Chapter 1: Background

1.1 Introduction

International healthcare systems strive to provide better services and care, while maintaining high standards of quality and maximising efficiency. Quality services have become the goal for most organisations so that they can meet present and future requirements of both customers and healthcare legislative bodies responsible for providing licenses and/or accreditation to these healthcare authorities (Almalki, Fitzgerald & Clark, 2011), including the Saudi Ministry of Health. In Saudi Arabia (SA) there have been several attempts by healthcare organisations, such as King Fahad Medical City (KFMC), to enhance the quality of their services while promoting customer satisfaction, employee loyalty and continuous improvement. To do this many healthcare facilities in Saudi Arabia and globally have turned to a total quality management (TQM) philosophy. TQM has grown from quality assurance processes that originated in industry during the 1940s (Alolayyan, Ali & Idris, 2011). There are, however, many factors that influence the successful implementation of TQM. Among these factors are effective teamwork and its components, which include effective communication, individual development and participative trust. Investigating these factors in the implementation of TQM in a healthcare facility in Saudi Arabia is the focus of the present study.

Teamwork in healthcare has always been considered a crucial factor that determines different aspects of success. Quality of teamwork among healthcare professionals influences both the successful implementation of many processes and procedures performed at healthcare organisations, as well as patient outcomes and staff satisfaction (Carney, West, Neily, Mills & Bagian, 2010). Teamwork promotes collaborative work, open communication and friendliness within different areas of service in healthcare, which is a key element that has been reported in literature to have a considerable impact on the success or failure of TQM implementation plans (Talib, Rahman & Azam, 2011). The need for teamwork has been widely recognised by managers and quality planners, as no single individual has the skills and the knowledge to deliver comprehensive quality care (Cartmill, Soklaridis & Cassidy, 2011; Manser, 2009). The nature of healthcare services is complex, as contributions are required from many individuals from different specialisations, backgrounds, educational levels and professions including nursing, medicine, nutrition and transportation.

The successful adoption of a TQM program is dependent on good teamwork to achieve quality objectives (Garbee, Paige, Bonanno, Rusnak, Barrier, Kozmenko, Yu, Cefalu & Nelson, 2013). Effective teamwork requires open, effective communication, supportive managers and

colleagues, a positive and friendly workplace environment, the ability of all employees to participate in the quality objective planning and implementation processes, and the flexibility to implement quality plans.

On the other hand, poor quality teamwork has been reported to hinder the provision of safe, effective healthcare, and contributes to adverse events and mistakes (Manser, 2009). Therefore, effective implementation of TQM plans and the achievement of quality objectives are directly linked to effective teamwork (Duggirala, Rajendran & Anantharaman, 2008).

TQM programs claim to offer the answers to issues related to quality service delivery by increasing the likelihood of consistently providing high standards of service, minimising consumption of human, financial and other resources, and promoting sustainability into the future. The primary aim of TQM programs is to increase the process of continuous improvement of services within an organisation through both effective and efficient utilisation of the available resources (Ehigie & McAndrew, 2005). The main philosophy of TQM is based upon implementing robust processes to ensure consistency in client satisfaction, productivity, sustainability and organisational goals (Azam, Rahman, Talib & Singh, 2012). This philosophy seeks to integrate employees' expertise, material resources, and managerial efforts to achieve the planned goals of the organisation, and to gain a competitive advantage over other similar organisations (Yeung, Cheng & Lai, 2006).

Although crucial in the process of implementing any TQM program, the impact of effective teamwork on the quality outcomes has not been widely addressed in the literature of quality management, particularly from a Saudi Arabian perspective. While healthcare in Saudi Arabia is moving towards total quality management, tools that ensure this progression, such as empirical evidence of the negative impact of ineffective teamwork outcomes, are still limited. Other factors that influence the successful implementation of TQM are the key components of teamwork, including effective communication, team learning behaviours, inter-professional development and credibility of team members. These also require investigation (Salas, Wilson, Burke & Priest, 2005). Studies that explore these factors, their impact on the overall process of TQM implementation and the negative effect they could have on the future of the organisation, are needed in Saudi Arabia.

In brief, a majority of the Saudi healthcare organisations are engaged in the process of adopting or implementing quality programs. However, the impact of effective teamwork has not been examined for its contribution to these efforts. In this study, teamwork and its attributes, including effective communication, team learning behaviour, management support leadership and decision-making, will be examined. Although other factors that influence the

implementation of TQM exist, teamwork is significant, as it involves a wide range of elements and influences all employees at different levels of responsibility within the organisation, and has a wide impact on the quality of services provided.

1.2 The Kingdom of Saudi Arabia Healthcare System and Total Quality Management

There are radical changes taking place in the Saudi healthcare context to improve services and promote both better client satisfaction and employee loyalty, and TQM is viewed by many as an ideal philosophy to bring about these necessary changes (Al-Khalifa & Aspinwall, 2000; Walston, Al-Omar & Al-Mutari, 2010). Healthcare in Saudi Arabia has improved significantly in recent decades because the government has given much attention to the development of quality healthcare services (Almalki, Fitzgerald & Clark, 2011).

At the beginning of the 1950s the Ministry of Health of Saudi Arabia, ARAMCO (an oil company) and the World Health Organisation (WHO) established the first health service to fight malaria, and that was the beginning of Saudi Arabia's experience with the organisation of a healthcare system. The evolution of healthcare moved slowly until the mid-1960s. During the period from 1965 to 1985 there were rapid developments in healthcare services when the Saudi government started applying the concept of healthcare for all under the WHO banner (Al-Yousuf, Akerele & Al-Mazrou, 2002).

Currently healthcare services are divided into three layers: primary, secondary and tertiary (Al-Yousuf, Akerele & Al-Mazrou, 2002). The largest sector in Saudi Arabia providing healthcare is the Ministry of Health, with a huge number of healthcare facilities located all over the country (Jannadi, Al-Shammari, Khan & Hussain, 2008). Other government sectors providing healthcare are Military Hospitals, National Guard Hospital, University Hospitals and ARAMCO Hospitals. Private sector providers include private hospitals, clinics and pharmacies which are concentrated in large cities in Saudi Arabia and are often used by non-Saudis working in the country (Al-Yousuf, Akerele & Al-Mazrou, 2002).

The WHO has worked on the evaluation of healthcare services in all countries around the world since early 2000. Interestingly, Saudi Arabia was recently rated 26th in terms of performance in healthcare, while the US is rated 37th (WHO, 2000). This performance rating could be a result of many factors, such the nationwide health insurance that covers all Saudis, the major shift of focus on primary health services, increased use of highly sophisticated technologies in diagnosing and treating different health conditions, reaching out for Saudis in almost all areas,

the recruitment of skilful health professionals, and the increased budgets distributed on effectiveness and efficacy (Almalki, Fitzgerald, G. & Clark, 2011).

The Saudi Arabian government is striving to develop strategies to further enhance the level of healthcare services to become a world leader in providing high quality health services to its population (Baranowski, 2009).

The first institution in Saudi Arabia to develop hospital standards was Saudi ARAMCO in 1994. At that time, every private or government hospital had to be approved to meet Saudi ARAMCO standards for medical services before they could treat ARAMCO staff. In 2003 a program called the Makkah Region Quality Program (MRQP) was established for healthcare quality in Makkah Region, and both private and government hospitals had to meet these standards (Alkhenizan & Shaw, 2010). Several private and governmental hospitals in Saudi Arabia then obtained accreditation from different international accreditation bodies. For example, the King Faisal Specialist Hospital and Research Centre in Saudi Arabia obtained international accreditation from the Joint Commission International Accreditation as the best hospital in Saudi Arabia in 2001 (ISQua, 2012).

In Saudi Arabia the desire to have accreditation certificates for healthcare services has increased (Walston, Al-Omar & Al-Mutari, 2010). The Central Board for Accreditation of Healthcare Institutions (CBAHI) was established in 2005 in Saudi Arabia to implement standards of quality in healthcare sectors all over the country (CBAHI, 2012). CBAHI standards were modified from the International Society for Quality in Healthcare (ISQua) standards to comply with national requirements (Alkhenizan & Shaw, 2010).

1.3 Challenges Facing Healthcare Organisations in Saudi Arabia

In 2000 the WHO examined many countries' healthcare systems, including Saudi Arabia (Baranowski, 2009). Interestingly, the report suggests that the healthcare system in Saudi Arabia has become one of the leading systems worldwide. The report includes assessment against the five main criteria used for the evaluation of health systems globally. These criteria are: general level of population health; health inequalities and disparities within the population; overall level of health system responsiveness, which is based on a combination of patient satisfaction and how well the system functions; distribution of responsiveness within the population or how well people of varying economic levels find that the healthcare system is serving them; and the distribution of the health system's financial burden within the population, or who pays the cost

of healthcare services (WHO/44, 2000, p. 3). It is interesting to note that any reference to the role of the healthcare workforce in ensuring that systems work, is missing from these criteria.

The ranking of the Saudi healthcare system among the world countries has highlighted the progress of delivering high quality care in Saudi Arabia (Baranowski, 2009). There is, however, the issue of whether these services are sustainable within the fiscal challenges facing any budget, including that of the Saudi healthcare system. The Saudi public healthcare system budgets have been increasing as a percentage of GDP (Almalki, Fitzgerald & Clark, 2011). However, the flow of revenue to cover escalating costs may not be endless. Thus there needs to be a focus on ensuring the system can continue to deliver quality of care within more limited budgetary allocations, and provide strategies that ensure sustainability in the face of changes in the population, including aging, chronic conditions and increased population. The adoption of TQM as a philosophical premise to promote sustainable quality services is being adopted throughout Saudi Arabia to ensure consistent processes are in place to deliver quality care.

Saudi Arabia is currently in an economic growth phase that is linked to the prices of crude oil and increased productivity (Annalisa, 2013). This economic boom has created a shift in the lifestyle of many Saudis, who were previously dependent mainly on growing crops (such as dates) and farming livestock (including cattle, goats, sheep and camels), fishing, and working in simple trading roles (mainly agricultural, clothing and households. As a result of the shift to more urban affluent lifestyles, new eating habits have been introduced to the Saudi society along with other habits related to reduced exercise and physical activity. Consequently, new health problems have emerged, including teenage obesity, diabetes mellitus and cardiovascular problems (Baranowski, 2009). Many of these health problems are chronic and require long term healthcare, which impacts on the productivity of the Saudi people and the cost of healthcare services.

The combination of improved healthcare services for the mother and her child and the presence of health professionals reaching out even to remote areas have led to a notable decrease in the death rates of women and infants. In addition, there has been an increase in the life expectancy of Saudi citizens. The reduced mortality rates and increased life expectancy have led to a growth rate of nearly 4% in the Saudi population (Hamilton, 2007).

For many western countries, including Australia, the United States of America (US) and the UK, long patient waiting times for a bed to have surgery is not unusual. Although this situation remains highly uncommon in the Saudi healthcare system, it is expected to become a phenomenon in the near future. It is therefore essential that the Saudi healthcare system remain as safe, responsive and efficient as it can be (Baranowski, 2009).

In a recent study, Baranowski (2009) concluded that it is crucial for the Saudi healthcare system to improve the efficiency of services it provides to clients, within current budgets. This could be achieved by developing long-term strategic plans based on the adoption of a quality management model, such as the TQM, and evaluated for improvements (Baranowski, 2009). There is, therefore, a strong need to explore the role of teamwork in the implementation of TQM in SA. Most employees in the country's healthcare organisations are non-Saudi nationals, and teamwork can become challenging in workplace environments where the staff come from a diverse range of cultural and professional backgrounds.

This study is based on the premise that a Saudi-oriented TQM model may solve some of the challenges facing today's Saudi healthcare system, in which both local and western experts set quality plans that may not take into account the difficulties of fostering effective teamwork in a workplace with many cultural and language barriers. In addition to many factors, including good policy, effective systems, training and a deep understanding of the cultural diversity in the SA context, successful implementation of TQM in such environments hinges on effective teamwork to achieve the required objectives. This study explores teamwork from a Saudi perspective, taking into consideration the participation of both Saudi and non-Saudi nationals who are all part of the current, and perhaps future, healthcare system.

1.4 Research Problem

Healthcare systems around the world use TQM to monitor and improve standards and productivity. In Saudi Arabia, TQM has been adopted as a model that can contribute to consistent and sustainable quality services and well-managed budgets. This research project is timely and will contribute to what is known about effective teamwork in a Saudi context as a predictor of successful TQM implementation.

Personal interest and enthusiasm have driven this study, with the researcher having experienced ineffective or limited teamwork in the workplace, such as in healthcare settings in Saudi Arabia. The importance of teamwork is discussed in the international literature reviewed in the next chapter of this thesis and is considered in relation to TQM in different industries and countries.

1.5 Significance of the Study

This research has the potential to help develop a holistic understanding of the impact that teamwork has on the successful implementation of a TQM program. This study aims to investigate this concept and provide empirical evidence that reflects the experience and attitude of employees regarding teamwork in their organisation.

When exploring the quality management literature, the extensive review examined both published literature from electronic and printed journals and theses archives, and some unpublished Masters and PhD theses from Saudi Arabia. However, little research was found that explored the impact of teamwork on the implementation of a TQM program within healthcare settings. It is clear that the main concept of this study – teamwork – has not received a focused examination for either its effect on the overall process of the successful implementation of a TQM program or the attributes which belong to this concept. Moreover, limited research on TQM exists in the Saudi context. This research is important because TQM has become a component of the quality plans of many Saudi health organisations, and there is a limited knowledge about how well these plans and objectives are implemented. Therefore, it is imperative to conduct a study that examines the effectiveness of teamwork as an essential factor influencing the successful implementation and achievement of TQM objectives.

King Fahad Medical City (KFMC), the setting for this study, is one of the largest hospitals within Saudi Arabia. Its vision is to be a pioneer health organisation through provision of the best healthcare in Saudi Arabia (KFMC, 2014). KFMC's mission statement includes the provision that staff and managers are to provide safe and distinctive healthcare for patients. According to KFMC managers, the emergency department is one of the busiest among healthcare settings in SA. Within this busy environment KFMC has different types of teams whose main objective is to provide quality care within the available resources (KFMC, 2014). Teams of doctors from all specialties are available around the clock to provide emergency medical treatment for all patients – emergency or admitted. Nursing staff are well qualified to provide care for varying patient needs. All auxiliary services (e.g. catering, transportation, mechanical support and maintenance) are ready to provide 24-hour service.

The department of general surgery at KFMC is considered the busiest surgery department in the country, and has Saudi Commission of Health Specialties accreditation (MOH, 2012). Annually, the KFMC has around 600,000 visits from people seeking medical attention and treats more than 50,000 clients as inpatients (KFMC, 2014). Although busy, departments of the KFMC strive to provide quality care that is determined by initial reports of the quality management teams formed for the purpose of achieving accreditation with the International Joint Commission (JCI) (KFMC, 2014).

It is anticipated that the findings of this study will improve understanding of factors that influence the effectiveness of teamwork in the implementation of a TQM program. It is hoped that findings in this study will provide an impetus for staff to reflect on their current practices and beliefs so that their work within teams is more closely aligned with the requirements of the

organisation. It is also hoped that information gained from this study will provide better support and guidance for both decision-makers and managers to enhance effective teamwork.

1.6 Research Aims

The primary aim of this study is to investigate the components of teamwork that influence the successful implementation of a total quality management program in King Fahad Medical City, Riyadh, Saudi Arabia.

The study also aims to explore aspects of interactions between teamwork components and the TQM program that influence employees' engagement in the program. The components include task reflexivity, participative trust, team learning behaviour, team efficacy and stability, leadership and decision-making, effective communication and management support.

The final aim is to explore employees' experiences, challenges and opportunities that might influence successful implementation of teamwork within a TQM program at King Fahad Medical City.

1.7 Research Questions

The following research questions are proposed for the study:

- What are the components of teamwork perceived among employees that influence successful implementation of the total quality management program in King Fahad Medical City?
- Which aspects of interaction between teamwork components and the total quality management program within King Fahad Medical City influence employees' engagement in the successful implementation process of the quality program?
- What are the unique factors that influence the successful implementation of effective teamwork in King Fahad Medical City, as perceived by the employees?

In brief, the adoption and successful implementation of the TQM program in King Fahad Medical City faces obstacles and challenges. Some of these obstacles can be observed in everyday interactions that occur within the medical city. Others require an in-depth exploration and careful examination. In this study, the researcher will explore teamwork as a crucial component of the successful implementation of a TQM program in King Fahad Medical City.

1.8 Overview of the Methodology

This study adopted a quantitative, cross-sectional method using a survey questionnaire and recruited a sample of employees of a healthcare organisation in Saudi Arabia. The Team Climate Assessment Measure (National Patient Safety Agency [NPSA], 2006), a quantitative scale, was selected as it suited the study purpose of exploring teamwork in healthcare and the impact of teamwork on patient safety and error management (NPSA, 2006). This scale underwent factor analysis, tool validity, reliability and normality tests, and the resulting valid tool included items that loaded significantly on the factors comprising the questionnaire, with a high cut-off point of 0.6. The impact of the sample characteristics was measured using analysis of variances tests, and significant findings were highlighted as prompted.

In addition, open-ended questions were added to the survey to further explore the employees' experiences of teamwork and TQM in their organisation. These questions allowed a broader perspective than the primary quantitative set of data. A content analysis method was adopted to analyse responses to the open-ended questions. Following ethical considerations set by the Ethics Committee for Human Research at the UNE and the KFMC ethics committee, data were collected over a twelve-week period from participants from three professions – medical, nursing and management – recruited through the use of a convenience sampling technique.

1.9 Summary of the Thesis

The first chapter of this thesis has provided background and context to the study and justification for conducting it. The aims, research questions and a brief overview of the methodology are also provided in the first chapter.

The second chapter explores the historical perspectives of TQM and its emergence. It explores the philosophical basis of TQM and how it has been applied in different industries, including healthcare systems globally. It also explains the factors and barriers commonly presented in literature that impact upon the successful implementation of TQM, one factor of which is teamwork and its components.

Chapter Three explains the methodology adopted to answer the research questions and why this methodology was chosen. The discussion of methods includes the study design and instruments, sampling and recruiting techniques, and the process of collecting and analysing the data.

Chapter Four presents the results of the data analysis and the relationships found among teamwork components and the participants' characteristics. It also presents the findings from the open-ended questions that were added to the survey tool.

Chapter Five presents and elaborates upon the main conclusions deducted from the study findings and presents them in light of the existing literature. Recommendations for policy and practice are presented, with a focus on contributing to the promotion of effective teamwork within Saudi healthcare organisations so that TQM objectives can be achieved. Areas for further research are discussed, and limitations of this study identified.

Chapter 2: Review of Literature

2.1 Introduction

The main purpose of this study is to explore the impact of teamwork on the successful implementation of total quality management (TQM) in a Saudi healthcare organisation. This is driven by the notion that adoption of any quality model within healthcare needs to be based on an understanding of the factors that are likely to make it successful.

This chapter provides a critical review of relevant literature regarding the evolution, theoretical foundations and definitions of TQM, its adoption in healthcare, and factors that influence the implementation of TQM in healthcare contexts. As this study aims to explore the link between successful implementation of TQM and effective teamwork, relevant literature that links these two concepts will also be presented and critically reviewed. Therefore, the structure of this chapter moves from a broad focus on definitions and models of TQM to the factors that impact on implementation, followed by a detailed discussion of the links between TQM implementation and effective teamwork.

This chapter is divided into two main sections, the first being a review of relevant literature in relation to TQM. The first section commences with a discussion of the evolution of TQM, followed by the historical perspectives of this model, its emergence as a quality management model, and the pioneers of TQM. The premises and basic philosophy are explored, and examples provided of the adoption of TQM and application in various industries, including healthcare. The factors and barriers that are commonly presented in the literature as impacting on the successful implementation of TQM are discussed, along with the influence of teamwork as a key concept in the success of TQM program implementation in healthcare services. Examples from literature are presented to explain the effect of the different components of teamwork on TQM successful implementation.

The second section of this chapter presents the theoretical framework chosen to underpin this study: the organisational climate theory. The justification for and review of literature in relation to this theoretical framework is also presented in section two of this chapter.

2.2 Search Strategy

The process of searching for literature relevant to the research topic was performed using several strategies, including mining the electronic databases ProQuest, which includes 16 data bases, PsychInfo and SAGE. The main topic of the search was: the impact of teamwork on the

successful implementation of TQM. The keywords used in the search were *'Total Quality Management'* and '*Teamwork*'; and '*Healthcare Organisation*' was added at later stage. The summaries and abstracts of found articles were then reviewed for relevance to the main topic of the study. Documents found to be relevant to the search purpose were reviewed in full and analysed. The main ideas of each article, including the research purpose, methods, tools, main findings and recommendations were summarised as notes. No year limit for the search was specified in order to ensure that all related documents were included in the search. However, other than seminal works, any material more than 20 years old was assessed and mostly rejected during this stage. In addition, the bibliographies and reference lists of relevant literature were examined for other studies that could be used as valuable resources for this research topic.

As the systematic search identified a wide range of documents, inclusion-exclusion criteria were set to eliminate outdated or irrelevant documents. The inclusion criteria were: studies conducted to define TQM and teamwork; to identify TQM and teamwork components; to compare the adoption and evaluation of TQM in all industries, especially healthcare; and to explore research instruments used to measure the impact of teamwork on TQM. Papers were then refined through reading the abstracts for relevance to the purpose of this search, as the title might not always best indicate the relevance of the paper to the study aims. The papers were analysed through highlighting the purpose of the paper and determining whether it was appropriate to include in the review of literature for this study based on the study aims, and then arranged according to which study question each paper belonged. The result was groups of papers that were reviewed and analysed and included under the subheadings outlined in this chapter.

