects per item is 5:5. The ratio of five subjects per item (1:5) is capable of running a single factor analysis, but in this situation, it is not so (Hair, Black, Babin, Anderson & Tatham, 1998). Accordingly, it is clear that the required sample size to carry out the factor analysis for all the items is 505 subjects (101 interval scale x 5 = 505 respondents). But since the subjects only totaled to 327, a separate factor analysis had to be conducted. The sections below explain the validity of the individual dimensions.

This procedure was carried out in order to delete items lacking of evidence indicating that the items are part of a hypothesized dimension. The items were removed individually using a procedure proposed by several researchers (Hair et al., 2006; Sekaran, 2006).

- Factor analysis is suitable to be carried out on metric variables and in the current

study and the most suitable is the 5-point Likert scale. Items with a Measuring of Sampling Adequacy (MSA) of less than .500 in the anti-image matrix were deleted. Moreover, the anti-image correlation matrix has the negatives of the partial correlation coefficients while the anti-image covariance has the negatives of the partial covariances. A good factor model is characterized by the small version of most off-diagonal elements. The diagonal of the anti-image correlation matrix displays the measure of the sampling adequacy of the variable with the acceptable level considered as .5. In the present study, all the variables are acceptable as they are all over .5.

- Items which failed to load with any other items were deleted and for the purpose of the study, the factor matrix loading or correlation between the items and factors was used.
- Items with loading less than .5 were deleted while pure items having .5 or over 0.5 loaded on only one factor.
- Also, items that double loaded (complex items) were deleted because they led to difficulty in interpreting the output. This happens when the factor score was greater than or equal to .500 on more than one factor.
- Items were also removed if an item loaded on a factor seemed unreasonably associated with other items in the same factor.
- Generally, variables should extract communalities of over .50 to be included in the analysis. Nevertheless, items as low as .30 have been known to be accepted. In the present study, all the variables' communalities registered over 0.50.

- Majority of the factors are required to meet a particular percentage of variance clarified; in most cases, 60% or higher. In the present study, the variance for quality management practices, leadership styles and organizational culture was over 60% (69.09 %, 70.81% and 75.75% respectively).
- The result of Bartlett test of sphericity is notable and the Kaiser-Meyer-Olkin measure in relation to sufficiency of sampling is over .6. The latter evaluation of sampling examines whether the partial correlation amongst variables is small or large. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, and if it is, it indicates that the factor model is inappropriate. In the present study, the Bartlett test of sphericity was found to be significant while Kaiser-Meyer-Olkin measure of sampling adequacy was revealed to be over .6.

The steps followed above were repeated every time. Hence, the final data is the result revealed after several repetitions of item analysis and evaluation.

Moreover, if the principal component is carried out with factor analysis while performing the Varimax rotation, it leads to supporting the initial constructs and discriminant validity. Based on Hair et al.'s (2006) recommendation, the least requirement for factor loading ranges from .30 to .40, but loadings of .50 or above are considered more significant. The detailed factor analysis in the present study for all variables is explained in the following section.

5.3.2.1 Factor Analysis on Quality Management Practices

Exploratory Factor Analysis (EFA) was conducted on the quality management practices which included seven aspects: employee focus, strategic quality planning, customer focus, information and analysis, continuous improvement, process management, and role of the quality department. For employee focus, the research used eight items; for strategic quality planning, seven items were used; for customer focus six items were used; for information and analysis, six items were used; for continuous improvement, three items were used; for process management, six items were used and ultimately, for the role of the quality department, five items were used. Table 5.3 shows all of the 41 quality management practice items and dimensions.

The outcome emanating from the exploratory factor analysis on the quality management practices is depicted in Table 5.4. The table shows the factor loading of seven aspects of quality management practices items after every step of the procedure that showed either low factor loading (< .50) or double loading. The results indicate that the loadings of the all items are from .50 to .90.

Table 5.3
Quality Management Practices Dimensions and Number of Items

Dimensions	**No. of items**
Employee focus	8
Strategic quality planning	7
Customer focus	6
Information and analysis	6
Continuous improvement	3
Process management	6
Role of the quality department	5

Table 5.4
Exploratory Factor Loading for Quality Management Practices

	Components						
	1	**2**	**3**	**4**	**5**	**6**	**7**
employee Q3	.885						
employee Q7	.828						
employee Q2	.812						
employee Q5	.756						
employee Q8	.735						
employee Q6	.732						
employee Q1	.679						
employee Q4	.648						
process Q35		.884					

Table 5.4 (continued)

	Components						
	1	**2**	**3**	**4**	**5**	**6**	**7**
process Q36		.867					
process Q32		.845					
process Q33		.825					
process Q31		.743					
process Q34		.714					
strategic Q13			.842				
strategic Q9			.832				
strategic Q15			.825				
strategic Q14			.783				
strategic Q12			.778				
strategic Q10			.712				
strategic Q11			.667				
information Q24				.894			
informationQ23				.879			
information Q27				.834			
information Q25				.814			
information Q26				.797			
information Q22				.605			
customer Q18					.870		
customer Q17					.863		

Table 5.4 (continued)

	Components						
	1	**2**	**3**	**4**	**5**	**6**	**7**
customer Q21					.775		
customer Q19					.729		
customer Q20					.680		
customer Q16					.652		
department Q40						.860	
department Q39						.829	
department Q37						.798	
department Q38						.754	
department Q41						.699	
continuous Q28							.777
continuous Q30							.751
continuous Q29							.732
Percentage of variance explained (%)							79.09
Kaiser-Meyer-Olkin							.804
Bartlett's test of sphericity approx. chi square							4448.22
df							820
Sig.							.000

The result in Table 5.4 indicates that the KMO measure for quality management practices items showed a value of .804. This indicates a 'meritorious' adequacy and thus appropriate for using factor analysis (Hair et al., 2006). The observed value of Bartlett sphericity is also large (4448.220) and its associated significance level is very low (.000). The outcomes of both the KMO measures and Bartlett test of sphericity outcomes revealed that the items used in the quality management practices evaluation were seen as meeting the conditions for the given factor analysis. This also implies that factor analysis could be made applicable for the different items of quality management practices.

Researchers such as Everitt and Dunn (1983) stated that the PCA with an Eigenvalue exceeding 1.0 is thought to be important and can be used to determine the factors to be extracted. The outcomes of the test in this research revealed seven factors with an Eigen value of more than 1. The screen plot in Figure 5.1 reveals that the plot declines steeply downward from one factor to seven factors before it gradually becomes an approximately horizontal line.

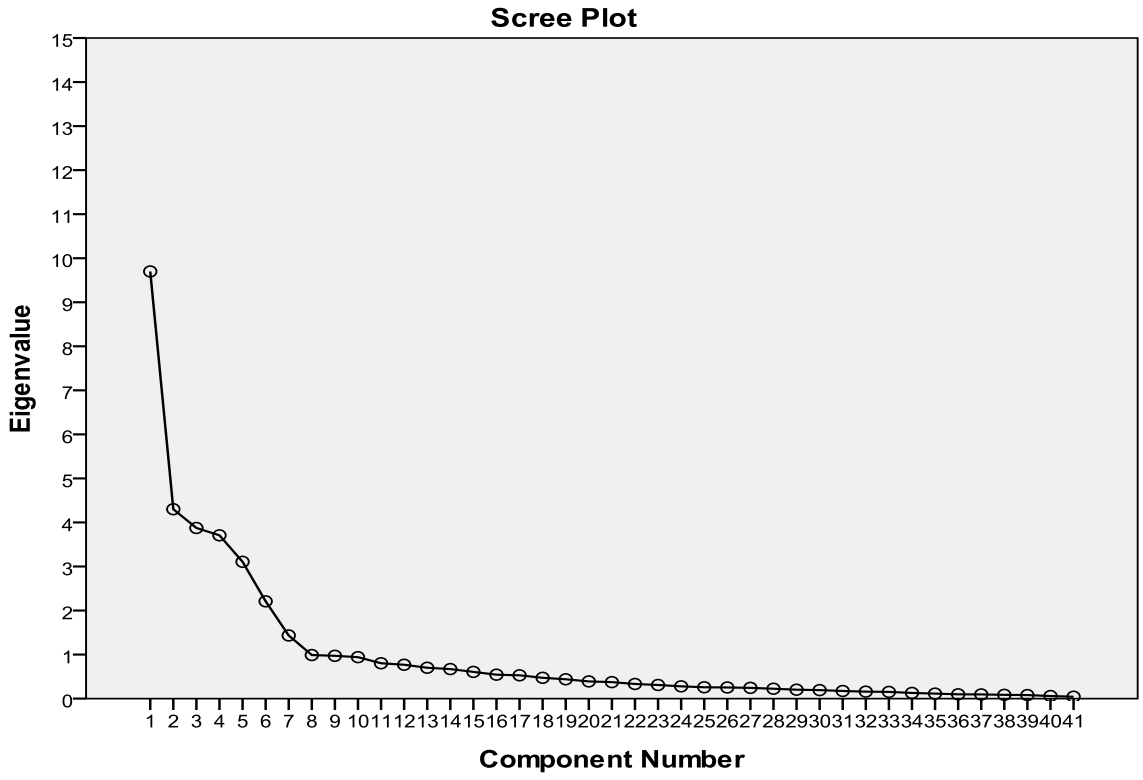

Figure 5.1
Scree Plot of Quality Management Practices

The outcomes in Table 5.4 show that all of the 41 quality management practice items demonstrate larger factor loading. Hair et al. (2006) hold that factor loading is the association amongst a given item and the given factors. Hair et al. (2006) believe that as a general rule, the factor loadings with value exceeding 0.50 or greater are understood as being very helpful and important; while loading exceeding 0.40 is believed to be more significant; loading exceeding .30 is believed to be comparatively important for the outcomes. In this research, all units have been arranged so that they have factor loadings exceeding .50 and thus revealing that the items relate very strongly with the factors themselves. The factor loading ranges from .605 to .894. This investigation demonstrated that one set of items necessarily evaluated only one aspect.

5.3.2.2 Factor Analysis on the Leadership Styles

The current study carried out exploratory factor analysis (EFA) on the leadership styles comprising three main categories: transformational leadership style, transactional leadership style, and laissez-faire leadership style. Moreover, transformational leadership style further comprises five sub-dimensions, as follows:

- Idealized influence (attribute)
- Idealized influence (behavior)
- Inspirational motivation
- Intellectual stimulation
- Individualized consideration.

The current research made use of four items each for attributes, for behaviour, for inspirational motivation, for intellectual stimulation, and finally for individualized consideration. On the other hand, the transactional leadership style comprises three sub-dimensions of contingent reward, management-by-exception (active), and management-by-exception (passive). Accordingly, four items were used for each sub-dimension. Lastly, the laissez-faire leadership style has one sole sub-dimension which is laissez-faire. Also, four items were used for laissez-faire. Table 5.5 shows the number of items for each sub-dimension. The findings from the exploratory factor analysis regarding leadership styles are presented in Table 5.6. The table includes the factor loadings of nine sub-dimensions of leadership style items after every procedure showing either low

factor loading (< .50) or double loading; the results showed that all items' loadings range from .50 to .90.

Table 5.5
Leadership Styles Dimensions, Sub-Dimension and Number of Items

Dimensions	**Sub-dimensions**	**No of items**
Transformational leadership	Idealized influence (attribute)	4
	Idealized influence (behavior)	4
	Inspirational motivation	4
	Intellectual stimulation	4
	Individualized consideration	4
Transactional leadership	Contingent reward	4
	Management-by-exception (active)	4
	Management-by-exception (passive)	4
Laissez-faire leadership	Laissez-faire	4

Table 5.6
Exploratory Factor Loading for Leadership Styles

	Components								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Contingent reward (TSR 4)	.897								
Contingent reward (TSR 3)	.895								
Contingent reward (TSR 2)	.697								
Contingent reward (TSR 1)	.612								
Individualized consideration (TFC 20)		.907							

Table 5.6 (continued)

	Components								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Individualized consideration (TFC 17)		.885							
Individualized consideration (TFC 18)		.798							
Individualized consideration (TFC 19)		.791							
Inspirational motivation (TFM12)			.897						
Inspirational motivation (TFM10)			.889						
Inspirational motivation (TFM9)			.817						
Inspirational motivation (TFM11)			.748						
Laissez-faire (LZ2)				.918					
Laissez-faire (LZ3)				.917					
Laissez-faire (LZ1)				.765					
Laissez-faire (LZ4)				.755					
Passive (TSP5)					.822				
Passive (TSP8)					.821				
Passive (TSP7)					.793				
Passive (TSP6)					.623				
Intellectual stimulation (TFS13)						.799			
Intellectual stimulation (TFS15)						.693			
Intellectual stimulation (TFS14)						.690			
Intellectual stimulation (TFS16)						.652			
Behavior (TFB6)							.774		
Behavior (TFB7)							.741		
Behavior (TFB5)							.681		
Behavior (TFB8)							.674		
Active (TSA12)								.706	

Table 5.6 (continued)

	Components								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Active (TSA9)								.703	
Active (TSA10)								.700	
Active (TSA11)								.671	
Attribute (TFA4)									.784
Attribute (TFA1)									.744
Attribute (TFA3)									.715
Attribute (TFA2)									.656
Percentage of variance explained (%)									70.81
Kaiser-Meyer-Olkin									.771
Bartlett's test of sphericity approx. chi square									8573.01
df									630
Sig.									.000

Table 5.6 indicates that the KMO measure for leadership styles is .771, which indicates a sufficient high level appropriate to be utilized in the factor analysis (Hair et al., 2006). Bartlett sphericity's value for the study is large (8573.01) with a significant level of .000. Both KMO measure and Bartlett test of sphericity results indicate that the items utilized satisfied the requirements for the factor analysis, and hence, implying that factor analysis could be made applicable to the leadership styles' items.

The researcher conducted factor analysis through the use of the principle component analysis (PCA) along with the Varimax rotation measure which incorporates the Kaiser normalization methods proposed by Hair et al. (2006). The Varimax rotation

concept has its basis on the simplification of the columns according to the factor matrix and contributes in arranging the items linked to a particular factor to be more conspicuous. According to Hair et al. (2006), generally, it is acknowledged that PCA is linked with determining the number of factors explaining the optimum number of variations in particular information. Based on Everitt and Dunn's (1983) study, a PCA level with an Eigenvalue level over 1.0 is known to be significant as it can be utilized to determine whether the factors can be extracted. The outcome of a nine-factor test resulted in an Eigenvalue of more than 1. In Figure 5.2, the screen plot shows that the plot has a sloping trend from the level of one factor to the level of the following nine factors before following an almost horizontal trend.

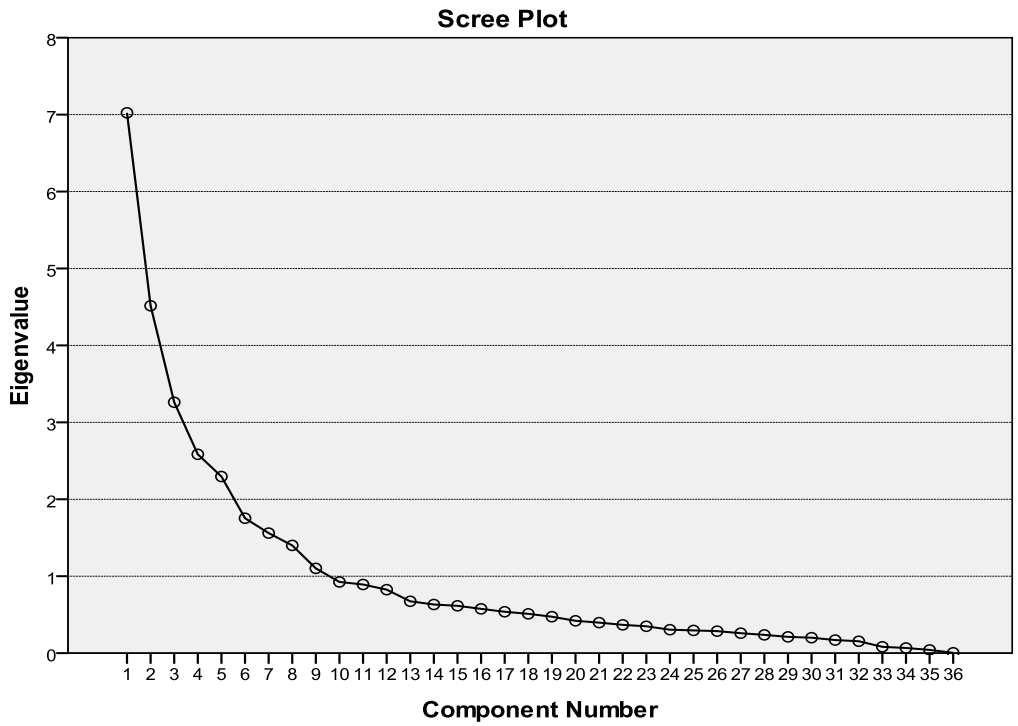

Figure 5.2
Scree Plot of Leadership Styles

From the results in Table 5.6, it is clear that the all the 36 items of leadership styles displayed high levels of factor loading. Hair et al. (2006) state that factor loadings with a value of more than .50 or greater are considered significant while loadings of more than .40 and .30 are equally so. In the present research, the factor loadings were over 0.50, indicating that the items significantly correlates with the factors with factor loadings ranging from .612 to .918. The analysis confirms that one set of items measures the same thing.

5.3.2.3 Factor Analysis for the Organizational Culture

An exploratory factor analysis (EFA) was conducted on organizational culture that has six dimensions: dominant characteristics, hospital leaders, management of employees, hospital glue, strategic emphases, and criteria of success. Four items were used for dominant characteristics, four items for hospital leaders, four items for management of employees, four items for hospital glue, four items for strategic emphases, and finally four items for criteria of success. Table 5.7 shows the dimensions and number of items of the organizational culture.

The result of exploratory factor analysis on the organizational culture is presented in Table 5.8. The table presents the factor loading of six dimensions of organizational culture items after every step of the procedure was met. The table shows either low factor loading (< .50) or double loading. The results indicate that the loadings of the all items are from .50 to .90.

Table 5.7
Organizational Culture Dimensions and Number of Items

Dimensions	**No. of items**
Dominant characteristics	4
Hospital leaders	4
Management of employees	4
Hospital glue	4
Strategic emphases	4
Criteria of success	4

Table 5.8
Exploratory Factor Loading for Organizational Culture

	Components					
	1	**2**	**3**	**4**	**5**	**6**
employeesO10	.803					
employees O9	.779					
employeesO12	.779					
employeesO11	.771					
GlueO14		.862				
GlueO15		.816				
GlueO16		.813				
GlueO13		.805				
mphasesO18			.862			
mphasesO20			.844			

Table 5.8 (continued)

	Components					
	1	**2**	**3**	**4**	**5**	**6**
mphasesO17			.812			
mphasesO19			.784			
CriteriaO23				.840		
CriteriaO22				.835		
Criteria O24				.801		
Criteria O21				.662		
leadersO5					.850	
leaders O8					.800	
leadersO7					.765	
leaders O6					.603	
Dominant O2						.834
Dominant O3						.809
Dominant O1						.710
Dominant O4						.586
Percentage of variance explained (%)						75.758
Kaiser-Meyer-Olkin						.858
Bartlett's test of sphericity approx. chi square						5645.79
df						276
Sig.						.000

The result in Table 5.8 indicates that the KMO measure for organizational culture items revealed a value of .858, which indicates a good adequacy and is thus is suitable for testing against factor analysis (Hair et al., 2006). The demonstrated values of Bartlett sphericity are also large (5645.79) and it is associated with a significance level of .000. Both of the KMO measure and Bartlett test of sphericity results demonstrate that the items used in the organizational culture measure obviously met the conditions for factor analysis. This means that factor analysis could be applied for the organizational culture items.

The factor analysis in this study was run by using principle component analysis (PCA) along with Varimax rotation in association with Kaiser Normalization practices (Hair et al., 2006). Everitt and Dunn (1983) state that the PCA with an Eigenvalue larger than 1.0 is believed to be important and can be used to ascertain the factors to be of an extract nature. In this research, the outcomes of the tests demonstrated six factors with an Eigenvalue exceeding 1. The screen plot in 5.3 reveals that the plot sloped steeply downward from one factor to six factors before slowly becoming an approximately horizontal line.

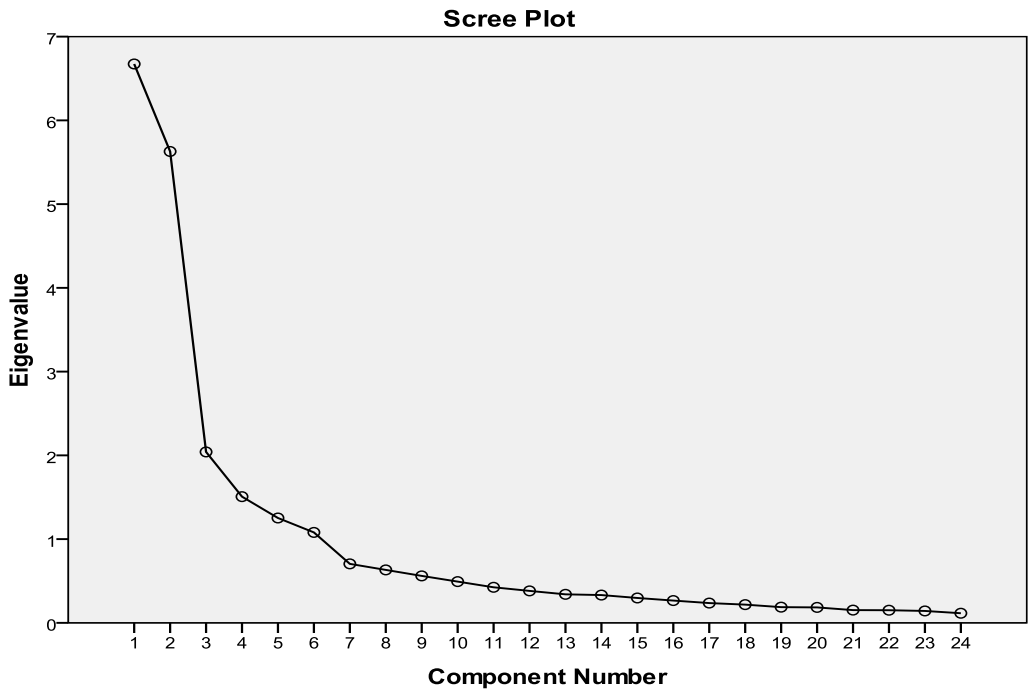

Figure 5.3
Scree Plot of Organizational Culture

The outcomes as evident from Table 5.8 reveal that all of the 24 items of organizational culture demonstrated a larger factor loading. According to Hair et al. (2006), factor loadings with values exceeding .50 or more are believed to very important; loading of more than .40 is believed to be more significant; loading exceeding .30 is believed to be important. In this research, all items had a factor loading of more than .50, which is suggestive of the fact that the items inter-relate very meaningfully with the factors as well as with factor loadings in the range from .586 to .862. This analysis acknowledges that a particular group of items is intended to measure one aspect.

A description of each of the four quadrants that representing a typical organization as well as a specific cultural profile as follow:

The Clan Culture: A very friendly place to work where people share a lot of themselves. It is like an extended family. The leaders, or the heads of the organization, are considered to be mentors and perhaps even parent figures. The organization is held together by loyalty or tradition. Commitment is high. The organization emphasizes the long-term benefits of human resources development and attaches great importance to cohesion and morale. Success is defined in terms of sensitivity to customers and concern for people. The organization places a premium on team work, participation, and consensus (Cameron & Quinn, 2006).

The Adhocracy Culture: a dynamic, entrepreneurial, and creative place to work. People stick their necks out and take risks. The leaders are considered innovators and risk takers. The glue that holds the organization together is commitment to experimentation and innovation. The emphasis is on being on the leading edge. The organizations long-term emphasis is on growth and acquiring new resources. Success means gaining unique and new products or services; being a product or service leader is important. The culture encourages individual initiative and freedom (Cameron & Quinn, 2006).

The Market Culture: A results-orientated organization whose major concern is for getting the job done. People are competitive and goal-orientated. The leaders are hard drivers, producers, and competitors. They are tough and demanding. The glue that holds the organization together is an emphasis on winning. Reputation and success are common concerns. The long-term focus is on competitive actions and achievement of measurable goals and markets. Success is defined in terms of market share and penetration. Competitive pricing and market leadership are important. The organizational style is hard-driving competitiveness (Cameron & Quinn, 2006).

The Hierarchy Culture: Based on Weber's seven classical attributes of bureaucracy; rules, specialization, meritocracy, hierarchy, separate ownership, impersonality, accountability. A very formalized and structured place to work. Procedures govern what people do. The leaders pride themselves on being good coordinators and organizers who are efficiency-minded. Maintaining a smooth-running organization is most critical. Formal rules and policies hold the organization together. The long-term concern is on stability and performance with efficient, smooth operations. Success is defined in terms of dependable delivery, smooth scheduling, and low-cost. The management of employees is concerned with secure employment and predictability (Cameron & Quinn, 2006).

5.4 Test of Differences

The MLQ subscales produce the scores that were combined to make up the scores for the three leadership styles: transformational, transactional, and laissez-faire. The transformational leadership combined the inspirational motivation, idealized influence behavior, intellectual stimulation, individual consideration, and idealized influence attributed scales into one score. Transactional leadership was made up by combining the scores on the three items including management by exception active, contingent reward, and management by exception passive. The laissez-faire leadership subscale score had just one item i.e. laissez-faire.

High scores on the three leadership scales were created to be able to fairly compare the scales and determine which leadership styles was predominant for each of the sample population. The leadership styles that scored the highest determined which

leadership group the leader was put in. Figure 5.4 shows the distribution of the leadership styles for the leaders of this sample population.

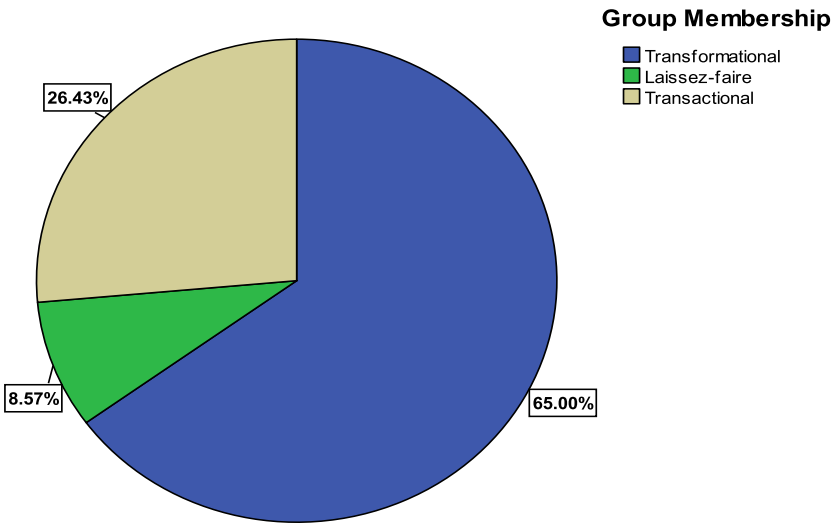

Figure 5.4
Leadership Styles of the Sample Population

In the sample population of 140 hospitals, 65 percent of the leaders can be categorized as more transformational than transactional or laissez-faire. The dominant leadership styles of 26.5 percent of the leaders can be categorized as transactional, and a similar percentage of leaders (8.5%) were categorized as laissez-faire, based on the highest scores on those scales.