This process was meticulous in order to ensure it included all papers that had strong relevance to the purpose; those papers found to be inappropriate were excluded from the list. Following this cull, the number of relevant resources included in the review of literature for this study was 174 journal articles, and 21 books. The main search process was conducted between July and December 2012 and spanned a 20 year period from 1995-2015, Some seminal works are included that were published before 1995.

2.3 Total Quality Management: Background and Definitions

A number of key authors have suggested definitions of TQM in attempts to set the philosophical premise for this process. Deming (1986), an early developer of TQM, defined it as a 'never ending cycle of continuous improvement' (Deming, 1986, p. 181). Here Deming determined that the process of ensuring quality must be ongoing, and it must also encompass all areas of an

industry, including the experience of employees and clients, and the provision of service or product. Juran (1989) built on the early work of Deming to suggest that 'fitness for use' was the main facet of the TQM concept (Juran, 1989, p. 15). This phrase refers to a broad understanding that TQM is based mainly on determining the usability of any element proposed to achieve the general objectives of the organisation. Juran (1989) went on to describe TQM as the system of activities that is directed to achieve a number of results, including delighted clients, empowered employees, higher revenues and, above all, reduced costs. Stevenson (2002) wrote that TQM was a philosophy that aimed to achieve continuous improvement of quality and client satisfaction.

Experts in quality management, who are often labelled as 'gurus of total quality management' in the literature, have strived to achieve TQM at all stages of production across a broad range of industries; their efforts have been demonstrated in two successful models in Japan and the US (Vincoli, 1991). Although early efforts to quantify quality addressed many of the TQM aspects, this emerging concept only matured and established its theoretical and practical foundations in many organisations during the 1990s (Karia & Asaari, 2006).

During the early theoretical foundations of the 'quality revolution', quality experts in the 1980s and 90s, including Deming (1986), Juran (1991) and Crosby (1979), contributed significantly to the establishment of the basic principles of total quality management (Silvestro, 1998). According to Susan, Miguel and Dale (2002), the pivotal role of these TQM 'gurus' in the development of a total quality management framework lies in their identification of the key components that are critical for the successful planning and implementation of a TQM program. These components include: organisational commitment; culture formation; continuous improvement; satisfaction of the clients; and the use of systems that measure performance and communication (Susan, Miguel & Dale, 2002). As will be discussed later in this chapter, many of these components have been adopted in healthcare organisations.

By the 1990s TQM was more broadly defined as a management philosophy, a corporate culture and an organisational activity based on the participation of all individuals within an organisation aiming to improve services and transform organisational culture in order to meet or exceed customer expectations and needs, by means of consistent leadership and continuous improvement (Fox & Frakes, 1997; Kujala & Lillrank, 2004).

This definition further allowed TQM to embrace all activities through which the needs and expectations of clients, as well as the objectives of the organisation, were satisfied efficiently and effectively. The understanding was that the main emphasis of TQM was to address client requirements and expectations, adopt means to maximise the potential of all staff members, and

seek out continuous improvement in the quality of services provided. Mohanty, Santhi and Haripriya (1996) described TQM as a co-operative effort that depended mainly on human skills and abilities.

By the start of the new millennium, TQM was known as a way to organise work flow within an organisation so that an optimum outcome of quality could be achieved. It provided the means to pursue a flawless, well-organised, and sustainable system that promoted positive, productive, and progressive business processes (Alolayyan, Ali & Idris, 2011). TQM provided the organisation with a process for enhancing success through a focus on both client and employee satisfaction. In addition, it sought to embed a continuous quality improvement mindset that improved over time and changed depending on market updates and turbulences, which could include increased demand on particular services or goods, change in the customer characteristics (e.g. ageing and the presence of new needs as related to health or financial status), and other factors that were not present in the past (Vouzas & Psychogios, 2007).

A more recent definition indicates that TQM is a compilation of a range of integrated steps or processes, involving all-staff commitment, open and transparent lines of communication, devotion to solving problems, developing staff to achieve maximum outputs, and a culture that emphasises customer satisfaction (Kumar, Garg & Garg, 2011). This is the definition adopted to underpin the current study.

TQM is driven by the work, commitment and efforts of people (Idris, 2011). Its results can be measured by high performance teamwork, high employee morale, and a harmonious organisational climate (Alolayyan, Ali, Idris & Ibrehem, 2011; Lakhe & Mohanty, 1995). Each member of the organisation is a source of both valuable and valid information that may add additional value to make their job better (Welikala & Sohal, 2008).

According to Levis, Brady and Helfert (2008), the successful implementation of TQM results in employee ideas being appreciated in a supportive environment, where flexible working structures allow changes to be made as a result of ideas and suggestions. However, the entire process involving total quality effort must be planned and managed by a team that is open, willing and, above all, committed to this process (Idris & Ali, 2008). It is clear that these recent definitions presented in the literature stress that TQM involves all levels of employees and engages all ranks in its input. The output therefore represents success for all, whereby no single individual has the right to claim success. For the current study, this focus on TQM as a process that engages all employees, resonates with the study aims and is consistent with exploring the link between effective teamwork and successful TQM. Therefore, in this study TQM is understood to be a program that comprises the activities aiming to improve all aspects of the

healthcare industry, including client satisfaction, employee satisfaction, loyalty and productivity (including teamwork), and improvement of the services provided in a well-organised, sustainable and cost-effective manner. In this thesis, the definition that is partially viewed as congruent with the study aims is that of Kumar, Garg and Garg (2011) and Idris (2011), which emphasises the importance of leadership and open communication lines to inform and sustain the achievement of the quality objectives.

2.4 Development of Total Quality Management

As well as identifying a definition of TQM to inform this study it is also important to provide background and context regarding the evolution of Quality Management and Quality Assurance into TQM. The key philosophy of TQM is that it embodies processes of ensuring and measuring organisational quality performance on a continuous basis (Aboyassin, Alnsour & Alkloub, 2011). This model has pushed forward over the past four decades to become a durable model in the business world, mainly due to the need to increase sustainability and improve organisational development (Idris, 2011). It is postulated that TQM maximises managerial output while minimising undesired elements within this output, such as increased cost, decreased effectiveness in using resources and technologies, and employee and client dissatisfaction (Prior, 2006).

There was no widely-agreed definition for TQM before the 1980s, but it was increasingly discussed in management literature during the second half of the 1980s (Sila & Ebrahimpour, 2002). Experts began to agree on the main elements forming TQM at the turn of the century (Sila & Ebrahimpour, 2002). Namely, these elements focus on improving customer satisfaction by developing processes that can achieve continuous and long term improvement in all organisational processes and outputs, and engage the entire work force in improving quality (Levis, Brady & Helfert, 2008).

Total quality management evolved as a philosophy from early efforts to improve client satisfaction, productivity, sustainability and meet organisational goals (Azam, Rahman, Talib & Singh, 2012). This philosophy, according to its pioneers, addresses both products and services (Douglas & Fredendall, 2004). Most models of TQM have been developed from simple to complex correlation among variables of productivity and, at later stages, client and staff satisfaction through a mixture of evidence from empirical observation and research and the trial-and-error of many experts in quality (Joss, 1998).

The first implementation of total quality programs was reported in large companies in developed countries such as Japan, the US, and certain countries in Western Europe. The

reported purposes of the adoption of these 'unconventional' quality programs included employee and customer satisfaction, high quality products, cost effective function and waste reduction (Huczynski, 2007).

In Japan, the evolution of TQM by Deming (1986) is culturally based on *Kaizen* or the Japanese philosophy of management, which was neither relevant to nor acceptable to US industrial management practices or standards in the early part of the 20th century (Asubonteng, McCleary & Munchus, 1996). Dahlgaard (1999) discusses the period until the late 1990s when TQM developed and became the most frequently and commonly used quality concept in industry across developed countries. He describes this development in three periods or phases, differentiated by the main feature that characterised the quality models adopted by the different industries. These periods are as follows: (1) the first phase, from the mid-1940s to the early 1960s, characterised by importing/adoption/learning; (2) the second phase, from the early 1960s to the early 1970s, characterised by digesting, implementing, and adaptation; and (3) the third phase, from the early 1970s to the early 1990s, characterised by mastery, further development and 'export' of the Japanese model of quality management to other countries. It has been suggested that these phases moved from the immature levels of adopting quality-oriented processes in the first phase into the mature decisions of management to adopt TQM as developed and applied in the Japanese industrial models (Dahlgaard, 1999).

According to Aghazadeh (2002), Deming began the TQM movement to promote the products of Japanese companies after World War II, and during the 1980s and 1990s it expanded to include a range of companies from different countries, mainly the US. Generally, Deming is given credit for restructuring and rebuilding Japanese industries after WWII (Asubonteng, McCleary & Munchus, 1996). The main focus of Deming's philosophy regarding total quality management was based on continuous improvement of products, staff conditions and the process of production, while eliminating waste by the safest and most effective methods (Deming, 1986). TQM has since developed through a range of industries following contributions from experts in the field (Aghazadeh (2002).

In Deming's model, quality is a journey of achievement and success (Deming, 1986). Deming's early work depended mainly on the identification of the causes of variation in production processes. He focused on reducing these variations using a range of statistical diagnostic tools (Douglas & Fredendall, 2004; Huczynski, 2007). Although this still forms a substantial part of quality approaches, it is the development of a quality culture through motivating and developing the people that has added the TQM dimension (Asubonteng, McCleary & Munchus, 1996). Generally, Deming (1986) focused mainly on the manufacturing industry; any reference to service industries can barely be seen in early TQM literature (Douglas & Fredendall, 2004).

Deming (1986) focused on the organisational managerial style and statistical aspects of quality along with employee motivation. He recommended that leadership styles needed to be flexible and open-minded, and encouraged bi-directional communication with employees.

Another early researcher and developer of TQM was Joseph Juran (1991), who has been recognised as the builder of the conceptual base for TQM (Aghazadeh, 2002). It was Juran (1991) who added the technical aspects to the philosophy of the TQM concept by defining three processes as the main components of quality management: planning; control; and improvement (Asubonteng, McCleary & Munchus, 1996). In contrast to Deming (1986), Juran focused on quality planning, policy development and improvement via a systemic approach to quality in all units (systems) of an organisation (Aghazadeh, 2002). Juran (1991) contended that quality should be determined at all levels of the process of production or service provision and all employees, especially the top level of management involved (Nwabueze, 2001). He proposed that only limited levels of achievement in quality could be reached if senior managers were not fully engaged and committed to the process.

Other pioneers in quality management from Japan were Taguchi and Wu (1979), who were concerned about the concepts and ideas of quality and efficiency during the design phase, or pre-manufacturing phase. Taguchi and Wu's model focuses on the quality of product design, rather than on the production process (Taguchi & Wu, 1979). This focus added a new dimension to TQM: the design and quality of the product.

Philip Crosby (1979) was one of the leading US experts in quality management. He was responsible for worldwide quality operations for fourteen years in technical industries, such as aircraft brakes, aeronautical hydraulics and electric power systems, avionics, aircraft and automobile fuel control systems, radios, televisions and computers (Asubonteng, McCleary & Munchus, 1996). Crosby (1979) believed that transforming the culture of any given organisation was the key to implementing quality improvement, and should lead to zero defects. Crosby (1979) suggested that this change could be achieved through redefining the relationship between employees at different levels to create a less hierarchical and more flat managerial structure so as to facilitate communication and reporting of problems and important issues and concerns. This change could be facilitated by adopting quality models that focused on the productivity of employees, using models that assessed the achievement of organisational and departmental objectives, spreading a sense of fairness and justice, providing incentives based on individual efforts, engaging all staff in teamwork, and structuring the work atmosphere to promote employee as well as client satisfaction (Crosby, 1979).

Crosby also believed that the best measurement of quality is the cost of quality, which is divided into two components: the price of non-conformance and the price of conformance (Asubonteng, McCleary & Munchus, 1996). Others, including Ishikawa (1976) and Feigenbaum (1983), agreed on a common TQM premise based on three main elements, namely client satisfaction; employee involvement; and continuous improvement (Karia & Asaari, 2006).

TQM was introduced to the US after it had been widely implemented in Japanese industries. A form of quality control, however, was first used in US industries in 1910 when the Ford Motor Company did not meet the quality standards of the production line (McAdam, 2000). Inspection teams were employed by the company to ensure that production met the standards of the project. When the inspectors found poor quality products they sold them cheaply (Dahlgaard et al., 1998).

With the advent of World War II (WWII), the American manufacturing industry faced increased demand for military products, including heavy machinery and spare parts for weapons (Dahlgaard et al., 1998). US industries started to develop policies that required supervisors to apply standards and measurement to assist in quality control (Dahlgaard et al., 1998). It was found that increased production had a negative impact on quality. As a result, a new strategy for quality emerged, called statistical quality control. The emerging strategy helped manufacturing companies improve the quality of their military-based products through staff training courses (Juran, 1989).

The quality control movement grew thereafter in other industries. The aim of the movement was to meet the demand for consistent quality products and the customer's increased demand for precision. Quality control here refers to the effective coordination of both quality maintenance and the quality improvement efforts of various groups within an organisation in order to enable production at the most economical levels while maintaining customer satisfaction (Feigenbaum, 1983).

As discussed, TQM subsequently developed to embrace the principles and concepts of quality management that are currently understood and implemented in many business activities and departments of an organisation (Dahlgaard-Park, 2011). Although quality management approaches have been used since the early 1900s in many industries, it was not until the end of 1980s that total quality management programs signalled a new era in the movement toward quality (Dahlgaard-Park, 2011). Because of its wide applicability and proven results, TQM became the most common approach of quality management adopted in business during the past three decades (Alolayyan, Ali, Idris & Ibrehem, 2011).

As reported in the literature, quality as an evolutionary process has ranged from inspection to quality control to quality assurance to TQM (Warwood & Roberts, 2004). The term TQM is used to indicate that a range of factors that impact on quality are managed continuously to ensure consistent quality standards are achieved. In the late 1980s, corporations such as American Express finally began applying TQM to the service sector (Kumar, Garg & Garg, 2011).

There are also a number of models that have been developed with TQM at their heart, such as the Six Sigma model dating from the late 1980s (Harry & Schroeder, 1999). This model aimed to reduce manufacturing defects, even those sometimes reported as normal and acceptable. Bill Smith (1988), a North American engineer at Motorola Company, developed Six Sigma as a means to increase the reliability of products by reducing excessive variation that results in defects in the manufacturing processes (Antony, 2012). This strategy can be described as a systematic, project-oriented, statistically-based approach that can reduce the presence of defects from products, processes and transactions (Pyzdek, 2001). The model integrates statistical methods into the engineering processes (Antony, 2012).

Today Six Sigma is a powerful business model used to advance performance in many world-class corporations by improving quality, reducing costs and creating value for the enterprise and customers (Antony, 2012). Although application of this model has resulted in many business success stories, the necessity for employee commitment to the process and continuous follow-up by quality officers make its application demanding (Snee, 2004). Other models of total quality management could be employed, including locally-developed models that suit particular organisations. However, the development of other models reported in the literature requires at the very least an assessment of the current practices, the identification of all available and required resources, the determination of what is missing in both resources and legislations, and must draw on all the theoretical elements that define exactly where a company is, and where, how and when it needs to go. This process summarises many of the methods outlined in literature by researchers such as Gail (2008), Ingram and Desombre (1999), and Malec, Torsher, Dunn, Wiegmann, Arnold, Brown and Phatak (2007).

TQM has also witnessed the evolution of more contemporary models, other than six sigma, including the ISO quality management standards, lean management, and crew resource management (International Association of Fire Chiefs, 2003; Ker, Wang, Hajli, Song & Ker, 2014). Among the successful models of TQM is lean management (LM). The Toyota Motor Corporation (TMC) of Japan was the pioneer developer of LM system in the process of manufacturing. TMC implemented this model with the purpose of minimising waste of time, resources and efforts when producing vehicles with a highly effective and efficient

manufacturing process (Womack & Jones, 2003). LM further ensures positive synergies among the quality improvement, cost reduction, and time reduction programs of the company, and thus minimising the trade-offs (Pettersen, 2009).

Although there are many differences in the views of the best components of TQM, there is a common agreement on the main components; yet, the interrelationship between these components can be found to vary even from one organisation to another.

The developers of TQM have contributed significantly to the growth of this method of quality management in many organisations globally. The adoption of TQM within healthcare organisations has been a more recent development. The core TQM principles have been either adapted or modified to suit the special nature of healthcare organisations, as discussed in the next section.

2.5 Total Quality Management in Healthcare Organisations

An early example of the search for quality in healthcare organisations and professional associations is the Surgeon's College in the US, which designed its first standards for hospitals, called 'Minimum Standards for Hospitals', in 1917 (Motagu, 2003). The adoption of quality processes has been increasingly evident in the healthcare sector since the 1950s, and more recently TQM has grown in popularity across health organisations globally (Aghazadeh, 2002). The first organisation for healthcare quality accreditation was established in the US in 1951, and that model of accreditation was implemented in Canada and Australia in the 1960s and 1970s and in Europe in the 1980s (Shaw, 2000). This resulted in the creation of a large number of accrediting organisations from different countries around the world that specialise in assessing the application of quality management standards in healthcare, such as the Joint Commission in the US (formerly known as the Joint Commission on Accreditation of Healthcare Organizations).

During the past three decades the global healthcare industry has seen rapid changes in many aspects, including the search for effective models of care and the measurement of the efficacy of services. TQM was first discussed in the healthcare literature in the 1990s (Martinez-Lorente, Dewhurst & Dale, 1998). Driven by changes in client characteristics (e.g. increased aging populations and health-educated individuals), innovations covering all aspect of healthcare, research and technology advances, and intense competition among different healthcare organisations, the quest for a model that ensures quality health services has become a necessity (Rad, 2006).

Healthcare organisations include many departments and units where each performs or provides particular services and functions that have different foci and responsibilities. Each department or unit comprises groups of professionals who provide clinical functions, including nursing, medicine, pharmacy, laboratory, social work, dieticians, physiotherapists and those staff who undertake non-clinical functions (e.g. food services, sanitation, business management, financing, human relations, transportation) (Powell, 2006). The complexity of healthcare organisations requires a quality management plan that emphasises the continuity of the care continuum to achieve the overall objectives of safety, quality and sustainable services to clients.

As this study addresses TQM in a healthcare organisation, it was essential that this concept be defined from the perspectives of the healthcare industry. A view that assumes TQM as a viable philosophy within the healthcare industry was suggested by Besterfield (2003), who defined TQM as a philosophy whose related applied principles sought to achieve continuous improvement of services provided by an organisation. These services should be competitive in nature and advantageous to the healthcare organisation and the care recipients in order to be both sustainable and progressive; otherwise, the organisation would not be viable into the future. According to Weech-Maldonado, Zinn and Hamilton (2001), healthcare TQM programs are sustainable if quality management elements are addressed from a social perspective, taking into consideration the special organisational structure and human relationships within each healthcare organisation. Considering these issues while ensuring the engagement of employees and managers in the planning, implementation and evaluation processes is vital (Weech-Maldonado, Zinn & Hamilton, 2001).

Global healthcare organisations are currently encountering challenges that include increased customer awareness of what constitutes quality services, issues related to budget cuts, and cost-effective services (Besterfield, 2003). The need for well-recognised frameworks that can address quality management issues has become a necessity. McAdam (2000) reported that activities directed towards this model gained momentum in the early 1990s upon the introduction of quality awards such as the European Quality Award, and the Malcolm Baldrige Award, in addition to the spread of accrediting organisations such as The Joint Commission in the US.

The outcomes of healthcare-focused quality management programs is reflected in the quality of the healthcare services provided, patient satisfaction, employee satisfaction and overall performance results. When applied to hospital care, TQM philosophy includes, but is not limited to, direct client care from hospital reception or triage, the documentation process required to proceed into healthcare services, a clear process of admission, the presence of qualified personnel to decide the urgency of the individual seeking care, the availability of

resources that are accessible when needed, effective communication between staff, patient and family members, teamwork, and so on (Rad, 2006). Healthcare organisations seek to deliver the best, most efficient and cost-effective services for their clients, who have become more aware of their right to expect quality in their provided care (Talib, Rahman & Azam, 2011; van den Heuvel, Koning, Bogers, Berg & van Dijen, 2005). Long waiting times, delayed health services, lack of resources without the presence of proper alternative solutions are some of the issues that neither clients nor organisations can tolerate in today's healthcare industry (Azam, Rahman, Talib & Singh, 2012). The question remains: how do healthcare organisations ensure negative or adverse events do not occur? Emerging from the early work of TQM developers, TQM has been introduced strongly into healthcare management literature as a process that can lead to achieving short as well as long-term organisational objectives for services such as healthcare (Manjunath, Metri & Ramachandran, 2007).

In their critical review and analysis of literature, Azam, Rahman, Talib and Singh (2012) proposed an integrated quality model that included technical quality and associated supportive quality parameters to achieve optimum patient satisfaction. They suggested that total quality management provides reasonable solutions to problems in order to achieve the required success in a profitable and a sustainable way. However, as conventional strategies to promoting healthcare quality (such as those focusing on professional competence through clinical guidelines, vertical integration, diversification, managed care arrangements and marketing strategies), no longer meet the required outputs in a climate of budgetary and staffing constraints, more innovative and comprehensive models are required (Asubonteng, McCleary & Munchus, 1996; Manjunath, Metri & Ramachandran, 2007). Hence the need to conduct studies, such as the one discussed in this thesis, to explore factors that may impact upon the implementation of TQM in health services.

While the public and governments demand quality healthcare and call for more control over expenditures, healthcare organisations are forced to seek means to improve the services they provide and optimise resources (Johannes, Breinlinger-O'Reilly & Elser, 2000). In many countries around the world, such as the US and Australia, clients – both individuals and companies – are careful to choose a healthcare facility they believe will address their health needs, provide quality services, will not harm them, and be cost-effective. The required model of TQM should therefore meet clients' requirements, organise resources and qualified professionals competently, support creativity, imply consistent development in service, and develop flexible future plans and competence so that consistent and acceptable levels of safe services can be maintained over time (Counte & Meurer, 2001). The achievement of these qualities and the ability to have sustainable healthcare organisations requires the adoption of a

model or mechanism that meets the desired level of services and increases the likelihood of consistency in quality. TQM provides these merits once planned, implemented and evaluated accurately.

Some would argue that TQM has been developed as a business philosophy to improve market performance of industrial and commercial firms, and not for organisations that provide humanitarian services such as hospitals and clinics. However, the literature is replete with examples of how TQM has been successfully applied in recent times to improve the quality of service in the healthcare sector, at the same time maintaining the integrity of the service (Ennis & Harrington, 1999; Gorji & Farooquie, 2011). This improvement can be achieved through critical exploration of the resources needed to produce quality services and the best results, coupled with the most efficient methods required to promote better implementation of quality plans.

Generally, research shows growing evidence of the positive impact TQM has on healthcare outcomes across a number of countries (Alolayyan, Ali, Idris & Ibrehem, 2011; Johannes, Breinlinger-O'Reilly & Elser, 2000), due to the nature of the model and the benefits it can bring to the organisation.

The adoption of TQM in Saudi Arabia is fairly new, but gaining momentum, so it is timely to explore how TQM has been implemented globally. The next section examines international studies and highlights those that are specific to Saudi Arabia.

It can be argued that a considerable number of organisations have not implemented their quality programs successfully. It is important to explore factors on both sides on the continuum in order to understand how to gain the best results.

2.6 Factors that Influence Implementation of TQM Programs in International Healthcare Contexts

There are a number of factors that have been discussed in the literature that influence the successful implementation of total quality management programs. These factors are often related to the effective functioning of teamwork. Given the progressive development of TQM practices in the healthcare sector, many researchers are concerned with identifying the factors influencing the successful implementation of TQM. Motwani (2001), in an extensive review of relevant literature, identified seven critical factors involved in implementing quality

management systems in hospitals. These factors are: the commitment of senior management; quality measurement and benchmarking; process management; product (service) design; employee training and empowerment; vendor (service provider) quality management; customer/client involvement and satisfaction. Walston, Al-Omar and Al-Mutari (2010), who studied organisational dimensions that influence the hospital patient safety climate in four types of Saudi Arabian hospitals, agreed on these factors and added that promoting collaborative efforts and experiences across hierarchies of any health organisation was a crucial component of client satisfaction and safety. Cartmill, Soklaridis and Cassidy (2011) also emphasised the importance of an organisational structure that promotes both inter- and intra-disciplinary approaches, as well as open communication among colleagues from different professions.

Barriers to successful implementation of TQM in all organisations have been reported in the literature, with considerable similarities being found. Khan (2011) investigated the experience of managers of service organisations in Pakistan (n=120) regarding the main barriers to total quality management implementation. Using a structured questionnaire, the results identified a lack of planning, lack of efficient human resources practices, inadequate infrastructure for total quality management (including the presence of training programs, empowerment and effective communication), lack of support from leadership, and lack of customer focus, all of which represent significant barriers to successfully implementing a TQM program.

Zain and Amar (2002) examined the relationship between organisational culture, management attitudes toward quality, human resources management, inter-functional relationship, information, processes and equipment resulting in ineffective implementation of TQM. In this study of 364 Indonesian organisations, albeit only manufacturing organisations, it is clear that there is a link between organisational culture, communication strategies and the successful implementation of TQM. These results suggest that, among the key factors that influence the implementation of TQM, communication and management attitude toward TQM are highly significant. Rad (2006) describes TQM as the development of an organisational culture that supports the attainment of clients' satisfaction. In order to achieve this outcome an integrated system of techniques and tools should be employed and applied at all levels to all members within the organisation. This involvement may result in meeting organisational objectives while emphasising the importance of teamwork, collaborative efforts and open communication at all levels of management. Although Rad's (2006) description of clients did not emphasise the need to address staff satisfaction, this description stands as an important input to the definition of TQM. Rad (2006) found that poor management control, lack of will towards change culture, poor organisational response to environmental changes, lack of teamwork and inadequate

response to internal and external customers' needs were the major barriers to successful implementation of TQM.

There are other key factors reported to influence quality management systems' successful adoption in hospitals. For instance, Wardhani and colleagues (2009) performed a systematic literature review of articles written in English and published between 1992 and 2006, using the thesaurus terms 'Total Quality Management' and 'Quality Assurance Healthcare', combined with the term 'hospital' and 'implement'. They found the key success factor for TQM implementation was an organisational culture that emphasised standards and values associated with affiliation, teamwork and innovation, and an assumption of change and risk taking.

Another systematic review performed by Talib and colleagues (2011) on published papers between 1995 and 2009 identified eight factors that helped the successful implementation TQM in healthcare institutions. These factors added to the previously identified factors included employee satisfaction and teamwork, organisational behaviour and culture, resource management, continuous improvement and training and education. Talib and colleagues (2011) stressed the important role of senior management in ensuring the successful implementation of TQM, as these managers facilitate, promote and enhance positive communication, empowerment and teamwork. Furthermore, Lee, Ngai and Zhang (2007) reported that the successful implementation of a TQM system in hospitals required hospital control and a broad approach to quality progress, all of which are steps that ensure higher levels of employee engagement.

Other researchers, however, reported different findings (Nadzam, Waggoner, Hixson, Warmuth & Atkins, 2003; Nwabueze, 2011; Striem, Vreteit & Brommel, 2003). Based on a survey of fifty chief executive officers randomly selected from the British National Healthcare System, Nwabueze (2011) examined the impact of leadership traits on the successful implementation of TQM program in healthcare. The author found that the qualities of the leader are extremely important for the successful implementation of a quality program. He further added that physician involvement is considered an important strategy for the successful implementation of TQM in the UK, as physicians play a dominant role in decision-making processes in many healthcare organisations (Nadzam, Waggoner, Hixson, Warmuth & Atkins, 2003). The active involvement of physicians in open communication with other employees within the organisation and participating in teamwork may promote better results for the adoption of TQM. Hence an understanding of the physician's role in effective teamwork is essential background for this study.

Generally, research investigating factors that influence the successful implementation of quality management programs in the healthcare industry is growing worldwide (Rad, 2006). It is clear from the existing research that there are several barriers that hamper the achievement of planned goals; these are often the result of weak planning processes, resource waste, employee and client dissatisfaction, and weak policies that concern the cost of services. These barriers also include lack of engagement from management in the implementation and evaluation of TQM, lack of employee interest and engagement in the successful implementation of the program, and poor distribution of resources (such as incentives and rewards provided to employees and managers for efforts in promoting the quality program), resulting in dissatisfaction and a sense of unfairness (Khan, 2011; Talib, Rahman & Azam, 2011). It is clear from the review of studies discussed so far that there are key factors that play a vital role in the implementation of TQM. Across many of the studies, these key factors include the engagement of staff at all levels within and across all disciplines, and effective communication and teamwork.

The next section explains in more detail the barriers to successfully implementing TQM, as reported in literature. There have been reports that classify these factors, or barriers, into four main categories: cultural and employee barriers; infrastructure barriers; organisational barriers; and managerial barriers (Ngai & Chen, 1997). Managing these barriers is necessary to facilitate the successful implementation of a TQM program, which is a challenge that many quality management experts are striving to achieve.

2.7 Barriers to Successful TQM Implementation

In a national survey, Sebastianelli and Tamimi (2003) investigated the obstacles encountered by TQM quality control and quality managers in the US. They reported that there are five underlying obstacles that influence the effective implementation of a total quality management program. These were as follows: inadequate human resource and management to perform the required task properly; lack of planning for quality within the departments and for the whole organisation; lack of leadership that governs the process of quality assurance; inadequate resources for the effective implementation and evaluation of TQM; and lack of a clear vision for a policy that focuses on client satisfaction (Sebastianelli & Tamimi, 2003).

In addition, among the reported issues that have a negative impact on the achievement of quality management program objectives are cultural factors and organisational structures. The literature suggests that these two factors are the most important barriers to implementing quality management systems in hospitals (Cartmill, Soklaridis & Cassidy, 2011; Wardanhi, Utarini, van Dijk, Post & Groothoff, 2009). The adoption of TQM requires change in both leadership and culture, as the hierarchical leadership style traditionally practiced in healthcare may not be

appropriate to support a TQM model that requires engagement of all employees in the process of decision-making and implementation (Asubonteng, McCleary & Munchus, 1996). The cultural changes represent an important component of the successful implementation of TQM. Issues within this component include the need for effective teamwork, and empowerment and meaningful communication across and between different parts of the organisation, which will be further explained later in this chapter.

The quality of culture at the workplace is crucial to ensure patient safety and satisfaction (Davis & Beale, 2015). There have been many reports of poor culture within healthcare organisations resulting in higher rates of injury, disability and even death (AIHW, 2014). As the focus of this thesis is on effective teamwork, many cultural factors that influence the quality of care and patient safety have considerable impact on the results of this study. Therefore, it is essential to briefly mention that there is significant literature that reports on organisational cultural issues in healthcare, such as poor communication (Victorian Department of Health Report, 2009), which is addressed in this thesis as a component of effective teamwork. In addition, bullying in healthcare has been reported to cause a considerable impact on the quality of the workplace culture. According to a Davis and Beale (2015) study nearly 1 in every 3-4 healthcare workers might either witness or be exposed to bullying, with the majority of victims being nurses.

Cartmill, Soklaridis and Cassidy (2011) explored the experience of clinicians during the transition from working within interdisciplinary teams to providing a transdisciplinary model of care in a US rehabilitation program that helps clients with chronic disabling musculoskeletal pain. They adopted a qualitative design using a grounded theory approach to collect data through in-depth interviews. Three main themes were identified that contributed towards building a successful transdisciplinary team: the client population; opportunities for communication with colleagues; and an organisational structure that supports transdisciplinary teamwork. The authors concluded that in order for teamwork to be successful, it requires input from the organisational level and adequate communication to contribute effectively to health professionals' satisfaction and improved levels of quality and safety of clients (Cartmill, Soklaridis & Cassidy, 2011). It is clear from this study that teamwork can only be effective when there is managerial support and involvement. Thus it is suggested that open lines of communication are vital to the process of implementing TQM.

Another study, conducted in Thailand, describes different barriers to the implementation of a quality management system in a hospital setting. Pongpirul, Sriratanaban, Asavaroengchai, Thammatach-Aree and Laoitthi (2006) used a self-reporting survey questionnaire to explore the problems and barriers faced by hospital professionals during implementation of quality management systems according to the hospital accreditation standards. The authors found that

the barriers perceived by the participants were staff shortage and the integration, and utilisation of information technology. These findings showed that although some barriers could be perceived as common or universal among different hospitals, some might still be viewed as unique to each setting (Pongpirul, Sriratanaban, Asavaroengchai, Thammatach-Aree & Laoitthi, 2006).

Some of the identified barriers to the successful implementation of a total quality programs in the quality management literature include those related to senior management's lack of commitment, inability to change organisational culture, lack of flexibility to adopt new plans, technologies and change, inadequate knowledge or understanding of TQM philosophy, poor teamwork and participation, inappropriate evaluation of teamwork, poor accessibility to data and results, and lack of attention to the needs of internal and external customers. These findings were reported by Rad (2005) in a study that explored TQM in health organisations in the Isfahan province of Iran. Other findings reported by Skiti (2009), who investigated TQM barriers in Kraaifonte in a healthcare service organisation in the Western Cape Province in South Africa, were similar to those reported by Rad (2005).

In summary, issues of senior management commitment, lack of open communication and exchange of information necessary to progress the implementation of any TQM program, as well as lack of teamwork are commonly reported as barriers by the majority of researchers in the field of quality. These factors are clearly crucial to the successful implementation of any TQM program and achievement of its ultimate goals, which include client satisfaction, employee involvement and continuous improvement.

2.8 Impact of Teamwork on the Success of TQM Programs

There are reports indicating that teamwork is the most influential factor required to achieve TQM (Warwood & Roberts, 2004). Teamwork has also been linked to many factors that would either improve or hinder the success of any TQM program (Walston, Al-Omar & Al-Mutari, 2010). According to Rad (2006), the successful implementation of TQM is related to the nature of teamwork within the organisation and the type of communication between and among staff members and managers. There is a need to address both factors when seeking to adopt a TQM program within a health organisation. Thus, the main focus of this section is directed towards exploring what is known about the impact of teamwork on the successful implementation on a TQM program, especially in the healthcare system, and specifically within hospitals, as a vital background for this study.

TQM is clearly influenced by a number of factors, including teamwork and crew resource management (CRM). Although the focus of this thesis is on the impact of effective teamwork, which includes leadership and communication, CRM could be another model of interest that would improve achieving TQM objectives (Oriol, 2006). CRM is a set of training steps that can be used in roles where human error can have serious effects. Used primarily for improving air safety, CRM focuses on communication, leadership and decision-making (Diehl, 2013). In that vein, CRM focuses on the delivery of customer-oriented care that considers personal safety and the limitation of human mistakes as a result of poor teamwork and ineffective communication (McConaughey, 2008). For the purpose of this thesis, the main factor addressed is teamwork and its components.

Total quality management programs in healthcare, as well as in other types of organisations, are the sum of all efforts made by members of the organisation to ensure quality (Powell, 2006). These efforts usually require the complete commitment and involvement of all members in the quality management process (Irfine, Abdul-Azeez & Hammed, 2011). Effective teamwork has been identified as the most important factor to create a dedicated and motivated workforce (Al-khalifa & Aspinwall, 2000; Kalaurachchi, 2010). Deming (1986), Juran (1991) and Crosby (1979), some of the TQM pioneers, all stressed the important role teamwork plays in determining the successful implementation of TQM programs (Asubonteng, McCleary & Munchus, 1996; Dahlgaard, 1999) for client satisfaction and safety (Walston, Al-Omar & Al-Mutari, 2010).

According to Johnson and Omachonu (1995), TQM is a leadership philosophy that is directed by a number of principles that can apply to the healthcare system. The first key principle addresses the need for senior management to mobilise its workforce towards achieving the mission, vision, and long- and short-term objectives within the organisation. The second key principle focuses on employee involvement in the process of implementing the quality management plans. It emphasises the importance of having every person, function, department and division become part of the process, linked to the organisation's written mission, vision and objectives (long- and short-term) (Gap, 2002). Another principle is about the importance of the customer. Each member of the organisation should recognise that the reason for the existence of the organisation is its customers (Gupta, McDaniel & Herath, 2005). In addition, the most valuable asset that each organisation has is its employees. The fourth principle takes the process a step further and assumes that when adopting a TQM model, it becomes a way of life for all employees from all levels of responsibility in their everyday activities within the organisation. They should all recognise that TQM is a process that is viable only through the implementation of its components; it is not just a process that has a beginning and an end (Eggli & Holfon, 2003).

The fifth principle of successful TQM, according to Johnson and Omachonu (1995) refers to understanding the needs, desires and expectations of the customers (internal and external). TQM philosophy targets the creation of services that meet, or even exceed, the expectations of the customers. It also aims to bridge the gap, if any, between the expectations of customers and what the organisation actually provides or is capable of delivering. The next principle, which concerns the focus of this study, addresses the importance of teams and teamwork to achieve TQM purposes. TQM depends mainly on the use of teams to solve problems, bearing in mind that TQM philosophy suggests that no one knows the problems in a process better than those who work and live with the process on a daily basis. Every malfunction within the system is treated as a defect that needs to be defined, isolated and then eliminated by the team's effort or the individuals within those teams. A quick fix of problems is not recommended as, in order to adhere to the principles of TQM, teams need to identify solutions through extensive collaborative planning and focused implementation of those plans (Li, Alistair & Harrison, 2003).

Teamwork in TQM increases self-efficacy and promotes better empowerment of employees (Irfine, Abdul-Azeez & Hammed, 2011). Every employee within the team is involved in and influenced by the transformation process. In TQM, all steps made are either processes or part of a process. There is a high degree of interrelatedness among processes, which depend on a series of steps or interventions that are cross-related; thus, collaborative efforts within and between

teams is essential (Jayaram, Ahire, Nicolae & Ataseven, 2012). Boundaries in TQM are defined by the functions and proposed outcomes and not by roles or the borders of the departments.

Generally, a healthcare system adopting TQM requires a good communication model, effective meeting processes and shared decision-making among its staff members; when this is present effective teamwork can improve the quality of patient care, enhance patient safety and reduce workload (Tanco, Jaca, Viles, Mateo & Santos, 2011). Warwood and Roberts (2004) investigated TQM success factors in fifty-four healthcare facilities which were rewarded for their quality management achievement in the UK. The authors concluded that the key factors that contributed to the successful implementation of TQM included effective leadership, application of best practice, economic survival, market orientation and employee involvement. All of these require a teambuilding approach to achieve the intended objectives.

Wheeler and Stoller (2011), in their review of the impact of teamwork in healthcare, suggested that teambuilding in healthcare takes on special importance as an essential intervention to achieve a successful model of teamwork. Teamwork in a variety of health settings, including the acute and sub-acute areas, has been reported to improve safety measures and an associated reduction in errors and improved professional behaviour, including communication (Neily, Mills, Young-Xu, Carney, West, Berger, Mazzia, Paull & Bagian, 2010). Huber (2010) also contends that teamwork is the cornerstone to successful healthcare services. Huber adds that teamwork should not be confined solely to a single department; it relates to the interdepartmental as well as intradepartmental collective effort of a group of people.

Mickan (2005) summarised the impact of effective teamwork within health organisations on the following levels: organisational; team; patients; and team members. Organisational benefits include decreased number of hospitalisation days, reduced cost in both capital and running expenses, improved coordination of care and services provided by health and non-health employees, and improved utilisation of resources. Team benefits include improved communication among health professionals from similar and different disciplines, more effective use of health services provided to clients, and improved formal and non-formal collaboration among health professionals. Client benefits include improved health outcomes, and improved reported satisfaction with health services. Team members benefits include increased reports of job satisfaction, improved job clarity, and improved overall well-being among employees (Mickan, 2005). It is essential that methods of measuring teamwork effectiveness exist in each healthcare organisation so that issues influencing this work can be identified and managed. In this study the focus is on exploring the importance of effective teamwork in implementing TQM in a heathcare facility in Saudi Arabia.

Teamwork can be described as a group of people working together to achieve a common purpose (Nejati, Nejati & Nami, 2010). Teams are especially appropriate for conducting tasks high in complexity that have many interdependent parts. Teams usually require cohesiveness and camaraderie to achieve the intended goals. According to DeLuca and Valacich (2006), different factors influence team performance, including team size, members' background and culture, and the methods of communication among members. It is therefore essential for teams to have a set of communication structures established before starting their teamwork so that issues of unfamiliarity and ambiguity among team members and preconceived ideas can be avoided.

2.9 Components of Teamwork in Healthcare Organisations

Among the different healthcare organisations, hospitals are traditionally the most complex organisations to deliver healthcare services. Most hospitals are divided internally into departments and units; each is responsible for the purpose of performing a particular task or group of tasks. Work roles are divided into health professions such as nursing, medicine, pharmacy, nutrition, laboratory and social work. There are also categories of support staff, which includes the provision of services for catering, sanitation and environment, finance, human relations and transportation. Even services provided within tertiary healthcare organisations can generally be divided into in-patient and out-patient services. Regardless of the type of service provided to the client, individuals from different professions, specialisations and backgrounds may participate in delivering the services of the hospital. Although they might seem to be separate, independent managerial structures from the outside, these different departments are cross-related or interdependent. Therefore, ability to work in teams becomes a necessity to ensure the smooth provision of services such as admissions, assessments, diagnoses, treatment, care delivery and support services. Thomas, Sexton, Lasky, Helmreich, Crandell and Tyson (2006) stressed that there was limited research investigating how to measure the impact of teamwork among healthcare professionals in relation to quality management systems. According to Ingram and Desombre (1999), teamwork is generally taken for granted in healthcare settings. It is assumed that healthcare delivery cannot possibly happen without assistance from different disciplines and services.

The year 1999 saw a landmark in the area of quality management. During that year a report from the Institute of Medicine in the US estimated that as many as 98,000 patients died annually because of medical errors in hospitals (Hohenhaus, Powell & Hohenhaus, 2006). Many experts in healthcare systems subsequently sought solutions to reduce the rate of error; those identified included the need for more effective teamwork and the development of a standardised methodology for communicating critical patient information. Since then, this concept has appeared in a range of studies within healthcare organisations. Teamwork is constantly emphasised as a crucial component in the process of providing comprehensive, safe and quality care (Cartmill, Soklaridis & Cassidy, 2011).

The literature contains ample evidence that healthcare professionals need to work in teams in order to accomplish their work safely and efficiently. To work effectively in teams, healthcare professionals need to establish good rapport with others and establish safe, multidisciplinary grounds on which to meet. Improving teamwork in healthcare may improve quality by helping

to monitor, prevent and manage errors (Morey, Simon, Jay, Wears, Salisbury & Dukes, 2002). Consequently, formulating teams and working together are common approaches usually adopted within healthcare organisations (Cartmill, Soklaridis & Cassidy, 2011). For instance, many nursing actions depend on the physician's accurate diagnosis and therapeutic plan. A nurse carries out most of the day-to-day care and provides the physician with detailed information about patient conditions. In addition, a physiotherapist cannot work without a clear message from the nurse and/or the physician on what the patient needs and what is the objective from physiotherapy. In return, the physiotherapist provides advice on the best actions that are appropriate for the patient to achieve the intended objective from physiotherapy. Therefore, professionals within healthcare organisations work in teams. In other words, the work of healthcare professionals depends on messages, written or spoken, from each healthcare professional to develop an interdisciplinary understanding of the clients' needs and plan of care. The effective and proper function of healthcare teams is crucial to deliver quality, organised and timely services. This review of the literature makes it clear that effective teamwork is necessary for the successful implementation of TQM.