Table 5.9 shows the amount of quality management practices the respondent were willing to put forth is heavily dependent on the leadership styles of their leader. Those with a leader who had a mostly transformational style had a mean quality

management practices score of 3.6 compared to a mean score of 3.3 for those with transactional style leaders, and 3.1 for those with leaders who had a laissez-faire style.

Table 5.9
Scores on Quality Management Practices Variable by Leadership Group Membership

					95% Confidence interval for mean	
	N	**Mean**	**Std. deviation**	**Std. error**	**Lower bound**	**Upper bound**
Transformational	91	3.6382	.41288	.04328	3.5522	3.7242
Laissez-faire	12	3.1707	.36326	.10486	2.9399	3.4015
Transactional	37	3.3151	.36799	.06050	3.1924	3.4378
Total	140	3.5127	.43207	.03652	3.4405	3.5849

For further analysis, ANOVAs were used to examine the differences in these mean scores on quality management practices across groups. Table 5.10 contains the analysis of variance (ANOVA). It shows that the relationship between the three different leadership styles and quality management practices are statistically significant, with F score 13.5 and significance level of .000, well beyond the alpha < .01 standard.

Table 5.10
Analysis of Variance Testing Difference between the Three Different Leadership Styles on the Dependent Variable: Quality Management Practices

	Sum of squares	**df**	**Mean square**	**F**	**Sig.**
Between Groups	4.281	2	2.140	13.532	.000
Within Groups	21.669	137	.158		
Total	25.949	139			

Hypothesis 1: Leadership styles are associated positively with quality management practices.

Table 5.10 presents significant relationships between leadership styles (transformational, transactional and laissez-faire) and quality management practices. Thus, hypothesis one was supported and it can be concluded that leadership styles are associated with quality management practices.

5.5 Correlation Analysis

Correlation analysis can be defined as the statistical method that is adopted in describing the strengths and direction taken by the linear relationship amongst two different variables (Pallant, 2001). The extent of relationships relative to measuring the strength and significance of the correlation amongst different is aptly demonstrated by Pearson's correlation coefficient (r) that has considerable high levels. Cohen's (1988) research puts forth processes in explaining the strengths and the extent to which the relationships amongst two variables with ranges from .10 to .29 are indications of a low level of

correlation; .30 to .49 implies a moderate level of relationship; .50 to 1 implies higher levels of relationships, which is demonstrated in Table 5.11.

Table 5.11
Cohen's Guideline of Correlation Strength

r	**Strength of relationship**
r = 0.l0 to 0.29 or r = - 0.l0 to - 0.29	Low
r = 0.30 to 0.49 or r = - 0.30 to - 0.49	Moderate
r = 0.50 to l.0 or r = - 0.50 to - 0.l.0	High

Table 5.12 provides a summary of the correlation of different variables that is portrayed and supplemented with details for the given hypotheses.

Table 5.12
Summary of Correlations of Variables

		TF	**TS**	**LZ**
QMP	Pearson Correlation	.368**	-.432**	-.706*
	Sig. (2-tailed)	.000	.008	.010
	N	91	37	12

*. Correlation is significant at the 0.05 level (2-tailed).

Note. QMP = Quality Management Practices; TF = Transformational Leadership Style; TS = Transactional Leadership Style; LZ = Laissez-faire Leadership Style

Hypothesis 1.1:

It is evident from Table 5.12 that transformational leadership behaviors are related with quality management practices. The correlation coefficient values relative to the examined relationships amongst the two was found to be .368, which can be termed as a positive moderate correlation at the given levels whereby $p < .01$. As a significant positive relationship exists, therefore, there is a support for this hypothesis..

Hypothesis 1.2:

As shown in Table 5.12, behaviors relative to transactional leadership styles are related with quality management practices. It was found that the values for correlation coefficients in terms of the examined relationships amongst the two variables are -.432, which is suggestive of moderate negative correlation at the well accepted level of $p < .01$. Therefore, there is a support for this hypothesis.

Hypothesis 1.3:

As evident from Table 5.12, laissez-faire leadership behaviors have a relationship with quality management practices. It was found that the value of correlation coefficient for the analyzed relationship amongst the two variables is -.706, which is considered a high negative correlation at significant level $p<0.05$. Hence, this hypothesis is supported.

5.6 Regression

Multiple regression analysis is conducted to mainly acquire concrete ideas from the various results to help determine the answers to the research questions and test the

research hypotheses. The analysis helps determine the contribution of every variable and pinpoints the variable that is the best predictor of any outcome. For example, R^2 indicates the manner in which the contingency variables can predict a given result in light of quality management practices. Accordingly, the normal value of R^2 can be considered as 1, implying a perfect linear correlation among the dependent and independent variables. If the value of R^2 is 0, it indicates the absence of such linear relationships. Moreover, it is revealed that standard multiple regression analysis is also linked to a modified R^2 value. "The adjusted R^2 statistic 'corrects' R^2 value to provide a better estimate of the true populations value" (Pallant, 2001, p. 145).

5.6.1 Regression Analysis Assumptions

A number of assumptions need to be checked before conducting multiple regression analysis. These assumptions are linked with normality, linearity, homoscedasticity, independence of errors terms, and multicollinearity (Hair et al., 1998; 2006; Pallant, 2001; Coakes & Steed, 2003).

5.6.1.1 Normality Assessment

The assumption to normality comes to be in consideration of the various multivariate strategies like multiple regressions. For the purpose of carrying out a successful factor analysis, it is imperative that outliers and linearity are first tackled.

Two of the main tests basically carried out for univariate normality are kurtosis and skewness. They refer to the characteristics of the distribution methods and are best used coupled with interval and ratio scale data. Both values for kurtosis and skewness

will turn out to be zero in cases where the observed distribution is shown to be normal. On the other hand, positive values of skewness shows positive skew while positive values for kurtosis show a very high level of distribution characteristic. Conversely, a negative skewness value shows negative skew and negative kurtosis values shows a flatter distribution. Nevertheless, normal distribution is not imperative for factor analysis but is applicable for varied multivariate statistical techniques such as multiple regressions and some alternative descriptive statistics concerning measures of variability and central tendency. These help to determine the normality of the distribution systems (Hair et al., 2006). This however, does not mean that lack of normality does not affect the analysis as correlations which are the basis of factor analysis can be impacted.

Normality was examined in the present study by using normal probability plots (P-P plots) as shown in Figure 5.5. Examination of data was based on the above guidelines and is considered to be acceptable. All the variables were tested using skewness and kurtosis levels to determine normality. According to Hair et al. (1998), the acceptable level of skewness and kurtosis is between -2.00 and + 2.00 at the significance level of 0.05.

It is clear from Table 5.13 that none of the variables showed skewness or kurtosis over 2.0, implying that data was suitably distributed. It indicates that analysis of skewness and kurtosis at univariate levels results to prior confirmation of multivariate normality only.

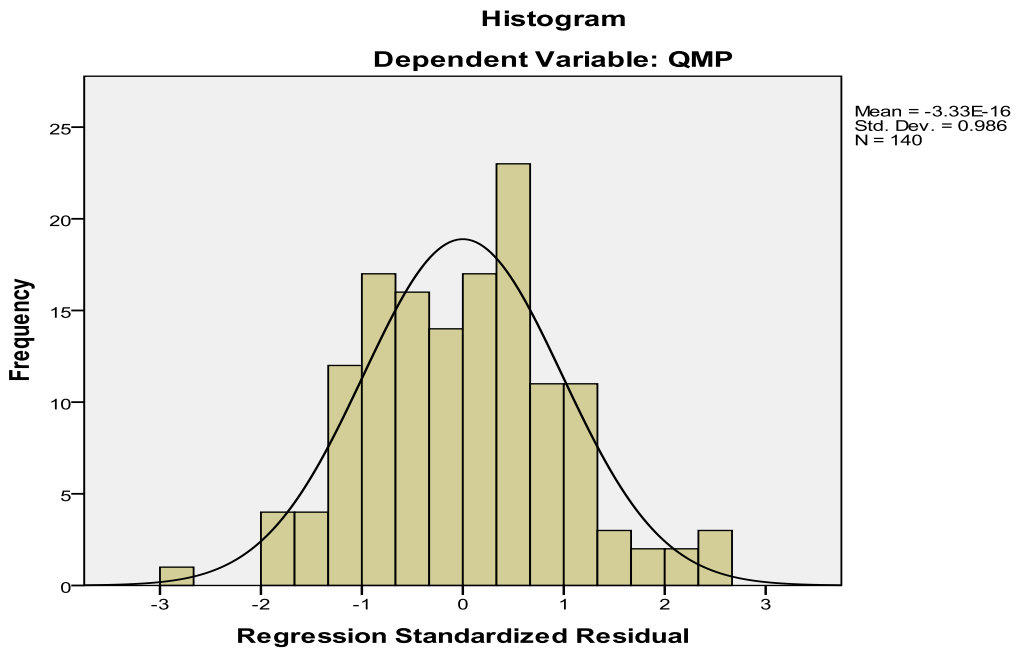

Figure 5.5
Normal probability plots (P-P plots)

Table 5.13
Statistic Values of Skewness and Kurtosis (Descriptive Statistics)

Variables	**Skewness**		**Kurtosis**	
	Statistic	**Std. error**	**Statistic**	**Std. error**
Quality management practices (QMP)	.425	.205	.334	.407
Transformational leadership (TF)	.089	.135	-.112	.296
Transactional leadership (TS)	-.500	.135	.139	.296
Laissez-faire leadership (LZ)	.726	.135	-.422	.296
Organizational culture (OC)	-.358	.135	.134	.296

5.6.1.2 Linearity

To achieve the objective of making assessments of linearity, the study made use of the normal plot diagram. The outcome of the linearity analysis is shown in Figure 5.6.

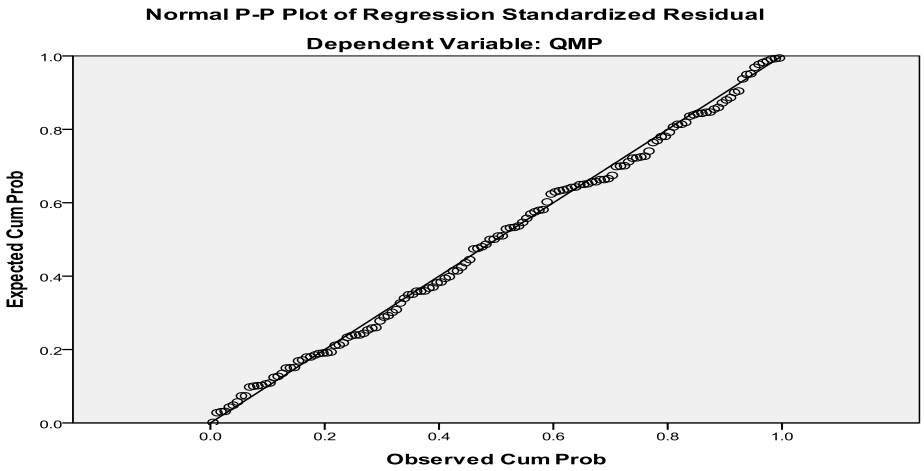

Figure 5.6
Linearity

It is impossible to obtain precise data that is normally distributed. Some cases are not considered as they vary a great deal of being above and below the diagonal lines while the observed values do not display any substantial variation. Hence, the resulting residuals are treated as normal. It can be stated that the required results relative to the linearity test are satisfied and they can be tested further.

5.6.1.3 Homoscedasticity

Homoscedasticity is another test conducted with regards to the assumptions. Verification is made through the use of scatter plots of regression; standardized residuals v. regression standardized predicted values. The random plot patterns indicate that the

assumption relative to homoscedasticity is correct. The homoscedasticity test result is depicted in Figure 5.7**.**

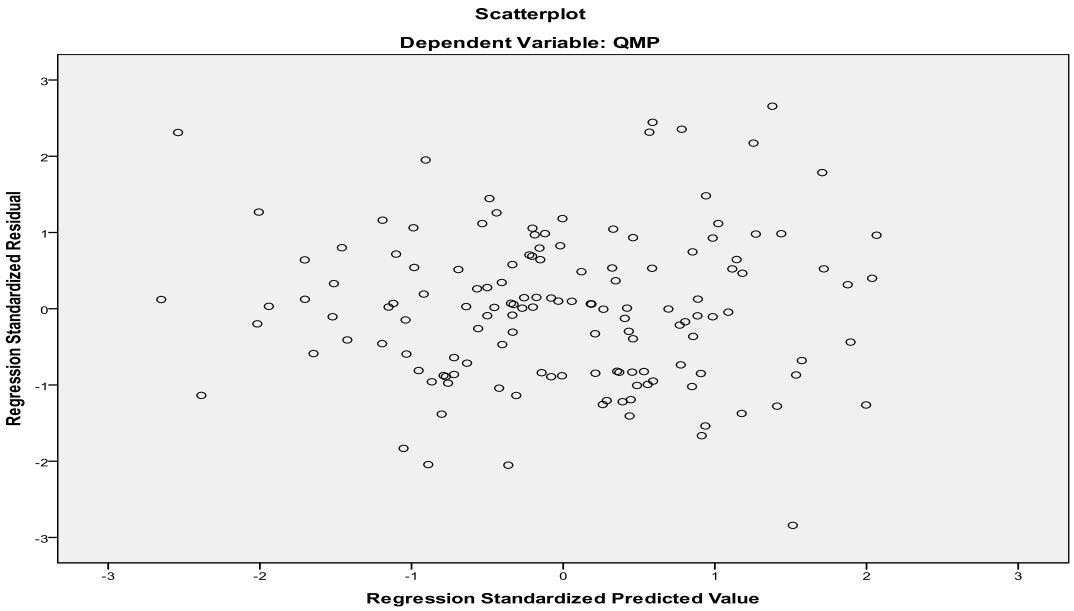

Figure 5.7
Homoscedasticity Test

5.6.1.4 Independence of Error Term

For the purpose of making an assessment and validation of the independence of error assumptions, the Durbin-Watson statistics were utilized. Based on Coakes and Steed (2003), the independence of error term is considered invalid if the Durbin-Watson values are between 1.50 and 2.50. For the present study, the Durbin-Watson value is summarized in Table 5.14. The result shows that the value declined among the acceptable values, indicating that auto-correlation problems are not found.

Table 5.14
Durbin-Watson Statistical Value

Model	R	R Square	Adjusted R square	Std. error of the estimate	Durbin-Watson
1	.378[a]	.143	.124	.40442	
2	.539[b]	.291	.270	.36915	
3	.558[c]	.311	.275	.36801	1.519

Note.

a. Predictors: (Constant), TS, TF, LZ

b. Predictors: (Constant), TS, TF, LZ, OC

c. Predictors: (Constant), TS, TF, LZ, OC, TFOC1, TSOC1, LZOC1

d. Dependent Variable: QMP

5.6.1.5 Multicollinearity Test (Independence of Independent Variables)

Besides the above assumptions, multicollinearity is another assumption that is considered to be a significant one to make sure of multicollinearity's absence. Accordingly, processes of colinearity are carried out for the assessment and determination of multicollinearity problems of predictors. To achieve such a process, Tolerance Value and the Variance Inflation Factor (VIF) were analyzed. According to Hair et al. (2006), the tolerance values ranges between 0 - 1. A value of 1 indicates the variable's non-relation with the other variables while a value of 0 indicates the variable's perfect correlation with another variable. VIF has a standard cut off value of 10 with all the predictors required to have a VIF value of less than 10. The present study's multicollinearity test values are shown in Table 5.15.

Table 5.15
Tolerance Value and the Variance Inflation Factor (VIF) Test

	Colinearity statistics	
Independent variables	**Tolerance**	**VIF**
Transformational leadership (TF)	.986	1.014
Transactional leadership (TS)	.987	1.014
Laissez-faire leadership (LZ)	.956	1.046
Organizational culture (OC)	.931	1.074

From Table 5.15, it is clear that multicollinearity does not exist amongst all independent variables as the tolerance values register less than 1.00 and VIF values are less than 10.0. Hence, the resulting data can be explored through the use multivariate techniques like the relevant regression analysis.

5.6.2 Hypotheses Testing

Hypothesis 2:

In terms of moderator analysis H2, it is held that organizational culture (clan, hierarchy, market, and adhocracy) moderates the relationship between leadership styles and quality management practices. To test the moderating effect, the guidelines established by Baron and Kenny (1986) were used. All predictor variables were mean centred by converting them to standardised scores (z-scores) before using them in the regression. Three regression analysis paths were employed. Figure 5.8 below summaries the paths.

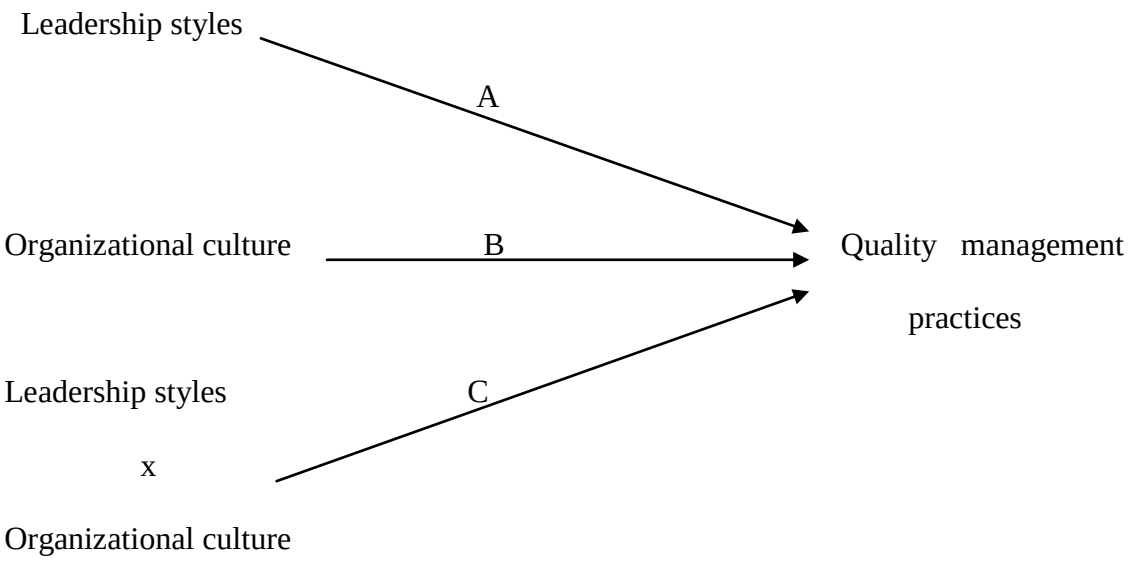

Figure 5.8
Organizational Culture(clan, hierarchy, market, and adhocracy) Moderates Leadership Styles and Quality Management Practices

It is evident from Table 5.16 that the *R* Square Change and Sig. F Change values show that clan culture has made significant, unique contributions of 27.5 to 32.3 percent, 10.9 to 17.6 percent, and 6.3 to 9.9 percent , respectively, to the variance of quality management practices after leadership styles had been taken into account (p , 0.05). The effect was most pronounced with transformational leadership style, followed by transactional and least of all, laissez-faire leadership styles.

Table 5.16
Results of Hierarchical Regression Analysis of Quality Management Practices on Leadership Styles in Clan Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.323	.048	.002	32.722	.000	.295	.222	3.128	.002
Transactional	.109	.176	.067	.001	14.605	.000	-.198	-.301	-3.337	.001
Laissez-Faire	.063	.099	.036	.020	7.546	.001	-.120	-.191	-2.353	.020

From the R square Change and Sig. F Change values in the Table 5.17, hierarchical culture made significant, unique contributions of 27.5 to 33.4 percent, 10.9 to 19.4 percent, and 6.3 to 16.4 percent , respectively, to the variance of quality management practices after leadership styles had been taken into account (p , 0.01). The effect was most evident with transformational leadership style, followed by transactional and least of all, laissez-faire leadership styles.

Table 5.17
Results of Hierarchical Regression Analysis of Quality Management Practices on Leadership Styles in Hierarchal Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.334	.059	.001	34.364	.000	.309	.247	3.488	.001
Transactional	.109	.194	.085	.000	16.494	.000	-.217	-.323	-3.808	.000
Laissez-Faire	.063	.164	.08	.000	13.483	.000	-.236	-.319	-4.082	.000

From the R square Change and Sig. F Change values in the Table 5.18, market culture made significant, unique contributions of 27.5 to 32.3 percent, 10.9 to 16.7 percent, and 6.3 to 14.9 percent , respectively, to the variance of quality management practices after leadership styles had been taken into account (p , 0.05). The effect was most evident with transformational leadership style, followed by transactional and least of all, laissez-faire leadership styles

Table 5.18
Results of Hierarchical Regression Analysis of Quality Management Practices on Leadership Styles in Market Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.323	.048	.002	32.689	.000	.278	.226	3.121	.002
Transactional	.109	.167	.058	.002	13.694	.000	-.171	-.275	-3.084	.000
Laissez-Faire	.063	.147	.084	.000	11.776	.000	-.188	-.290	-3.670	.000

.

From the R square Change and Sig. F Change values in the Table 5.19, adhocracy culture made significant, unique contributions of 27.5 to 32.4 percent, 10.9 to 16.5 percent, and 6.3 to 11.5 percent , respectively, to the variance of quality management practices after leadership styles had been taken into account (p , 0.05). The effect was most apparent with transformational leadership style, followed by transactional and least of all, laissez-faire leadership styles.

Table 5.19
Results of Hierarchical Regression Analysis of Quality Management Practices on Leadership Styles in Adhocracy Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.324	.049	.002	32.771	.000	.276	.222	3.128	.002
Transactional	.109	.165	.056	.003	13.582	.000	-.169	-.266	-3.043	.003
Laissez-Faire	.063	.115	.052	.005	8.927	.000	-.164	-.229	-2.851	.005

Hence, organizational culture (clan, hierarchy, marker, and adhocracy) was generally found to be a significant moderator in the relationship between leadership styles and quality management practices.

In other words, almost all contingency factors (transformational leadership style, transactional leadership style, and laissez-faire leadership style) have a magnitude effect on quality management practices. Therefore, it could be said that organizational culture is an important moderator in the relationships amongst leadership styles and quality management practices. Thus, hypothesis two is supported. It can be concluded that organizational culture (clan, hierarchy, marker, and adhocracy) moderates the relationship between leadership styles and quality management practices.

Hypothesis 2.1:

H2.1 states that organizational culture (clan, hierarchy, market, and adhocracy) moderates the relationship between transformational leadership style and quality management practices. To test the moderating effect, the guidelines that were established by Baron and Kenny (1986) were used. Three regression analysis paths were employed. Figure 5.9 below summarizes the paths.

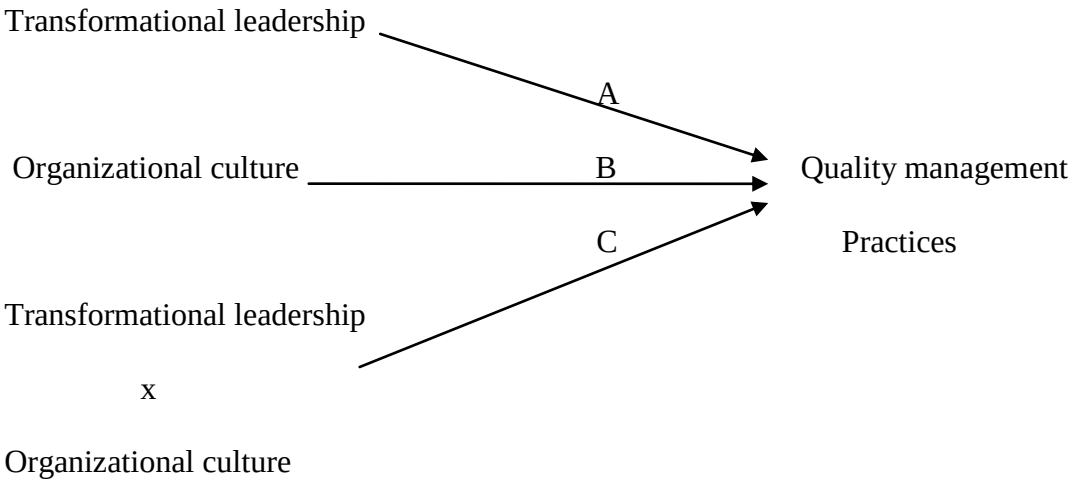

Figure 5.9
Organizational Culture (clan, hierarchy, market, and adhocracy) Moderates Transformational Leadership Style and Quality Management Practices

It is evident from Table 5.20 that the *R* Square Change and Sig. F Change values show that clan culture has made a strong, unique contributions of 27.5 to 32.3 percent to the variance of quality management practices after transformational leadership styles had been taken into account (p , 0.05). Also, the overall model was significant and the

beta value is .222, which indicates that clan culture does have a considerably moderating impact on the relationships amongst transformational leadership style and quality management.

Table 5.20
Results of Hierarchical Regression Analysis of Quality Management Practices on Transformational Leadership Style in Clan Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	Δ R^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.323	.048	.002	32.722	.000	.295	.222	3.128	.002

To better illustrate the moderating effect of the clan culture on the relationship between transformational leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.10 illustrates the significant interaction between clan culture and transformational leadership style. It can be readily seen in Figure 5.10 that quality management practices is higher when transformational leadership style is higher for low, medium and high clan culture.

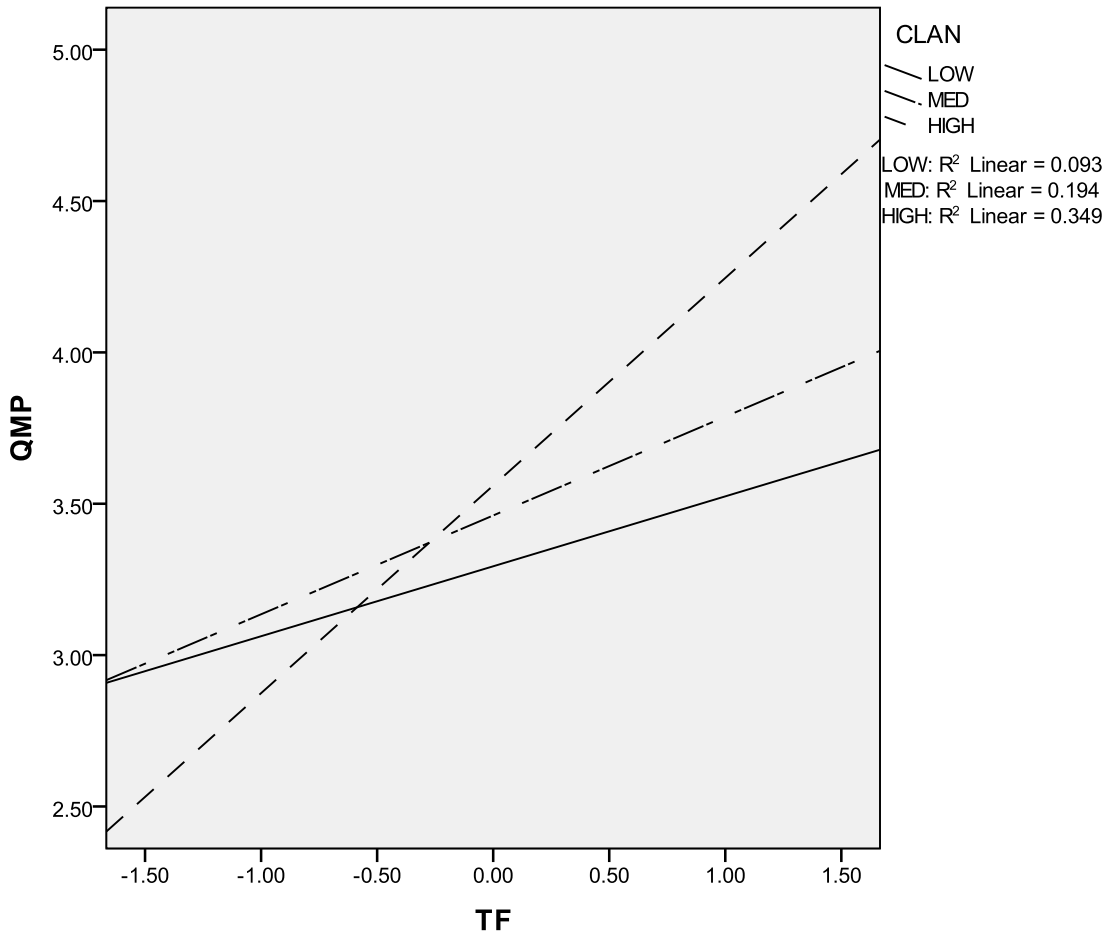

Figure 5.10
Significant Interaction Between Clan Culture and Transformational Leadership Style in Predicting Quality Management Practices

It is evident from Table 5.21 that the *R* Square Change and Sig. F Change values show that hierarchal culture has made a strong, unique contributions of 27.5 to 33.4 percent to the variance of quality management practices after transformational leadership styles had been taken into account (p , 0.01). Also, the overall model was significant and the beta value is .247, which indicates that hierarchal culture does have a considerably moderating impact on the relationships amongst transformational leadership style and quality management practices.

Table 5.21
Results of Hierarchical Regression Analysis of Quality Management Practices on Transformational Leadership Style in Hierarchal Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.334	.059	.001	34.364	.000	.309	.247	3.488	.001

To better illustrate the moderating effect of the hierarchal culture on the relationship between transformational leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero. Figure 5.11 illustrates the significant interaction between hierarchal culture and transformational leadership style. It can be readily seen in Figure 5.11 that quality management practices is higher when transformational leadership style is higher for low, medium and high hierarchal culture.

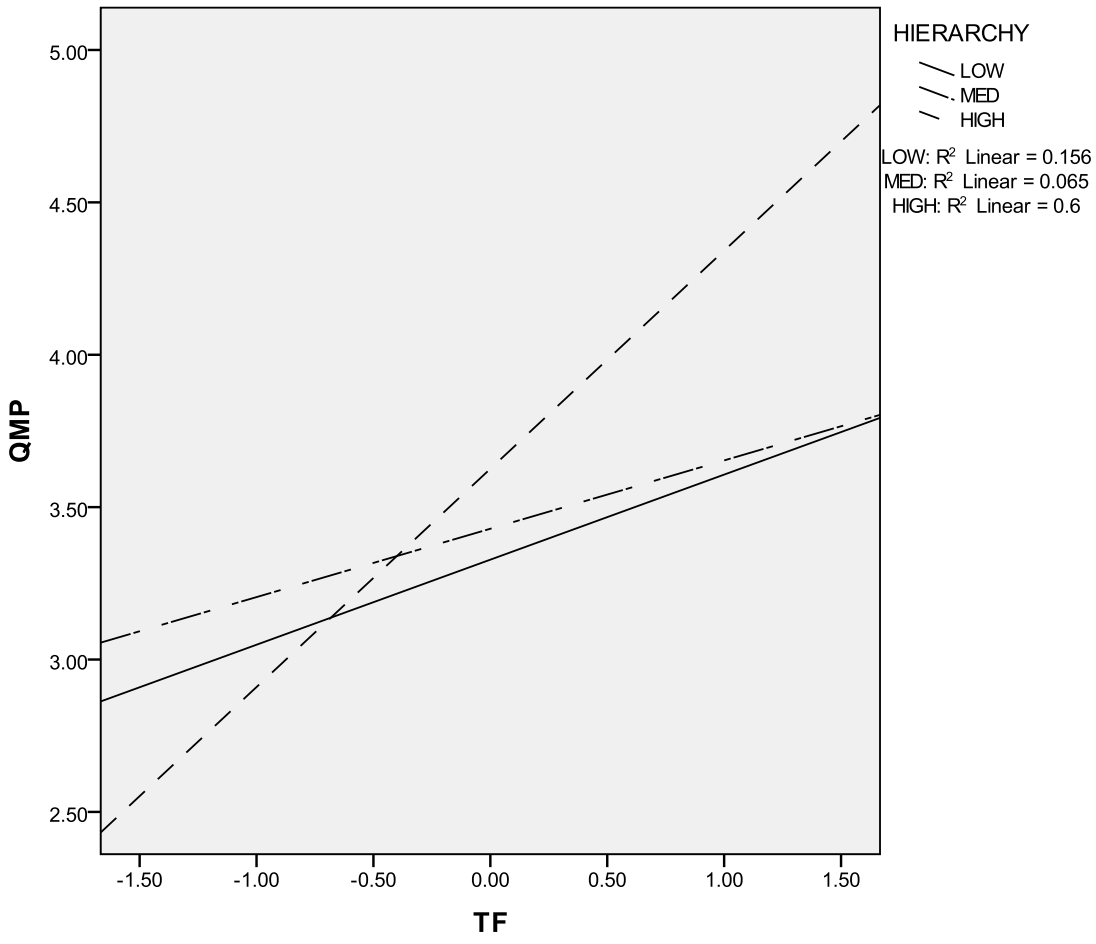

Figure 5.11
Significant Interaction Between Hierarchal Culture and Transformational Leadership Style in Predicting Quality Management Practices

It is evident from Table 5.22 that the *R* Square Change and Sig. F Change values show that market culture has made a strong, unique contributions of 27.5 to 32.3 percent to the variance of quality management practices after transformational leadership styles had been taken into account (p , 0.05). Also, the overall model was significant and the beta value is .226, which indicates that market culture does have a considerably moderating

impact on the relationships amongst transformational leadership style and quality management practices.

Table 5.22
Results of Hierarchical Regression Analysis of Quality Management Practices on Transformational Leadership Style in Market Culture

Independents variables	Model summary				ANOVA			Coefficients		
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.323	.048	.002	32.689	.000	.278	.226	3.121	.002

To better illustrate the moderating effect of the market culture on the relationship between transformational leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero. Figure 5.12 illustrates the significant interaction between market culture and transformational leadership style. It can be readily seen in Figure 5.12 that quality management practices is higher when transformational leadership style is higher for low, medium and high market culture.

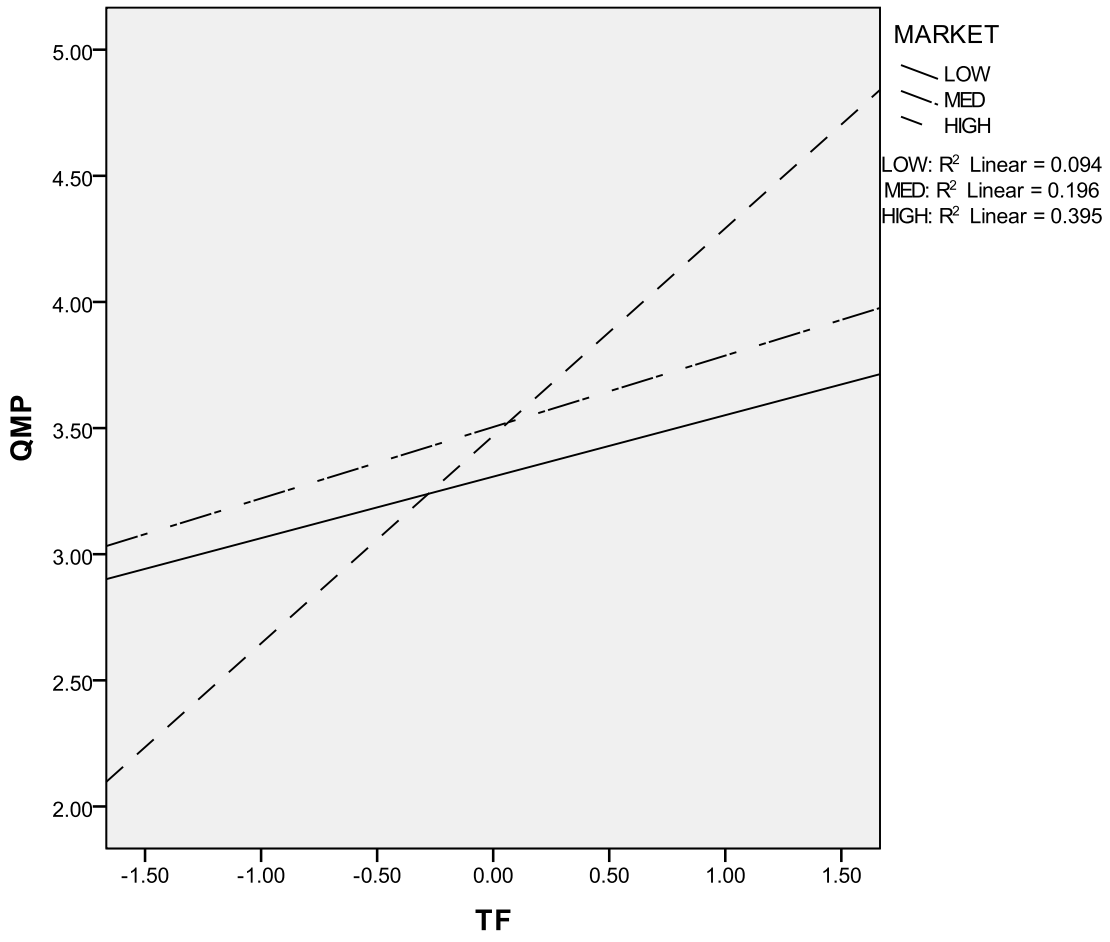

Figure 5.12
Significant Interaction Between Market Culture and Transformational Leadership Style in Predicting Quality Management Practices

It is evident from Table 5.23 that the *R* Square Change and Sig. F Change values show that adhocracy culture has made a strong, unique contributions of 27.5 to 32.4 percent to the variance of quality management practices after transformational leadership styles had been taken into account (p , 0.05). Also, the overall model was significant and the beta value is .222, which indicates that adhocracy culture does have a considerably

moderating impact on the relationships amongst transformational leadership style and quality management practices.

Table 5.23
Results of Hierarchical Regression Analysis of Quality Management Practices on Transformational Leadership Style in Adhocracy Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transformational	.275	.324	.049	.002	32.771	.000	.276	.222	3.128	.002

To better illustrate the moderating effect of the adhocracy culture on the relationship between transformational leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero. Figure 5.13 illustrates the significant interaction between adhocracy culture and transformational leadership style. It can be readily seen in Figure 5.13 that quality management practices is higher when transformational leadership style is higher for low, medium and high adhocracy culture.

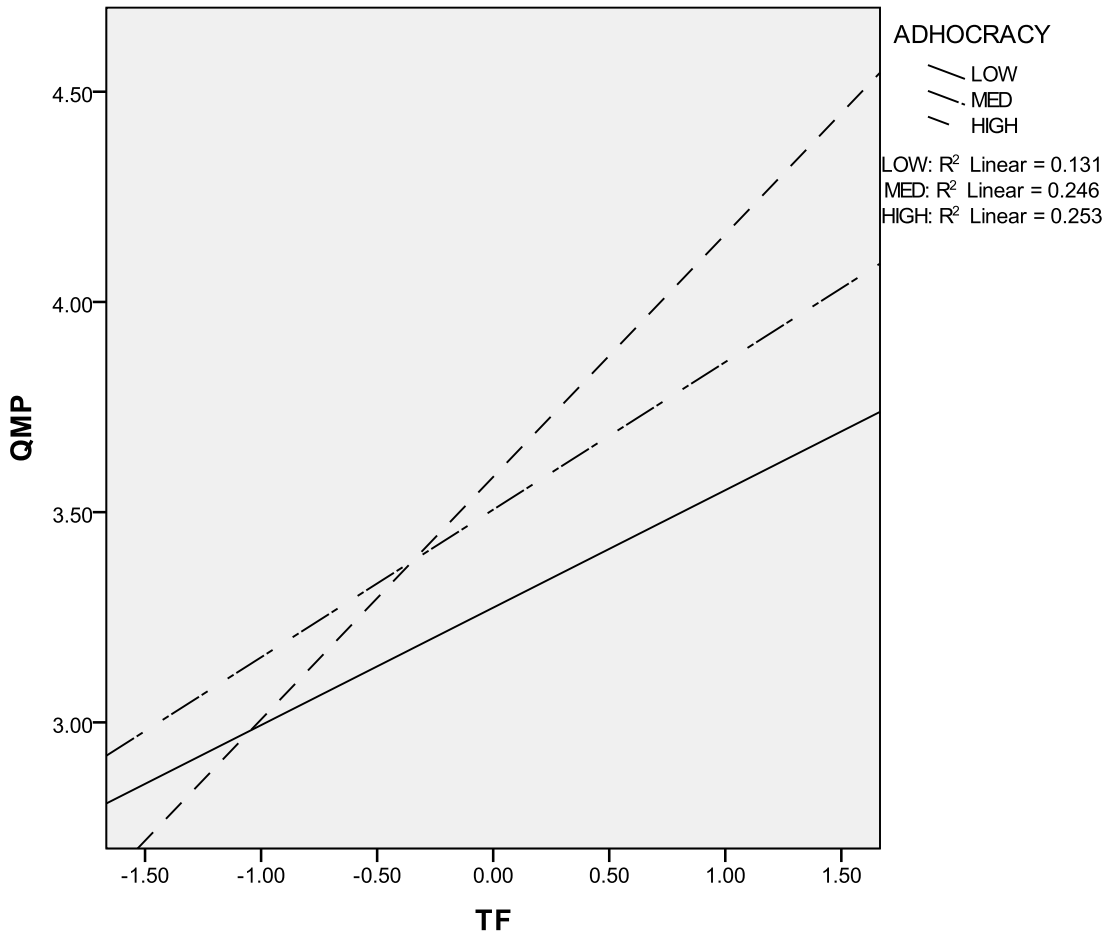

Figure 5.13
Significant Interaction Between Adhocracy Culture and Transformational Leadership Style in Predicting Quality Management Practices

Hence, organizational culture (clan, hierarchy, marker, and adhocracy) was generally found to be a significant moderator in the relationship between transformational leadership style and quality management practices.

Therefore, it could be said that organizational culture is an important moderator in the relationships amongst transformational leadership style and quality management practices. Thus, the hypothesis is supported. It can be concluded that organizational

culture (clan, hierarchy, marker, and adhocracy) moderates the relationship between transformational leadership style and quality management practices.

Hypothesis 2.2:

H2.2 states that organizational culture (clan, hierarchy, market, and adhocracy) is a moderator for the relationship between transactional leadership style and quality management practices. To test the moderating effect, the guidelines established by Baron and Kenny (1986) were used. Three regression analysis paths were employed. Figure 5.14 below summarizes the paths.

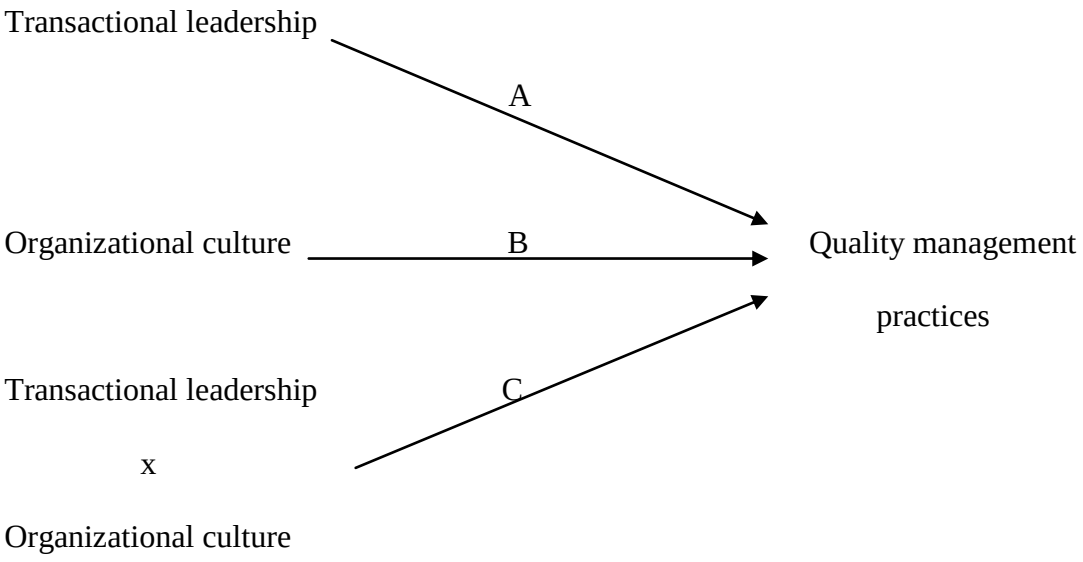

Figure 5.14
Organizational Culture (Clan, Hierarchy, Market, And Adhocracy) Moderates Transactional Leadership Style and Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.24, clan culture made significant, unique contributions of 10.9 to 17.6 percent, to the variance of quality management practices after transactional leadership style had been taken into account (p , 0.01). In addition, the overall model was significant and the beta value is -.301, which indicates that clan culture does have a considerably moderating impact on the relationships amongst transactional leadership style and quality management practices.

Table 5.24
Results of Hierarchical Regression Analysis of Quality Management Practices on Transactional Leadership Style in Clan Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transactional	.109	.176	.067	.001	14.605	.000	-.198	-.301	-3.337	.001

To better illustrate the moderating effect of the clan culture on the relationship between transactional leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.15 illustrates the significant interaction between clan culture and transactional leadership style. It can be readily seen in Figure 5.15 that when clan culture is high,

medium, and low, hospitals with lower transactional leadership style have a higher quality management practices than hospitals with higher transactional leadership style.

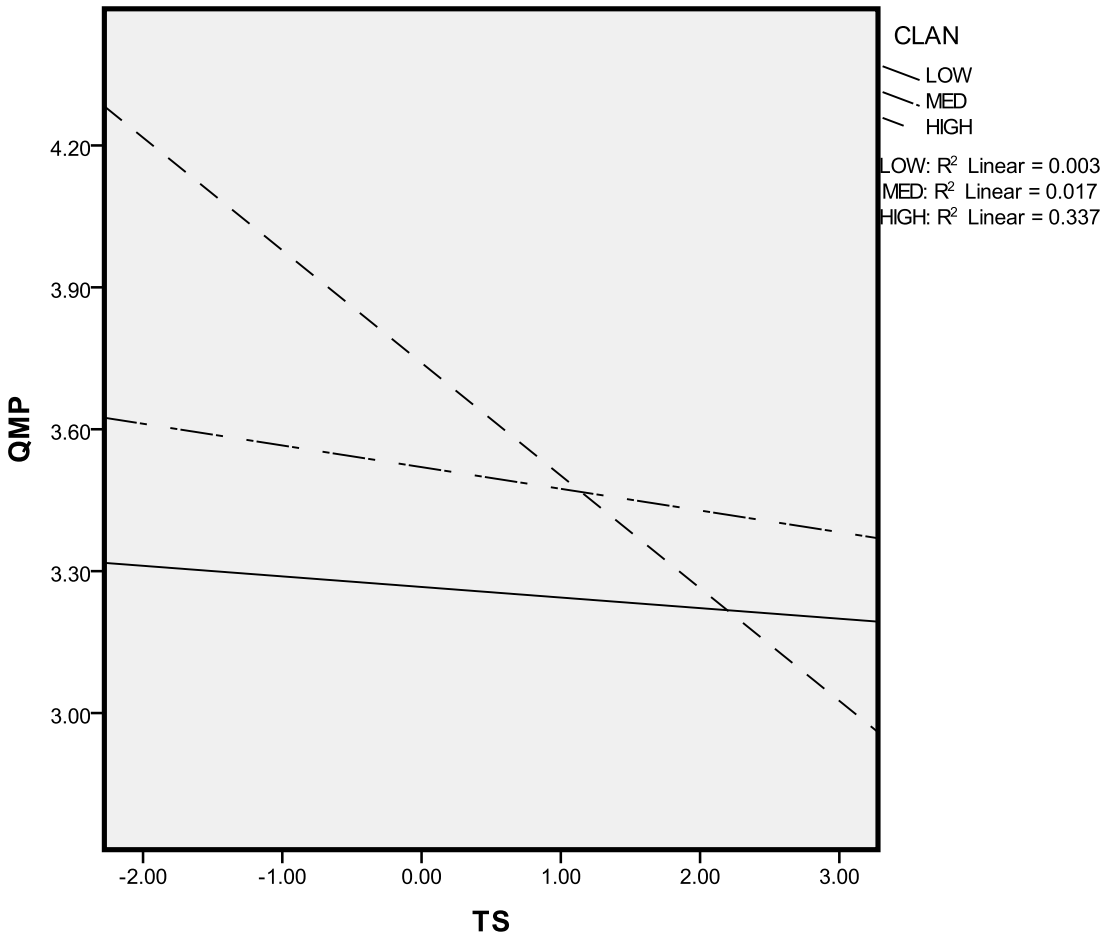

Figure 5.15
Significant Interaction Between Clan Culture and Transactional Leadership Style in Predicting Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.25, hierarchy culture made significant, unique contributions of 10.9 to 19.4 percent, to the variance of quality management practices after transactional leadership style had been taken into account

(p , 0.00). In addition, the overall model was significant and the beta value is -.323, which indicates that hierarchy culture does have a considerably moderating impact on the relationships amongst transactional leadership style and quality management practices.

Table 5.25
Results of Hierarchical Regression Analysis of Quality Management Practices on Transactional Leadership Style in Hierarchy Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transactional	.109	.194	.085	.000	16.494	.000	-.217	-.323	-3.808	.000

To better illustrate the moderating effect of the hierarchy culture on the relationship between transactional leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. to test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.16 illustrates the significant interaction between hierarchy culture and transactional leadership style. It can be readily seen in Figure 5.16 that when hierarchy culture is high and low, hospitals with lower transactional leadership style have a higher quality management practices than hospitals with higher transactional leadership style.

However, transactional leadership style does not matter much for quality management practices when hierarchy culture is medium.

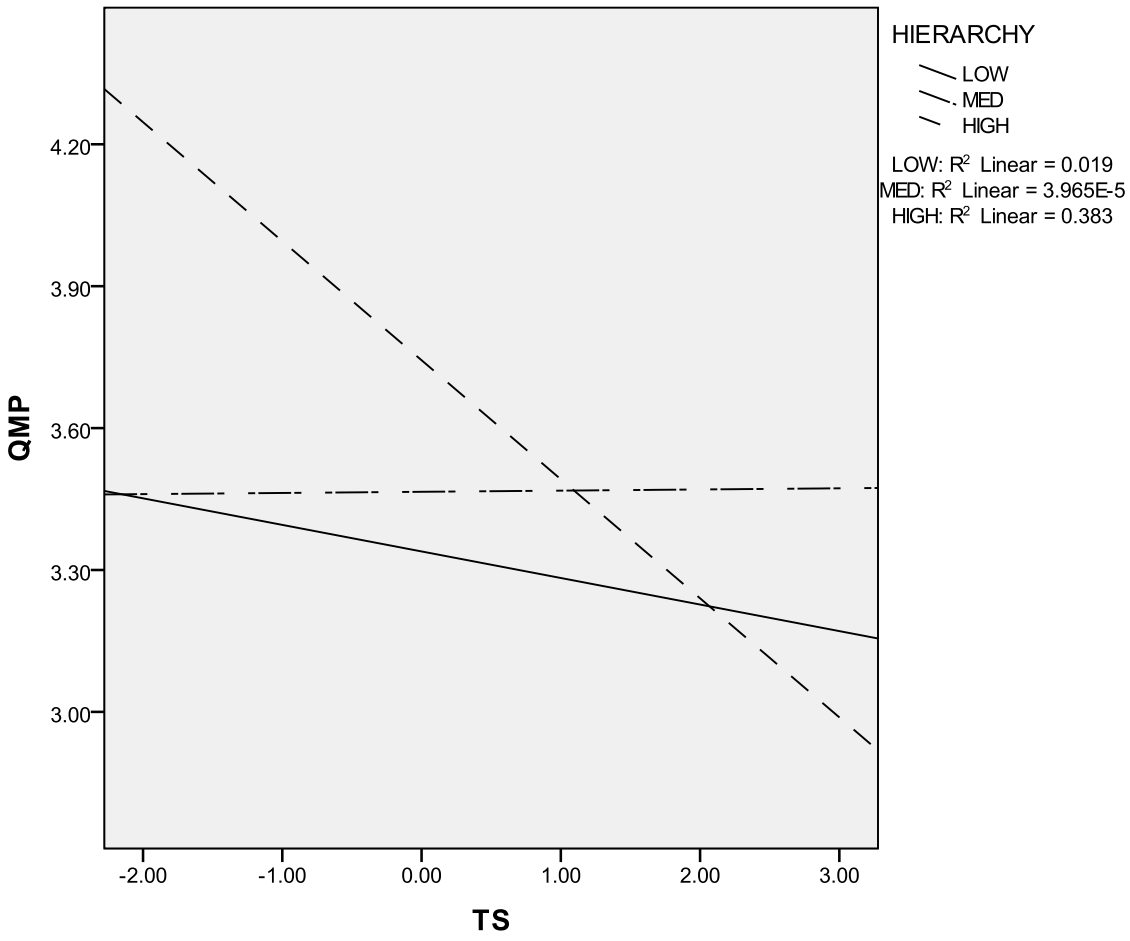

Figure 5.16
Significant Interaction Between Hierarchy Culture and Transactional Leadership Style in Predicting Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.26, market culture made significant, unique contributions of 10.9 to 16.7 percent, to the variance of quality management practices after transactional leadership style had been taken into account (p , 0.00). In addition, the overall model was significant and the beta value is -.275,

which indicates that market culture does have a considerably moderating impact on the relationships amongst transactional leadership style and quality management practices.