Several factors influence the effectiveness of teamwork in achieving quality management goals. A key factor is the engagement of team members in formulating and implementing a decision, which necessitates that all members are part of the decision-making process (Alolayyan, Ali, Idris & Ibrehem, 2011). This approach ensures that all members are committed to decisions made within the team. Thus, changes based on these decisions can be advocated and implemented fully by the relevant members.

2.9.1 Organisational Change

Another factor that may impact on teamwork and the involvement of staff members in the decision-making process is related to their perceptions of organisational change. Lam and Robertson (2012) suggested that individuals who perceive that their organisation has flexibility and willingness to change tend to participate more actively in the process of making decisions and contributing to the overall process of quality management. Team members who participate are strong advocates of the decisions that come out of their teams. In their study, Ooi, Arumugam, Teh and Chong (2008) reported that organisation culture and teamwork had a positive relationship with employee job satisfaction. Their survey of 173 employees in three production firms in Malaysia revealed that effective teamwork was perceived as a dominant TQM practice that led to an overall improvement in production, safety and employee job satisfaction. In addition, Powell (2006) contends that organisations that support their teams with the proper tools, and provide the required resources and technologies, assist in creating a positive culture.

Part of the process of ensuring that teamwork promotes the successful implementation of quality management objectives is related to the managerial approach. Managers are key to the whole process of fostering effective teamwork (Nwabueze, 2011). They [managers] need to make sure that work processes are regularly reviewed and different views of employees are heard (Ingram & Desombre, 1999; Powell, 2006). This process ensures that objectives, plans and approaches are regularly revised and modified according to organisational needs. Mulholland (2004) suggests that effective teamwork can create a more relaxing work atmosphere, and supports the sharing of humour in the workplace (Mulholland, 2004). Therefore, involving managers and exploring their perspectives regarding the process of planning, implementing and evaluating TQM programs in their organisation is a key element in ensuring that TQM objectives are achieved.

2.9.2 Communication

Communication is an embedded factor of effective teamwork. It is the process by which information is exchanged between and among individuals (DeVito, 2005). Communication is much more than words going from one person's mouth to another's ear. It comprises the reflection of symbols related to voice tones and qualities, eye contact, physical presentation and closeness, visual cues, and overall body language (Nixon, 2005).

The relationship between effective teamwork and good communication can be viewed as a cornerstone in the successful implementation of TQM. This link has been widely reported in the literature (Escriba-Moreno, Canet-Giner & Moreno-Luzon, 2008; Mathieu, Travis Maynard, Rapp & Gilson, 2008; Wardhani, Utarini, van Dijk, Post & Groothoff, 2009). The other factor that influences the successful adoption and implementation of TQM is effective communication. This is especially important when considering the relationship between members of the organisation and their managers (Gorji & Farooquie, 2011). Multidimensional communication from top management to staff members and in the opposite direction, as well as the communication of staff members at similar managerial levels, is crucial for the quality management program to be planned and implemented effectively (Ödegård & Hallberg, 2004).

Communicating effectively requires skills that can be used in many areas of life, and these are mediated by each individual's education, employment and socialising skills (Guo, 2009). An effective communicator takes into account the perspectives of those listening or receiving the message. Accordingly, the communicator decides on how, when and which messages to communicate. That is to say, in order to communicate effectively, the communicator needs to anticipate how the receiver will process the sent message, and then sends the message based on

this understanding (Hua, Sher & Pheng, 2005). Many factors influence effective communication.

In healthcare, communication can take a number of forms. According to Cartmill, Soklaridis and Cassidy (2011), health professionals identified three factors that fostered and facilitated the maintenance of successful teamwork in their work environment. These were: formal communication; informal communication; and education and training opportunities. Health professionals also suggested that communication was an important factor in the sustainability of successful teams. Examples of formal communication include ward rounds; meetings, including shift handovers that discuss patients' conditions; updates; reports; documentation; and written updates on patients' charts (Cartmill, Soklaridis & Cassidy, 2011). Informal communication is generally verbal and often involves health professionals expressing their ideas, issues, frustrations and disappointments, discussing any stressful patient experiences. It also works to provide learning experiences for students and other health professionals (Cartmill, Soklaridis & Cassidy, 2011).

In the Saudi context, Walston, Al-Omar and Al-Mutari (2010) examined three organisational dimensions that influence a hospital's organisational climate using a survey questionnaire ('organisational climate' is explained later in this chapter). Findings from their study indicate that both communication and teamwork between employees are critical variables that influence client safety. Generally, they recommended that good communication supported all vital processes within the healthcare organisation. These processes included planning, decision-making, problem solving and goal setting, and, if implemented in a collaborative atmosphere, promoted shared responsibility for patient safe care. Collaboration via good communication determines positive client health outcomes, such as length of stay, medical therapy bill, and client general satisfaction with the provided services. Walston, Al-Omar and Al-Mutari (2010) also contend that it is important to ensure that communication channels are clear to all employees and that these channels are used properly to create a safety climate for staff and patients, where fewer errors might occur and therapy objectives can be better achieved.

It has also been reported that a positive safety climate can be established based on mutual respect and trust using good and effective communication (Walston, Al-Omar & Al-Mutari, 2010). Errors occur when communication problems arise. Feedback from managers and physicians is a critical dimension that promotes a patient safety climate. Many studies show the importance of feedback for improving and developing safety. Other authors also suggest that the organisation with a strong patient safety climate seeks to develop its services through robust feedback and to learn from its errors (Ödegård & Hallberg, 2004). Good feedback increases

staff involvement and commitment, and these can be factors that promote better achievement of TQM objectives.

Errors that put patient safety at risk are usually related to factors linked to insufficient system definition or orientation, such as inadequate communication networks, poor organisation of staff roles and responsibilities, and communication failures between teams (Carthey, de Leval & Reason, 2001). The Joint Commission (2005) reported that more than 60% of human-related events are caused by poor communication. Thomas, Sexton, Lasky, Helmreich, Crandell and Tyson (2006) reported that the main aspects of teamwork, including communication and leadership, had significant correlation with better quality outcomes and improved patient safety.

Patient safety refers to the goal of achieving an error-free healthcare service while providing an acceptable level of care. Safety is a crucial objective in all healthcare settings and requires that factors that might influence its process be addressed and managed. Among these factors are the lines and confidentiality of communication. Mwachofi, Walston and Al-Omar (2011) examined the socioeconomic and organisational factors affecting patient safety and quality perceptions among nurses in Saudi Arabia. They reported that among the most influential factors that lead to improvement in patient safety and fewer practice errors were the ability to communicate suggestions that could improve quality of care and the presence of a confidential error reporting system. A clear message sent by the authors to the leaders and decision makers was to reinforce the need for effective communication among health workers, especially about patient safety and hospital quality. They also stressed the crucial role of effective communication in helping to reduce mortality rates, improve length of stay of patients, reduce legal and medical complications, and control costs. In addition, reduced staff turnover rates and better job satisfaction were among the benefits of effective communication. Other studies reported similar findings internationally, such as those by Berney and Needleman (2006), Chang, Chou and Cheng (2007) and Ramanujam, Abrahamson and Anderson (2008).

Meirovich, Galante and Yaniv (2006) reported that good communication practices with high levels of bidirectional feedback and disclosure between employees and managers resulted in more positive attitudes towards managers. They reported a positive attitude towards TQM as a result of open communication practices, while lack of communication in both directions resulted in poorer attitudes (Meirovich, Galante & Yaniv, 2006).

A comprehensive study by Carney, West, Neily, Mills and Bagian (2010) investigated the differences in perceptions of communication and teamwork effectiveness between surgeons and nurses using a safety attitudes questionnaire in 34 hospitals in the US. This questionnaire measured the quality of communication and collaboration between healthcare workers. Carney

and colleagues concluded that surgeons reported a more favourable view of communication and teamwork than did nurses. Furthermore, nurses rated their communication and teamwork with other nurses higher than with doctors. Nurses also had different perceptions about the nature of teamwork. They described collaboration as 'having their input respected', while surgeons saw collaboration as 'having nurses anticipate their needs and follow instructions'. If nurses and surgeons cannot communicate effectively, patient care and safety may be in danger, thus jeopardising the whole quality management process. In addition, while nurses perceive lack of collaboration and respect for their input, they are less likely to report information concerning patients, including safety issues. Therefore, teamwork must be bi-directional, respectful and effective or patients will be affected. The authors suggested the introduction of the WHO Surgical Safety Checklist, which is designed to make surgical team members aware of teamwork and communication problems. This checklist is an example of how to provide managers and staff members with an assessment of the factors that need to be addressed to introduce improvements to teamwork so that patient safety can be maximised.

The importance of communication between nurses and physicians in order to meet goals and provide care to patients was also investigated by Narasimhan, Eisen, Mahoney, Acerra and Rosen (2006). They reported that unwanted or ineffective care could occur when goals of care were not communicated clearly and effectively to patients. This resulted in increased service costs and doubled the likelihood of medical errors (Narasimhan, Eisen, Mahoney, Acerra & Rosen, 2006).

Tjia, Mazor, Field, Meterko, Spenard and Gurwitz (2009) explored nurse-physician communication among 375 nurses in a long-term care setting in the US. Participants identified several barriers to effective nurse-physician communication. These included: lack of physician openness to communication; lack of professionalism; and language barriers. Nurses also reported barriers such as feeling hurried by the physician, and difficulty finding a quiet place to make phone calls to the physician. All participants agreed that nurses needed to be briefed and prepared with clinical information when talking with physicians and physicians needed to be more open to listening to the opinions of nurses.

On the relationship between teamwork and communication, Cooney and Sohal (2004) suggested that teamwork promoted communication and cooperation among staff members, thus facilitating problem solving and functional flexibility.

In order to promote effective teamwork between health professionals, managers need to communicate plans and vision, and ask for suggestions to improve productivity, work conditions and client satisfaction (Al-Omaim, Zairi & Ahmed, 2003; Karia & Asaari, 2006).

They also need to support employees by clearly defining roles and appreciating individual employee efforts – they might even consider promoting or providing incentives to those demonstrating effective teamwork. While engaged in this process, managers lead by example in communicating and sharing thoughts, ideas and suggestions that may contribute to the quality of the services provided in their organisation. Employees need to be open to receiving these messages, plus brainstorming, discussing, and contributing to collective thoughts and ideas. The result is teamwork that is based on mutual engagement of staff members and motivation to improve the quality of services provided (Alolayyan, Ali, Idris & Ibrehem, 2011). Effective teamwork has been found to have a positive influence on job involvement, job satisfaction, career satisfaction, and organisational commitment (Karia & Asaari, 2006).

Another factor that can impact on effective teamwork is a lack of information, which, according to Hua, Sher and Pheng (2005), limits employees' sense of interest and level of comprehension. The employees' level of communication usually depends of how much they know about a particular subject: the more the employee knows the more effective their contribution to the communication may be.

Another factor that can be a barrier to effective communication in healthcare settings is the hierarchical nature of relationships, which determines distribution of power among employees and managers (Leonard, Graham & Bonacum, 2004). This in turn may interfere with the decision-making process within the organisation. Cultural factors may also play a pivotal role in the effectiveness of communication as these may influence the type, content and quality of communication (Harvey & Griffith, 2002).In some cultures these factors may include gender, age, level of education, profession and years of experience. Some cultures consider these as crucial factors to be addressed. For example, in Saudi Arabia female staff members are generally less able to communicate openly and convey their thoughts in mixed gender teams.

2.9.3 Employee and Client Satisfaction

Within healthcare organisations, quality management programs focus on client satisfaction that can be achieved through meeting the needs of the highest and yet most cost-effective standards. Salas, Sims and Burke (2005) suggest that teams are more adaptable to work conditions, staff relations and overall productivity and creativity than any individual can. Teamwork provides more complex, innovative and comprehensive solutions to any given organisational problem than individual solutions alone (Tanco, Jaca, Viles, Mateo & Santos, 2011). When members of an organisation embrace principles of TQM, they are required to engage in the process of quality management. This engagement, in turn, determines the level of team members' involvement in the process of decision-making, which then either promotes or diminishes the

effectiveness and quality of members' meeting outcomes. In other words, when team members believe that their contribution to a team is appreciated and the decisions made are adopted, their participation in the overall teamwork effort can be considerably higher (Karia & Asaari, 2006; Tanco, Jaca, Viles, Mateo & Santos, 2011).

2.9.4 Decision-making

Another factor that influences teamwork is where the decisions are usually made within an organisation. In their remarks, Escriba-Moreno, Canet-Giner and Moreno-Luzon (2008) report that the more decentralised the organisation is, the more coordinated and autonomous the teams are; thus, the teams become more successful. Team autonomy and access to information and resources necessary to make decisions often result in more effective teamwork (Valsecchi, Wise, Mueller & Smith, 2012). When teams form part of the main structure of an organisation, the structure becomes more horizontal and flexible. Jackson (2001) also reported that these qualities were favourable to more successful and sustainable organisations.

Jaruseviciene, Liseckiene, Valius, Kontrimiene, Jarusevicius and Lapão (2013) examined the teamwork experiences of general practitioners and community nurses involved in primary healthcare in Lithuania. Following a qualitative approach and thematic analysis, the focus group meetings resulted in six themes: the structure and synergy among team members, descriptions of roles and responsibilities, competencies, communication and the organisational background for teamwork among members of the primary healthcare teams. According to the authors, primary healthcare in Lithuania requires effective teamwork to be effective. However, the process of teambuilding and the roles and functions of team members need to receive adequate attention in order to support effective primary healthcare services (Jaruseviciene, Liseckiene, Valius, Kontrimiene, Jarusevicius & Lapão, 2013). This study suggests that both formal and individual behavioural factors should be targeted when aiming to strengthen primary healthcare teams. The authors also reported that health professionals (nurses and physicians) indicated several issues concerning organisational factors that influenced teamwork. These included financial incentives, appropriate work conditions, and improving organisation and team-building initiatives. Although not widely reported in literature, it has been suggested that incentives given to employees promote higher levels of job satisfaction and improve loyalty, thus encouraging them to participate actively in the quality process (Taital, Haufle, Heck, Loeppke & Fetterolf, 2008).

There is enough evidence in the literature to demonstrate that effective teamwork improves staff member loyalty, enhances both organisational and professional commitment, and improves participation in the quality management process. Chang, Ma, Chiu, Lin and Lee (2009) carried

out a cross-sectional survey in four acute care hospitals in Taiwan, comparing levels of job satisfaction and opinions about teamwork and the quality of patient care among healthcare professionals. The results of this study showed that the most important 'predictors of job satisfaction' were the quality of care given to patients, and teamwork. Coeling and Cukr (2000) found that good teamwork between nurses and surgeons resulted in increased quality of patient care, improved nurse job satisfaction, and made the cost of care cheaper.

The most common relationship in healthcare organisations is that of nurse–physician. McCusker, Dendukuri, Cardinal, Laplante and Bambonye (2004) suggested that, among the factors that influenced quality measures in healthcare organisations was 'nurse–physician relations'. This measure is useful to assess the effect of quality improvement initiatives that aim to improve the work environment for hospital nurses. Although Fitzgerald (2008) indicated that nurses may refrain from communicating openly with other health disciplines, including medicine, they are still required to communicate, either formally or informally, so as to work in teams that are based on mutuality and respect for each other's roles.

Being an active team member that participates in the TQM process necessarily mandates that some members make decisions that influence the services provided in their areas (Salas, Sims & Burke, 2005). Taking decisions or being part of the decision-making process indicates that members are given the opportunity to be active participants in their respective area of specialty to promote better outcomes (Mathieu, Travis Maynard, Rapp & Gilson, 2008). So, each member contributes to the overall process of quality management based on their knowledge, skills and experiences. This way of managing organisational affairs is based on the adoption of a team approach to making decisions and setting plans.

In their study, Cartmill, Soklaridis and Cassidy (2011) reported that informal communication had a positive impact on the success of teamwork. This type of communication provides a learning opportunity that other health professionals could receive by attending informal discussion meetings, for example, during breaks or while sitting in a staff lounge. Informal communication usually provides the opportunity for health professionals to share information that could be described as informative and educational (Cartmill, Soklaridis & Cassidy, 2011). These authors suggest that informal conversations between health professionals often provide an avenue to share different opinions and perspectives and might add to each person's information and experience.

Teamwork is clearly crucial for quality healthcare services. None of the health disciplines can provide care solely (Huber, 2010). Trans-disciplinary teamwork is an essential component of all successful healthcare organisations. Furthermore, Cartmill, Soklaridis and Cassidy (2011)

suggest that maintaining a successful trans-disciplinary team is necessary for the process of educating and teaching all health professionals, especially those with limited experience in clinical settings, and with interdisciplinary teamwork. Health professionals have indicated that team learning behaviour needs to become an integral part of the work environment within all healthcare organisations. Participants have also reported that when all opinions are considered to be equally important, learning about and from other disciplines results, which promotes a better teamwork environment for all (Cartmill, Soklaridis & Cassidy, 2011; Huber, 2007; Wheeler & Stoller, 2011).

Miscommunication among team members can lead to frustration due to work overload and a lack of engagement in team processes. In addition, poor communication and teamwork has been shown to contribute to negative patient outcomes (Wheeler & Stoller, 2011).

Even when health professionals have limited knowledge and skills of teamwork and team building, on-the-job training has been found to improve this knowledge and promote better teamwork experiences among health professionals. Sehgal, Fox, Vidyarthi, Sharpe, Gearhart, Bookwalter, Barker, Alldredge, Blegen and Wachter (2008) examined the impact of developing a multidisciplinary teamwork training program that focused on teaching teamwork behaviours and communication skills to internal medicine residents, hospital workers, nurses, pharmacists, and a range of other staff. The authors concluded that an educational program that focuses on teamwork skills, including effective communication, must be accompanied by actual clinical activities so as to foster the use of new skills and change behaviour. These authors concluded that educational programs, composed of a series of sessions, need to be fostered, as they improve teamwork activities and achieve better quality results, including cost-effective and time-saving services (Sehgal, et al., 2008).

Managers might also benefit from such programs as leadership skills in order to improve teamwork outcomes. Leggat (2007) conducted a study that explored the individual teamwork competencies perceived by health service managers to contribute to the effectiveness of the work of any given team in both management and clinical teams. This study was conducted among postgraduate health service management students. The findings suggested a need for a focused teamwork development approach and learning model so that teamwork competencies for health service managers can be developed (Leggat, 2007).

2.9.5 Policy

Health department reviews in many countries around the world, including Australia, the UK, and the US, have recommended more focused attention on inter-professional learning and practice that concerns important issues such as patient safety and minimising human errors

(Runciman, Williamson, Deakin, Benveniste, Bannon & Hibbert, 2006; Walton, Shaw, Barnet & Ross, 2006). These reports often call for greater teamwork, inter and intra-professional collaboration and support for innovative workplace learning strategies (Braithwaite & Associates, 2005). Furthermore, Barr (2003) considered teamwork, which includes effective communication and managerial support, as an explicit core inter-professional competency that is essential to drive change in the healthcare industry and implement quality management program successfully.

For teamwork to be successful, members have to share a common vision and have agreed goals (Wheeler & Stoller, 2011). Differences in power, levels of education, theoretical and clinical perspectives, and practical approaches to care delivery can pose challenges to effective teamwork in healthcare contexts (Tanco, Jaca, Viles, Mateo & Santos, 2011). All staff members need to have access to information necessary to guide their decisions. Differences in the level of knowledge or hiding pieces of information from some team members may jeopardise the whole process of teamwork and collaboration. Every team member needs to feel empowered so that their ideas and thoughts can be contributed and considered by the whole team (Nwabueze, 2011). This can be somewhat challenging in countries such as Saudi Arabia, where gender equity is not a cultural norm (Vidyasagar & Rea, 2004).

According to Wardhani, Utarini, van Dijk, Post and Groothoff (2009), an organisation that has a developmental culture, an assumption of change and the ability to take risks usually demonstrates a positive correlation with the successful implementation of a quality management program. A review of literature by Tanco, Jaca, Viles, Mateo and Santos (2011) aimed to highlight to the industry that important lessons can be learned regarding how teamwork is generally managed within healthcare organisations, using planned lessons. These lessons included the necessity of engaging all employees in teams so that they are able to unify their vision, become effective team members, build on their skills, create cross-disciplinary teams, encourage trans-professional teamwork, empower each other, be client-focused and product-oriented, delegate flexible roles, and support each other to use active communication to avoid misunderstandings. Teamwork, autonomy, empowerment and self-engaging behaviours are also required to improve the impact of effective teamwork (van den Broek, Callaghan & Thompson, 2004).

It is crucial to address the issue of educating health professionals, graduates and undergraduates on team building, team dynamics and the importance of this approach in achieving the quality of the service they deliver. They should also be aware of how important teamwork is to their work, which is usually dependent on the work of other professionals and non-professionals in

the health organisation. No single individual or profession can work alone in the healthcare organisation and do all that is required (Huber, 2010).

Although abundant literature is available from many countries around the world about the effects of teamwork on the successful implementation of quality management programs, there is still limited evidence on the topic from the Middle East; thus the impetus for this study, which seeks to explore such effects on a health facility in Saudi Arabia.

In brief, effective teamwork is reported in the literature to have considerable impact on the success of any quality model within healthcare organisations. TQM is one quality model that has received attention in the healthcare industry recently. The impact of teamwork on TQM has been investigated in different countries around the globe. There are, however, limited studies that address the impact of teamwork on the implementation of TQM in Saudi Arabia.