Table 5.26
Results of Hierarchical Regression Analysis of Quality Management Practices on Transactional Leadership Style in Market Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	Δ R^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transactional	.109	.167	.058	.002	13.694	.000	-.171	-.275	-3.084	.000

To better illustrate the moderating effect of the market culture on the relationship between transactional leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. to test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.17 illustrates the significant interaction between hierarchy culture and transactional leadership style. It can be readily seen in Figure 5.17 that when market culture is high and medium, hospitals with lower transactional leadership style have a higher quality management practices than hospitals with higher transactional leadership style. However, transactional leadership style does not matter much for quality management practices when market culture is low.

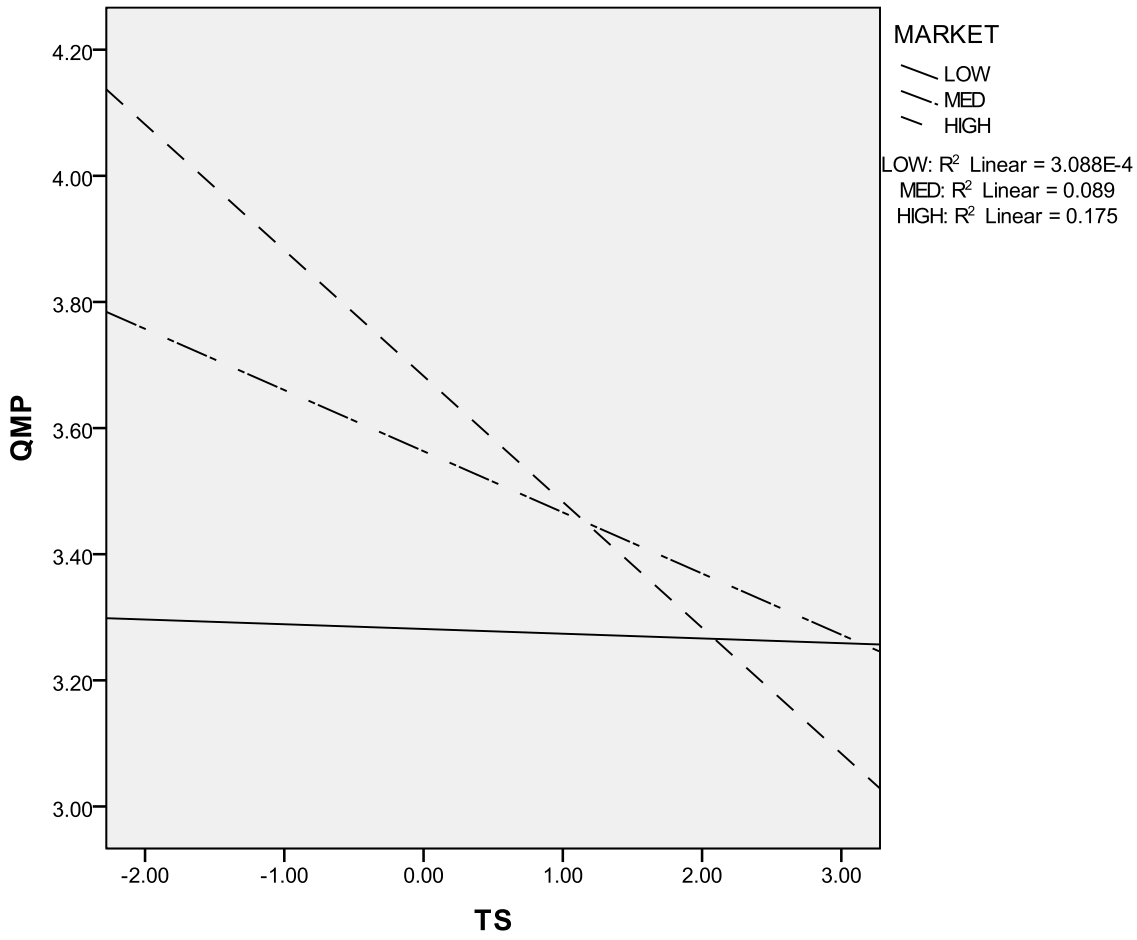

Figure 5.17
Significant Interaction Between Market Culture and Transactional Leadership Style in Predicting Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.27, adhocracy culture made significant, unique contributions of 10.9 to 16.5 percent, to the variance of quality management practices after transactional leadership style had been taken into account (p , 0.00). In addition, the overall model was significant and the beta value is -.266, which indicates that adhocracy culture does have a considerably moderating impact on the relationships amongst transactional leadership style and quality management practices.

Table 5.27
Results of Hierarchical Regression Analysis of Quality Management Practices on Transactional Leadership Style in Adhocracy Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Transactional	.109	.165	.056	.003	13.582	.000	-.169	-.266	-3.043	.003

To better illustrate the moderating effect of the adhocracy culture on the relationship between transactional leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.18 illustrates the significant interaction between adhocracy culture and transactional leadership style. It can be readily seen in Figure 5.18 that when adhocracy culture is high, medium, and low, hospitals with lower transactional leadership style have a higher quality management practices than hospitals with higher transactional leadership style.

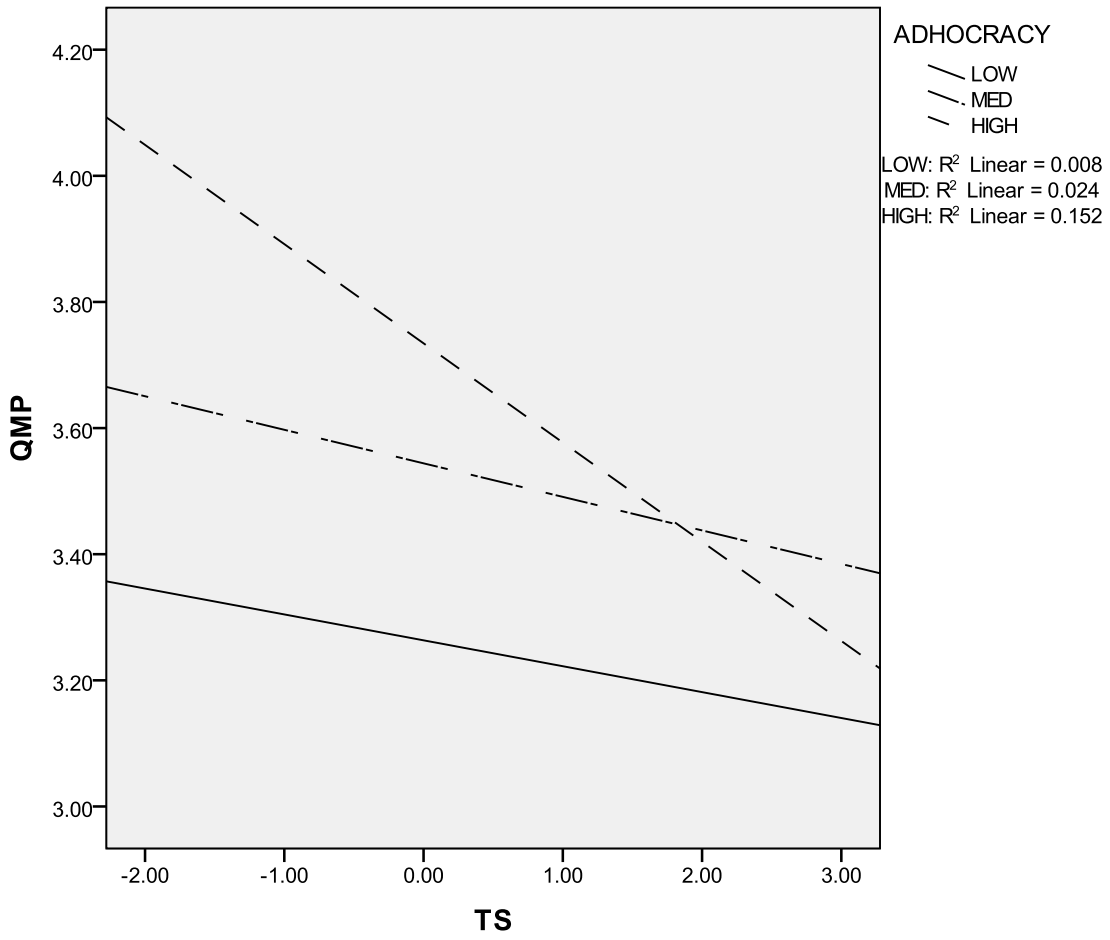

Figure 5.18
Significant Interaction Between Adhocracy Culture and Transactional Leadership Style in Predicting Quality Management Practices

Hence, organizational culture (clan, hierarchy, marker, and adhocracy) was generally found to be a significant moderator in the relationship between transactional leadership style and quality management practices.

Therefore, it could be said that organizational culture is an important moderator in the relationships amongst transactional leadership style and quality management practices. Thus, the hypothesis is supported. It can be concluded that organizational

culture (clan, hierarchy, marker, and adhocracy) moderates the relationship between transactional leadership style and quality management practices.

Hypothesis 2.3:

Hypothesis H2.3 states that organizational culture (clan, hierarchy, market, and adhocracy) moderates the relationship between the laissez-faire leadership style and quality management practices. To test the moderating effect, the guidelines established by Baron and Kenny (1986) were used. Three regression analysis paths were employed. Figure 5.19 below summarizes the paths.

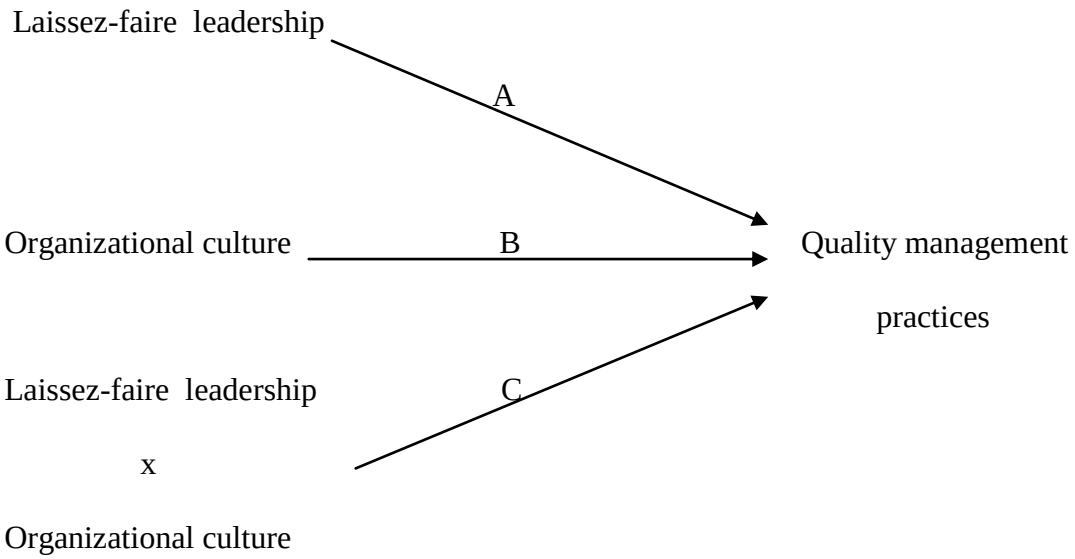

Figure 5.19
Organizational Culture (clan, hierarchy, market, and adhocracy) Moderates Laissez-Faire Leadership Style and Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.28, clan culture made significant, unique contributions of 6.3 to 9.9 percent, to the variance of quality management practices after laissez-faire leadership style had been taken into account (p , 0.05). In addition, the overall model was significant and the beta value is -.191, which indicates that clan culture does have a considerably moderating impact on the relationships amongst laissez-faire leadership style and quality management practices.

Table 5.28
Results of Hierarchical Regression Analysis of Quality Management Practices on Laissez-Faire Leadership Styles in Clan Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Laissez-Faire	.063	.099	.036	.020	7.546	.001	-.120	-.191	-2.353	.020

To better illustrate the moderating effect of the clan culture on the relationship between laissez-faire leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.20 illustrates the significant interaction between clan culture and laissez-faire leadership style. It can be readily seen in Figure 5.20 that when clan culture is high and medium, hospitals with lower laissez-faire leadership style have a higher quality

management practices than hospitals with higher laissez-faire leadership style. However, laissez-faire leadership style does not matter much for quality management practices when clan culture is low.

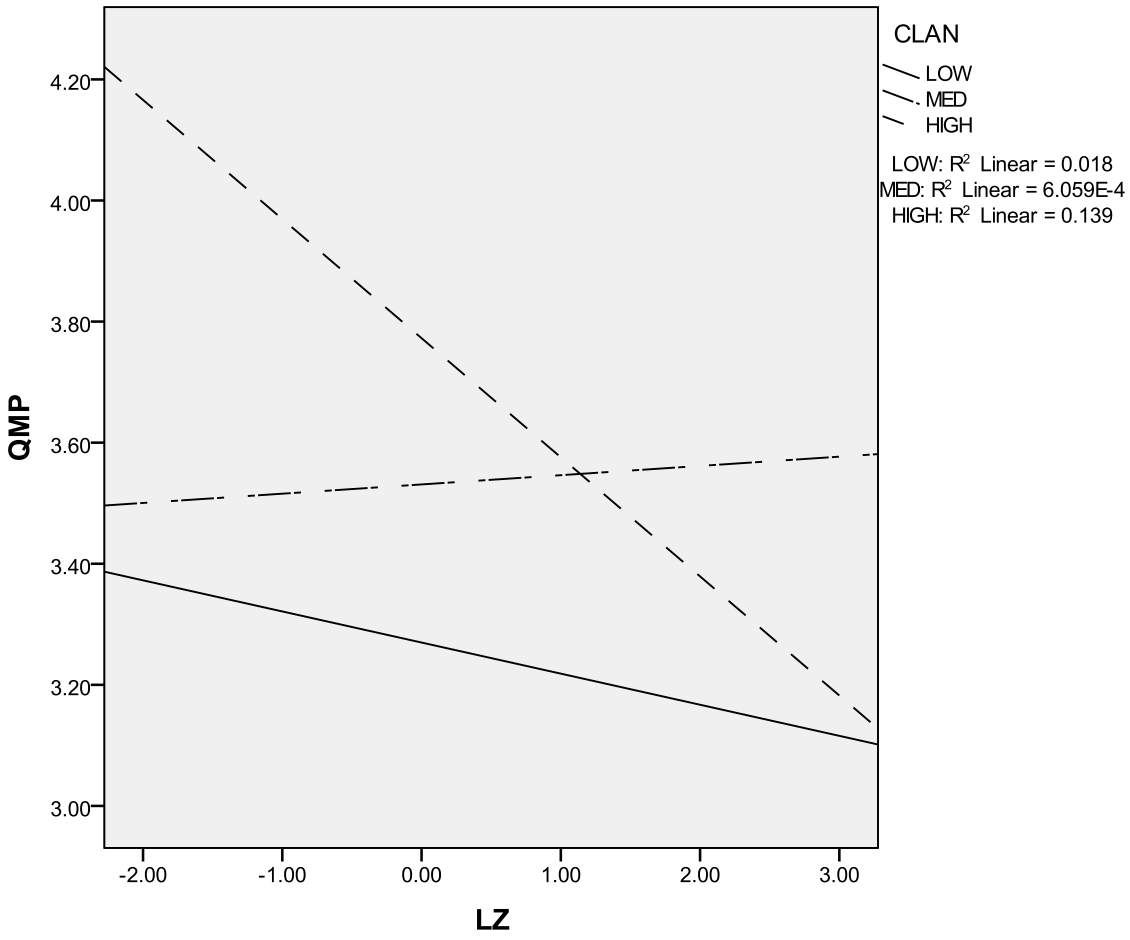

Figure 5.20
Significant Interaction Between Clan Culture and Laissez-Faire Leadership Style in Predicting Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.29, hierarchy culture made significant, unique contributions of 6.3 to 16.4 percent, to the variance of quality management practices after laissez-faire leadership style had been taken into account (p , 0.00). In addition, the overall model was significant and the beta value is -.319, which indicates that hierarchy culture does have a considerably moderating impact on the relationships amongst laissez-faire leadership style and quality management practices.

Table 5.29
Results of Hierarchical Regression Analysis of Quality Management Practices on Laissez-Faire Leadership Styles in Hierarchy Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Laissez-Faire	.063	.164	.08	.000	13.483	.000	-.236	-.319	-4.082	.000

To better illustrate the moderating effect of the hierarchy culture on the relationship between laissez-faire leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.21 illustrates the significant interaction between hierarchy culture and laissez-faire leadership style. It can be readily seen in Figure 5.21 that when hierarchy culture is

high and medium, hospitals with lower laissez-faire leadership style have a higher quality management practices than hospitals with higher laissez-faire leadership style. However, laissez-faire leadership style does not matter much for quality management practices when hierarchy culture is low.

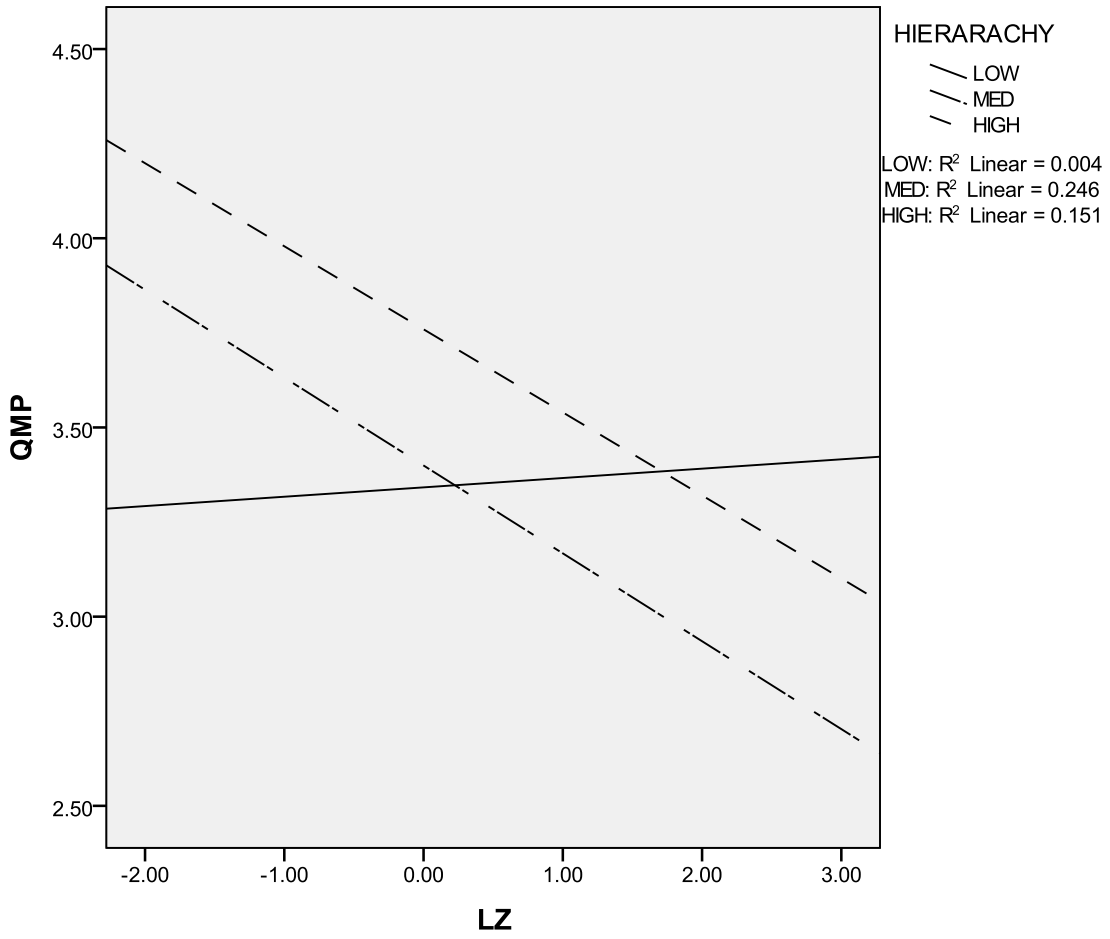

Figure 5.21
Significant Interaction Between Hierarchy Culture and Laissez-Faire Leadership Style in Predicting Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.30, market culture made significant, unique contributions of 6.3 to 14.7 percent, to the variance of quality management practices after laissez-faire leadership style had been taken into account (p

, 0.00). In addition, the overall model was significant and the beta value is -.290, which indicates that market culture does have a considerably moderating impact on the relationships amongst laissez-faire leadership style and quality management practices.

Table 5.30
Results of Hierarchical Regression Analysis of Quality Management Practices on Laissez-Faire Leadership Styles in Market Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	Δ R^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Laissez-Faire	.063	.147	.084	.000	11.776	.000	-.188	-.290	-3.670	.000

To better illustrate the moderating effect of the market culture on the relationship between laissez-faire leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.22 illustrates the significant interaction between market culture and laissez-faire leadership style. It can be readily seen in Figure 5.22 that when market culture is high and medium, hospitals with lower laissez-faire leadership style have a higher quality management practices than hospitals with higher laissez-faire leadership style. Also, when market culture is low, hospitals with high laissez-faire leadership style have a higher quality management practices than hospitals with lower laissez-faire leadership style.

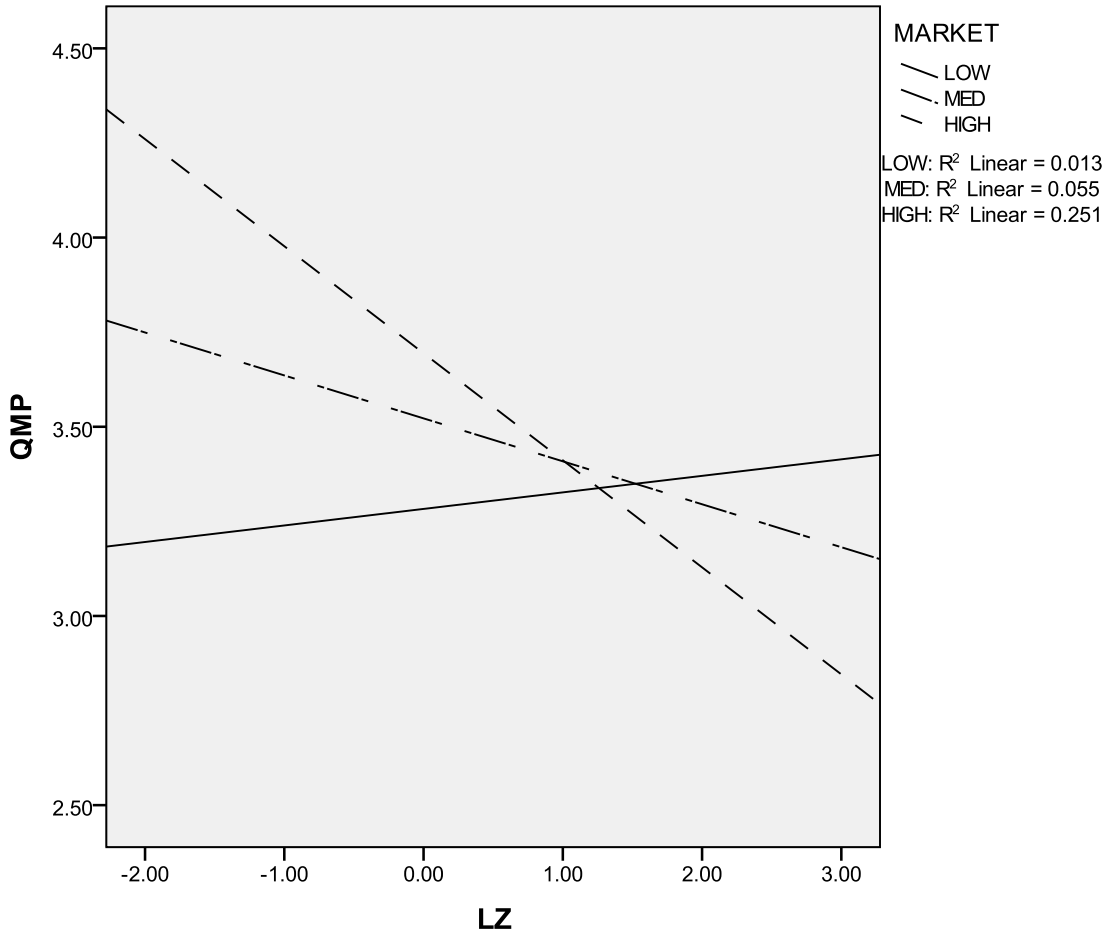

Figure 5.22
Significant Interaction Between Market Culture and Laissez-Faire Leadership Style in Predicting Quality Management Practices

From the R square Change and Sig. F Change values in Table 5.31, adhocracy culture made significant, unique contributions of 6.3 to 11.5 percent, to the variance of quality management practices after laissez-faire leadership style had been taken into account (p , 0.05). In addition, the overall model was significant and the beta value is -.229, which indicates that adhocracy culture does have a considerably moderating impact on

the relationships amongst laissez-faire leadership style and quality management practices.

Table 5.31
Results of Hierarchical Regression Analysis of Quality Management Practices on Laissez-Faire Leadership Styles in Adhocracy Culture

Independents variables	Model summary				ANOVA		Coefficients			
	R^2 Excl. Interaction	R^2 Incl. Interaction	ΔR^2	Sig. F change	F	Sig.	B	Beta	t	Sig.
Laissez-Faire	.063	.115	.052	.005	8.927	.000	-.164	-.229	-2.851	.005

To better illustrate the moderating effect of the adhocracy culture on the relationship between laissez-faire leadership style and quality management practices, the guidelines established by Cohen, Cohen, West, and Aiken (2003) were used. To test the simple slopes of the graphed interactions to identify if they were significantly different from zero.

Figure 5.23 illustrates the significant interaction between adhocracy culture and laissez-faire leadership style. It can be readily seen in Figure 5.23 that when adhocracy culture is high, medium, and low, hospitals with lower laissez-faire leadership style have a higher quality management practices than hospitals with higher laissez-faire leadership style.

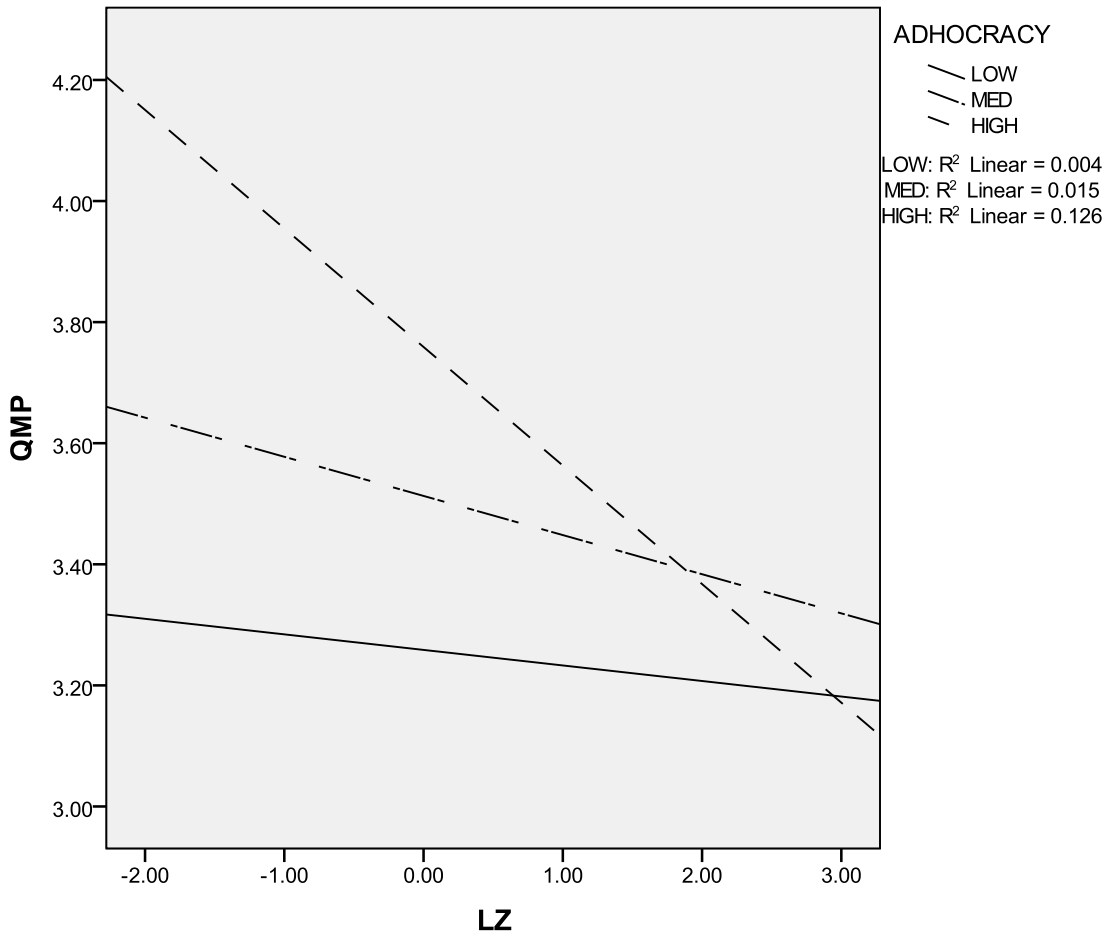

Figure 5.23
Significant Interaction Between Adhocracy Culture and Laissez-Faire Leadership Style in Predicting Quality Management Practices

Hence, organizational culture (clan, hierarchy, marker, and adhocracy) was generally found to be a significant moderator in the relationship between laissez-faire leadership style and quality management practices.

Therefore, it could be said that organizational culture is an important moderator in the relationships amongst laissez-faire leadership style and quality management practices. Thus, the hypothesis is supported. It can be concluded that organizational

culture (clan, hierarchy, marker, and adhocracy) moderates the relationship between laissez-faire leadership style and quality management practices.

5.7 Summary

In a summary, this study has provided specific inputs relative to quality management practices in public hospitals in Saudi Arabia. The researcher used a sample population of 140 hospitals in carrying out an exploratory factor analysis to determine the factor structure of instruments that had 101 items. The factors examined in this context were transformational leadership style, transactional leadership style, laissez-faire leadership style, organizational culture, and quality management practices. A test of reliability was also run in the context of all the interval scale variables in order to ascertain the extent to which they are free from casual errors. Additionally, this research made an analysis of the assumptions made in regard to normality, linearity, homoscedasticity, independence of errors terms, multicollinearity, and the outcomes showed that the assumptions proved to be correct. In addition to the above, the research conducted hierarchical regression to analyze the relationships amongst different leadership styles, organizational culture, (clan, hierarchy, marker, and adhocracy) and practices of quality management. In view of the outcomes that emerged from the research, it can be said that all the hypotheses were supported the moderating effect of organizational culture on the relationship between leadership styles and quality management practices. The independent variables also revealed a pattern whereby they sufficiently contributed to practices of quality management.

CHAPTER SIX

DISCUSSION AND RECOMMENDATIONS

6.0 Introduction

This chapter summarizes and discusses the outcomes of the current research aimed at examining the hurdles and identifying the issues that could lead to good quality management practices in Saudi Arabia's public hospitals. In addition, this chapter concludes the findings that can be drawn from this research. In the final part of the chapter, the overall contribution of theory and practice along with the limitations and potential for future research are discussed.

6.1 Summary of the Study Results

It is known that the government of Saudi Arabia has been giving high priority to healthcare in its developmental plans. But despite the high spending, services in the sector are not up to the mark. It thus becomes imperative to examine managerial philosophies in the context of leadership styles and organizational culture and their relationship with quality management practices in public hospitals in the country. It is evident that quality management has not been adopted in the country's public sector in the true spirit primarily because of the difficulties faced in the country's culture and in implementing modern management practices.

Given that quality is the focus of all organizations in a competitive environment, it becomes important for public hospitals in Saudi Arabia to make quality the highest priority in their functions. Although quality management connotes varied meanings for

the organizations, the healthcare sector needs to recognize that strict professional standards should be maintained by focusing on customer understanding and investments. Quality performance is known to strongly impact operational performance but the main issue is how to make the required achievements. The literature review has examined the viewpoints of several researchers that have considered how variables of quality management influence performance, such as external quality requirements, corporate support for quality, managerial knowledge, product complexity and organizational uncertainty. The size of the industry, country and processes undertaken by the organization are also determinants of quality management practices.

Whatever the circumstances that characterize the workings of any organization, the support of the top management is essential to provide a meaningful direction to workers. Innovations are necessary in order to make improvements in services, procedures and products. In the context of public hospitals in Saudi Arabia, transformational leadership has been found to result in employee motivation and satisfaction. Using this style in healthcare helps provide a clear concept about how quality services are to be offered in hospitals. Moreover, quality standards and other strategies help improve the status and satisfaction of patients. Given that customer satisfaction is a measure of quality, evaluating and monitoring healthcare are important to achieve high standards in public hospitals.

In the present context, socio-economic progress in Saudi Arabia during the last 30 years can be seen in sectors such as transport, education and health. In view of the development in health services, longevity has increased in the country, while change in lifestyle has led to increase in chronic diseases. However, the Ministry of Health in the

country is facing problems in making long-term plans in healthcare because of the unavailability of reliable data relative to health facilities. Nevertheless, the healthcare sector in Saudi Arabia is being improved with the introduction of health insurance, paid medical services, privatization of medical services, and decentralizing authority in hospitals. However, these measures are still in the infancy stage and healthcare continues to be free for all citizens as well as expatriates that work in the public sector. Free medical and rehabilitation services in hospitals, particularly in big cities, have rendered the systems to become overloaded. Given the shortcomings in Saudi Arabia's public hospitals, leadership has been found to be the major factor that can positively impact and ensure quality management in these hospitals.

The Saudi government came up with national guidelines in 1993 in addressing the need to establish quality assurance in healthcare. The policy focused on introducing quality management practices but complete information is not available about the outcome of such efforts. The World Health Organization reviewed healthcare systems in the country in 2006 and found that quality management in the sector has been adversely impacted by leadership styles because people in authority were not adequately trained. Moreover, there is inadequate monitoring of performance levels in public hospitals. Thus, the need to carry out further studies to make more objective assessments of quality management in the healthcare sector in Saudi Arabia is evident and interventions that can improve quality of healthcare should be identified.

So far, reforms in the country have been carried out on the basis of Royal decree number (M/11) dated 3/6/2002 which does have immense potential to introduce revolutionary improvements in the quality of health services available in the country.

The systems pertaining to quality assurance in the healthcare sector are taken care of by about 21 Regional Health Affairs Directorates that are controlled by the Ministry of Health.

According to Al-Ahmadi and Roland (2005), healthcare quality is impacted by the pressures from increasing demand for health services and they identified six factors that create hurdles in achieving quality health care in Saudi Arabia:

- Organizational culture
- Organizational factors
- Professional development
- Implementation of evidence-based medicine
- Problems at the interface with secondary care
- Management factors

Leadership is a major factor that has the potential of ensuring the achievement of quality management in healthcare but the outcomes of any specific leadership behaviours are not clearly established. The World Health organization (2006) measured the country's health care systems and found that the sector has been adversely impacted by inappropriate leadership styles because of inadequate training and lack of reliable data. Moreover, there is no concrete indication that performance of healthcare systems is being monitored properly. It is in this context that Al-Ahmadi and Roland (2005) have stressed the need to conduct further research to arrive at meaningful conclusions about the performance of the sector. Damanhouri (2002) researched on total quality management standards in Saudi Arabian public hospitals and found that the concept of

TQM in them was quite weak and employed conservatively. He found that the main issues hindering the adoption of quality standards were related with top management's vision and commitment. He too felt the need to conduct more exhaustive research to analyze the impacts of leadership elements so that appropriate policy decisions can be made to implement quality management processes in the country's public hospitals.

It is thus evident on the whole that quality management systems in Saudi Arabia's public hospitals are not effective and are performing at low levels. The only way to improve quality in hospitals is to exhaustively investigate issues relative to quality management programs. The issue should be examined by investigating the gaps so that the problems can be removed. It was with this objective that the current research was conducted in attempts to fill existing research gaps relating to the impact of the given leadership behaviours, especially in the context of transformational, transactional, and laissez-faire leadership on quality management practices in Saudi Arabian hospitals. The significance of evaluating leadership styles and the ways in which they influence quality management and organizational culture is an important need that should be addressed. This is because more than 70 percent of healthcare workers in the country are expatriates from diverse cultures and countries. Almost 80 percent of nurses and doctors are not Saudi citizens while there are only about 6 million expatriates in the country that has a total population of 22.6 million. It is known in this context that organizational culture is the common awareness of workers relative to working practices. Values are imbibed through people's social processes and organizational culture refers to practices that are attained through workplace social practices. But whatever the circumstances,

organizational culture is an important determinant of the extent to which any organization is knowledge intensive.

This research has dealt with the theoretical structure that can be adopted in dealing with the issues. The study has also addressed issues relative to the influence of leadership styles on quality management practices implemented in public hospitals in Saudi Arabia. The structure of this research has been created on the basis of past research about issues that considered the relationship between organizational culture, quality management practices and leadership styles.

In addition, the present study has carried out a thorough review of literature regarding the definitions of and approaches to quality management practices. Quality management has varying meanings owing to its many features, dimensions and measures. Also, there are several models of quality management such as those proposed by the American pioneers, the Japanese pioneers, and others. Prior studies are mostly dedicated to what constitutes quality practices and the factors contributing to quality improvement. Literature provided from different sources, dedicated to varying industrial sectors and hailing from different countries, was reviewed. Most researchers are of the consensus that top management support is the most important contributor to quality performance.

Also, the literature review suggests that quality improvement is impacted by many factors such as top management support, training, workforce management, process management, employee involvement, and overall employee relations. It is also believed that quality in the physical sense of the product is not enough for sustainable advantage and that customer relation has a big role in the system of quality performance

enhancement. Moreover, many researchers state that top management support and commitment are just other names for leadership. In turn, the leadership theories contain pertinent information regarding leadership styles, traits and rationale as they relate to the identification of leadership styles and the provision of a context within the purview of Bass's (1985) theory of transformational, transactional and laissez-faire leadership styles. The transactional leadership style was not found be significant in quality improvement as it is related to rewards and punishment, or in other words, exchange. The transformational of leadership may affect quality management practice because the top echelons of management are the ones that motivate and guide the lower level employees. In sum, with a transformational leader, an organization is enabled to engage and involve its employees and to give them the motivation they need. This leads to product and process quality improvement in a people-oriented culture. In addition, when firms have a customer-centred approach, they focus on customer satisfaction. To derive customer satisfaction, firms must realize that internal customers (i.e., employees) need to be satisfied first. Thus, quality improvement is directly related to leadership styles.

The present study has also carried out a review of the definitions and approaches to organizational culture. However, the outcome of practicing TQM depends on a lot of factors, including organizational culture. The relationship between the organizational culture and TQM has been investigated by a number of researchers from different points of view. Several studies posit that successful TQM implementation naturally requires the success of the QM practices in the organization which in turns depends on its organizational culture. In addition, studies claimed the importance of leadership behavior in organizational culture and their consistent efforts for quality improvement.

Furthermore, this study described the theoretical framework adopted. The inter-relation between an organization's quality management practices, organizational culture and leadership have been studied by prior researchers within topics such as senior management commitment, top management, senior management understanding, and visionary leadership. The present research adapted these studies to develop a new model in the field that interlinks the impact of specific leadership behaviours (independent variables) in light of varying organizational cultures (moderator variable) upon quality of management practices (dependent variable) in an organization.

This research was based on leadership styles and quality management practice theories specifically Anderson et al.'s (1994) theory that was developed from Deming's (1982) management method development. Literature acknowledges that Anderson et al. were the first pioneering researchers to synthesize quality management theory using Delphi method-based research with the help of managers and academic sources linked to quality (Chowdhury et al., 2007; Fisher et al., 2005; Rungtusanatham, Forza, Filippini, & Anderson, 1998). Anderson et al. highlight that in Deming's management methods, the basic rationale lies in the creation of an organizational system that encourages the implementation of quality management practices such as customer focus, continuous improvement and team work, which all require effective leadership. Moreover, the leadership theory applied in the current research is drawn from Bass's (1985) theory. Bass's work on the theory of transformational leadership grew out of James MacGregor Burns's (1978) qualitative investigation into charismatic political leaders (Howell & Avolio, 1993) along with House's (1971) theory of charismatic leadership (Yukl & Van

Fleet, 1982). This theory of charismatic leadership in turn originated from the pioneering work of charisma carried out by Weber (Bass, 1990).

Organizational culture theory in the present study was adapted from Quinn and Rohrbaugh's (1983) development of Competing Values Framework (CVF). This framework stresses on organizational culture and provides an overview of how it may have an impact on the organization's change management ability, which is normally linked with the enhancement of both quality and performance.

The present study has made use of several variables namely leadership styles on practices of quality management that correlates in the developed model making the ideal design for the study a co-relational one that concentrates on the mathematical based approach (Cooper & Schindler, 2003). As a result, a quantitative method through a cross-sectional survey design was applied in this study with a self-administered questionnaire as the survey instrument. This method is ideal in systematically and statistically measuring the relations between the variables. The survey instrument comprised four categories: demographic profiles, quality management practices, the multi-factor leadership questionnaire, and finally organizational culture. These instruments were chosen because of their extensive use in quality management, leadership and organizational culture research, as well as the high reliability and validity of these instruments.

The research has provided considerable level of clarification about quality management practices in public hospitals in Saudi Arabia. The sample size of 140 was considered ideal in arriving at conclusions on the given parameters. It was in this context that the research was related to exploratory factor analysis in order to ascertain

and examine the factor structures of the given instruments in relation to the 101 items that were examined. The factors examined were transformational leadership style, transactional leadership style, laissez-faire leadership style, organizational culture, and quality management practices. A test of reliability was also made in regard to the interval scale variables in ascertaining the manner in which it abstains from making random errors. The research also examined assumptions relative to factors such as normality, linearity, homoscedasticity, independence of errors terms, and multicollinearity. The outcome clearly reveals that most of these assumptions were complied with. A hierarchical regression was carried out to examine the link between leadership styles, organizational culture, and quality management practices.

Data in this study was answers given against questionnaires that were developed from the current literature in order to create survey instruments for the study. Synthesis of innumerable findings and analysis was made to create meaning out of all the outcomes. The analysis was done with the objective of comprehending issues that could assist in achieving quality management practices. The frequency process provided data and graphical display that helped understand the different variables.

Exploratory factor analysis of leadership styles examined three main dimensions; transformational leadership style, transactional leadership style, and laissez-faire leadership style. The results revealed that all of them demonstrated strong factor loading, which means that all three styles were considered by respondents as being important in public hospitals in Saudi Arabia. The given items correlated strongly with factor loadings that were on the higher side. Exploratory factor analysis of organizational culture comprised six dimensions, namely, dominant characteristics,

hospital leaders, management of employees, hospital glue, strategic emphases, and criteria of success. The results revealed that the KMO measure demonstrated a high value that indicated good adequacy and thus efficient use of factor analysis. The outcome indicated that factor analysis is applicable to organizational culture.

The results that depicted in table 6.1, indicated that all hypotheses of the research have been found to get adequate support while the independent variables clearly contributed to quality management practices as follows:

Table 6.1

Hypotheses Summary

Hypothesis	**Supported**
H1: Leadership styles are associated positively with quality management practices.	Yes
H1.1: Transformational leadership style are associated positively with quality management practices.	Yes
H1.2: Transactional leadership style are associated with quality management practices.	Yes
H1.3: Laissez-faire leadership style are associated negatively with quality management practices.	Yes

Table 6.1 (continued)

Hypothesis	Supported
H2: Organizational culture moderates between leadership styles and quality management practices.	Yes
H2.1: Organizational culture moderates between transformational leadership style and quality management practices.	Yes
H2.2: Organizational culture moderates between transactional leadership style and quality management practices.	Yes
H2.3: Organizational culture moderates between laissez-faire leadership style and quality management practices.	Yes

The first main hypothesis (H1) stated that there is a relationship between leadership styles and quality management practices. The results of the test of the differences analysis provided support for this hypothesis. In addition, among all independent factors, transformational leadership style provided a positive correlation with quality management practices. Also, transactional and laissez-faire styles revealed to negatively correlate with quality management practices.

The first sub-hypothesis (H1.1) in this research stated that transformational leadership behaviors are related to quality management practices. Given that the correlation coefficient value for the tested relationship between both variables was .368, which is considered as a positive moderate, it can be said that a positive strong relationship exists and there is adequate strength in this hypothesis.

The second sub-hypothesis (H1.2) stated that transactional leadership behaviors are associated with quality management practices. The correlation coefficient value for the tested relationship between both variables was -.432, which is considered as a negative moderate. It can be said that considerable amount of negative relationship exists, and thus, there is considerable strength in this hypothesis.

The third sub-hypothesis (H1.3) stated that laissez-faire leadership behaviors are associated with quality management practices. The correlation coefficient value for the tested relationship between both variables was -.706, which again is considered high negative at the given level. Therefore, considerable amount of negative relationship exists, which also means that there is strength in this hypothesis.

Multiple regressions analysis was carried out to answer the other research questions as well as to test the research hypotheses. It was necessary to make a number of assumptions to carry out the multiple regression analysis. The assumptions were in the context of normality, linearity, homoscedasticity, independence of errors terms, and multicollinearity. Multiple regression analysis allows the researcher to get relative contributions from all variables and shows the variable that proves to be the best indicator of outcomes. While evaluating each of the independent variables it became known that all variables contributed significantly to the quality management practices. The maximum positive contribution was made by transformational leadership on quality management practices. Other variables were found to impact strongly as well as negatively towards quality management in Saudi public hospitals.

The main second hypothesis stated that organizational culture (clan, hierarchy, marker, and adhocracy) moderates between leadership styles and quality management practices. Organizational culture was found to make a considerable contribution towards variance of quality management practices subsequent to organizational culture having been taken into account. Moreover, the research results indicated that the *R* square value and Sig. F Change values show that clan, hierarchy, marker, and adhocracy cultures has made significant, unique contributions to the variance of quality management practices after leadership styles had been taken into account. It became evident that most contingency factors in terms of transformational leadership style, transactional leadership style, and laissez-faire leadership style had considerable impact upon quality management practices. Therefore, the outcome was relative to the fact that organizational culture is mostly found to be a moderator in the relationships amongst leadership styles and quality management practices. Thus, it can be said that organizational culture mostly has moderating impact on relationships amongst leadership styles and quality management practices.

Hypothesis 2.1 stated that organizational culture (clan, hierarchy, marker, and adhocracy) moderates between transformational leadership styles and quality management practices. The results revealed that the *R* square value and Sig. F Change values show that clan, hierarchy, marker, and adhocracy cultures has made significant, unique contributions to the variance of quality management practices after transformational leadership styles had been taken into account. It came to be known that transformational leadership style has a strong impact on quality management practices. Thus, there is considerable strength in this hypothesis. In other words, organizational

culture can be said to be having considerable moderating impact on the relationship between transformational leadership style and quality management practices.

Hypothesis 2.2 posited that organizational culture that organizational culture (clan, hierarchy, marker, and adhocracy) moderates between transactional leadership style and quality management practices. The outcome indicated that the *R* square value and Sig. F Change values show that clan, hierarchy, marker, and adhocracy cultures has made significant, unique contributions to the variance of quality management practices after transactional leadership styles had been taken into account. Additionally, organizational culture made a contribution towards the variance of quality management practices. It became known that transactional leadership style has an impact on quality management practices. Therefore, organizational culture was found to be an important moderator in the link between transactional leadership style and quality management practices. It can therefore be said that there is strength in the hypothesis. Organizational culture has moderating impact on the relationships amongst transactional leadership style and quality management practices.

Hypothesis 2.3 states that organizational culture (clan, hierarchy, marker, and adhocracy) moderates between laissez-faire leadership styles and quality management practices. The results revealed that the *R* square value and Sig. F Change values show that clan, hierarchy, marker, and adhocracy cultures has made significant, unique contributions to the variance of quality management practices after laissez-faire leadership styles had been taken into account. Therefore, organizational culture can be said to be having considerable moderating impact on the relationship between laissez-faire leadership style and quality management practices.

6.2 Discussion

6.2.1 Leadership Styles and Quality Management Practices

A marked characteristic of this research is the finding that not much information is available about the relation between leadership styles, organizational culture, and their impact on quality management practices. Researchers such as Deming (1982, 1986) conducted an exhaustive research on leadership and found that it is of crucial importance in quality conscious organizations, but he did not find solutions to approaches towards leadership behaviors. The impact of leadership is an important determinant of productivity in any organization. This study attempted to understand leadership behaviors in terms of transformational, transactional leadership and laissez-faire leadership styles. Efforts have also been made to demonstrate if any of these styles or their combination helps achieve quality management in public hospitals. The outcome of this research will be of immense benefit for academics as well as investors and regulators in thoroughly understanding the relation amongst leadership styles and quality management practices in Saudi Arabia's health sector.

This study has drawn from theories relative to organizational culture, leadership styles, and quality management practices. In fact, theories of quality management practices have been used in this study. Major amongst them is the analysis of Deming's (1982) development of management methods that was traced by Anderson et al. (1994). The researcher assumed that an efficient organizational system focuses on making use of effective leadership in implementing quality management practices through constant improvements and customer service. However, it is difficult to define leadership because it is not easy to describe its meaning in different contexts. The vagueness arises

because of the large number of areas in which it has been defined and the theories that have been put forth. Thus, several contradictions arise but these varying contentions are very important to enable an understanding of leadership. They also assist in explaining the ways in which the theories are used efficiently in organizational working environments. Different studies are in agreement about the kind of practices that can be considered effective for quality improvement. Researchers have emphasized the need for the top management to take active participation in contributions towards quality performance.

The research delved into the relationship between leadership style and the establishment of a quality environment in research and development settings as researched by Berson and Linton (2005). It was found in their research that transformational leadership may lead to a quality environment in the context of a telecommunications firm. In other words, the research was successful in determining that transformational behaviors have an association with the realization of quality management practices. Berson and Linton (2005) asserted that leaders have to deal with uncertain goals and performance targets. It is thus evident from the circumstances surrounding Saudi public hospitals that leadership styles can lead to multiple outcomes in organizations and have an extraordinary impact on employee satisfaction. Such circumstances are present in a hospital environment and these findings are also in keeping with the conclusions drawn by Laohavichien et al. (2009), who found that leadership style influences employees, which enhances quality performance or processes and products. This research has found that transformational leadership provides visionary leadership that may lead to successful quality management. Moreover,

transformational leadership has the potential to influence practices of quality management because top management and leaders represent the roles of leaders that guide and support workers. In organizations where transformational leadership characterizes the functioning of top management, it becomes possible to involve and engage workers through motivational strategies, thus enabling them to give their best. This leads to the improvement of product and services and the development of people oriented culture. Additionally, organizations adopting customer centred approaches mostly focus on customer satisfaction. In order to achieve customer satisfaction organizations have to understand that employees are internal customers that need to be motivated and satisfied first. Such aspects clearly imply that quality management practices are considerably dependent on transformational leadership styles being used in the organization. Furthermore, the findings of this research are consistent with other studies that linked this style to higher organizational performance (Bass & Avolio, 1999; Bass, 1990; Idris & Ali, 2008; Yukl, 1999). Their findings are equally relevant to the Saudi healthcare sector because it is important to define the critical factors that affect the quality management practices thereby affecting organizational performance. So, transformational leadership style was found to be the style that most positively affects quality management practice and therefore impacts organizational performance and thereby offering a great deal of practical solutions to improving quality management practices in Saudi public hospitals.

Correlation analysis between the transactional leadership style and quality management practices revealed that transactional leadership is negatively associated with quality management practices. This result is not in line with studies of Berson and

Linton (2005), Podsakoff et al. (1990), and Yukl (1999), who indicated that the transactional leadership style can reward followers who participate to accomplishing quality objectives, and punish those who do not participate, a technique which eventually results in managing short-term objectives. However, the negative association between the transactional leadership style and quality management practices is expected given the fact that transactional leadership has been noted to result in lower quality and productivity than transformational leadership (Masi & Cooke, 2000) and given the fact that passive avoidant leadership has been uniformly associated with negative performance (Bass & Avolio, 1999). Accordingly, transactional leadership is not considered to be effective in improving quality mainly because it relates mostly to punishments and rewards, which implies exchange and this findings are consistent with the findings of Avolio (1994), Avolio and Bass (2004), and Sosik and Dionne (1997). In their studies, they mentioned that corrective transactional leadership (i.e. the active and passive forms of management by exception) is not supportive of effective organizational performance and thus could not be supportive of quality management practices.

The third sub-hypothesis theorized that laissez-faire leadership is associated with quality management practices .The findings confirmed this association and analysis found that a laissez-faire leadership style is negatively associated with quality management practices; a result in line with studies by Bass (1990), Sosik and Dionne (1997) and Vouzas and Gotzamani, (2005). In their studies, they mentioned that the laissez-faire leadership style is incompatible with the leadership behaviours which are necessary for effective quality management thereby leading to lack of task concentration, work quality problems, and poor productivity.

6.2.2 Organizational Culture, Leadership Styles and Quality Management Practices

This research has accepted the definition of culture as a combination of values, beliefs and practices whereby management and workers adopt similar behaviours. This meaning includes the different characteristics that are provided by most descriptions of cultures such as assumptions, beliefs, values, and behaviours. In order to achieve total quality management in organizations, it is essential that the organizational culture should be used in closing the gap between national culture and workers' culture. In being aware of the culture in the organizations management, it becomes possible to frame the best possible strategies to achieve quality performance in view of the influence of organizational culture on the organizational outcome. In most emerging economies, the presence of organizational culture allows organizations to ensure that instructions of management are followed in their true spirit. The outcomes of quality are directly associated with organizational culture and achieving total quality management requires the right leadership (Bass, 1998; Rad, 2006; Hofstede et al., 1990). Leadership impacts commitment of the organization because if leaders demonstrate innovativeness they can effectively motivate workers to work sincerely, which enhances the overall performance of the organization (O'Reilly et al., 1991). At the same time, managers have to be adequately trained to deliver and practice leadership behaviours. Different outcomes have been achieved by various studies conducted in the context of the link between organizational culture and quality management (Rad, 2006).