TQM is a quality model that puts emphasis on client satisfaction, employee performance and commitment, and the use of resources to facilitate provision of cost-effective and efficient services. Generally, there is growing evidence that TQM has a positive impact on healthcare organisations worldwide. However, the achievement of these positive outcomes has not been observed in Saudi Arabian healthcare organisations. This study seeks to consider one of the factors that influence the implementation process: teamwork, and the role this might play in the implementation process. In Saudi Arabia there is limited knowledge regarding the impact this factor has on TQM in health organisations. Thus, a study exploring this particular factor will provide data that can be used for future research. The next section of this chapter presents and discusses the conceptual framework chosen to underpin this study.

2.10 Conceptual Framework

2.10.1 Organisational Climate Theory

Organisational Climate (OC) Theory as a conceptual framework emerged less than a century ago, specifically during the 1930s, as a result of a need to examine the impact of industrialism on human behaviour within organisations (Mulki, Jaramillo & Locander, 2006). The term ‘organisational climate’ first appeared in work by Lewin, Lippitt and White in the late 1930s. Lewin, Lippitt and White (1939) applied this concept to a study of the aggressive behaviour of males. They investigated leader behaviours among teenagers, and identified the influence those behaviours had on relational exchanges within that group. Although the main focus of Lewin, Lippitt and White’s study was social climate, many believe that they were pioneers in the establishment of the organisational climate theory (Erhart, Schneider & Macey, 2014). According to Lewin, Lippitt and White (1939), the social climate (or atmosphere) referred to the

interactions between boys that focused on group behaviour rather than that of individuals. They also viewed leadership style as the cornerstone in the process of developing the climate; thus, the leadership style is an antecedent of the climate (Lewin, Lippitt & White, 1939).

Fleishman (1953) studied leadership styles influenced by the work of Lewin, Lippitt and Whie (1939), and reported that the term 'leadership climate' referred to the leader who has the ability to create the 'climate' to transfer learning to a work environment. This concept kept appearing in the literature until the late 1960s (Erhart, Schneider & Macey, 2014). So, the development of this theory has been slow, and has been explored by a number of researchers.

Although the work on this theory goes back to the 1930, 'organisational climate' has been mentioned in a range of different studies, such as Argyris (1958), who explored group dynamics in a bank and linked the concept of organisational climate to formal organisational policies, employee needs, values, and personalities. Soon afterward, McGregor (1960) argued that organisational climate was determined by managerial assumptions and the relationship between managers and their subordinates. However, McGregor did not present any techniques to measure OC, instead suggesting that it was dependent on perceptions and therefore difficult to measure. Forehand and Gilmer (1964) defined OC as a set of qualities that describe the organisation and are enduring over time. Gregopoulos (1965) described OC as a normative structure of attitudes and behavioural standards that provides a basis for interpreting situations and acts as a source of pressure for directing activities in an organisation. Further to this, Litwin and Stringer (1968) introduced a framework of OC by suggesting that there were six dimensions of OC: 1) structure, 2) responsibility, 3) reward, 4) risk, 5) warmth, and 6) support. The theory of OC has been developed over time and used in a number of settings; more recently it has been linked to the concept of teamwork and the implementation of TQM (Berces & Hegyi, 2001).

There has been some confusion over what constitutes organisational culture and organisational climate (Hunter, Bedell & Mumford, 2007). Organisational climate is an important factor that determines many aspects of the effectiveness and efficiency of an organisation (Bolman, 2003), while organisational culture constitutes the values, norms, traditions, myths and ways that individuals behave within the organisation (Hunter, Bedell & Mumford, 2007; James, Choi, Ko, McNeil, Minton, Wright & Kim, 2008). The main issue concerning the formation of organisational climate is how employees form perceptions of themselves within the organisation and how this presence can be defined (Schneider & Reichers, 1983).

Early attempts were made to establish how organisational climate operates. Schneider and Bartlett (1968) conducted an extensive empirical study on employees in life insurance companies. They developed two sets of separate dimensions, one at managerial level and

another for field agents within the companies. During this time studies had established the first conceptualised and measured forms of organisational climate depending on the shared perceptions and vision of the organisation's members (Schneider & Bartlett, 1970). However, there was little distinction between what the organisation actually provided to employees in terms of work climate and what those employees were hoping for (wishful thinking).

Common components of OC across a range of studies include teamwork and communication, leadership styles and models, and reward-punishment systems of the organisation (Schneider, Ehrhart & Macey, 2013). These features influence how individuals might behave within their teams, determining aspects of teamwork including communication, organisational support, and collegial interaction and collaboration (McMurray, Pirola-Merlo, Sarros & Islam, 2010).

OC also encompasses how employees perceive organisational policies and the inter-social environment within the organisation (Patterson, Warr & West, 2004), and how they are treated by their organisation (Harris, 2002). It refers to the properties that influence workers' attitudes, motivation and behaviours (Bhutto, Laghari & Butt, 2012). OC is how workers perceive their workplace: whether it is friendly or unfriendly, a good or bad place to work, hard on workers or an easy-going place. These often unconscious perceptions and feelings determine many aspects of workers' interactions with surrounding people (colleagues, clients and visitors) and resources (machines, equipment, consumables and so forth), and influence productivity and loyalty (Clercq & Rius, 2007; Permarupan, Al- Mamun, Saufi, Binti Zainol, 2013).

Organisational Climate Theory has been adopted as the conceptual framework in this study to align the findings with a theoretical explanation. This theory addresses the impact of organisation on human behaviours (Aaron, Sommerfeld & Willging, 2011), which is relevant to this study that examines the effects of teamwork on the implementation of TQM objectives. This study is concerned with the organisational structure of healthcare in Saudi Arabia and how this might impact on team behaviour, specifically how OC might influence how team are formed, team dynamics, and the factors that significantly influence team efficacy and efficiency. As previously stated, a team comprises a group of people who work together within an organisation to achieve specific objectives (Mosser & Walls, 2002). Teams perform within the organisation driven by policies, rules and regulations (DeLuca & Valacich, 2006) which determine the nature of the organisation and how each member functions within it. The nature of the organisation and the underlying culture greatly influence teamwork and defines its dynamics (Bolman, 2003). While the key to successful teamwork depends on the internal and external characteristics of an organisation, organisation climate determines the how, what and where of teamwork. Teamwork is therefore intrinsically linked to organisational climate (Chen, 2010). Thus is important when examining teamwork within a given organisation to understand

the organisational climate within which employees work. The theory adopted in this study provides a connection between the organisational characteristics, the processes and the staff mix, and assists in understanding how OC might influence the successful implementation of TQM programs in the KFMC.

The Saudi community is conservative. The ability of females to move and mix with males in markets, restaurants and other public places is extremely restricted and can occur only with the presence of a close male relative (or chaperone, who is known as a 'Mahram') (Meijer, 2010). As with a number of countries around the world (Rosemary & Le Feuvre, 2003; Woodend & Devins, 2005), signs of female segregation can be seen in different aspects of public life in Saudi Arabia. Gender segregation and limitations in female empowerment might contribute to organisational climate and teamwork in a negative way. Less empowered females might be discouraged from active participation in promoting a positive atmosphere in the workplace, and thus influencing productivity and quality improvement (Abubakr & Mohamed, 2005).

Female segregation in healthcare facilities can be minimal due to the nature of the work, the mixed and overlapping tasks performed by professionals from both genders, and other procedures that require their collaboration (Hibbert, Al-Sanea & Balens, 2012). In part, separation of both genders cannot apply to all situations within healthcare facilities, where health professionals and clients from both genders meet in closed places with or without the presence of a Mahram for professional reasons, including performing physical assessment and clinical evaluation. It is well known that in some cases there will only be a female physician or a male nurse available to apply or provide the required care. However, if possible a health professional of the same gender will implement care (Mebrouk, 2008). In rare cases, family or next of kin will deny care, and this could happen in any country around the world. Similarly, this might also apply with meetings of health professionals regarding issues related to the organisation and their work, such as quality objectives. In many cases, health professionals of both genders work hand-in-hand to save a life, apply a particular procedure or administer a therapy. Therefore, it can be said that fewer restrictions are seen within these organisations compared with the wider Saudi community.

OC within KFMC might have been influenced by issues of female segregation due to the fact that few Saudi females are promoted to administrative posts, meaning the majority of these positions are held by males. In addition, non-Saudi females usually work in areas of direct client care, e.g. as nurses in the wards and in the clinics, and they usually do not stay for long periods of time to be promoted; thus, they will maintain a static position or at the best be promoted to a lower managerial post, such as unit manager or supervisor. Therefore, if present, female segregation within the KFMC might be present mainly as a result of the nature of the healthcare

organisational hierarchical structure, but not due to influence by the Saudi community conservative culture or even the culture within the healthcare organisation.

Organisational climate determines the nature of communication, trust, satisfaction, retention and the social and professional relationships among employees and managers (Volkwein & Zhou, 2003). OC reflects workers' perception of their work environment and the characteristics of that environment that determine many aspects of emotional responses of those workers (Glisson & James, 2002). Therefore, this theory will provide the means to interpret the study findings, and to explain the mechanics of why and how they have been ascertained, by providing a theoretical explanation of the context of the study.

Organisational Climate Theory stems from research investigating organisational management (Glisson, Schoenwald, Kelleher, Landsverk, Hoagwood, Mayberg, Green & The Research Network on Youth Mental Health, 2008; McMurray, Pirola-Merlo, Sarros & Islam, 2010). It has evolved in the pursuit of effective management theory that aimed to maximise productivity, adopt cost-effective strategies, maximise employee satisfaction and improve [skilled] employee retention (Nonaka & Takeuchi, 1995). In this, several principles have been combined to provide an outline for the development of an effective organisational climate model. The major themes in this model suggest supporting active, effective communication, promoting efficient teamwork dynamics, developing an enabling culture, and developing a shared vision to create an effective organisational climate (Denison, 1996; Randhawa & Kaur, 2014). The key concepts in this theory that inspire a positive organisational climate among all levels of employees include effective communication and teamwork; these involve a range of components including the decision-making process, lines of communication, organisational hierarchy, leadership style, job satisfaction and involvement and role differentiation among employees (Von Krogh, Ichijo & Nonaka, 2000; Haakonsson, Burton, Obel & Lauriden, 2008; Randhawa & Kaur, 2014). As can be seen later in this section, the tool adopted in this study investigates these elements in addition to team learning behaviour and task flexibility.

OC can be defined as the conceptual framework that describes the way in which organisational members perceive and characterise their environment in an attitudinal and value-based manner to achieve organisational objectives (Glisson, Schoenwald, Kelleher, Landsverk, Hoagwood, Mayberg, Green & The Research Network on Youth Mental Health, 2008; Verbeke, Volgering & Hessels, 1998). OC comprises a set of attributes such as loyalty, commitment and dedication. Created within the organisation, it determines the quality of communication and influences how employees behave within the organisation (Smith, 2009). OC is influential to institutional effectiveness and success in different organisations, including industry, higher education and healthcare. As a result of its subjective nature and controllability by the decision-makers, OC is

greatly influenced by organisational leadership and the nature of teamwork within the organisation (Johnsrud, 2002). Thus, its adoption as a conceptual framework in the present study can be justified as it will assist in understanding the aspects of teamwork that impact on the implementation of 'total' quality management. OC also assists in explaining how teams perform by characterising features of teams within an organisation.

For the purpose of structuring the theoretical premise for this study, the National Patient Safety Agency (NPSA) definition of OC was adopted (2006). According to the NPSA (2006) OC can be described as the shared perception of all behaviours, practices and procedures within a team representing different levels of teams, including unit, departmental and organisational levels. Team climate is part of the organisational climate and can also be described as the way that individuals working within their teams perceive how things are done in the organisation (NPSA, 2006). In this study, the choice of a conceptual framework that focuses on how teams interact within an organisation was necessary to explore the influence of teamwork on the implementation of TQM. Teams have a variety of objectives, structures and tasks and the researcher needed to consider a framework to explore and understand the nature of teamwork, i.e. organisational climate. According to NPSA (2006), team climate focuses on the proximate work environment of individuals within the subsystems of organisation.

The team climate assessment measurement (TCAM) items comprise descriptions of how work group members or the group as a whole perform various aspects of their team tasks. It also addresses team climate dimensions derived from theories of effective group functioning and how these dimensions relate to issues of safety/adverse incident management (NPSA, 2006).

2.11 Summary

This chapter critically reviewed relevant literature in relation to the research topic and the conceptual framework. The chapter commenced with a discussion of the historical perspectives of the development of TQM, how and who contributed to its emergence as a quality management model. It also explored the philosophical premises that support TQM. This was followed by a review of the literature focused on factors that have impacted on the successful implementation of TQM. In the second section of this chapter the theoretical framework that supported this study and provided the theoretical foundation for its findings is presented and discussed.

The next chapter explains the methodology and methods adopted in this study, why they were adopted and how they were employed to answer the research questions.

Chapter 3: Methods

3.1 Introduction

This study investigates the influence of teamwork on the successful implementation of a total quality management program in King Fahad Medical Centre, Riyadh, Saudi Arabia, and examines the components of effective teamwork. To explore this topic, the researcher chose a quantitative research method using a survey questionnaire.

Chapter Three is divided into the following sections. Section one explains the methodology, or the study design, including the advantages, disadvantages and strategies adopted to meet the purposes of this study. Justification of the chosen methodology and the paradigm is also discussed in this chapter. The second section presents and justifies the choice of study questionnaire, the Team Climate Assessment Measure (TCAM) developed by the National Patient Safety Agency (NPSA, 2006), and the process of validation. The third section presents information about the relevance of the study questionnaire to the research topic and justifies the use of a quantitative research design for this study. The ethical considerations taken into account when planning and implementing the study are then discussed.

The next section explains the study procedures, including location and population of the study, sampling strategies, the process of adapting the study questionnaire for use in a Saudi environment, and the process of pilot testing. Data collection and analysis techniques are explained, followed by a discussion of the study limitations and a summary of the main points covered in this chapter.

3.2 Paradigm of the Study Design

The underlying paradigm for this study is pragmatism. Paradigms are world views that guide researchers' decisions (Tashakkori & Teddlie, 2009). Scholars such as Greene (2008) and McKinstry (2000) suggest that pragmatism is the best philosophical foundation for research that comprises quantitative and qualitative components. In this study the methodology is quantitative, using a survey tool that includes a number of open-ended questions. The main purpose of the open-ended questions is to provide a means of understanding the participants' perspectives, particularly in relation to the work environment in a Saudi Arabian healthcare facility, which is the location for this study. The pragmatist paradigm is ideal when a cross-section survey and open-ended questions are combined, in order to explore research questions

from several perspectives. As suggested by Creswell (2003), this approach is directly linked to the purpose of the study and to identifying and addressing the research questions.

Adoption of a quantitative approach with added open-ended questions better answers the research questions and provides additional understanding of the organisational climate within the setting for this study. Darlington and Scott (2002) suggested that decisions of whether to take a quantitative or qualitative research approach were often based on choice of a design and methodology best suited to the study purpose, rather than on the philosophical perspectives of the researchers. In this study, adoption of this approach gave the researcher insight into the factors influencing the implementation of effective teamwork so that quality management objectives in a Saudi healthcare organisation could be explored. It also provided the participants with an opportunity to provide a more in-depth explanation of what they perceive by reflecting on their personal experiences – information that could not possibly be gathered using a quantitative approach alone. The quantitative approach captures experiences using a numerical scale, but cannot gather participants' thoughts about the context of their workplace (Creswell & Plano-Clark, 2006).

The complexity of any human-related phenomenon in relation to the environment and surrounding variables is based on interaction among the components of this environment, as well as the attributes of humans (Creswell, 2003). These all make the pragmatist paradigm an ideal context for the use of designs similar to that adopted in this study. Based on the pragmatic view of maximum benefit with the least use of resources, the researcher has adopted a validated tool that explores the teamwork components that impact on the successful implementation of a TQM program, and has added a number of open-ended questions that can explore additional information relevant to the aims of this study, within the Saudi Arabian context (Teddlie & Tashakkori, 2009).

3.3 Data Collection Tool

The researcher conducted a comprehensive search of the literature, via electronic databases and library bookshelves as described in Chapter Two, to find a valid and reliable tool that could answer the research questions. The researcher used key terms such as 'quality management', 'total quality', 'quality in healthcare setting', 'teamwork', 'factors influencing quality management', and 'healthcare quality' to search for other relevant studies. The review revealed a wide variety of survey tools, but many had different scopes and none were considered a perfect match for the study purposes. Hence the decision was made to adopt the Team Climate Assessment Measure (TCAM) (National Patient Safety Agency [NPSA], 2006), with some minor modifications to better focus the questionnaire on the impact of effective teamwork

within the context of total quality management. According to the team climate assessment measurement guide (NPSA, 2006), this tool was developed to enable teams in health and social care contexts to review aspects of their teamwork that they believed may affect patient safety and error management (NPSA, 2006). It is not a test, and has no 'right' or 'wrong' answers. It is a five-response Likert's scale ranging from 'Strongly Disagree' to 'Strongly Agree'. As a self-reporting questionnaire, the modified team climate assessment measurement aimed to collect staff members' views on issues related to effective teamwork. It took approximately fifteen to twenty minutes to complete responses to the 53 short statements. This tool has been used in a range of different healthcare settings within the UK, where it was originally developed by a NHS team (NPSA, 2006).

The researcher located this tool in an open access electronic site sponsored by the National Health System of the UK (<www.npsa.nhs.uk>). The tool was considered appropriate to answer many of the aims of this study, as TQM in healthcare is also closely aligned with ensuring patient safety, as discussed in Chapter Two. The tool was developed to be applied to a range of clinical settings and has been validated by the TCAM team as well as other researchers (Norris, 2009). Themes embedded in the TCAM include task reflexivity, team learning behaviours, team efficacy and stability, and leadership and decision-making. However, in order to better fit the culture and context of this study as well as maintain the content validity of the tool, the researcher, under the guidance of the supervisors, made some minor amendments to better suit the study purpose and context. The adapted tool has slightly different values to the original tool and thus should be treated as a modified version of the TCAM. The adapted tool has 30 items instead of the 53 items that made up the original. Five new items and eight modified items were adopted in the new tool to better reflect both the purposes of the study and the KFMC organisational environment and structure. Content validity has been maintained, as the remaining items included in the TCAM questionnaire were not changed; instead a limited number of new items necessary to meet the study purpose were added.

3.3.1 TCAM Items by Dimension

Internal and external validity of the TCAM has been and continues to be established in several ways. According to NPSA (2006), the TCAM scale was selected on the basis of a review of conceptual links between a comprehensive list of team climate scales and components of the TCAM. Secondly, patient safety-relevant items were integrated into the TCAM items. And finally, the process of validating the questionnaire items was supervised by the NPSA team.

External validity is concerned with generalization of the effect in research to a given populations, settings, treatment variables, and measurement variables (Lewis-Beck, Bryman &

Futing, 2003). In addition, internal validity is examines whether the study design closely follows principle of cause and effect (Lewis-Beck, Bryman & Futing, 2003). Both types of validity have been established earlier through the original developer of the scale. Further, this study comes to test these types by re-testing the scale on different population.

3.3.1.1 Task reflexivity

This concept includes the following items: the team reviews its objectives; methods used by the team to get the job done are often discussed; there are regular discussions on whether the team is working effectively together; the team modifies its objectives in light of changing circumstances; team strategies are changed; the quality of communicating and discussing information is analysed; the team reviews its approach to getting the job done; and the way decisions are made in this team is reviewed (NPSA, 2006).

This concept addresses strategies used by the team to ensure patient safety and effectively manage adverse incidents, and also how the team supports reviewing individual beliefs and behaviours relevant to patient safety (NPSA, 2006).

3.3.1.2 Participative trust and safety

This dimension explains the following items: how mistakes made by members are considered; how members of the team are able to bring up problems and tough issues; rejecting or accepting people within the team because of being different; how easy or difficult it is to ask other members of the team for help; whether any member on the team would deliberately act in a way that undermines other member's efforts; and how the unique skills and talents of team members are valued and utilised (NPSA, 2006).

3.3.1.3 Team learning behaviour

This dimension encompasses the following: if the team takes time to consider ways to improve its work processes; whether the team tends to address differences of opinion privately or off-line, rather than directly as a group; if the team frequently seeks new information that leads to important changes; whether someone makes sure that the team stops to reflect on the work process; if members in the team often speak up to test assumptions about issues under discussion; and if people from outside the team are invited to present information or have discussions with the team members (NPSA, 2006).

3.3.1.4 Individual development

This dimension refers to team support for individual professional development; team support for individual learning activities, whether the team provides individual members with useful ideas and practical support and helps them to optimise professional development; and whether team members pay attention to each other's work so that the work remains at a high standard (NPSA, 2006).

3.3.1.5 Inter-professional credibility

This aspect relates to how team members feel when accepting procedural suggestions from other team members; and how well individual members trust, and have faith and confidence in the credibility of other members' knowledge about the project (NPSA, 2006).

3.3.1.6 Inter-professional learning

This dimension addresses issues related to the interaction between professional groups about how best to work together to achieve the team's objectives. It asks questions about feelings of trust and safety between colleagues with different professional backgrounds, and about the climate of constructive debate between professional groups within the team. This dimension focuses on how well all professional groups work together to achieve tasks, and the level of co-operation and trust that exists between different professional groups (NPSA, 2006).

3.3.1.7 Regular contact

The main focus of this dimension is on regularity of group meetings. It also focuses on how team members keep in touch with each other; whether there are frequent and mutual exchanges when they meet; and whether they also discuss topics informally.

3.3.1.8 Mutual trust

This dimension refers to issues concerning trust and friendliness among group members. It also asks about team support to each member, and whether there is a strong sense of helpfulness among team members that includes understanding and empathy (NPSA, 2006).