It is known that systems of total quality management (TQM) have been recommended by the World Health Organization to be introduced in healthcare systems. In fact TQM is being gradually transferred from developed nations to developing nations. There is a marked pattern whereby the healthcare systems have been strongly influenced by globalization. Developing nations are increasingly adopting standards of accreditation in their respective healthcare sectors so that standardized health care services can be provided at international levels.

In Saudi Arabia, culture is described in terms of technology, religion, language, family structures and community structures (Hammad, Kysia, Rabah, Hassoun, & Connelly, 1999). All these factors have been impacting the healthcare sector in the country and thus have a strong influence over the changes that are happening in the systems. This aspect of the Saudi hospitals is amply explained by the theory put forth by Hoy and Miskell (1996), who hold that behaviourally successful leaders can be distinguished from unsuccessful leaders. In Saudi Arabia, management practice is particularly impacted by cultural values pertaining to tribal conventions whereby managers are considered as father figures. Such relationships create problems for managers and impacts organizational performance. Theoretically, total quality management entails the participation of everybody in the decision making process. In Saudi Arabia, this aspect of the organization is in contradiction with the tribal traditions and thus creates resistance to the planned change processes.

The significance of implementing TQM in Saudi Arabia is now clear in view of several challenges emerging from the country's membership of the World Trade Organization, high levels of competition, high cost of technology and globalization. The

Saudi management styles are more in keeping with Blake and Mouton's (1975) impoverished management style whereby there is not much effort put towards productivity because of cultural constraints. The healthcare sector is characterized with providing crucial services in which a minimum level of quality and efficiency is demanded. This is measured through the main pointers such as morbidity rates, mortality rates, and the rates relative to medical faults. Thus, implementing TQM is considered a crucial objective that most healthcare organizations strive to achieve. It is considered necessary because hospitals wish to become competent in being able to compete globally and meet global challenges. Such goal setting helps both public and private health sectors to participate globally and to provide healthcare services of international standards. Therefore, this study focused on the factors that affect the implementation of quality management practices in Saudi Arabian hospitals. The main factors that impact their performance are organizational culture, and effective leadership (Mauro & Mauro, 1999). This research recognizes that there is a strong need to disseminate leadership, primarily because so many organized bodies are present. In addition, researchers have argued that unless cultural change is introduced and unless an appropriate organizational culture is created by involving workers in all programs, improvements cannot be made. Saudi Arabia currently suffers from such problems and also from the absence of a concrete organizational structure, including team work, technical expertise and information systems.

This research has dealt with a number of issues in regard to efficiently implementing quality management practices in public hospitals in Saudi Arabia. They pertain to frequent change in leadership, ineffective and inefficient financial and

information systems and the presence of customers that have varied needs. Moreover, there is lack of proper training for staff and performance appraisals are poor. There is considerable lacking in the effectiveness of public hospitals because of inadequate time being provided for applying quality management practices. Under these circumstances, there is strong need for conducting exhaustive research on how quality management practices can succeed in Saudi Arabian public hospitals. In view of this situation, it is extremely difficult to find ways to avoid failure of quality management strategies because the culture in the country continues to avoid their complete acceptance. It is thus imperative to deal effectively with the factors that prevent efficient implementation of quality management initiatives in the country.

Upon reviewing the relevant literature on implementing quality management strategies in public hospitals and the results of the sample survey, it becomes evident that there are several barriers to implementing such measures in public hospitals. These barriers mainly relate to three factors that represent independent variables; transformational, transactional, and laissez-faire leadership. Hence, there is a distinct and conditional impact in the relations amongst dependent and independent variables because of the effect of organizational culture, which is a moderating variable. The study result shows that the organizational culture has made significant, unique contributions to the variance of quality management practices after it was taken into account. These aspects clearly imply that quality management is considerably dependent on leadership styles and the organizational culture being used in the organization (Lim, 1995; Oqbannan & Harris, 2000). Several researchers suggested that organizational culture may be a harmonious combination variable that leadership uses to influence

various organizational outcomes. Furthermore, the result of the current study is in line with previous studies that linked the leadership styles with organizational culture (Bass & Avolio, 1994; Chang & Lee, 2007; Schein, 2004). Also, the findings of this research are consistent with other studies that linked organizational culture with quality management (Bass, 1998; Schein, 1985; Senge, 1990; Shaw, 2002; Rad, 2006; Oqbannan & Harris, 2000).

Accordingly, the study finding shows that organizational culture has made significant, unique contributions to the variance of quality management practices and it moderates the relationship between transformational leadership style and quality management practices. The results of the current study are in line with previous studies (Chen, 2004; Xenikou & Simosi, 2006) that demonstrated that organizational culture moderates the effect of transformational leadership on business performance. Hence, transformational leadership style and organizational culture play a major role in the successful implementation of quality management practices. The major characteristics of leaders have been understood as being encapsulated in the transformational leadership style. Leaders are responsible for promoting and approving collaboration, involvement, learning and team work. These behaviors enhance quality of productivity to the satisfaction of internal customers. Transformational leadership styles adopted by managers help them achieve their goals and objectives. There is a definite link between their knowledge level and leadership styles (in theory as well as practice) and the understanding of their influence on workers. Organizational culture impacts leadership performance in a number of ways which makes it important for management to appreciate the effects of culture on leadership styles.

With regards to hypothesis 2.2, the moderating effect of organizational culture between transactional leadership style and quality management practices indicated that organizational culture made significant and moderating impact with unique contributions to the variance of quality management practices. Transactional leaders are task-oriented (Bass & Avolio, 1993) and a transactional leader appeared to be perceived by study participants as a manager of tasks instead of a leader of people. This transactional quality of a leader appeared to set the tone that completing the task is the desired goal rather than attaining higher goals leaving all stakeholders in a static state. The study showed that a transactional leader who applied a passive management by exception style limited follower input, which resulted in a culture and quality management practices that excluded follower input and was accepting of marginal performance. In sum, the study findings are consistent with previous studies (e.g. Avolio & Bass, 2006; Chen, 2004) that stated that a culture focusing on a moderate form of management that fails to fully use the resources and opportunities, and that possesses and prefers to maintain its present position.

Hypothesis 2.3 stated that the organizational culture moderates between laissez-faire leadership style and quality management practices. The study finding shows that organizational culture has made significant, unique contributions to the variance of quality management practices and it moderates the relationship between laissez-faire leadership style and quality management practices. A laissez-faire leader appeared to be incompatible with the leadership behaviours which are necessary for effective quality management (Sosik & Dionne, 1997). Moreover, Bass (1990) connected laissez-faire leadership to a lack of task concentration, work quality problems, and poor productivity.

One may further posit that maintaining subordinates' focus on the needs and desires of customers requires leaders to actively espouse and reiterate this objective. The results of the current study are in line with previous studies by Peterson, Smith, Martorana, and Owens (2003), and Kotter and Heskett (1992) that showed that the inability or unwillingness of an organization, its leadership behaviour, and ultimately culture to adapt to its environment adversely impacts performance.

6.3 Implications for Research

The researcher's aim through the present study was to contribute to the area of quality management, particularly to the quality management practices, in public hospitals and the factors impacting them. Moreover, the researcher aimed to provide relevant individuals with practical results of the strategic applications of quality management practices in public hospitals. The current study's theoretical and practical implications are discussed in the following sections.

6.3.1 Managerial Implication

Empirical evidence revealed that leadership style can impact the quality management practices indicating that transformational leadership behaviours positively relate to quality management practices. The findings also implied that both transactional leadership and laissez-faire leadership behaviours negatively impact quality management practices. This is an expected result as the managers in public hospitals department are not appreciative of hospital directors applying punishments and rewards as they imply either exchange or avoidance of responsibilities.

The transformational leadership behaviours' positive impact on quality management practices indicates the interdependency of the behaviours and thus has an interactive impact on the practices. Based on the situation, this category of leadership behavior can be presented at the same time to bring about the impact upon quality management practices. In other words, managers may be able to maximize their quality management practices through the improvement of transformational leadership behaviours. In the context of public hospitals in Saudi Arabia, transformational leadership has been shown to lead to quality management practices. Under this style of leadership in healthcare, a comprehensive concept regarding the provision of quality services in hospitals is provided. Hence, this leadership style which satisfies Islamic principles must be followed.

In addition, organizations desirous of developing quality management practices in an effective way should facilitate complete training that will encourage management to practice leadership behaviours like:

- Communicating a positive vision of the future.
- Communicating values and important beliefs.
- Spending time training and treating employees as individuals.
- Establishing a unified purpose and common mission.
- Encouraging subordinates to deviate from previous ways of doing things and come up with their own innovations and to re-examine assumptions.
- Getting involved prior to arising of issues.

The quality management practices basically need the development of a new culture. The most effective quality management practices thrive in a culture where there

is an open, collaborative and cooperative environment facilitated by management and supported by organizational learning, teamwork, and customer focus (internal/external).

For success in quality management practices, leadership should guarantee that all organizational facets comprising organizational structure, management style, training, communications, compensation and promotion systems, procedures, and processes work together. In addition, the existing organizational culture should complement the values and principles of quality management practices approach if the achievement of significant progress in quality improvement is to be realized. Accordingly, hospital directors may opt for a quality management approach that is suitable to the existing organizational culture or they may attempt to modify the existing culture. To change the organizational culture, the directors have to adopt a different leadership style, from an authoritative to a participative leadership style, in order for continuous improvement to be achieved with the help of their employees. The directors should encourage and empower the employees to take part in the organization's continuous improvement programs. Training is one of the most effective tools to promote and develop employees' skills in line with organization's beliefs and values and to modify the culture to one that values quality management. Furthermore, continuous learning and improvement often lead to a positive culture characterized by sufficient behavioral modifications in developing a sustainable TQM climate. The hospital directors should encourage innovation within their organizations by placing particular stress upon both innovation and learning and facilitating an infrastructure that assists in the development and preservation of an organizational climate conducive to sustainable continuous improvement.

6.3.2 Theoretical Implications

The present research carried out an analysis based on both theoretical and practical frameworks. This is considered an ideal and invaluable step in managing and coping with the present issues and in addressing matters pertaining to the effect of leadership styles upon quality management systems' practices and strategies. The arrangement of the various stages of this study was developed in such a way that it keeps the outcomes and patterns of the prior research and issues relative to the linkage amongst organizational culture, quality management practices and leadership styles.

A review of literature reveals that the body of work done in the topic has examined the viewpoints of several researchers who studied the way leadership variables impact quality management such as senior management commitment, top management, senior management understanding, and visionary leadership (e.g. Awan et al., 2009; Chowdhury et al., 2007; Feigenbaum, 2007; Karuppusami & Gandhinathan, 2006). Nevertheless, only little research has been dedicated to the evaluation of the relationships between specific leadership behaviours like transformational, transactional, and laissez-faire leadership and quality management practices. Hence, the theoretical implications of the present study are listed as follows:

Firstly, the current study took help from theories of quality management practices to develop the basis of the research. More specifically, the research is based on Anderson et al.'s (1994) theory built upon Deming's (1982) management method development. This is coupled with the Bass's (1985) leadership theory to enable the study of factors impacting the quality management practices.

Secondly, the study also made use of the organizational culture theory based on

Quinn and Rohrbaugh (1983), to act as a moderator in the model for the purpose of exploring the impact of organizational culture in Anderson et al.'s (1994) model. The contexts in the proposed framework are:

1. Transformational leadership style
2. Transactional leadership style
3. Laissez-faire leadership style
4. Organizational culture

The study proposed a total of seven determinant factors to be taken into consideration during the examination of the quality management practices.

Thirdly, the proposed research framework was tested empirically in light of the quality management practices in a healthcare system context. The findings support the framework's validity and reliability. Hence, the implications of the determinant factors in the framework can be added to management literature. Additionally, the research framework can be utilized as a research tool for the examination of the determinant factors in deciding whether to adopt other factors of quality management.

6.4 Limitations

One of the strengths of the present research is the acknowledgement of its limitations because these limitations formed the recommendations for future study and they clarify the theoretical implications. Based on the researcher's knowledge, the present study is the first of its kind to investigate the leadership styles, organizational culture and their

relationship with quality management practices in public hospitals in Saudi Arabia. As such, some of the limitations of the research are:

1. The pioneer of its kind - It is the first study and hence,requires further studies of its caliber for collaboration of results.
2. Data was collected from the managers' departments in Saudi public hospitals. A broader sample of data from diverse respondents in the future is recommended to minimize any potential bias stemming from the level of the informants.
3. Generalizing the findings of this study – Owing to the geographical limitations, participants may have particular attributes that are different compared to other parts of the world. Therefore, future research can use a more diverse random sampling for the verification of the dimensions developed in this study.

6.5 Recommendations for Future Research

The present study proposes some recommendations for future study in the area of quality management practices that would help enrich the body of the study. These recommendations are detailed in the following paragraphs.

The present study can be replicated in other Arab countries or other developing countries and comparison of results can be carried out. Future research can increase the investigation and access to comprehensive results in the prediction of quality management practices and the variables impacting them, particularly when exposed to culture, e.g. national culture.

In the current study, the results of the relationship between the leadership styles, organizational culture and their association to quality management practices in public

hospitals are revealed. Therefore, the recommendation for future studies is to examine these variables to help determine their impact on private hospitals, as well as to examine if their findings are in line with the current study or not. In addition, other studies have pointed to a difference in the nature of the organizations due to cultural differences between people and financial resources and this is a different angle that could be explored in future studies.

The researcher also recommends to further study the possibility of other variables in investigating and predicting quality management practices. These variables could include information system, financial resources, and employee readiness regarding the quality management practices.

Since the present study adopted organizational culture, the researcher recommends the examination of other moderator variables, e.g. national culture, in the future. This may lead to further explanations of the variables' impact upon and prediction of quality management practices.

The researcher also recommends a different method of study – the qualitative method which could effectively work in hospital sectors as interviews carried out with respondents may help acquire results, most specifically in the cultural context. Moreover, future studies can be carried out on employee staff members to explore their opinions concerning quality management practices.

One of the main premises of the present study is the perception of the managers regarding leadership styles and organizational culture. The managers were constantly requested to rate the hospital director's leadership style and behavior, and their affect on organizational culture. Future studies should concentrate on including hospitals'

directors self-rating of their leadership style and their perceptions of the organizational culture. These could then be compared to the department managers' perceptions.

6.6 Summary

The chapter contains a summary of the main findings based on the objectives of the research. Research constructions were elaborated which would prove invaluable for those interested in further investigating the leadership styles, organizational culture and quality management practices in public hospitals.

The research began with the exploration of the current state of quality management practices in public hospitals and the relevant factors that may result in the application of quality management practices that can be used to facilitate better quality systems in public hospitals.

The study tested eight hypotheses developed around the linkage between leadership styles (transformational, transactional and laissez-faire styles) with quality management practices. Additionally, the moderating effect of organizational culture on the impact of these relationships was tested. It is hoped that the findings of the study will contribute to the body of knowledge and the understanding of quality management practices in hospitals which has not been given ample attention.

Furthermore, the research has highlighted various practical and theoretical issues regarding management practices and has listed limitations and recommendations for future studies.

REFERENCES

Adam, E. E. (1994). Alternative quality improvement practices and organization performance. *Journal of Operations Management*, 12(1), 27-44.

Ahire, S., Golhar, D., & Waller, M. (1996). Development and validation of TQM implementation constructs. *Decision Sciences*, 27(1), 23-56.

Ahmed, A. (2009). Staff suggestion scheme (3Ss) within the UAE context: Implementation and critical success factors. *Education, Business and Society: Contemporary Middle Eastern Issues*, 2(2), 153-167.

Al-Ahmadi, H., & Roland, M. (2005). Quality of primary health care in Saudi Arabia: a comprehensive review. *International Journal for Quality in Health Care*, 1-16.

Al-Ammaj, F. H. (2000). An Investigation of Leadership Style and Organizational Commitment Among Saudi Public Employees. PhD. Dissertation, Mississippi State University, United States.

Allport, G. W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart and Winston.

Al-Mailam, F. F. (2004). Transactional versus transformational style of leadership-employee perception of leadership efficacy in public and private hospitals in Kuwait. *Quality Management in Healthcare*, 13(4), 278.

ALTouri, M. H. (1998). The evaluation of quality performance in Saudi Arabian Hospitals. Unpublished Ph.D. dissertation, University of Wales, Swansea, United Kingdom.

Amos, T., & Ristow, A. (1999). *Human Resource Management: Small Business Management Series*. Cape Town: Juta.

Anderson, J., Rungtusanatham, M., & Schroeder, R. (1994). A theory of quality management underlying the Deming management method. *Academy of management review*, 19(3), 472-509.

Anderson, J., Rungtusanatham, M., Schroeder, R., & Devaraj, S. (1995). A Path Analytic Model of a Theory of Quality Management Underlying the Deming Management Method: Preliminary Empirical Findings. *Decision Sciences*, 26(5), 637-658.

Anderson, R. D., Jerman, R. E., & Crum, M. R. (1998). Quality management influences on logistics performance. *Transportation Research Part E: Logistics and Transportation Review*, 34(2), 137-148.

Ansari, M. A. (1990). *Managing people at work: Leadership styles and influence strategies*. New Delhi: Sage Publications Pvt. Ltd.

Antonaros, R. A. (2010). continuous quality improvement, total quality management, and leadership. PhD dissertation, School of Business and Technology, Capella University, Minneapolis, USA.

Antony, J., Leung, K., Knowles, G., & Gosh, S. (2002). Critical success factors of TQM implementation in Hong Kong industries. *International Journal of Quality and Reliability Management*, 19(5), 551-566.

Avolio, B. J. & Bass, B. M. (2006). *Multifactor leadership questionnaire* (3rd ed.). Menlo Park, CA: Mind Garden, Inc.

Avolio, B. J. (1994). Total quality and leadership. In B. M. Bass & B. J. Avolio (Eds.),

Improving organizational effectiveness through transformational leadership (pp. 121–145). Thousand Oaks, CA: Sage.

Avolio, B. J., & Bass, B. M. (1991). *The full range of leadership development*. Center for Leadership Studies, Binghamton, NY.

Avolio, B. J., & Bass, B. M. (1995). Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *The Leadership Quarterly*, 6(2), 199-218.

Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire, manual and sampler set* (3rd ed.). MindGarden: Redwood City, CA.

Awan, H., Bhatti, I., Qureshi, A., & Bukhari, S. (2009). Critical total quality management factors and financial performance of the firm. *International Journal "Total Quality Management & Excellence"*, 37(3), 399-405.

Babbie, E. R. (1973). *Survey research methods*. Wadsworth Belmont, CA.

Badri, M. A., Davis, D., & Davis, D. (1995). A study of measuring the critical factors of quality management. *International Journal of Quality and Reliability Management*, 12(2), 36-53.

Baron, R.M. & Kenny, D.A. (1986). The Moderator-Mediator variable distinction in Social Psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Bass, B. (1998). *Transformational leadership: Industrial, military, and educational impact*. Lawrence Erlbaum Associates Mahwah, NJ.

Bass, B. M. (1974). The substance and the shadow. *American Psychologist*, 29(12), 870-886.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press New York.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational dynamics*, 18(3), 19-31.

Bass, B. M., & Avolio, B. J. (1995). *MLQ multifactor leadership questionnaire* . Redwood City. CA: Mind Garden.

Bass, B. M., & Avolio, B. J. (1997). *Full range leadership development: Manual for the Multifactor Leadership Questionnaire.* Palo Alto, CA: Mind Garden.

Bass, B., & Avolio, B. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications, Inc.

Bass, B., & Avolio, B. (1999). *Training full range leadership: A resource guide for training with the MLQ.* Palo Alto, CA: Mind Garden.

Bass, B.M., & Avolio, B.J. (1993). Transformational leadership: A response to critiques. In M.M. Chemers & R. Ayman (Eds.). *Leadership theory and research: Perspectives and direction* (pp.49–88). San Diego, CA: Academic Free Press.

Berrio, A. A. (2003). An organizational cultural assessment using the competing values framework: A profile of Ohio state university extension. *Journal of Extension*, 41(2), 206-223.

Berson, Y., & Linton, J. (2005). An examination of the relationships between leadership style, quality, and employee satisfaction in R & D versus administrative environments. *R and D Management*, 35(1), 51-60.

Bin Saeed, K. (1999). Perceptions on the Influence of Cost Issues on Quality Improvement Initiatives: A survey of Saudi Health Care Managers. *International Journal for Quality in Health Care,* 11(1), 59-65.

Black, A., & Porter, J. (1996). Identification of the critical factors of total quality management. *Decision Sciences*, 27, 1-21.

Blake, R. R., & Mouton, J. S. (1975). An overview of the grid. *Training and Development Journal*, 29(5), 29-37.

Bodla, M. A., & Nawaz, M. M. (2010). Comparative Study of Full Range Leadership Model among Faculty Members in Public and Private Sector Higher Education Institutes and Universities. *International Journal of Business and Management*, 5(4), 208-218.

Bourque, L. B., & Fielder, E. P. (2003). *How to conduct self-administered and mail surveys*. Sage Publications, Inc.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.

Bryman, A. (1992). *Charisma and leadership in organizations*. Sage Publications, London.

Bryman, A., & Cramer, D. (1994). *Quantitative data analysis for social scientists*. Routledge: London and New York, NY.

Burke, W., & Litwin, G. (1992). A causal model of organizational performance and change. *Journal of Management*, 18(3), 523-545.

Burns, J. M. (1978). *Leadership*. Harper and Row, New York.

Cambell, R. J. (2008). Change management in health care. *Heath Care Manager*, 27(1), 23-39.

Cameron, K. S., & Quinn, R. E. (2005). *Diagnosing and changing organizational culture: Based on the competing values framework*. Jossey-Bass Inc Pub, New York.

Cameron, K.S. (1997). "*Techniques for making organizations effective."* In Druckman, D., Singer, J. and Van Cott, H. (Eds.) Enhancing Organizational Performance. Washington, D.C.: National Academies Press. (39-64).

Carlson, D. S., & Perrewe, P. L. (1995). Institutionalization of organizational ethics through transformational leadership. *Journal of Business Ethics*, 14(10), 829-838.

Caroseli, M. (1991). *Total quality transformations.* Amherst, MA: Human Resource Development Press.

Cassell, C., & Symon, G. (1994). *Qualitative methods in organizational research: A practical guide.* Sage Publications Ltd, London.

Chang, S. C., & Lee, M. S. (2007). A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The Learning Organization*, 14(2), 155-185.

Chen, C. C., Chen, X. P., & Meindi, J. R.*(*1998). How can cooperation be fostered? The cultural effects of individualism–collectivism. *Academy of Management Review*, 23, 285–304.

Chen, L. Y. (2004). Examining the effect of organization culture and leadership behaviors on organizational commitment, job satisfaction, and job performance at small and middle-sized firms of Taiwan. *Journal of American Academy of Business*, 5(1/2), 432-438.

Chowdhury, M., Paul, H., & Das, A. (2007). The impact of top management commitment on total quality management practice: An exploratory study in the thai garment industry. *Global Journal of Flexible Systems Management*, 8(1/2), 17-29.

Coakes, S. J. & Steed, L. G. (2007). *SPSS analysis without anguish: version 14.0 for Windows*. Milton, Queensland: John Wiley & Sons Australia Ltd.

Coakes, S. j., & Steed, L. G. (2003). *SPSS analysis without anguish*. Sydney: John Wiley & Sons.

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*, (2nd ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates Publishers.

Cohen, J., Cohen, P., West, S. G., and Aiken, L. (2003). *Applied Multiple Regression/ Correlation. Analysis for the Behavioral Sciences* (3rd edition). Mahwah, NJ: Lawrence Erlbaum Associates.

Cooper, D. R., & Schindler, P. S. (2003). *Business Research Methods* (8th ed.) McGraw-Hill, New York.

Crosby, P. (1979). *Quality is free: The art of making quality certain*. New American Library, New York.

Damanhouri, A. M. (2002). Considering Total Quality Management in Ministry of Health Hospitals in Jeddah City in Saudi Arabia. Ph.D. dissertation, Aberystwyth University, Wales, United Kingdom.

Davies, H., Nutley, S., & Mannion, R. (2000). Organisational culture and quality of health care. *Quality in Health Care*, 9(2), 111.

Dean , J., & Bowen, D. (1994). Management theory and total quality: improving research and practice through theory development. *Academy of management review*, 19(3), 392-418.

DeBaylo, P. W. (1999). Ten reasons why the Baldrige model works. *Journal for Quality and Participation*, 24-29.

DeBerry, S. L.(2010) using transformational leadership to change organizational culture in a government agency. PhD dissertation, School of Business and Technology, Capella University, Minneapolis, USA.

Deming, W. (1986). *Out of the crisis*. Massachusetts Institute of Technology, Center for Advanced Engineering Study, Cambridge, MA.

Deming, W.E. (1982). *Quality Productivity and Competitive Position.* Massachusetts Institute of Technology, Center for Advanced Engineering Study, Cambridge, MA.

Denison, D. R., & Spreitzer, G. M. (1991). Organizational culture and organizational development: a competing values approach. *Research in organizational change and development*, 5(1), 1-21.

Detert, J., Schroeder, R., & Mauriel, J. (2000). A framework for linking culture and improvement initiatives in organizations. *Academy of management review*, 25(4), 850-863.

Doherty, A. J., & Danylchuk, K. E. (1996). Transformational and transactional leadership in interuniversity athletics management. *Journal of Sport Management*, 10(3), 292-309.

Douglas, T. J., & Fredendall, L. D. (2004). Evaluating the Deming Management Model of Total Quality in Services. *Decision Sciences*, 35(3), 393-422.

Dow, D., Samson, D., & Ford, S. (1999). Exploding the myth: do all quality management practices contribute to superior quality performance. *Production and Operations Management*, 8(1), 1-27.

Elenkov, D. S. (2002). Effects of leadership on organizational performance in Russian companies. *Journal of Business Research*, 55(6), 467-480.

Erkutlu, H. (2008). The impact of transformational leadership on organizational and leadership effectiveness: The Turkish case. *Journal of Management Development*, 27(7), 708-726.

Ettorre, B. (1996). Is the Baldrige still meaningful?. *Management Review*, 85, 28-43.

Everitt, B. S. And Dunn, G.(1983). *Advanced Methods of Data Exploration and Modelling*. Heinemann Educational Books, Ltd., London.

Feigenbaum, A. (1983). *Total Quality Control Handbook*. New York, McGraw-Hill.

Feigenbaum, A. (2007). The international growth of quality. *Quality Progress*, 40(2), 36.

Fiedler, F. E. (1967). *A theory of leader effectiveness*. McGraw-Hill, New York.

Fiedler, F. E., & Chemers, M. M. (1974). *Leadership and effective management*. Glenview, IL: Scott: Foresman and Company.

Fink, A. (2003). *The survey handbook*. Sage Publications, Inc., Oaks, CA.

Fisher, C., Barfield, J., Li, J., & Mehta, R. (2005). Retesting a model of the Deming management method. *Total Quality Management & Business Excellence*, 16(3), 401-412.

Fleishman, E.A. (1957) .'A Leadership Behavior Description for Industry' . In Stogdill, R.M. and Coons, A.E. (eds) *Leader Behavior: Its Description and Measurement* .Columbus, OH: The Ohio State University Bureau of Business Research., 120–133.

Flynn, B. B., & Saladin, B. (2001). Further evidence on the validity of the theoretical models underlying the Baldrige criteria. *Journal of Operations Management*, 19(6), 617-652.

Flynn, B. B., Schroeder, R. G.& Sadao, S., (1995). Relationship between JIT and TQM: practices and performance. *Academy of Management Journal*, 38(5), 1325-1360.

Flynn, B., Schroeder, R., & Sakakibara, S. (1994). A framework for quality management research and an associated measurement instrument. *Journal of Operations Management*, 11(4), 339-366.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.

Gabor, A. (1990). *The man who discovered quality.* New York: Random House.

GAO. (1991). *Management Practices: US Companies Improve Performance through Quality Efforts,* DC.GAO/NSIAD-91-190. U.S. Government Printing Office: Washington, DC.

Garvin, D. A. (1991). How the Baldrige Award really works. *Harvard Business Review*, 69(6), 80.

Gibson, J. L., Ivancevich, J. M., Donnelly, J. H., & Konopaske, R. (2003). *Organization: Behavior Structure Processes.* New York: McGraw-Hill Companies, Inc.

Goetsch, D & Davis, K. (2011). *Quality Management for Organizational Excellence:*

Introduction to Total Quality. Upper Saddle River, NJ: Prentice Hall.
Hackman, J., & Wageman, R. (1995). Total quality management: Empirical, conceptual, and practical issues. *Administrative Science Quarterly*, 40(2).
Hair, J. F., Black, C. W., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Sadle River, New Jersey: Prentice Hall.
Hair, J. F., Black, W.C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (5th ed.) Upper Sadle River, New Jersey: Prentice Hall.
Hammad, A., Kysia, R., Rabah, R., Hassoun, R., & Connelly, M. (1999). *Guide to Arab culture: Health care delivery to the Arab American community.* Dearborn, MI: Arab Community Center for Economic and Social Services.
Handfield, R., Ghosh, S., & Fawcett, S. (1998). Quality-Driven Change and Its Effects on Financial Performance. *Quality Management Journal*, 5(3), 13-33.
Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal of Occupational and Organizational Psychology*, 70(1), 19-34.
Hawkins, P. (1997) Organizational culture: Sailing between evangelism and complexity. *Human Relations*, 50, 417- 440.
Helfrich, C.D., Li, Y. F., Mohr, D. C., Meterko, M., & Sales, A. E. (2007). Assessing an organizational culture instrument based on the Competing Values Framework: exploratory and confirmatory factor analyses. *Implement Science*, 2(13).
Hellriegel, D., Jackson, S.E., Slocum, J., Staudé, G., Amos, T., Klopper, H.B., Louw, L. & Oosthuizen, T. (2004). *Management*,(2nd ed.). Cape Town: South Africa: Oxford University Press.
Hildebrandt, S., Kristensen, K., Kanji, G. & Dahlgaard, J.J. (1991) Quality culture and TQM. *Total Quality Management*, December, 1–15.
Hill, S., & Wilkinson, A. (1995). In search of TQM. *Employee Relations*, 17(3), 8-25.
Hill, W. A. (1973). Leadership style: Rigid or flexible?. *Organizational Behavior and Human Performance*, 9(1), 35-47.
Ho, D. C. K., Duffy, V. G., & Shih, H. M. (1999). An empirical analysis of effective TQM implementation in the Hong Kong electronics manufacturing industry. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 9(1), 1-25.
Hofstede, G. (1991). *Cultures and Organizations: Software of the Mind: Intercultural Cooperation and its Importance for Survival*. Cambridge, England: McGraw-Hill.
Hofstede, G. (2007). Asian management in the 21st century. *Asia Pacific Journal of Management*, 24(4), 411–420.
Hofstede, G., Neuijen, B., Ohayv, D., & Sanders, G. (1990). Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35(2).
House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative science quarterly*, 16(3), 321-339.
Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of applied psychology*, 78(6), 891-902.
Hoy, W. K., & Miskel, C. G. (1996). *Educational administration: Theory, research, and*

practice. McGraw-Hill, New York, NY.
Hughes,R. L., Ginnett, R.C., & Curphy, G. J. (1999). *Leadership: enhancing the lesson of experience.* Boston: McGraw-Hill.
Hussey, J., & Hussey, R. (1997). *Business Research: A practical guide for undergraduate and postgraduate students*. Macmillan, Basingstoke.
Iaquinto, A. L. (1999). Win a quality award and lose your competitive advantage. *Strategic Change*, 8(2), 95-101.
Idris, F., & Ali, K. (2008). The impacts of leadership style and best practices on company performances: Empirical evidence from business firms in Malaysia. *Total Quality Management & Business Excellence*, 19(1), 165-173.
Ingersoll, G., Kirsch, J., Merk, S., & Lightfoot, J. (2000). Relationship of organizational culture and readiness for change to employee commitment to the organization. *Journal of Nursing Administration*, 30(1), 11.
Ivancevich, J. M., & Mattheson, M. T. (1993). *Organizational Behavior and Management.* Burr Ridge, IL: Richard D. Irwin: Inc.
Ivancevich, J. M., Szilagyi, A. D., & Wallace, M. J. (1977). *Organizational behavior and performance*. California, CA: Goodyear Pub. Co.
Jabnoun, N., & Sedrani, K., (2005).TQM, culture, and performance in UAE manufacturing firms. *The Quality Management Journal*, 12 (4), 8-20.
Jackson, S. (1990). Calling in the gurus. *Director*, 44(3), 95-101.
Janis, R. S. (2003). An Examination of Bass's (1985) Leadership Theory in the Project Management Environment. PhD. Dissertation, Nova Southeastern University. United States.
Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of organizational Behavior*, 21(8), 949-964.
Jung, J., & Hong, S. (2008). Organizational citizenship behaviour(OCB), TQM and performance at the maquiladora. *International Journal of Quality & Reliability Management*, 25(8), 793-808.
Jung, J., Su, X., Baeza, M., & Hong, S. (2008). The effect of organizational culture stemming from national culture towards quality management deployment. *The TQM Magazine*, 20(6), 622-635.
Juran, J. (1989). *Juran on leadership for quality*: an executive handbook. New York, Free Pr.
Juran, J. M. (1994). The upcoming century of quality. *Quality Progress*, 27(8), 29-38.
Karuppusami, G., & Gandhinathan, R. (2006). Pareto analysis of critical success factors of total quality management. *The TQM Magazine*, 18(4), 372-385.
Kent, A., & Chelladurai, P. (2001). Perceived transformational leadership, organizational commitment, and citizenship behavior: A case study in intercollegiate athletics. *Journal of Sport Management*, 15(2), 135-159.
Khan, M.A. (2010). Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan – An Empirical Study. *International Journal of Business and Management*, 5 (9), 46-59.
Khan, M.A. (2011). Total quality management and organizational performance-moderating role of managerial competencies. *international journal of academic*

research, 3(5), 453-458.
Kim, U., Triandis, H. C., Kagitcibasi, C., Choi, S. C., & Yoon, G. *(*1994*). Individualism and collectivism: Theory, method and applications.* Newbury Park, CA*:* Sage Pres
Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: Do traits matter. *Academy of Management Executive,* 5(2), 48-60.
Kotter, J.P. and Heskett, J.L. (1992). *Corporate Culture and Performance*. Free Press, New York.
Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30, 607-610.
Lagrosen, Y., & Lagrosen, S. (2005). The effects of quality management-a survey of Swedish quality professionals. *International Journal of Operations and Production Management*, 25(10), 940.
Lakhal, L., Pasin, F., & Limam, M. (2006). Quality management practices and their impact on performance. *International Journal of Quality and Reliability Management*, 23(6), 625-646.
Lakshman, C. (2006). A theory of leadership for quality: Lessons from TQM for leadership theory. *Total Quality Management & Business Excellence*, 17(1), 41-60.
Laohavichien, T., Fredendall, L., & Cantrell, R. (2009). The Effects of Transformational and Transactional Leadership on Quality Improvement. *Quality Management Journal*, 16(2), 18.
Latham, J. (2008). Building bridges between researchers and practitioners: A collaborative approach to research in performance excellence. *Quality Management Journal*, 15(1), 8.
Lau, R., Zhao, X., & Xiao, M. (2004). Assessing quality management in China with MBNQA criteria. *International Journal of Quality and Reliability Management*, 21(7), 699-713.
LeBrasseur, R., Whissell, R., & Ojha, A. (2002). Organizational learning, transformational leadership and implementation of continuous quality improvement in Canadian hospitals. *Australian Journal of Management*, 27(2), 141.
Levy, P. (2006). *Industrial / organizational psychology: Understanding the workplace (2nd ed.).* Boston, MA: Houghton Mifflin Company.
Lewis, W. G., Pun, K. F., & Lalla, T. R. (2006). Exploring soft versus hard factors for TQM implementation in small and medium-sized enterprises. *International Journal of Productivity and Performance Management*, 55(7), 539-554.
Lim, B. (1995). Examining the organizational culture and organizational performance link. *Leadership & Organization Development Journal*, 16(5), 16-21.
Lord, R. G., De Vader, C., & Alliger, G. (1986). A meta-analysis between personality traits and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology*, 71, 402–410.
Mann, R. D. (1959). A review of the relationships between personality and performance in small groups. *Psychological Bulletin*, 56(4), 241-270.
Masi, R.J. and Cooke, R.A. (2000) .Effects of transformational leadership on subordinate motivation, empowering norms, and organizational productivity. *International Journal of Organizational Analysis*, 8(9), 16-47.

Mathew, J. (2007). The relationship of organisational culture with productivity and quality. *Employee Relations*, 29(6), 677-695.

Matthews, G., Deary, I. J., & Whiteman, M. C. (2003). *Personality traits.* Cambridge University Pr.

Mauro, J., & Mauro, N. (1999). The Deming leadership method: A behavioural and technical approach. *Cross Cultural Management*, 6(4), 3-4.

Mele, C., & Colurcio, M. (2006). The evolving path of TQM: towards business excellence and stakeholder value. *International Journal of Quality and Reliability Management*, 23(5), 464-489.

Metri, B. (2006). Total Quality Transportation Through Deming's 14 Points. *Journal of Public Transportation*, 9(4), 35-46

Metri, B. A. (2005). TQM critical success factors for construction firms. *Management*, 10(1), 61-72.

Milakovich, M. E. (1990). total quality management for public sector productivity improvement. *Public Productivity And Management Review*, XIV(1), 195-215.

Ministry Of Health. (2006). *Annual health report in 1427 H*. Kingdom of Saudi Arabia: Ministry Of Health.

Ministry of Health. (2007). *Health Statistical Year Book*. Saudi Arabia: Ministry Of Health.

Morgan, C., & Murgatroyd, S. (1994*). Total Quality Management in the Public Sector: An International Perspective.* Buckingham :Open University Press,

Motwani, J. (2001). Measuring critical factors of TQM. *Measuring Business Excellence*, 5(2), 27-30.

Motwani, J. G., Mahmoud, E., & Rice, G. (1994). Quality Practices of Indian Organizations:: An Empirical Analysis. *International Journal of Quality & Reliability Management*, 11(1).

Murphy, K., & Davidshofer, C. (1998). *Psychological testing: Principles and applications (4th Ed).* Englewood Cliffs, NJ: Prentice Hall.

National Institute of Standards and Technology(NIST). (2009). *Malcolm Baldrige National Quality Award 2009 Health Care Criteria for Performance Excellence*: Gaithersburg, MD.

Nelson, D. L., & Quick, J. C. (1995). *Organizational behavior: Foundations, realities, and challenges.* South-Western Pub.

Ng, P. K., Goh, G. G., & Eze, U. C. (2010). Leadership: An Exploratory Study on Leadership in a Semiconductor Manufacturing Firm's Performance. *International Journal of Business Management Science* , 3(2), 231-250.

Northouse, P. G,. (2001). *Leadership theory and practice*, 2nd ed. Thousand Oaks, CA: Sage Publications.

Northouse, P. G. (1997). *Leadership: Theory and practice.* Thousand Oaks, CA: Sage.

Oqbonnan, E., & Harris, L. (2000). Leadership style, organizational culture and performance: empirical evidence from UK companies. *The International Journal of Human Resource Management*, 11(4), 766-788.

O'Reilly, C., Chatman, J., & Caldwell, D. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of management Journal*, 34(3), 487-516.

Øvretveit, J. (2000). Total quality management in European healthcare. *International*

Journal of Health Care Quality Assurance, 13(2), 74 – 80.

Ovretveit, J. (2005). *The leader's role in quality and safety improvement: A review of research and guidance (4th ed).* Stockholm, Sweden: Association of County Councils.

Pallant, J. (2001) *SPSS Survial Manual: A Step by Step Guide to Data Analysis Using SPSS. Version 10*. Buckingham: Open University Press.

Pallant, J. (2003). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (1st ed.).* Australia: Allen & Unwin.

Pannirselvam, G. P., & Ferguson, L. A. (2001). A study of the relationships between the Baldrige categories. *International Journal of Quality and Reliability Management*, 18(1), 14-34.

Peterson, R.S., Smith, D.B., Martorana, P.V., & Owens, P.D. (2003). The impact of chief executive officer personality on top management team dynamics: One mechanism by which leadership affects organizational performance. *Journal of Applied Psychology*, 88, 795–808.

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers'' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly*, (1), 107-142.

Powell, T. (1995). Total quality management as competitive advantage: a review and empirical study. *Strategic Management Journal*, 16(1), 15-37.

Prajogo, D. I., & McDermott, C. M. (2005). The relationship between total quality management practices and organizational culture. *International Journal of Operations and Production Management*, 25(11), 1101.

Puffer, S. M. & McCarthy, D. J. (1996). A framework for leadership in a TQM context. *Journal of Quality Management*, 1(1), 109-130.

Quazi, H. A., & Padibjo, S. R. (1998). A journey toward total quality management through ISO 9000 certification-a study on small-and medium-sized enterprises in Singapore. *International Journal of Quality and Reliability Management*, 15(4), 489-508.

Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, 29(3), 363-377.

Rabbani, F., Jafri, W., Abbas, A., Pappas, G., Jahan, F., Syed, NA, Syed, I. A., Brommels, M., & Tomson, G. (2009). Culture and quality care perceptions in a Pakistani hospital. *International Journal of Health Care Quality Assurance*, 22(5), 498-513.

Rad, A. (2006). The impact of organizational culture on the successful implementation of total quality management. *The TQM Magazine*, 18(6), 606-625.

Rahman, M. N. A., & Tannock, J. D. T. (2005). TQM best practices: Experiences of Malaysian SMEs. *Total Quality Management & Business Excellence*, 16(4), 491-503.

Raja, M., Natha, P., Deshmukh, S., & Wadhwa, S. (2007). Quality award dimensions: a strategic instrument for measuring health service quality. *International Journal of Health Care Quality Assurance*, 20(5), 363-378.

Rao, S. S., Luis, T., & Solis, E. (1997). Does ISO 9000 have an effect on quality

management practices? An international empirical study. *Total Quality Management & Business Excellence,* 8(6), 335-346.
Reitz, H. J. (1981). *Behavior in organizations*. Homewood, IL: Richard d Irwin.
Remenyi, D., Williams, B., Money, A. & Swartz, E. (1998). *Doing research in business and management: an introduction to process and method.* Sage Publications Ltd.
Robbins, S. P. (1994). *Essentials of organization behavior*. Prent Hall, E. Cliffs, NJ, 202-226.
Ruggieri, A., & Merli, R. (1998). Critical factors for the implementation of total quality management in Italy: An empirical analysis. *Total Quality Management*, 9(4), 210-212.
Rungtusanatham, M., Forza, C., Filippini, R., & Anderson, J. C. (1998). A replication study of a theory of quality management underlying the Deming management method: insights from an Italian context. *Journal of Operations Management*, 17(1), 77-95.
Ryan, S. (2004). The spirit of leadership and a commitment to quality transform SSM health care system. *Journal of Organizational Excellence,* 23(3), 15-21.
Sahney, V., & Warden, G. (1991). The quest for quality and productivity in health services. *Frontiers of Health Services Management*, 7(4), 2-40.
Salaheldin, S. I. (2009). Problems, success factors and benefits of QCs implementation a case of QASCO. *TQM Journal*, 21(1), 87-100.
Samson, D., & Terziovski, M. (1999). The relationship between total quality management practices and operational performance. *Journal of operations management*, 17(4), 393-409.
Saraph, J., Benson, P., & Schroeder, R. (1989). An instrument for measuring the critical factors of quality management. *Decision Sciences*, 20(4), 810-829.
Saunders, M., Lewis, P., & Thornhill, A. (2000). *Research methods for business studies (2nd ed.)*. Harlow: Printice Hall.
Schein, E. (1985). *Organizational culture and leadership*. San Francisco: Jossey.
Schein, E. (1996a). Culture: The missing concept in organizational studies. *Administrative Science Quarterly*, 41(2), 229-240.
Schein, E. (2004). *Organizational culture and leadership*. San Francisco: Jossey-Bass.
Schmele, J., & Foss, S. (1989). The Quality Management Maturity Grid. *Journal of Nursing Administration*, 19(9), 25-34.
Schwab, D. P. (2005). *Research Methods for Organizational Studies*. Lawrence Erlbaum Associates, New Jersey.
Sekaran, U. (2003). *Research methods for business: A skill building approach (4th ed).* New York: John Wiley.
Sekaran, U. (2006). *Research methods for business: A skill building approach (4th ed).* Academic Internet Publ.
Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization.* Currency Doubleday, New York.
Sengupta, S. (2004). To err is human. *Optimize*, Jan 2004, pp 55-61.
Shaw, P. (2002). *Changing conversations in organizations: A complexity approach to change.* New York & London: Routledge.
Shortell , S. M., Levin, D.Z., & O'Brien, J. L. (1995). Assessing the evidence on CQI: is the glass half empty or half full?. *Hospital & Health Services Administration*,

40(1), 4-24.
Shortell, S., Gillies, R., & Devers, K. (1995). Reinventing the American hospital. *The Milbank Quarterly*, 73(2), 131-160.
Shortell, S., O'Brien, J., Carman, J., Foster, R., Hughes, E., Boerstler, H., et al. (1995). Assessing the impact of continuous quality improvement/total quality management: concept versus implementation. *Health Services Research*, 30(2), 377.
Sila, I., & Ebrahimpour, M. (2005). Critical linkages among TQM factors and business results. *International Journal of Operations and Production Management*, 25(11), 1123-1155.
Sims, H. P., & Lorenzi, P. (1992). *The new leadership paradigm: Social learning and cognition in organizations*. Newbury Park, CA: Sage.
Sosik, J. J., & Dionne, S. D. (1997). Leadership styles and Deming's behavior factors. *Journal of Business and Psychology*, 11(4), 447-462.
Sosik, J. J., Avolio, B. J., & Kahai, S. S. (1997). Effects of leadership style and anonymity on group potency and effectiveness in a group decision support system environment. *Journal of Applied Psychology*, 82(1), 89-103.
Sousa, R., & Voss, C. (2002). Quality management re-visited: a reflective review and agenda for future research. *Journal of Operations Management*, 20(1), 91-109.
Sowmya, C. S. (2012). "E-Biz Challenges Model of Leadership" – Learnings From The Animal World. *International Journal of Multidisciplinary Research*, 2(1), 64-76.
Stogdill, R. M. (1948). Personal factors associated with leadership; a survey of the literature. *The Journal Of Psychology*, 25, 35-71.
Stogdill, R. M. (1974). *Handbook of leadership: a survey of theory and research*. New York: Free Press.
Sutermeister, R. A. (1969). *People and productivity*. New York: McGraw-Hill.
Tabish, S. (1998). Towards development of professional management in Indian hospitals. *Journal of Management in Medicine*, 12, 109-119.
Taormina, R. J. (2008). Interrelating leadership behaviors, organizational socialization, and organizational culture. *Leadership & Organization Development Journal*, 29(1), 85-102.
Taylor, W. A., & Wright, G. H. (2003). A longitudinal study of TQM implementation: factors influencing success and failure. *Omega*, 31(2), 97-111.
Taylor, W. A., & Wright, G. H. (2003). The impact of senior managers' commitment on the success of TQM programmes. *International Journal Of Manpower*, 24(5), 535-550.
Trivellas, P., & Dargenidou, D. (2009). Organisational culture, job satisfaction and higher education service quality: The case of Technological Educational Institute of Larissa. *The TQM Journal*, 21(4), 382-399.
Van de Ven, A., Poole, A., & Scott, M. (1995). Explaining development and change in organizations. *Academy of Management Review*, 20, 510-541.
Vaus, D. A. (1995). *Surveys in social research*. North Sydney: Allen & Unwin.
Vouzas, F., & Gotzamani, K. (2005). Best practices of selected Greek organizations on their road to business excellence: the contribution of the new ISO 9000: 2000 series of standards. *The TQM Magazine*, 17(3), 259-266.

Wahid, R., & Corner, J. (2009). Critical success factors and problems in ISO 9000 maintenance. *International Journal of Quality & Reliability Management*, 26(9), 881-893.

Waldman, D. A. (1994). Designing performance management systems for total quality implementation. *Journal of Organizational Change Management*, 7, 31-31.

Walston, S., Al-Harbi, Y., & Al-Omar, B. (2008). The changing face of healthcare in Saudi Arabia. *Annals of Saudi Medicine*, 28(4), 243-250.

Wardhani, V., Utarini, A., van Dijk, J., Post, D., & Groothoff, J. (2009). Determinants of quality management systems implementation in hospitals. *Health policy*, 89(3), 239-251.

Weber, M. (1947). *The Theory of Social and Economic Organization*. Trans: AM Henderson and T. Parsons. NewYork: Oxford University Press.

Wilkinson, A., Marchington, M., & Goodman, J. (1992). Total quality management and employee involvement. *Human Resource Management Journal*, 2(4), 1-20.

Williams, J. C. (1978). *Human behavior in organizations*. Cincinnati, OH: South-Western Pub. Co.

Wilson, D. D., & Collier, D. A. (2000). An empirical investigation of the Malcolm Baldrige National Quality Award causal model. *Decision Sciences*, 31(2), 361-383.

Witt, L. A., & Ferris, G. R. (2003). Social skill as moderator of the conscientiousness-performance relationship: Convergent results across four studies. *Journal of Applied Psychology*, 88(5), 809-821.

World Health Organization. (2006). *Country Cooperation Strategy for WHO and Saudi Arabia 2006-2011*. Cairo: Regional Office for the Eastern Mediterranean, World Health Organization.

Wu, H. Y., Wiebe, H. A., & Politi, J. (1997). Self-assessment of total quality management programs. *Engineering Management Journal*, 9(1), 25-32.

Xenikou, A., & Simosi, M. (2006). Organizational culture and transformational leadership as predictors of business unit performance. *Journal of Managerial Psychology*, 21(6), 566-579.

Xirasagar, S. (2008). Transformational, transactional and laissez-faire leadership among physician executives. *Journal of Health Organization and Management*, 22(6), 599-613.

Yammarino, F. J., & Bass, B. M. (1990). Transformational leadership and multiple levels of analysis. *Human Relations*, 43(10), 975.

Yang, C.C. (2003). The Establishment of a TQM System for the Health Care Industry. *The TQM Magazine*, 15,(2), 93-98.

Yiing, L. H., & Ahmad, K. Z. B. (2009). The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance. *Leadership & Organization Development Journal*, 30(1), 53-86.

Yong, K. T., & Pheng, L. S. (2008). Organizational culture and TQM implementation in construction firms in Singapore. *Construction Management and Economics*, 26(3), 237-248.

Yukl, G. (1989). Managerial leadership: A review of theory and research. *Journal of management*, 15(2), 251.

Yukl, G. (1999). An evaluative essay on current conceptions of effective leadership. *European Journal of Work and Organizational Psychology*, 8(1), 33-48.

Yukl, G. (2002). *Leadership in Organizations*. Prentice Hall. Upper Saddle River, NJ.

Yukl, G. A., & Van Fleet, D. D. (1982). Cross-situational, multimethod research on military leader effectiveness. *Organizational Behavior and Human Performance*, 30(1), 87-108.

Yusof, S. R. M., & Aspinwall, E. M. (2000). Critical success factors in small and medium enterprises: survey results. *Total Quality Management & Business Excellence*, 11(4), 448-462.

APPENDIX A

English Questionnaire

Dear

It is my pleasure to inform you that I am conducting a pilot and field study for the purpose of making a scientific research in order to be awarded the PHD degree in Business Administration from the University of Utara in Malaysia. The title of the study is “leadership styles, organizational culture and their relationship with quality management practices in public hospitals in Saudi Arabia’’.

Will you kindly answer the questions on the attached questionnaire as your cooperation in this respect will be of great effect in concluding valuable results from this study.

The researcher wants to give every assurance that all information given in this questionnaire will remain, and dealt with confidentially, and will be used solely for the purpose of scientific research.

Thanking your co-operation,

Researcher

Mohammad Alharbi

BACKGROUND INFORMATION

This part contains statements concerning general information about the participants Please read the following statements and checks the category that best describes your situation.