3.3.1.9 Team efficacy

This involves how well the team achieves its goals; how the team achieves goals without requiring members to put in unreasonable time or effort; how well team members can perform;

and if they have the special skills needed for good teamwork and to achieve the team objectives (NPSA, 2006).

3.3.1.10 Team stability

This dimension includes the rate of team-member turnover; as well as team members' impressions of how many people have left the team during the last six months.

3.3.1.11 Shared leadership and leadership clarity

This dimension addresses the number of people that lead/coordinate the team; whether all team members have leadership/co-ordinator roles in one way or another; the presence or absence of a very clear leader/co-ordinator; the presence of conflict over who leads/co-ordinates the team; team members' initiatives to promote shared motivation and commitment; team members' initiatives to make sure the team develops and uses the best possible approach to work; team members' initiatives to help the work group build and use members' knowledge and skills; team members' initiatives to constructively resolve problems or conflicts that develop among members; and how team members inform other members about what to do and how they should do it (NPSA, 2006).

3.4 Relevance of Questionnaire Items to the Research Topic

Face validity, content and construct validity were tested. Reliability and internal consistency were also measured, as they were required for the construct validity (i.e. principal component analysis) (Bryman & Cramer, 2005). These tests are explained later in this chapter.

Face validity refers to what the scale appears superficially to measure. Face validity pertains to whether the scale "looks valid" to the experts who examine it (Neuman, 2011). Content validity focuses on the content of the scale (DeVon, Block, Moyle-Wright, Ernst, Hayden, Lazzara, Savoy & Konstas-Polston, 2007). According to Content validity determines whether the manifest factors (expressed as items of the scale) actually measure the latent concept (teamwork in case). In the present study content validity has been established following both extensive review of literature, using a scale of previous use that has proven to be valid and by asking questions to experts in the field of quality management about the comprehensiveness of the scale items. Further details are explained next.

The full set of items representing factors influencing effective teamwork was critically reviewed to evaluate relevance by six experts in quality management from Saudi Arabia. Each of these

authorities holds a doctoral degree in quality management; together they share teaching roles in three universities in the country. All had at least five years post doctorate experience and expertise in quality management. The researcher contacted these experts, explained the study purpose and asked them to review the study questionnaire items and provide feedback. Specifically, the experts were asked to judge the validity of items individually and as a set, and to suggest revisions and identify any areas any omissions. They were asked the following questions: 'Do these statements belong together under each factor?' 'Do these statements belong to the factor where they have been placed?' and 'Do these factors and the underlying statements cover the factors influencing effective teamwork?' Relevance was validated using a 4-point scale; 0 indicated 'not relevant/complete'; 1 indicated 'mildly relevant/complete'; 2 indicated 'moderately relevant/complete'; and 3 indicated 'strongly relevant/complete' (Lynn, 1996). By responding to these questions, the experts provided feedback on whether the questionnaire items were, in fact, measuring the concept under investigation (i.e. the teamwork component influencing the implementation of TQM), and whether those items covered all aspects of the topic.

Based on the responses of these experts, the resulting questionnaire was not further modified or changed. Content validity as well as face validity of the study questionnaire was also tested during this process (DeVon, Block, Moyle-Wright, Ernst, Hayden, Lazzara, Savoy & Kostas-Polston, 2007), as the experts provided their view on the adequacy of the items to investigate the topic and to measure what it was intended to measure (Holden, 2010).

The questionnaire needed to be attractive, easy to complete, and promote participant interest in the topic so that they would be willing to complete it. Neuman (2003) also indicated other issues in the use of a survey which required attention, such as how to deal with incomplete questionnaires and how to clarify unclear points arising within the questionnaire. The effect of these issues was minimised by providing participants with the contact details of the researcher and being available at different times to answer any questions. In this study, a limited number of questionnaires were missing data (see 'Missing Data and Outliers' section in Chapter Four). There were also missing data in the open-ended questions section, as not all participants completed this part of the questionnaire.

The draft of the amended tool was sent to a group of six consultants (who were aware of the organisational culture of Saudi Arabian hospitals and were experts in the field of health management), to comment on the amendments to the questionnaire, and to provide feedback on whether the items were appropriate to cover the concepts under investigation, i.e. teamwork and total quality management. These experts also provided feedback on the overall structure, clarity and comprehensibility of the items within the tool (detailed explanation of this step can be

found in section 3.7.4 Translation the Study Questionnaire). The tool was also sent to five other PhD candidates who were exploring issues in relation to health management, and who viewed and commented on the amended tool. Suggestions were received for a few minor changes that included rearranging some items so that they would reflect the study purposes a little more clearly.

The modified study questionnaire comprises six factors and fifty-three items. The range of responses for each item is between one and five. The total score for the tool ranges between 53 and 265, with the levels divided into three categories to reflect a low, medium and high level of perceived practice of effective teamwork components. Chapter Four explains the process of validation and discusses the factors and their corresponding items found to reflect participants' perceptions in this study.

3.5 Open-ended Questions

As already discussed, this quantitative study adopted an existing survey questionnaire, the TCAM (NPSA, 2006) (Appendix 3), which comprises closed quantitative statements. For the purposes of this study the tool was amended slightly and four open-ended questions were added (Creswell, 2003). The value of adding the open-ended questions was that they offered a broader perspective than the primary data set could offer alone (Appendix 4).

As this tool had never been used in a Saudi Arabian setting four open-ended questions were added to the survey to gather additional data in response to the following research aims (see Appendix 4):

a) What are the components of teamwork among employees that influence the successful implementation of the total quality management program in King Fahad Medical City?

b) Which aspects of interaction between teamwork components and the total quality management program within King Fahad Medical City influence employees' engagement in the successful implementation process of the program?

c) What are the unique factors that influence the successful implementation of effective teamwork in King Fahad Medical City, as perceived by the employees?

d) The four open-ended questions were:

1. How would you define a team? Teamwork?
2. What is your role in the team?
3. What are the benefits of challenges of teamwork?
4. Would you like to add any further comments about teamwork?

3.6 Ethical Considerations

The research procedures adopted in this study respected all professional, legal and socio-cultural obligations (Polit & Hungler, 2003). The ethics approvals were granted to conduct this study from the Human Research Ethics Committee (HREC) of the University of New England (Appendix 1) and by the Human Research Ethics Committee at King Fahad Medical City (see Appendix 1).

The participants' rights and interests were a top priority and were safeguarded throughout the process of this research and in gathering, keeping, storing and protecting the data. Anonymity and confidentiality issues were addressed by not asking participants to state their names or provide other identifying information; each survey tool was allocated a code number only; and no names were recorded. Informed consent was implied, as willing participants submitted completed copies of the study questionnaire to the researcher by depositing them into locked boxes at a variety of locations throughout the hospital.

During the research, participants' privacy was also protected through securing data storage. As per University of New England Human Research Ethical Committee mandates, the data will be stored for five years by the researcher, after which it (will be securely destroyed by the researcher (Polit & Hungler, 2003). Specifically, data that consist of password-protected electronic files on computers accessed by the student researcher will be de-identified, and hard copies of completed questionnaires will be locked in a filing cabinet in the researcher's office. When the time comes, these will all be destroyed by deleting relevant electronic files and by using a paper shredding machine.

Before data collection, the researcher explained to the candidates that they had the right to refuse to participate. They were assured that their decision to participate or not would not disadvantage them in any way. All participants were provided with an information sheet that explained the purpose of the study and informed that they could request a summary of results from the researcher after completion. Contact details for the researcher were provided to all participants (Appendix 2).

As there were no previous studies identified in the Saudi Arabian context that investigated the impact of effective teamwork on the implementation of a total quality program, this research is expected to contribute to the current knowledge about the topic and this was explained to the candidates as one main benefit of the study. The researcher also noted that participating in this study would not cost the participants anything, except the short time taken to complete the study

questionnaire. It was estimated that completing the survey questionnaire would take 15-to-20 minutes.

3.7 Study Procedures

3.7.1 Location and Population

The location of this study was King Fahad Medical City, Riyadh, Saudi Arabia, the largest medical city in Saudi Arabia. As explained in Chapter One, this medical city lies at the heart of the Saudi capital. It provides healthcare services to more than one million people (KFMC, 2014) and, when the research was conducted, had a total of 6,645 employees. Among those employees, only physicians (n=868), nurses (n=3136) and managers (n=208) were invited to participate in this study, as these groups are primarily responsible for implementing the TQM program. The total number of eligible participants was 4,212.

3.7.2 Sample and Sampling Frame

The data collection period was twelve weeks between 01/04/2013 and 01/09/2013. Participants were recruited through the use of a convenience sampling technique. The researcher sought to recruit a sample size that would be statistically adequate to represent the whole population (n=4,212). A statistical method was used to measure the number of participants required for a representative sample. Using G*power (medium effect size .05, alpha .05, power .95) the required sample size to obtain statistically valid findings was 394 (Faul, Erdfelder, Buchner & Lang, 2009). The G*power software establishes its calculation of the sample size based on the statistical tests that are adopted to answer the research questions (Faul, Erdfelder, Buchner & Lang, 2009). Considering that one of the statistical test runs requires a minimum sample size of 500, the researcher sought to obtain more than 500 completed questionnaires.

Convenience sampling was employed to recruit participants to this study as it was the only method that guaranteed attracting the required sample size, and also contributed to the speed with which data could be gathered (Neuman, 2003). This type of non-probability sampling technique allowed the researcher to recruit a sample of eligible participants due to their accessibility and proximity to the researcher (Neuman, 2003). Employees eligible to participate in this study were as follows: physicians (n=868), nurses (n=3136), and managers (n=208). A response rate of 14.23% (n= 571) was achieved and included in the analysis process. The respondents, who completed and returned the study questionnaire, were 96 physicians, 412 nurses, and 63 managers.

After ethical approvals to conduct this study were obtained, the student researcher contacted the three departments included in the study (Medical, Nursing, and Management). The key persons in these departments were asked to assist in suggesting the most effective strategy to approach and invite staff to participate. The researcher displayed advertisements on the noticeboards of each department explaining the study purpose, who was eligible to participate and how to contact the researcher if they were interested. The researcher then held information sessions for potential participants at their workplace and explained the study purpose and procedure; those who did not have time or were not available at the time of the visit were left a copy of the information sheet in their mail boxes.

Frequent field visits were made to the facility during the period of data collection to provide an overview of the purpose of the study and answer any questions. The researcher also explained to potential participants that their contribution was highly appreciated and could contribute to efforts to promote teamwork in their organisation and department. They were also informed that the study results would be made available to them and to each of the three departments once the thesis had been approved by the University.

Copies of the information sheet (Appendix 2) were provided to all candidates, either in person or via their mailboxes. The information sheet was distributed during field visits, before and after meetings, and was also attached to the questionnaire. In addition, extra copies were left with the managers and heads of departments who willingly distributed them to the staff who could not attend an information session. These sheets explained the study purposes, procedure, potential benefits and expected risks, and provided contact details for the researcher and Human Research Ethics Committee in case of inquiry or complaint. The information sheet also directed participants to where in each department they could collect a questionnaire and find locked boxes to deposit it once completed. Box keys were kept with the researcher. There were also further field visits to all areas of data collection during the period of data collection to remind all staff about the study. Among the issues that the researcher emphasised was the importance of the results to their everyday practice. So the recruitment process was continuous during the data collection process.

3.7.3 Inclusion/Exclusion Criteria

As explained earlier, the candidates recruited to participate in this study represented three departments: medicine, nursing and management, as the three key areas responsible for implementing TQM processes. The candidates eligible to participate in this study were:

- A health professional (nurse, physician), or a manager across all levels of management with an experience in the facility of no less than one year

- Able to read and comprehend either Arabic or English.

Exclusion criteria included the following:

- Employees other than the identified health professionals or managers, such as allied health professionals, administrative assistants, cleaners, drivers, security, or guards.
- Newly arrived employees (employed for less than one year), who were not yet acquainted with the work culture. During meetings the researcher emphasised that not less than one year of experience was needed for any employee to participate in the study.

3.7.4 Translating the Study Questionnaire

The language used for most communication within healthcare organisations in Saudi Arabia is English; however, the formal language of the country is Arabic. Some KFMC employees are native English speakers or speak English fluently and cannot speak Arabic, while others speak Arabic but have little English. The researcher decided that in order to increase the response rate, the questionnaire needed to be translated into Arabic in addition to the original English version. The translation process was carefully managed (as detailed below) to ensure that all items within the questionnaire reflected the meanings intended in the original by the authors and could be read and comprehended by Arabic-speaking participants. The questionnaire was translated into Arabic and reviewed to ensure that the technical meanings were consistent and clearly understood in both languages. The survey was then translated back to English to ensure consistency of meaning and intent. This process produced versions of the questionnaire in both English and Arabic (see Appendices 3 and 4). The participants were provided with both versions so that they might choose whichever they were most comfortable with.

The process of translation was as follows:

- The original English version was sent to three bilingual experts in the field of quality management to translate into Arabic.
- When the three versions were returned, they were revised by the researcher for accuracy to combine the best and most appropriate translation.
- The new Arabic version was then sent to a bilingual expert to perform a back-translation into English.
- The researcher and his supervisors then compared the ‘new English’ version with the original. No discrepancies were found.

- The final Arabic version was sent to an Arabic language editor to ensure that it was both grammatically correct and easy to read and comprehend. This step was necessary as it was expected that not all participants would be adept in academic (written) Arabic, even if they were native Arabic-speakers. That the text was easy to read and comprehend was evidenced by the fact that there were no language-related inquiries by any of the participants.
- Responses in Arabic were also translated into English by a bilingual expert and then the text was back translated and comparisons were run by the researcher for any discrepancy. All discrepancies were resolved between the researcher and the bilingual expert.

3.7.5 Pilot Testing the Study Questionnaire

The researcher wanted to make sure that completing the questionnaire would not impose any burden on the participants. In order to assess the time commitment required to complete the questionnaire the researcher recruited 30 participants for a pilot test. As part of the whole sample, participants in the pilot study were recruited following the same steps as the main study. However, the researcher made one visit to each department included in the study to identify pilot participants and the number was limited to 30 participants made up of 23 nurses, 4 managers and 3 physicians. The purpose was twofold: to test the internal consistency of the tool using Cronbach's Alpha, which was deemed appropriate for this type of Likert's scale tool (Tabachnick & Fidell, 2007); and to ask the participants to make comments on whether the statements were clear and easy to understand. Of the 30 copies of the study questionnaire sent for pilot testing, 29 copies were returned.

Those who participated in the pilot study were asked to give their opinion on the study questionnaire with regards to the readability of the items, and whether these items were easy to understand. The pilot testing participants did not provide any negative comments. They reported that the study questionnaire was easy to read and to complete, and that it was not hard for them to complete the study questionnaire in a short time.

After reviewing information gathered from the pilot study, the researcher made some minor editorial amendments before starting the process of recruiting participants and data collecting for the study. The final version of the questionnaire is provided in Appendix 4. As explained earlier, data collection for this study took nearly 12 weeks. During this time the researcher made frequent visits to the hospital to present information sessions and ensure that all participants had the opportunity to ask any questions. The researcher was received well by all employees, with

many taking a copy of the questionnaire or asking the researcher for a copy so that they could participate in this study.

3.7.6 Preparing the Quantitative Data for Analysis

Responses on the completed questionnaires were coded for entry on the SPSS file. Data were entered on the statistical analysis software as coded. The plan was to treat the missing data using the process of data imputation if necessary. This method means that any missing data can be replaced using a logical equation to complete the flow of data (Enders, 2010). However, this step was unnecessary, as the number of questionnaires with missing data was limited and these were excluded. The outliers, on the other hand, were specified at 5% and there were no extreme values, as will be seen in the next chapter.

3.8 Quantitative Data Analysis

Sample characteristics were measured using descriptive statistics. The quantitative data underwent descriptive statistical analysis, which described the demographic characteristics of the population and sample. Descriptive statistics were used to reduce the raw data obtained in the study into numbers, which summarised the participant characteristics including educational background (Carney, West, Neily, Mills & Bagian, 2010; Sinclair, Lingard & Mohabeer, 2009), gender, age, academic degree and years of experience (Cartmill, Soklaridis & Cassidy, 2011).

Measures of central tendency calculations included mean, median, maximum, minimum and mode. Standard deviation and standard error were also calculated to reflect the distribution of the sample on the normal distribution curve and to be utilised in the next step of inferential statistics. In addition, an internal consistency measure was required for this modified instrument. Thus, findings from the questionnaire would be tested for reliability and internal consistency using Cronbach's Alpha.

In this study the questionnaire responses are on a Likert's scale; an appropriate measurement test for this type of scale is Cronbach's Alpha (Cronbach & Shavelson, 2004; Field, 2005). As a newly modified tool, it was necessary that a number of issues were addressed before proceeding into factor analysis. These issues included an internal consistency value of no less than 0.6; Kaiser-Meyer-Olkin sampling adequacy; and factor loadings and the correlation between a variable and a factor (Hayes, 2002).

A number of statistical tests were adopted to answer the first research question: 'What are the components of teamwork among employees that influence the successful implementation of the total quality management program in King Fahad Medical City?' The first step in answering this question was preceded by the validation process of the study questionnaire. Then, the items and their corresponding themes that were found to impact on the study findings were kept for data analysis and to answer the first question of this study. These themes represented the components of teamwork that influenced the successful implementation of the quality management program in King Fahad Medical City.

The first measure in the list is measuring the internal consistency of the tool. It was imperative to have a reliable tool that had an acceptable level of internal consistency (alpha coefficient > .60 for this type of study that includes neither diagnosis nor treatment plan), so that factor analysis could be performed (Field, Miles & Field, 2012; Jolliffe, 2002; Tarkkonen & Vehkalahti, 2005). The internal consistency measure is a statistical test that reflects the relationship between each item and the other items. It also refers to the relationship of each item to the collection of items or total score, or how well these items fit together on a conceptual or theoretical basis (Hayes, 2002). Generally, internal consistency indicates the accuracy and precision of a research tool (DeVon et al., 2007; Thorndike, Cunningham, Thorndike & Hagen, 1991). It also indicates the tool's relative lack of error, and a function of properties and qualities of the concept under investigation (i.e. teamwork), the tool itself, the groups being assessed, the testing environment, and the purpose of assessment (Delaney, 2005). Reliability and internal consistency of the research tool answered the following question: does the research tool really measure what it was developed to measure?

Internal consistency of the tool was measured for its reliability value from a single administration (Truxillo, 2003). The values obtained from running Cronbach's Alpha depend on the participant's performance from item to item, based on the standard deviation of the test and the standard deviations of the items (Field, Miles & Field, 2012). As these values were statistically acceptable (Munro, 2005), the next step in the process of construct validity was performed.

When measured, Cronbach's Alpha was found to be notably high. Thus, the decision was made to run factor analysis for two reasons. The first was to ensure that all overlapped items within the questionnaire could be identified and then removed so that only items with good representation and contribution to the overall construct (set of factors) would be analysed. The second reason was to decrease the number of items within the questionnaire; 53 items was deemed to be a high number and needed to be reduced by removing all weak items that did not contribute to the overall explanation of the concept under study. Before going into the step of

factor analysis, it was necessary that normal distribution of the study sample be assumed (Bryman & Cramer, 2005).

Tests of normality adopted in this study included Kolmogorov-Smirnov goodness of fit test and the quantile-quantile probability plot (Q-Q plot), in addition to tests of internal consistency (Munro, 2005). This was a crucial step for the purpose of ensuring that the sample represented a normal distribution, or tended to have normal distribution, so that factor analysis could then be performed to measure the validity of the tool. It is worth mentioning that an assumption of normal distribution should be established before proceeding into factor analysis. Further discussion on this point can be seen in the later sections (Devon et al., 2007). The justification for adopting the Kolmogorov-Smirnov test measuring goodness of fit was that this test applies to different distributions, such as the Likert's scale used in the present study (Oztuna, Elhan & Tuccar, 2006). It is also a more sensitive measure, near the centre of the distribution rather than at both tail-ends of the distribution (Hou, Parker, Harris &Wilman, 2009; Marsaglia, Tsang & Wang, 2003). It can be universally applied without restriction to any scientific problem as there are no restrictions on the size of the sample, and the critical values of probabilities are widely available (Oztuna, Elhan & Tuccar, 2006).

Additionally, the Q-Q plot that was adopted as one of the normality measures in this study is a graphical representation that compares two data sets or, as with the case in this study, compares a probability distribution against normal [theoretical] distribution (Makkonen, 2008). This graphic can be developed by plotting the quantile scores against each other to form a line of some form depending on the relationship among the obtained scores. First, the set of intervals for the quantiles is chosen. The theoretical (i.e. normal distribution) scores assumed in this study are represented by the X axis and the Y axis represents the obtained values on the study scale. Theoretical plot or normal probability plot is the line against which mean scores obtained in the present study are compared.

Kaiser-Meyer-Olkin (KMO) sampling adequacy was calculated in order for the researcher to ensure there was an appropriate sample size to undertake the factor analysis (Field, Miles & Field, 2012). The KMO values range between 0 and 1. For the purpose of interpreting the KMO, a value of 0 indicates that the sum of partial correlations is large in comparison to the sum of correlations. This means that there is diffusion in the pattern of correlation as they are not fitting into a single channel of correlation; distraction of correlations can then be depicted in the obtained low values. In other words, such low KMO value indicates that factor analysis is inappropriate (Parsian & Dunning, 2009). On the other hand, a value close to 1 indicates factor analysis would yield distinct and reliable factors (Field, 2005). A value of 0.9 or greater could be described as marvellous (Parsian & Dunning, 2009). In addition to principal component

analysis, tests of internal consistency, sampling adequacy and normality ensured that the questionnaire was both a valid and a reliable tool, and that its findings could be handled more confidently.