1. Type Of Hospital General ( ) Specialist ( )

2. Department : .....

3. Gender:

   Male ( ) Female ( )

4. Age:

   20-30 ( ) 31-40 ( ) 41-50 ( ) 51 years and above ( )

5. Nationality:

   Saudi ( ) Non-Saudi ( )

6. Academic Qualification:

   Higher School ( ) Bachelor ( ) Master degree ( )

   PhD degree ( ) Others ( )

7. Position:

   Under one Year ( ) 1-5 year ( ) 6-10 years ( )

   11-15 years ( ) 16-20 years ( ) More than 20 years ( )

PART 1: QUALITY MANAGEMENT PRACTICES SURVEY

Instructions

Please indicate your level of agreement or disagreement with the following statements:

Key:

1= strongly disagree 2= disagree 3= neither disagree nor agree 4= agree 5= strongly agree

No	ITEMS **TRAINING AND EDUCATION**	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
1	Hospital employees are given education and training in how to identify and act on quality improvement opportunities	1	2	3	4	5
2	Hospital employees are given education and training in statistical and other quantitative methods that support quality improvement.	1	2	3	4	5
3	Hospital employees are given the needed education and training to improve job skills and performance.	1	2	3	4	5
4	Hospital employees are rewarded and recognized (e.g., financially and/or otherwise) for improving quality	1	2	3	4	5

	TEAMWORK AND INVOLVEMENT					
5	Teamwork and consensus are important in our hospital	1	2	3	4	5
6	Our hospital encourages employees to participate in decision making	1	2	3	4	5
7	Our hospital tries to understand the point of view of patients in defining the quality of health services.	1	2	3	4	5
8	Our hospital‘s senior management encourages teamwork across units and disciplines.	1	2	3	4	5
	STRATEGIC QUALITY PLANNING					
9	Hospital employees are given adequate time to plan for and test improvements.	1	2	3	4	5
10	Each department and work group within this hospital maintains specific goals to improve quality	1	2	3	4	5
11	The hospital's quality improvement goals are known throughout the organization.	1	2	3	4	5
12	Hospital employees are involved in developing plans for improving quality.	1	2	3	4	5
13	Middle managers (e.g., department heads, program directors, and first line supervisors) are playing a key role in setting priorities for quality improvement	1	2	3	4	5

14	External customers are playing a key role in setting priorities for quality improvement	1	2	3	4	5
15	Non-managerial employees are playing a key role in setting priorities for quality improvement	1	2	3	4	5
	CUSTOMER FOCUS					
16	The hospital does a good job of assessing current patient needs and expectations.	1	2	3	4	5
17	Hospital employees promptly resolve patient complaints.	1	2	3	4	5
18	Patients' complaints are studied to identify patterns and prevent the same problems from recurring.	1	2	3	4	5
19	The hospital uses data from patients to improve services	1	2	3	4	5
20	The hospital does a good job of assessing physician satisfaction with hospital services.	1	2	3	4	5
21	The hospital uses data on customer expectations and/or satisfaction when designing new services.	1	2	3	4	5
	INFORMATION AND ANALYSIS					
22	The hospital collects a wide range of data and information about the quality of care and services.	1	2	3	4	5
23	The hospital uses a wide range of data and information about the quality of care and services to make improvements.	1	2	3	4	5

24	The hospital continually tries to improve how it uses data and information on the quality of care and services.	1	2	3	4	5
25	The hospital continually tries to improve the accuracy and relevance of its data on the quality of care and services provided.	1	2	3	4	5
26	The hospital continually tries to improve the timeliness of its data on the quality of care and services provided	1	2	3	4	5
27	The hospital compares its data to data on the quality of care and services at other hospitals.	1	2	3	4	5
	CONTINUOUS IMPROVEMENT					
28	Associates in the hospital try to improve the quality of their service.	1	2	3	4	5
29	Associates in the hospital believe that quality improvement is their responsibility.	1	2	3	4	5
30	Associates in the hospital analyze their work services to look for ways of doing a better job.	1	2	3	4	5
	PROCESS MANAGEMENT					
31	Quality data (defects, complaints, outcomes, time, satisfaction, etc.) are available.	1	2	3	4	5
32	Quality data are timely.	1	2	3	4	5

33	Quality data are used as tools to manage quality.	1	2	3	4	5
34	Quality data are available to hourly workers.	1	2	3	4	5
35	Quality data are available to managers and supervisors.	1	2	3	4	5
36	Quality data arc used to evaluate supervisor and managerial performance	1	2	3	4	5
	ROLE OF THE QUALITY DEPARTMENT					
37	Visibility of the quality department.	1	2	3	4	5
38	Quality department's access to divisional top management.	1	2	3	4	5
39	Autonomy of the quality department.	1	2	3	4	5
40	Amount of coordination between the quality department and other departments.	1	2	3	4	5
41	Effectiveness of the quality department in improving quality.	1	2	3	4	5

PART2: LEADERSHIP STYLES QUESTIONNAIRE

Name of Leader: _____Date:_____

Hospital ID #: _____Leader ID #: _____

This questionnaire is used to describe the leadership style of the above-mentioned individual as you perceive it. Answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.**

Please answer this questionnaire anonymously.

Important (necessary for processing): Which best describes you?

___ I am at a higher organizational level than the person I am rating.

___ The person I am rating is at my organizational level.

___ I am at a lower organizational level than the person I am rating.

___ Other than the above.

Thirty six descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all , Once in a while, Sometimes , Fairly often, Frequently, if not always.

1 2 3 4 5

The Person I Am Rating. . .

No	ITEMS	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
1	Provides me with assistance in exchange for my efforts	1	2	3	4	5
2	Re-examines critical assumptions to question whether they are appropriate	1	2	3	4	5
3	Fails to interfere until problems become serious	1	2	3	4	5
4	Focuses attention on irregularities, mistakes, exceptions, and deviations from standards	1	2	3	4	5
5	Avoids getting involved when important issues arise	1	2	3	4	5
6	Talks about his/her most important values and beliefs	1	2	3	4	5
7	Is absent when needed	1	2	3	4	5
8	Seeks differing perspectives when solving problems	1	2	3	4	5
9	Talks optimistically about the future	1	2	3	4	5
10	Instills pride in me for being associated with him/her	1	2	3	4	5
11	Discusses in specific terms who is responsible for achieving performance targets	1	2	3	4	5
12	Waits for things to go wrong before taking action	1	2	3	4	5
13	Talks enthusiastically about what needs to be accomplished	1	2	3	4	5

14	Specifies the importance of having a strong sense of purpose	1	2	3	4	5
15	Spends time teaching and coaching	1	2	3	4	5
16	Makes clear what one can expect to receive when performance goals are achieved	1	2	3	4	5
17	Shows that he/she is a firm believer in "If it ain't broke, don't fix it."	1	2	3	4	5
18	Goes beyond self-interest for the good of the group	1	2	3	4	5
19	Treats me as an individual rather than just as a member of a group	1	2	3	4	5
20	Demonstrates that problems must become chronic before taking action	1	2	3	4	5
21	Acts in ways that builds my respect	1	2	3	4	5
22	Concentrates his/her full attention on dealing with mistakes, complaints, and failures	1	2	3	4	5
23	Considers the moral and ethical consequences of decisions	1	2	3	4	5
24	Keeps track of all mistakes	1	2	3	4	5
25	Displays a sense of power and confidence	1	2	3	4	5
26	Articulates a compelling vision of the future	1	2	3	4	5
27	Directs my attention toward failures to meet standards	1	2	3	4	5
28	Avoids making decisions	1	2	3	4	5
29	Considers me as having different needs, abilities, and aspirations from others	1	2	3	4	5
30	Gets me to look at problems from many different angles	1	2	3	4	5
31	Helps me to develop my strengths	1	2	3	4	5
32	Suggests new ways of looking at how to complete assignments	1	2	3	4	5
33	Delays responding to urgent questions	1	2	3	4	5

34	Emphasizes the importance of having a collective sense of mission	1	2	3	4	5
35	Expresses satisfaction when I meet expectations	1	2	3	4	5
36	Expresses confidence that goals will be achieved	1	2	3	4	5

PART 3: ORGANIZATIONAL CULTURE SURVEY

Instructions

Please indicate your level of agreement or disagreement with the following statements:

Key:

1= strongly disagree 2= disagree 3= neither disagree nor agree 4= agree 5= strongly agree

No	ITEMS DOMINANT CHARACTERISTICS	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
1	The hospital is a very special place. It is like an extended family. People seem to share a lot of themselves.	1	2	3	4	5
2	The hospital is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.	1	2	3	4	5
3	The hospital is very production oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.	1	2	3	4	5
4	The hospital is a very formalized and structured place. Bureaucratic procedures generally govern what people do.	1	2	3	4	5

	HOSPITAL LEADERS					
5	The leaders of the hospital are generally considered to be mentors, facilitators, or parent figures.	1	2	3	4	5
6	The leaders of the hospital are generally considered to be entrepreneurs, innovators, or risk takers	1	2	3	4	5
7	The leaders of the organization are generally considered to be hard-drivers, producers, or competitors.	1	2	3	4	5
8	The leaders of the hospital are generally considered to be coordinators, organizers, or efficiency experts.	1	2	3	4	5
	MANAGEMENT OF EMPLOYEES					
9	The management style in the hospital is characterized by teamwork, consensus and participation.	1	2	3	4	5
10	The management style in the hospital is characterized by individual risk-taking, innovation, flexibility, and uniqueness	1	2	3	4	5
11	The management style in the hospital is characterized by hard-driving competitiveness, goal directedness, and achievement.	1	2	3	4	5
12	The management style in the hospital is characterized by careful monitoring of performance, longevity in position, and predictability.	1	2	3	4	5
	HOSPITAL GLUE					
13	The glue that holds the hospital together is loyalty and mutual trust. Commitment to this hospital runs high.	1	2	3	4	5
14	The glue that holds the hospital together is orientation toward innovation and development. There is an emphasis on being on the cutting edge.	1	2	3	4	5
15	The glue that holds the hospital together is the emphasis on production and goal accomplishment. Marketplace	1	2	3	4	5

	aggressiveness is a common theme.					
16	The glue that holds the hospital together is formal rules and policies. Maintaining a smooth running hospital is important.	1	2	3	4	5
	STRATEGIC EMPHASES					
17	The hospital emphasizes human development. High trust, openness and participation persist.	1	2	3	4	5
18	The hospital emphasizes acquiring new resources and meeting new challenges. Trying new things and prospecting for new opportunities are valued.	1	2	3	4	5
19	The hospital emphasizes competitive actions and achievement. Measurement targets and objectives are dominant.	1	2	3	4	5
20	The hospital emphasizes permanence and stability. Efficient, smooth operations are important.	1	2	3	4	5
	CRITERIA OF SUCCESS					
21	The hospital defines success on the basis of development of human resources, teamwork, and concern for people.	1	2	3	4	5
22	The hospital defines success on the basis of having the most unique or the newest products. It is a product leader and innovator.	1	2	3	4	5
23	The hospital defines success on the basis of market penetration and market share. Competitive market leadership is key.	1	2	3	4	5
24	The hospital defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low cost production are critical.	1	2	3	4	5

APPENDIX B

Arabic Questionnaire

سعادة/ المحترم

السلام عليكم ورحمة الله وبركاته

أفيدكم بأنني أقوم بدراسة استطلاعية ميدانية للقيام ببحث علمي بعنوان (تأثير أنماط القيادة والثقافة على تطبيقات إدارة الجودة بمستشفيات وزارة الصحة) للحصول على درجة الدكتوراه في مجال الإدارة الصحية من جامعة أوتارا بماليزيا.

الرجاء التكرم بتوزيع هذه الاستبانة على مدراء الادارات والأقسام المختلفة لديكم بالمستشفى ليتم الإجابة على أسئلة الاستقصاء المرفقة من قبلهم , وسوف يكون لتعاونكم أثر كبير للتوصل إلى نتائج قيمة لهذه الدراسة.

ويود الباحث أن يؤكد أن جميع البيانات الواردة بهذا الاستقصاء سوف يتم معالجتها بطريقة سرية ولن تستخدم إلا في أهداف البحث العلمي فقط.

شاكرين لكم تعاونكم

الباحث

محمد فالح الحربي

للاستفسار عن أية أسئلة أو نقاط غير مفهومة أرجو التواصل عن طريق التلفون أو الايميل أدناه:

E-mail: mfh2@hotmail.com

الرجاء التكرم بوضع علامة(√) أمام العبارة المناسبة

بيانات عامة:

1- **نوع المستشفى** عام ( ) تخصصي ( )

2- **إسم الادارة أو القسم :** .....

3- **الجنس:**

ذكر ( ) أنثى ( )

4- **الجنسية:**

سعودي ( ) غير سعودي ( )

5- **العمر:**

أقل من 20 سنة ( ) 20 - 30 سنة ( ) 31 – 40 سنة ( )

41 – 50 سنة ( ) 51 سنة فأكثر ( )

6- **المستوى التعليمي:**

ثانوي ( ) بكالوريوس ( ) ماجستير ( ) دكتوراه ( ) غير ذلك ( )

7- **عدد السنوات التي قضيتها في هذه الإدارة:**

أقل من سنة ( )

1 – 5 سنة ( )

6 – 10 سنوات ( )

11 – 15 سنة ( )

16 – 20 سنة ( )

أكثر من 20 سنة ( )

الرجاء تحديد درجة اتفاقك أو عدم اتفاقك مع الجمل التالية بوضع علامة (√) تحت الخانة المناسبة

م		غير موافق بشدة	غير موافق	لا موافق أو غير موافق	موافق	موافق بشدة
	التدريب والتعليم					
1	*يتم إعطاء موظفي المستشفى التعليم والتدريب اللازم في كيفية التعرف على الفرص المتاحة لتحسين الجودة.*					
2	*يتم إعطاء موظفي المستشفى التعليم والتدريب في الأساليب الإحصائية والطرق الكمية الأخرى لدعم تحسين الجودة.*					
3	*يحصل موظفي المستشفى على التعليم والتدريب اللازم لتحسين مهارات العمل والأداء.*					
4	*يحصل موظفي المستشفى على المكافآت والتقدير سواء ماليا أو غير ذلك لتحسين جودة.*					
	فرق العمل والمشاركة					
5	*العمل الجماعي والتوافق في الآراء مهمه في هذا المستشفى.*					
6	*هذا المستشفى يشجع الموظفين على المشاركة في إتخاذ القرارات.*					
7	*المستشفى لدينا يحاول فهم وجهة نظر المرضى في تحديد نوعية الخدمات الصحية.*					
8	*إدارة المستشفى تشجع العمل الجماعي بالأقسام والإدارات داخل المستشفى.*					
	التخطيط الاستراتيجي للجودة					
9	*يتم إعطاء موظفي المستشفى الوقت الكافي للتخطيط واختبارات تحسينات الجودة.*					
10	*كل الادارات وفرق العمل داخل المستشفى لديها أهداف خاصة لتحسين الجودة.*					
11	*أهداف تحسين الجودة بالمستشفى معروفة لجميع العاملين.*					
12	*يشترك جميع موظفي المستشفى في وضع خطط تحسين الجودة.*					
13	*مدراء الادارات الوسطى (رؤساء الاقسام , مدراء الادارات) يلعبون دوراً أساسي في وضع أولويات تحسين الجودة.*					
14	*المرضى يلعبون دوراً أساسياً في وضع أولويات تحسين الجودة.*					

15	موظفي الادارات والاقسام يلعبون دوراً أساسياً في وضع أولويات تحسين الجودة.					
	التركيز على العملاء					
16	المستشفى يقوم بعمل جيد لتقييم احتياجات المرضى الحالية وتوقعاتهم المستقبلية.					
17	موظفي المستشفى يقومون بحل شكاوى المرضى على وجة السرعة.					
18	تدرس شكاوى المرضى للتعرف على أنماط المشاكل المتكررة ومنعها من الحدوث مرة أخرى.					
19	يقوم المستشفى بإستخدام البيانات والمعلومات من المرضى لتحسين الخدمات الصحية.					
20	المستشفى يقوم بعمل جيد لتقييم رضاء الأطباء من خدمات المستشفى المقدمة.					
21	يقوم المستشفى بإستخدام البيانات من توقعات المرضى أو رضاءهم عند تقديم خدمات جديدة.					
	المعلومات والتحليل					
22	المستشفى يقوم بجمع مجموعة واسعة من البيانات والمعلومات حول نوعية الرعاية والخدمات الصحية.					
23	المستشفى يستخدم مجموعة واسعة من البيانات والمعلومات حول نوعية الرعاية والخدمات المقدمة لإدخال تحسينات على الجودة.					
24	المستشفى يحاول باستمرار لتحسين طريقة استخدام البيانات والمعلومات وذلك لتحسين نوعية الخدمات الطبية المقدمة.					
25	المستشفى يحاول باستمرار لتحسين دقة وأهمية البيانات الخاصة به وذلك لتحسين نوعية الخدمات الطبية المقدمة.					
26	المستشفى يحاول باستمرار لتحسين توقيت بياناته على نوعية الرعاية والخدمات المقدمة.					
27	يقوم المستشفى بمقارنة بياناته عن جودة الخدمات الصحية مع المستشفيات الأخرى.					
	التحسين المستمر					
28	جميع العاملين بالمستشفى يحاولون تحسين نوعية الخدمات الصحية المقدمة.					
29	جميع العاملين بالمستشفى يعتقدون ان تحسين الجودة من مسؤلياتهم.					
30	جميع العاملين بالمستشفى يقومون بتحليل الخدمات المقدمة للبحث عن أفضل الطرق للقيام بعمل أفضل.					

	إدارة العمليات					
31	*بيانات الجودة مثل (العيوب والشكاوي والنتائج ، والوقت ، والرضاء ، الخ) متاحة للجميع .*					
32	*بيانات الجودة تأتي في الوقت المناسب.*					
33	*بيانات الجودة تستخدم كأدوات لإدارة الجودة.*					
34	*بيانات الجودة متوفرة لجميع الموظفيين العاديين بالمستشفى.*					
35	*بيانات الجودة متوفرة لجميع مدراء ورؤساء الأقسام .*					
36	*بيانات الجودة تستخدم لتقييم اداء المدراء ورؤساء الأقسام.*					
	دور إدارة الجودة					
37	*رؤية إدارة الجودة واضحة.*					
38	*إدارة الجودة لها الحق بالمشاركة وضع قرارات الادارة العلياء.*					
39	*إدارة الجودة مستقلة بقرارتها ومرتبطة مباشرة بالمدير العام للمستشفى.*					
40	*يوجد مقدار من التنسيق اللازم بين إدارة الجودة وغيرها من الإدارات داخل المستشفى.*					
41	*إدارة الجودة فعالة بتحسين الجودة بالمستشفى.*					

استبيان القيادة متعددة العوامل

نموذج من يقوم بالتقييم

يستخدم هذا الاستبيان لوصف اسلوب القيادة الخاص بمدير المستشفى كما تراه انت. يرجى الاجابة على كافة البنود الموجودة على ورقة الاجابة هذه. اذا كان اي بند غير ملائم او اذا كنت غير متأكد او لا تعرف الاجابة، الرجاء ترك مكان الاجابة خالياً.

بإدناه تجد 36 جملة وصفية. الرجاء الحكم على كل جملة من ناحية ملاءمتها للشخص الذي تقوم بوصفه بوضع علامة (√) تحت الخانة المناسبة.

الشخص الذي أقوم بتقييمه:

م	الوصف	أبداً بالمرة	مرة واحدة	أحياناً	غالبا	متكرر إذا لم يكن دائما
1	يوفر لي المساعدة لقاء بذل جهودي					
2	يعيد تفحص الافتراضات الاساسية للتساؤل عن صحتها					
3	يفشل في التدخل الى ان تتفاقم المشكلة					
4	يركز اهتمامه على الامور غير المعتادة و الاخطاء والاستثناءات والانحرافات عن المعيار					
5	ينأى بنفسه عن الانخراط في الامور الهامة الطارئة					
6	يتحدث حول اهم القيم والمعتقدات لديه					
7	يغيب حين اكون في حاجة اليه					
8	يبحث عن وجهات نظر مختلفة عند حل المشاكل					
9	يتحدث بتفاؤل حول المستقبل					
10	لي الفخر بالعمل معه					

11	يناقش بمصطلحات محددة من هو المسئول عن تحقيق اهداف الاداء					
12	ينتظر حصول الامور الخاطئة قبل اتخاذ القرار					
13	يتحدث بحماس حول ما هي الامور التي تحتاج الى انجاز					
14	يحدد اهمية الحصول على احساس قوي بالقصد (الغرض)					
15	يقضي وقتا في التدريس والتدريب					
16	يوضح ماذا يمكن ان يتوقع المرؤ ان يتلقى عند تحقيق اهداف الأداء					
17	يبين انه مؤمن جدا بالمقولة "اذا لم تكن مكسورة فلا تصلحها					
18	يتجاوز المصلحة الذاتية لصالح الجماعة					
19	يعاملني كفرد بدلا من كوني عضوا في مجموعة					
20	يظهر ان المشاكل يجب ان تصبح حادة قبل اتخاذ قرار بشأنها					
21	يعمل بطرق تزيد من تقديري له					
22	يركز كامل اهتمامه على التعامل مع الاخطاء والشكاوى والفشل					
23	يهتم بالنتائج الاخلاقية والمعنوية للقرارات					
24	يتابع بشكل مستمر كافة الاخطاء					
25	يظهر شعورا بالقوة والثقة					
26	يشكل رؤية واضحة للمستقبل					
27	يوجه اهتمامي نحو اسباب الفشل في تلبية المواصفات					
28	يتفادى اتخاذ القرارات					
29	يعتبرني شخصا ذا حاجات وقدرات والهام مختلفة عن الآخرين					
30	يساعدني في تفحص المشاكل من عدة زوايا					

31	يساعدني في تطوير مكامن القوة لدي					
32	يقترح طرقا جديدة في البحث عن كيفية انجاز المهام					
33	يؤخر الاستجابة للاسئلة الملحة					
34	يؤكد على اهمية وجود حس جماعي بالمهمة					
35	يعبر عن الرضا عندما البي التوقعات					
36	يعبر عن الثقة بأن الاهداف سوف تنجز					

الرجاء توضيح مستوى الموافقة أو عدم الموافقة من خلال البيانات التالية عن ثقافة المستشفى وذلك بوضع علامة (√) تحت الخانة المناسبة.

م	السمات الرئيسية	غير موافق بشدة	غير موافق	لا موافق أو غير موافق	موافق	موافق بشدة
1	المستشفى يعتبر مكان خاص مثل الأسرة الكبيرة حيث يتشارك الناس فيها أشياء كثيرة .					
2	المستشفى يعتبر مكانا حيويا حيث أن الناس مستعدون لتحمل المخاطرة					
3	المستشفى مشروع إنتاجي التوجيه ، والاهتمام الكبير هو القيام بالمهام ، ويتميز الناس بقوة المنافسة والإنجاز .					
4	المستشفى مكان رسمي منظم جدا ، وتقوم الإجراءات البيروقراطية بتنظيم ما يفعله الناس .					
	قادة المتشفى					
5	يتميز قادة المستشفى بشكل عام بالتوجيه والقيام على تيسير الأمور .					
6	يتميز قادة المستشفى بشكل عام بالإبتكار والإقدام على المجازفة .					
7	يتميز قادة المستشفى بشكل عام بالثبات في القيادة والإنتاج والمنافسة .					
8	يعتبر قادة المستشفى بشكل عام منسقون أو منظمون أو خبراء أكفاء .					
	إدارة الموظفين					
9	أسلوب الإدارة بالمستشفى يتسم بالعمل الجماعي والإجماع والمشاركة					
10	أسلوب الإدارة بالمستشفى يتسم بالمخاطرة الفردية ، الإبتكار ، المرونة .					
11	أسلوب الإدارة بالمستشفى يتسم بالتنافسية الشديدة ، التوجيه نحو الهدف ، الإنجاز .					
12	أسلوب الإدارة بالمستشفى يتسم بالمراقبة الشديدة للأداء ، طول البقاء في الوظيفة ، التنبؤ .					

	الرابط الذي يربط الشخص بالمستشفى					
13	*الرابط الذي يربطنا بالمستشفى هو الولاء والثقة المتبادلة والإلتزام تجاه المستشفى بدرجة كبيرة .*					
14	*الرابط الذي يربطنا بالمستشفى هو التركيز على التوجه نحو الإبتكار والتطوير والوصول إلى أفضل المستويات .*					
15	*الرابط الذي يربطنا بالمستشفى هو التركيز على الإنتاج وتحقيق الأهداف حيث يتسم السوق بالتنافس الشديد .*					
16	*الرابط الذي يربطنا بالمستشفى هو اللوائح والسياسات الرسمية، حيث أهمية الحفاظ على إدارة المستشفى بشكل سلس .*					
	الإستراتجيات التي يتم التأكيد عليها					
17	*المستشفى يؤكد على التنمية البشرية ، الثقة العالية ، والإصرار على الإنفتاح والمشاركة .*					
18	*المستشفى يؤكد على إكتساب موارد جديدة ومواجهة التحديات ، تجربة أشياء جديدة والبحث عن فرص جديدة يعتبر أمرا ذا قيمة .*					
19	*المستشفى يؤكد على الإجراءات التنافسية والإنجاز ، والأهداف هي المسيطرة .*					
20	*المستشفى يؤكد على الإستمرارية والإستقرار ، وتتسم العمليات ذات الكفاءة والسلاسة بالأهمية .*					
	معايير النجاح					
21	*المستشفى يعرف النجاح على أساس تنمية الموارد البشرية ، العمل الجماعي ، والإهتمام بالناس .*					
22	*المستشفى يعرف النجاح على أساس إمتلاك أكثر المنتجات حداثة . ويتسم المستشفى بالإبتكار والقيادة .*					
23	*المستشفى يعرف النجاح على أساس الدخول والمشاركة في السوق ، فالمفتاح هو قيادة السوق التنافسي .*					
24	*المستشفى يعرف النجاح على أساس الكفاءة . وتعتبر الجدولة السلسة والإنتاج الأقل تكلفة أمورا حاسمة .*					

<u>شكرا لشخصكم الكريم</u>

بسم الله الرحمن الرحيم

المملكة العربية السعودية
وزارة الصحة
الإدارة العامة للبحوث الطبية

الـــرقـــم : .....
التـــاريخ : .....
المشـفـوعـات : .....

نموذج موافقة على تسهيل مهمة بحث
Research Facilitation Approval Form

Date: 12/07/2010 — التاريخ : 1431/ 07/30:

Mr. Mohammad Faleh AlHamedy Al-Harby			اسم الباحث Researcher's Name
تأثير أنماط القيادة و ثقافة المنظمة على تطبيقات ادارة الجودة بالمستشفيات التابعة لوزارة الصحة با لمملكة العربية السعودية			عنوان الدراسة Title of the study
0505552777	Telephone - تليفون	Mfh2@hotmail.com	البريد الالكتروني E-mail
Country/City -مدينة/البلد Malaysia/Kedah Darul Aman		Universiti Utara Malaysia	اسم الجامعة Name of the University
Other أخرى ☐	PhD دكتوراه ■	MS ماجستير ☐	الدرجة العلمية Scientific - Degree

Application	خطاب تقديم	المستندات المطلوبة Required Documents
Protocol	بروتوكول الدراسة	
Questionnaire	استمارة البحث	
Informed consent	الموافقة المستنيرة	
Letter from the Univ./Affiliation	خطاب من الجامعة/ جهة العمل	
Letter from Cultural attaché or	خطاب من الملحق الثقافي أو خطاب الابتعاث	
GAT&S if applicable*	والتدريب*	
EC Approval* ☐	موافقة لجنة الأخلاقيات *	

The results of this research will guide in developing strategies as to how to improve the quality of health services through improving the functioning of healthcare key leaders/health managers in the Ministry of health hospital together with implementation of quality of healthcare programs based on data derived from this research.	ملخص الموضوع Research Summary

Approved (موافق) ■	Not Approved (غير موافق) ☐	To complete prerequisites (لاستكمال المتطلبات) ☐	To be submitted to SC/EC. (يتم إرسال لطلب إلى اللجنة العلمية/ إخلاقيات) ☐	رأي اللجنة بالإدارة العامة للبحوث الطبية GAMR Committee Opinion

Committee members		أعضاء اللجنة
Names	Signature/التوقيع	الاســـم
Dr. Mohammad Khalil		د. محمد خليل
Dr. Naseem Akhtar Qureshi		د.نسيم اختر قرشي
Dr. Rajab Manna		د. رجب مناع
Mr. Fahad Hazza		أ. فهد الهزاع

Observations:
GA T&S = General Administration for Training & Scholarship
SC= Scientific Committee
EC= Ethical Committee
GAMR = General Administration for Medical Research
* If applicable

مدير عام
الإدارة العامة البحوث الطبية
د. نبيل بن هزاع القحطاني