Principal component analysis was deemed to be appropriate and was used for two reasons: high inter-item correlation; and the number of items is relatively high (Field, 2005). The cut-off point for the accepted loading values was 0.6; a reasonably good cut-off point for this type of study which represents a relatively high value to measure validity of the tool (Stevens, 2002).

Component analysis is a statistical method that has been used to measure how well an instrument was developed. It was used in this study to cluster items under the main factors, and how these items were able to interpret the underlying factor, specifically those items that had a level of loading greater or equal to the cut-off point. Loading refers to the level of association between an item and a factor; its value ranges between 0 and 1 (Jolliffe, 2002). The higher the loading value, the more it is likely to represent the factor better. This type of analysis also summarises the items into a small number of factors (Bryman & Cramer, 2005).

Loading as a value in factor analysis refers to the measure of association between an item and a factor. In other words, the loading value of any given item represents its relative contribution to the definition of the construct (Bryman & Cramer, 2005). The resulting list of items that belong to each other should then be said to explain the underlying factor. Related items define the part of the construct that can be grouped together to form a group of factors which together should explain the construct under examination, thus determining construct validity (Munro, 2005). Construct validity in the case of this study referred to the degree to which the items on a given questionnaire relate to the relevant or underpinning theoretical construct (DeVon et al., 2007). It also referred to the quantitative value, rather than a qualitative distinction between the 'valid' and the 'invalid' questionnaire as a whole.

Principal component analysis is a powerful analysis tool when there are many factors and items, such as the 53 items in the tool of this study, and the researcher intended to examine all things that these variables could possibly explain (Jolliffe, 2002). Principal component analysis in this study defined the combination of factors that explained the phenomenon or construct under study. So, the number of variables would be reduced to an acceptable level that determined all characteristics of the construct were included in these items. By finding some linear projections of the obtained data, principal component analysis both preserved these data and combined them so that it became representative of the original data without losing anything necessary (Chen, Reuss, Hung & Sick, 2013). In other words, it reduced the number of items by combining them without losing any of the necessary information gathered as original data.

This type of analysis identified the items that explained the pattern of correlations within a set of observed variables (Field, 2005). It was used to reduce the amount of data. This was done by identifying a smaller number of factors that explained most of the variance observed within the larger pile of variables available in the original set of data. It could also generate hypotheses regarding causal mechanisms or examine the investigated variables in subsequent analysis, such as those conducted to delineate issues including collinearity (DeCoster, 1998; Stevens, 2002). This step, however, was not done as the scope and purpose did not require it. Other tests, such as regression and studies of predictability, were viewed unnecessary to run in this study because they were not part of the study plan and questions.

Varimax rotation was adopted when using principal component analysis. The rotation method is a mathematical method that uses the statistical analysis software, SPSS in this case, to rotate the axes in geometric space to make it easier to determine which variables have loaded on which components (factors) (Jolliffe, 2002). Varimax rotation in this case was deemed appropriate as it produces multiple group factors within the scale that can define the themes explaining the originally-measured construct. This method assumed that the factors forming the study tool were not related. The process of analysis was used to minimise their number and keep only those which contributed to the explanation of the study concept. In the case of varimax rotation, a simple solution means that each factor has a small number of large loadings and a large number of small (or even zero) loadings (Lewis-Beck, Bryman & Futing, 2003). After a varimax rotation, each original variable (within the factor) tends to associate with a smaller number of factors. Therefore, each factor will be represented only by a small number of variables.

Varimax rotation simplified the columns obtained in the factor matrix by simply maximising the sum of variances of loadings needed of the factor matrix (Kline, 2002). Furthermore, it works to minimise the number of variables (items) that have high loadings on a given factor and might improve interpretability of the resulting factors within the matrix (Kline, 2002). This final step concludes the construct validity process which was adopted in this study.

The second question that asked quantitative information was as follows:

a) Which aspects of interactions between teamwork components and personal characteristics influence employees' engagement in the successful implementation process of the quality program? These characteristics are: age, gender, nationality (Saudi and non-Saudi), academic degree (diploma, baccalaureate, Masters and PhD), general and current experience.

b) The answer to this question has been obtained from running a Pearson correlation coefficient and a point biserial correlation coefficient which measured the correlation between the study variable and the findings of the study questionnaire. A Pearson correlation coefficient is used in the case of continuous variables, such as age, years of experience (Linacre, 2008). The point biserial correlation coefficient is used when a variable has only two options or is dichotomous, such as gender, nationality (Linacre, 2008). The point biserial correlation is mathematically equivalent to the Pearson correlation. In addition, a multivariate (one-way MANOVA) was performed to examine whether there was any effect of the participants' characteristics examined in the study questionnaire on the teamwork components included in the study questionnaire (Stevens, 2002).

3.9 Data Analysis of Responses to Open-Ended Questions

The data gathered via the open-ended questions were analysed using content analysis. Through this method of analysis, the researcher was able to organise ideas provided by respondents to the open-ended questions in the survey questionnaire (Creswell, 2009). The content was grouped into categories, and then into patterns as they appeared during this process of analysis (Straus & Corbin, 1998). The resulting patterns represented the main themes of these data components, which are reported as themes.

Validity was addressed by ensuring the accuracy of data collection and analysis so that these data accurately represented the experience of the informants (Neuman, 2011). To ensure the accuracy of the collected data in the current study the researcher re-read the responses carefully in order to identify significant information. Pragmatic validity for the study is an indication of the study results having relevance beyond the study group. Three types of validity were addressed in the analysis process of qualitative responses: descriptive, interpretive and theoretical (Holloway & Wheeler, 2013). Descriptive validity was ensured a careful transcription of the open-ended responses (Johnson & Turner, 2003). Ensuring interpretive validity was achieved by accurately representing the meaning and the views of the participants, who represent the insider perspective, where the researcher's main role was to reflect what has been reported and did not have any other role (the outsider viewpoint) (Johnson & Turner, 2003). This was achieved by discussing coding and themes with the expert supervisors during the analysis phase.

Theoretical validity was ensured by developing a good fit between the data and the theoretical explanation of the data, and this was achieved later when explaining the findings using both the conceptual framework adopted in this study and through the use of relevant literature when discussing the emerging results with expert supervisors (Johnson & Turner, 2003).

Furthermore, the procedure followed when analysing the written responses to the open-ended questions was based on recommendations by Creswell (2003) and steps described by Krippendorff (2004). These steps were as follows:

1. The researcher read and reread the data in its entirety, noted down commonalities between the different segments of text, and assembled the general description for each theme that appeared in the text. The researcher searched for common and distinctive features, variations and important nuances.
2. The text was divided into categories of meaning.
3. Categories were created to identify shared commonalities.
4. Key themes and sub-themes were constructed and based the identified categories and content.
5. Quotes were selected that exemplified the themes.

The researcher was cautious about using any computer software program to conduct the content analysis of the text-based data, given that it was collected in two languages, which required careful consideration and a relevant cultural lens; thus, data analysis software was not considered appropriate or useful in this study, and the decision was made to manually analyse the data.

In addition, employees at the medical city are not all Saudi citizens and many do not speak Arabic, as they come from a variety of different cultural backgrounds (see Chapter One). Hence, it could be said that the organisation had developed its own unique culture, which provides context that needed to be considered when analysing the data from the open-ended questions (Sinclair, Lingard & Mohabeer, 2009).

As the researcher is part of the Saudi culture and understands its complexities it was decided that manual analysis would facilitate better interpretation of the clues and cues so that the resulting themes would more accurately reflect the participants' meanings.

3.10 Validity and Trustworthiness

Many experts in qualitative research, such as Creswell (2003) and Thomas (2004), highlight two main principles to ensure that responses to open-ended questions can demonstrate trustworthiness. These principles are as follows:

1. Ensure question clarity. Avoid ambiguity, the use of jargon, and use of language outside the knowledge of the target population. The participants are then more likely to interpret the questions in the intended manner.
2. Conduct pilot testing to allow for subsequent revisions and modifications as required.

The study questionnaire was piloted on 30 participants to ensure that all items, including the open-ended questions, were clear in their content and meaning. The researcher in this study adopted these principles as part of the pilot study described earlier, in order to strengthen the content validity of the closed questions and enhance the trustworthiness of the open-ended questions

3.11 Summary

This chapter has presented the methodology adopted to explore the teamwork component of TQM implementation. The chapter commenced with a presentation and justification for the chosen methodology, a discussion of the research design, and explained the procedures used in this study. Ethical considerations, validity and trustworthiness were then discussed. The next chapter provides an analysis of the data.

Chapter 4: The Findings

4.1 Introduction

This study aimed to investigate the components of teamwork that influence the successful implementation of the total quality management (TQM) program in King Fahad Medical City (KFMC). The study also aimed to explore interactions between teamwork elements and the TQM program that influence employees' engagement in implementation of the program – elements such as task reflexivity, participative trust, team learning behaviour, team efficacy and stability, leadership and decision-making, effective communication and management support. The final aim was to explore KFMC employees' experiences, challenges and opportunities that might influence successful implementation of teamwork within the TQM program.

This chapter presents the findings of this study. First the participants' demographic data are discussed. This is followed by an analysis of participants' responses to the closed-ended survey questions which explored components of teamwork that influenced successful implementation of the TQM program in King Fahad Medical City. Both descriptive and inferential statistics are presented using the statistical software SPSS version 20 to obtain results that provide answers to the research questions. This chapter also discusses the findings of the tests of normality, internal consistency and factor analysis which were performed on the data to ensure its validity and reliability. It then explores the impact of the study characteristics on the questionnaire components using tests that measure correlation coefficient and analysis of variance. Finally, it presents findings from the open-ended questions that were added to the study questionnaire. The themes that emerged from these responses are presented and supported by quotes of participants.

4.2 Characteristics of the Sample

This study was conducted at King Fahad Medical City, which is a hospital complex in Riyadh, Saudi Arabia. The participants were physicians, nurses and managers who had worked at the medical city for at least one year. The total number of questionnaires distributed was 4012. This number represented the eligible population of physicians (n=868), nurses (n=3136), and managers (n=208), based on employee numbers provided by KFMC Human Resource Department. The total number of returned questionnaires was 594; twenty-three were excluded as they were incomplete, with data missing from more than 50% the questionnaire items. The response rate was 14.23% (n= 571). The response rate is reasonably satisfactory, as the total number of completed questionnaires is adequate to reach the required effect size that exceeds

the measured sample size of 394 (see Chapter Three, Section 3.3.2 Sample and Sampling Frame).

The response rates based on the total number of responses from each profession were as follows: physicians 46.2% (n=96); nurses 13.1% (n=412); and managers 30.3% (n=63). As illustrated in Table 4.1, the age of participants ranged between 21 and 62, with a mean age of 34.62 (SD=8.019). Current experience, which refers to the experience of the participants in the current position, has also been provided. It was essential that current experience be explored alongside general experience, so that variation in experience may explain some of the findings related to the survey mean score or participants' responses to the open-ended questions. More than half the participants had less than four years of experience. The range of current experience among participants was between one and twenty-four years.

Table 4.1: Sample characteristics (n = 571)

Factor	Mean	SD	Minimum	Maximum
Age	34.62	8.019	21	62
General experience (Years)	8.236	5.617	1	35
Current experience (Years)	4.99	3.321	1	24

Table 4.2 presents findings on the additional four characteristics of the study sample. There were significantly more female participants [74% (n=421)] than male [26% (n=150)]. This percentage was also present in the main population of this study within KFMC (i.e. total numbers of nurses, physician and managers). Based on official documents provided to the researcher from the KFMC human resources department, female employees represented 77.7% (n=3116) of the total number of employees who were eligible to participate in this study at the time of collecting data (KFMC, 2012).

Table 4.2: Findings of gender, nationality, profession, and academic degree of the participants*

Factor		No.	%
Gender	Male	150	26.3
	Female	421	73.7
Nationality	Saudi	125	21.9
	Non Saudi	446	78.1
Profession	Manager	63	11.0
	Medical staff	96	16.8
	Nursing staff	412	72.2
Academic degree	Diploma	145	25.4
	Bachelor degree	325	56.9
	Masters	82	14.4
	PhD	19	3.3

*n=471

In addition, the majority of participants in this study were non-Saudi [78% (n=446)] from more than 25 different nations, compared with 22% (n=125) Saudi participants. Within the organisation, Saudi employees represent 24.7% (n= 1644) of the total work force (KFMC, 2012). Comparably, this percentage is nearly 25% when including only managers and health professionals in the study sample. Thus, the percentage obtained in this study comes close to the percentage of Saudi employees working at the medical city at the time of collecting data for this study.

More than 70% (n=412) of the participants in this study were nurses, which, in turn, explains the relatively greater number of females, while managers achieved the lowest percentage (11%, n=63) among all participating professionals, compared with nearly 19.3 % (n= 1287) of the whole population. Medical staff came next after nurses in the total number of participants in this study (16.8%, n=96). In addition, physicians represented nearly 13.1% (n=868) of the total number of employees. The Saudis represented nearly 21% of the whole sample, and their presence was mainly among the managers. Furthermore, more than half the participants held a baccalaureate degree, with only 3.3% (n=19) having a PhD. Just over half the participants had less than seven years of experience and the range of participants' overall work experience was between one and thirty-five years.

As noted in Table 4.2, most participants were female non-Saudi nurses. These findings are indicative of the relative representation of study sample to the population of the professionals who represented the sample in this study within the medical city (KFMC, 2014).

The next section explains the statistical tests and processes adopted to ensure that the tool being used in this study was both valid and reliable. It also explains the normality tests measured in this study, which directed the process of statistical analysis and the choice of the tests deemed appropriate for this type of study.

4.3 Missing Data and Outliers

With regards to the missing data, the 23 questionnaires with missing data were excluded. Analysis was performed only on the complete questionnaires; this step is considered by many statisticians as the simplest and safest method so that no errors to the findings can be made through complementing the missing data using the statistical methods (Barladi & Enders, 2010; Howell, 2007).

The next part in this discussion addresses the presence of normal distribution and the outliers that could have influenced the findings in this part of the study. Among the most influential

factors that lead to disturbed normal distribution is the presence of extreme values, outliers. In order to establish the presence of normal distribution, these extreme values, or potentially extreme values, were excluded from the mean scores. This is usually performed based on specific criteria, as per the following explanation.

The outlier scores were examined in this variable by trimming the top and bottom 5% of the scores and then measuring the means. Trimming here refers to the removal of the top and bottom 5% of the mean scores. The trimmed mean score was 203.41 with a lower bound mean score of 204.14 and a higher bound mean score of 205.68; the mean score with no trimming was 204.73. The difference between both mean scores was small and represented less than one standard deviation; consequently it was neglected (Tabachnick & Fidell, 2007). Therefore, there were no outliers, or extreme, scores that influenced the results obtained in the mean scores.

4.4 Normality, Internal Consistency and Factor Analysis

The Kaiser–Meyer–Olkin measure of sampling adequacy for the new 30-item scale was 0.922 indicating a high (marvellous) level of inter-correlation among the items (Field, Miles & Field, 2012). As a reminder, this measure is used to compare the magnitudes of the observed correlation coefficient and the magnitudes of the partial correlation coefficients (Hutcheson & Sofroniou, 1999). This result was consistent with Bartlett's test of sphericity, which showed that correlations between the items were sufficient to perform factor analysis with Chi-Square of 11353.874 ($p < .001$). As explained in Chapter Three, this measure tested the hypothesis that assumed the correlation matrix was an identity matrix (Hutcheson & Sofroniou, 1999), and the value was significant ($p < .05$). Items were then tested for correlation. The findings indicated that items of the study questionnaire correlated with each other and explained one another on the variable under investigation (Field, Miles & Field, 2012).

Based on the findings of the normality tests adopted here, it could be said that normality in the case of findings in this study is accepted (Figure 1); it is often rejected when kurtosis is greater than ±2 and/or skewness is higher than ±, 1indicating that the distribution departs significantly from the normal distribution (Hutcheson & Sofroniou, 1999).

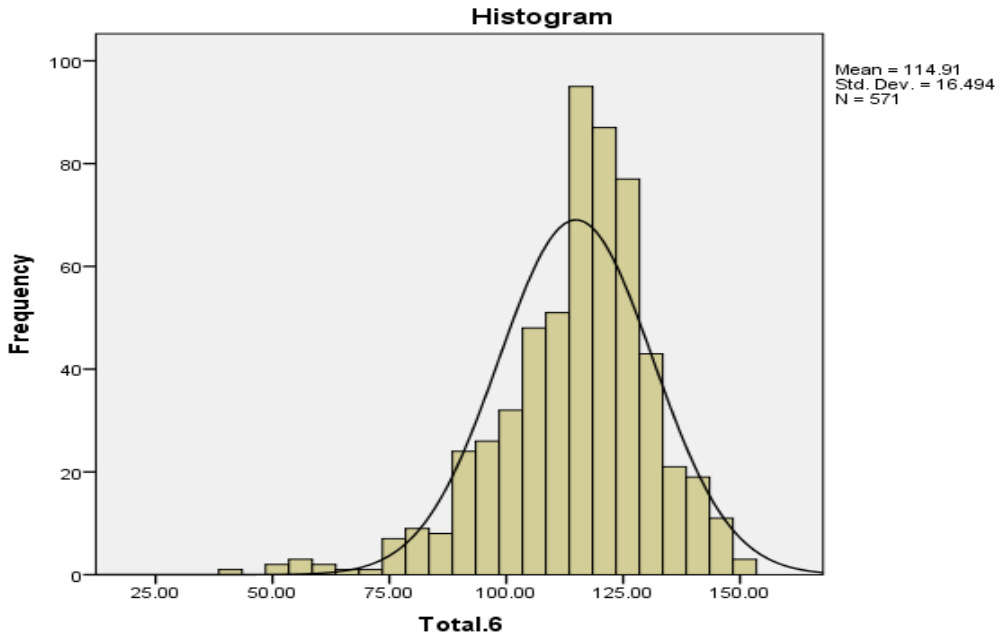

Figure 1: Distribution of the responses on the scale

The Kolmogorov-Smirnov test measured goodness of fit and normality of the distribution; the sample was standardised and compared with a standard normal distribution (Corder & Foreman, 2009; Oztuna, Elhan & Tuccar, 2006). It helped the researcher in making a decision whether the sample had moved substantially from the theoretical assumptions or expectations that the sample was both representative and composed of all study population categories, such as different age groups, both genders, and different academic degrees (Marsaglia, Tsang & Wang, 2003). The Kolmogorov-Smirnov test indicated the null hypothesis which assumed that data were not coming from a normal distribution. Therefore, by rejecting the null hypothesis in the case of this study, it could be assumed that the data set which was examined represented a normal distribution. Furthermore, other measures, such as kurtosis, skewness and the Q-Q plot, have been added to the measure of normality in this study.

The Q-Q plot in Figure 2 shows the scores on the scale as close to the straight line, indicating scores close to normal distribution with no extreme values of thin positive and thin negative skewness (Skewness= -.761 (Std Error= .101), Kurtosis= 1.623 (Std Error= 194), Kolmogorov-Smirnov *P* value= .092 [the lower bound of the true significance is 121.568, std error= .668]) (Corder & Foreman, 2009).

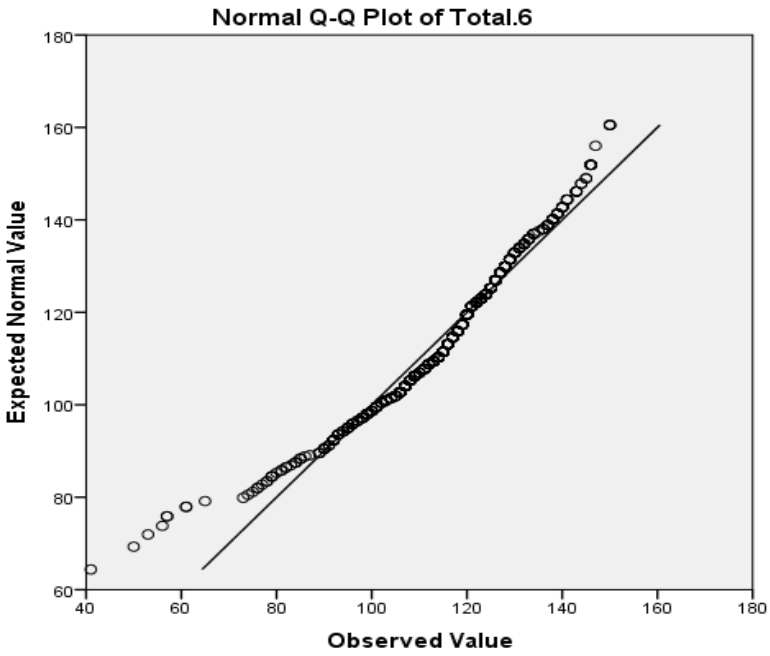

Figure 2: Q-Q plot of the responses on the 30-item scale

Cronbach's alpha was calculated for the scale to determine internal consistency. The internal consistency of the total 53-item scale was .965, representing a good value, but could indicate a condition of interconnected and overlapped items (Nunnally & Bernstein, 1994). These findings indicate that the level of intercorrelation among the items on the scale is high, thus affecting the internal consistency values. These high values of internal consistency imply a strong correlation between scale items. In other words, there are items within this scale that measure the same thing, or could even be redundant (Eisinga, TeGrotenhuis & Pelzer, 2012).

As explained in Chapter Three, high internal consistency values resulted from a possible high intercorrelation among scale items. Consequently, there was a need to find those inter-related items in order to select the best that represented the construct originally measured by the study questionnaire items and factors. Thus, factor analysis was chosen to define these items by deleting those that contributed less and leaving those that contributed best.

There were 53 items within the questionnaire: a relatively high number (Neuman, 2003). Factor analysis that was found appropriate in this case was principal component analysis (Jolliffe, 2002). After running the factor analysis with varimax rotation, there were 30 items with a loading higher than the cut-off point of .60, representing seven factors (Table 4.3).

Table 4.3: Scale item loadings, explained percentage of the variance and alpha values

	Task Reflexivity (Explained 62.852% of variance, α: .883)	**Loading**
1	The team reviews its approach to getting the job done.	.755
2	The team always discusses information concerning work during team meetings.	.733
3	The team reviews its objectives.	.718
4	The team reviews its approach of making decisions.	.707
5	In this team we modify our objectives in light of changing circumstances.	.674
6	The team frequently seeks new information that leads us to make important changes.	.670
	Participative Trust (Explained 19.256% of variance, α: .877)	
7	There is trust among group members.	.678
8	There is friendliness among group members.	.677
9	People in this team accept others even when having different opinions.	.657
10	Team pays attention to each other's behaviour relevant to team goals.	.638
11	If you make an error in this team, nothing is held against you.	.615
12	The team provides me with useful ideas and practical support.	.613
	Quality of Communication (Explained 6.839% of variance, α: .892)	
13	I am satisfied with the quality of communication with the direct manager.	.763
14	I am satisfied with the quality of communication with the top management.	.761
15	I am satisfied with the quality of communication between employees in the organisation.	.735
16	I am satisfied with the quality of communication in my unit/department.	.707
	Management Support (Explained 4.283% of variance, α: .871)	
17	Incentives are given to employees who participate in setting quality plans.	.836
18	Management gives incentives to promote teamwork.	.766
19	Management appreciates employees' work based only on their performance.	.730
20	Management consults appropriate employees to solve quality issues.	.683
	Team Learning Behaviour (Explained 3.274% of variance, α: .842)	
21	Team members are regularly in touch with each other.	.764
22	Team holds group meetings regularly.	.721
23	Team has frequent and mutual exchanges.	.719
24	The group members meet frequently to discuss topics informally.	.708
	Role of effective communication (Explained 1.964% of variance, α: .890)	
25	Effective communication can reduce preventable mistakes and adverse events.	.879
26	Effective communication promotes teamwork.	.846
27	Effective communication is crucial to achieve quality goals.	.821
	Team Efficacy and Stability (Explained 1.532% of variance, α: .836)	
28	Decisions are made based on team members' initiatives that promote shared motivation and commitment.	.899
29	I have the impression that many people have left the team over the last 6 months.	.870
30	There is a high turnover of staff in this team.	.804

All the following tests of internal consistency were conducted on the resulting 30 items divided into seven factors; the first factor that has six items explained more than 60% of the variance (Table 4.3). Cronbach's alpha of the new scale was .948, and the range of alpha values for the seven factors was .894- .839 (DeVon et al., 2007). Guttman split half reliability using

Cronbach's alpha for parts 1 and 2 were .918 (fifteen items) and .814 (fifteen items) respectively, and the correlation between the two parts was .816. The Spearman-Brown coefficient was .828 for equal length. Guttman split half coefficient was .837, indicating an acceptable item correlation.

In brief, the results obtained from data analysis, including normality and factor analysis, indicated that the resulting seven factors subsumed within 30 items is both a valid and a reliable tool. The material above explained the detailed findings of normality, internal consistency and principal component analysis measures adopted to ensure the assumption made earlier. These findings further indicated that this tool can be used to measure what it was built to measure, as its psychometric properties are statistically acceptable. It is worthwhile to note that the amended tool still requires further testing in subsequent studies as validity and reliability of an amended tool cannot be achieved by applying it to only one study.

4.5 Survey Findings

The original survey was composed of 53 items subsumed within six factors. These factors reflected how employees perceived the implementation of teamwork to achieve total quality management objectives within their organisation. The new, validated survey comprised 30 items explaining seven factors. These factors and the number of items that explain them are: task reflexivity (six items); participative trust (six items); quality of communication (four items); management support (four items); team learning behaviour (four items); roles of effective communication (three items); and team efficacy and stability (three items). These items are discussed further in the next section.

The survey is a Likert's scale that is composed of 5-point responses ranging from strongly disagree (1) to strongly agree (5). The total score ranged between 30 and 150; each item was assigned one mark.

Findings from analysing the scale and its factors indicate that all mean scores fall within the high range, except for 'team efficacy and stability', which fell in the moderate area (Table 4.4). This indicates that employees were favourable towards the implementation of teamwork principles to achieve TQM objectives. The whole scale mean score (M =114.91) indicates that employees have perceived a high level of teamwork and thus commitment towards TQM.

Table 4.4: Mean scores and range of obtained scores for whole scale and sub scales (n=571)

Factor	Mean (SD)	Level	Range of scores
Scale	114.912 (16.490)	High	30-150
Task Reflexivity	23.841 (3.690)	High	6-30
Participative Trust	22.190 (4.040)	High	7-30
Quality of Communication	15.212 (3.322)	High	4-20
Management Support	15.463 (2.224)	High	5-20
Team Learning Behaviour	16.501 (2.542)	High	4-20
Role of Effective Communication	11.122 (1.972)	High	3-15
Team Efficacy and Stability	9.581 (2.543)	Moderate	3-15

Task reflexivity factor had a total mean score of nearly 24, which is a high score. Almost two-thirds of participants reported perceiving a high level of team collaboration, as team members frequently meet and discuss issues related to the successful implementation of quality and other related plans. In addition, participants reported having the flexibility to review and, if needed, modify plans at the team levels. The participants reported that the dynamic status of the teams could be noticed clearly during their meetings. Thus teamwork at this facility can be described as flexible, with a capacity to adjust to whatever issues are identified (Table 4.5).

Table 4.5: Response distribution on 'Task Reflexivity' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	The team reviews its approach to getting the job done	6 (1.1%)	20 (3.5%)	88 (15.4%)	330 (57.8%)	127 (22.2%)
2	The team always discusses information concerning work during team meetings	6 (1.1%)	19 (3.3%)	80 (14%)	358 (62.7%)	108 (18.9%)
3	The team reviews its objectives	5 (.9%)	25 (4.4%)	89 (15.6%)	342 (59.9%)	110 (19.3%)
4	The team reviews its approach of making decisions	3 (.5%)	17 (3%)	62 (10.9%)	301 (52.7%)	188 (32.9%)
5	In this team we modify our objectives in light of changing circumstances	8 (1.4%)	14 (2.5%)	91 (15.9%)	323 (56.6%)	135 (23.6%)
6	The team frequently seeks new information that leads us to make important changes	9 (1.6%)	19 (3.3%)	103 (18%)	321 (56.2%)	119 (20.8%)

The factor 'participative trust' also recorded high level of TQM commitment. Employees reported that their teams are built based on mutual interest of adding constructive inputs, and that team members are generally supportive of each other, valuing contributions from different

team members (Table 4.6). Although the majority of findings on the items of this concept are positive, item 1 which determines the level of trust among team members differed (Strongly Disagree/Disagree 34.4% and Neither Agree Nor Disagree 29.2%). This finding might indicate the need for team members to improve their knowledge about each other as trust could be built through open communication and sharing of thoughts, ideas, hopes and fears.

Table 4.6: Response distribution on 'Participative Trust' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	There is trust among group members	94 (16.5%)	102 (17.9%)	167 (29.2%)	156 (27.3%)	52 (9.1%)
2	There is friendliness among group members	11 (1.9%)	52 (9.1%)	129 (22.6%)	286 (50.1%)	93 (16.3%)
3	People in this team accept others even when having different opinions	10 (1.8%)	32 (5.6%)	98 (17.2%)	303 (53.1%)	128 (22.4%)
4	The team pays attention to each other's behaviour relevant to team goals	13 (2.3%)	32 (5.6%)	83 (14.5%)	301 (52.7%)	142 (24.9%)
5	If you make an error in this team, nothing is held against you	9 (1.6%)	32 (5.6%)	104 (18.2%)	307 (53.8%)	119 (20.8%)
6	The team provides me with useful ideas and practical support	7 (1.2%)	23 (4%)	93 (16.3%)	338 (59.2%)	110 (19.3%)

As identified in Chapter Two, effective communication has always been a key factor in the process of achieving TQM goals. This was evident in the findings of this study. Communication has two factors: the impact of communication; and the role of effective communication as a crucial component of the TQM process. Both factors have achieved high mean scores that indicated the positive effect communication has on the successful implementation of TQM. Quality of communication refers to what each employee perceives when communicating with other employees, whether they are in their own unit, department, or at organisational level (Table 4.7). It also refers to the process of communication with all different levels of managers and employees. On all items of this concept, the majority of participants reported being satisfied with the quality of communication.

Table 4.7: Response distribution on 'Quality of Communication' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	I'm satisfied with the quality of communication with the direct manager	8 (1.4%)	26 (4.6%)	60 (10.5%)	312 (54.6%)	165 (28.9%)
2	I'm satisfied with the quality of communication with the top management	9 (1.6%)	29 (5.1%)	83 (14.5%)	318 (55.7%)	132 (23.1%)
3	I'm satisfied with the quality of communication between employees in the organisation	7 (1.2%)	19 (3.3%)	134 (23.5%)	320 (56%)	91 (15.9%)
4	I'm satisfied with the quality of communication in my unit/department	13 (2.3%)	32 (5.6%)	83 (14.5%)	301 (52.7%)	142 (24.9%)

The other factor concerning communication is the role of communication that the employees perceive has an impact on the quality of teamwork outcomes. This factor comprises three main factors that have been reported in the literature (Table 4.8). These include the impact of open communication on improving the outcomes of teamwork; enhancing the planning process; and promoting the achievement of quality plans. The respondents reported that they perceived this factor to positively influence the quality of teamwork and its outcomes. The total mean score on this factor is in the high category, indicating awareness of the importance that effective communication has in promoting teamwork.

Table 4.8: Response distribution on 'Role of Effective Communication' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	Effective communication can reduce preventable mistakes and adverse events	15 (2.6%)	31 (5.4%)	94 (16.5%)	297 (52%)	134 (23.5%)
2	Effective communication promotes teamwork	23 (4%)	41 (7.2%)	114 (20%)	277 (48.5%)	116 (20.3%)
3	Effective communication is crucial to achieve quality goals	38 (6.7%)	50 (8.8%)	149 (26.1%)	255 (44.7%)	79 (13.8%)

The support that employees receive from their managers can make a difference to the success of teamwork. Management support was a key factor that has been reported by participants in this study to have a positive impact on their commitment to teamwork. The mean score on this factor indicates that employees perceive that this factor is clearly present in their respective units, departments, and across the organisation. Additionally, the majority of participants

indicated that management provides incentives to employees which promote teamwork (Table 4.9).

Table 4.9: Response distribution on 'Management Support' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	Incentives are given to employees who participate in setting quality plans	70 (12.3%)	66 (11.6%)	171 (29.9%)	203 (35.6%)	61 (10.7%)
2	Management gives incentives to promote teamwork	8 (1.4%)	31 (5.4%)	74 (13%)	340 (59.5%)	118 (23.1%)
3	Management appreciates employees' work based only on their performance	6 (1.1%)	20 (3.5%)	88 (15.4%)	330 (57.8%)	127 (22.2%)
4	Management consults appropriate employees to solve quality issues	4 (.7%)	11 (1.9%)	40 (7%)	239 (41.9%)	277 (48.5%)

Team learning behaviour refers to how employees keep informed about new issues that arise as they team proceeds in its meetings. It shows how often team members, and whether they meet and communicate outside the formal meetings. Such point could imply the sense of mutuality that team members might have when meeting formally, and whether each member could contribute with his/her input in a collaborative, supportive atmosphere. Generally, the total mean score falls within the high category indicating that employees perceive the organisational and unit atmosphere as meeting the items indicated under this theme (Table 4.10).

Table 4.10: Response distribution on 'Team Learning Behaviour' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	Team members are regularly in touch with each other	4 (.7%)	8 (1.4%)	30 (5.3%)	211 (37%)	318 (55.7%)
2	Team holds group meetings regularly	2 (.4%)	35 (6.1%)	95 (16.6%)	301 (52.7%)	127 (22.2%)
3	Team has frequent and mutual exchanges	13 (2.3%)	20 (3.5%)	88 (15.4%)	330 (57.8%)	127 (22.2%)
4	The group members meet frequently to discuss topics informally	18 (3.2%)	49 (8.6%)	107 (18.7%)	297 (52%)	100 (17.5%)

Team efficacy and stability is the only factor reported to have a moderate mean score (Table 4.11). The first item on this sub scale explores the process of sharing ideas and thoughts of a particular team with the corresponding manager(s).

Table 4.11: Response distribution on 'Team Efficacy and Stability' statements

Statement		n (%)				
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	Decisions are made based on team members' initiatives that promote shared motivation and commitment	6 (1.1%)	20 (3.5%)	88 (15.4%)	330 (57.8%)	127 (22.2%)
2	I have the impression that many people have left the team over the last 6 months	17 (3%)	43 (7.5%)	122 (21.4%)	313 (54.8%)	76 (13.3%)
3	There is a high turnover of staff in this team	41 (7.2%)	63 (11%)	179 (31.3%)	301 (40.8%)	55 (9.6%)

Participants in this study have generally reported positive perceptions toward teamwork. Although responses varied from one theme to another, participants believed that teamwork was important to the successful implementation of their tasks. The next section explores whether the demographic variables and some of the participants' characteristics have influenced the findings explained above.

4.6 Correlation between Scale Mean Scores and Sample Characteristics

There is a correlation between the sample characteristics and the findings of this study. Table 4.12 shows these correlations.

Examination revealed that age, gender, profession, and general experience of the participants had no statistically significant correlation with the total mean score obtained on the whole scale (P>.05). On the other hand, both nationality and current experience scored statistically significant correlations with the whole scale mean score (P < .05).

Table 4.12: Correlations between findings on the scale and sample characteristics

Correlation Factors	Correlation Coefficient	*P* value
Age x Whole scale	.036	.389
Gender x Whole scale	.076¥	.070
Nationality x Whole scale	.157¥	.001
Profession x Whole scale	.021	.614
Academic degree x Whole scale	-.110	.008
General experience x Whole scale	-.004	.919
Current experience x Whole scale	-.094	.024

* The point biserial correlation was used in this case

As illustrated in Table 4.13, employee nationality correlated significantly with the factors that indicate effective teamwork. Healthcare organisations in Saudi Arabia recruit professionals and workers from other countries, who usually represent the main human power of these organisations (Baranowski, 2009). Although in the process of replacing non-Saudi employees with Saudis, these organisations still depend on other nationalities in many areas, especially health and some executive managerial positions in medicine, nursing and human resource management.

In addition, current experience correlated significantly with the factors that explore teamwork, while overall experiences did not. Although the accumulative experiences of the nurses shape the professional standards of practice, perhaps the most recent experience stands as being the most effective as it reflects the current state of practice of the nurse. While the correlation between the tool and each characteristic reflected the overall scope, one-way MANOVA was performed to determine whether there were statistical differences in the teamwork component between participants based on these characteristics (i.e. gender, age, nationality, academic degree, general and current experience).

4.7 Impact of Gender on Teamwork Components

One-way MANOVA analysis was performed to determine whether there were significant differences between both genders and the components of teamwork. The multivariate test showed significant differences between both genders and three components on the scale ($F(7, 365) = 7.376$, $P < .001$, Wilk's $\Lambda = 0.916$, partial $\eta^2 = .084$, Table 4.13). The scale components influenced significantly by gender are: quality of communication ($P = .041$); management support ($P = .009$); and team efficacy and stability ($P < .001$). This finding indicates that female

participants achieved higher mean scores than male participants on three components in the study scale (Table 4.14).

Table 4.13: Multivariate tests between genders and the survey factors [a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power [c]
Intercept	Pillai's Trace	.980	4023.258[b]	7.000	563.000	.000	.980	28162.806	1.000
	Wilks' Lambda	.020	4023.258[b]	7.000	563.000	.000	.980	28162.806	1.000
	Hotelling's Trace	50.023	4023.258[b]	7.000	563.000	.000	.980	28162.806	1.000
	Roy's Largest Root	50.023	4023.258[b]	7.000	563.000	.000	.980	28162.806	1.000
Gender	Pillai's Trace	.084	7.376[b]	7.000	563.000	.000	.084	51.633	1.000
	Wilks' Lambda	.916	7.376[b]	7.000	563.000	.000	.084	51.633	1.000
	Hotelling's Trace	.092	7.376[b]	7.000	563.000	.000	.084	51.633	1.000
	Roy's Largest Root	.092	7.376[b]	7.000	563.000	.000	.084	51.633	1.000

a. Design: Intercept + Gender b. Exact statistic c. Computed using alpha = .05

Table 4.14: Tests between subject-effect (Gender)

Teamwork Component	Gender	Mean	SD	Mean Square	F	Sig.
Task Reflexivity	Male	23.947	3.797	2.139	.157	.651
	Female	23.808	3.655			
	Total	23.844	3.700			
Participative Trust	Male	30.213	5.047	14.763	.545	.535
	Female	29.848	5.259			
	Total	29.944	5.202			
Quality of Communication	Male	18.193	3.359	141.146	15.311	.041
	Female	19.323	2.913			
	Total	19.026	3.074			
Management Support	Male	15.033	2.184	36.533	7.523	.009
	Female	15.608	2.211			
	Total	15.457	2.216			
Team Learning Behaviour	Male	16.333	2.706	5.831	.903	.453
	Female	16.563	2.480			
	Total	16.503	2.541			
Role of Effective Communication	Male	10.540	2.746	69.467	11.961	.313
	Female	11.333	2.279			
	Total	11.124	2.433			
Team Efficacy and Stability	Male	10.053	2.704	56.363	8.892	.000
	Female	10.767	2.448			
	Total	10.580	2.535			

4.8 Impact of Nationality on Teamwork Components

One-way MANOVA analysis was performed to determine whether there was a significant impact of type of nationality (Saudi and non-Saudi) on teamwork components. The multivariate test, MANOVA, showed noteworthy differences between type of nationality and four components on the study scale ($F(14, 1124) = 5.906$, $P < .001$, Wilk's $\Lambda = 0.868$, partial $\eta^2 = .069$, Table 4.15). Components influenced by the nationality factor were: quality of communication ($P < .001$); management support ($P = .005$); team learning behaviour ($P < .001$); and team efficacy and stability ($P < .001$). Non-Saudi participants obtained higher mean scores, which indicate that they perceived the implementation of effective teamwork components better than the Saudi participants (Table 4.16).

Table 4.15: Multivariate tests between nationality and the survey factors [a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[d]
Intercept	Pillai's Trace	.659	154.928[b]	7.000	562.000	.000	.659	1084.497	1.000
	Wilks' Lambda	.341	154.928[b]	7.000	562.000	.000	.659	1084.497	1.000
	Hotelling's Trace	1.930	154.928[b]	7.000	562.000	.000	.659	1084.497	1.000
	Roy's Largest Root	1.930	154.928[b]	7.000	562.000	.000	.659	1084.497	1.000
Nationality	Pillai's Trace	.133	5.739	14.000	1126.000	.000	.067	80.342	1.000
	Wilks' Lambda	.868	5.906[b]	14.000	1124.000	.000	.069	82.687	1.000
	Hotelling's Trace	.152	6.074	14.000	1122.000	.000	.070	85.029	1.000
	Roy's Largest Root	.145	11.649[c]	7.000	563.000	.000	.127	81.543	1.000

a. Design: Intercept + Nationality
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.
d. Computed using alpha = .05

Table 4.16: Tests between subject-effect (Nationality)*

Teamwork Component	Nationality	Mean	SD	Mean Square	F	Sig.
Task Reflexivity	Saudi	23.552	4.300	13.658	1.003	.317
	Non Saudi	23.926	3.501			
	Total	23.844	3.699			
Participative Trust	Saudi	29.704	5.785	9.215	.340	.560
	Non Saudi	30.011	5.031			
	Total	29.944	5.202			
Quality of Communication	Saudi	17.280	3.973	488.016	56.686	.001
	Non Saudi	19.516	2.571			
	Total	19.026	3.074			

Teamwork Component	Nationality	Mean	SD	Mean Square	F	Sig.
Management Support	Saudi	14.752	2.681	79.562	16.643	.005
	Non Saudi	15.655	2.027			
	Total	15.457	2.216			
Team Learning Behaviour	Saudi	15.832	2.870	71.974	11.348	.000
	Non Saudi	16.691	2.411			
	Total	16.503	2.541			
Role of Effective Communication	Saudi	10.336	2.940	99.459	17.281	.645
	Non Saudi	11.345	2.225			
	Total	11.124	2.433			
Team Efficacy and Stability	Saudi	9.960	2.883	61.454	9.709	.000
	Non Saudi	10.753	2.404			
	Total	10.580	2.535			

*Saudi (n=125), non-Saudi (n=446)

4.9 Impact of Profession on Teamwork Components

The impact of type of profession on teamwork components was examined using one-way MANOVA. Findings showed significant differences between the type of profession and the scale ($F(28, 2020.531) = 3.983$, $P< .001$, Wilk's $\Lambda = 0.824$, partial $\eta^2 = .049$, Table 4.17).

Table 4.17: Multivariate Tests between profession and the survey factors [a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[d]
Intercept	Pillai's Trace	.611	125.870[b]	7.000	560.000	.000	.611	881.091	1.000
	Wilks' Lambda	.389	125.870[b]	7.000	560.000	.000	.611	881.091	1.000
	Hotelling's Trace	1.573	125.870[b]	7.000	560.000	.000	.611	881.091	1.000
	Roy's Largest Root	1.573	125.870[b]	7.000	560.000	.000	.611	881.091	1.000
Profession	Pillai's Trace	.181	3.822	28.000	2252.000	.000	.045	107.007	1.000
	Wilks' Lambda	.824	3.983	28.000	2020.531	.000	.047	100.261	1.000
	Hotelling's Trace	.207	4.136	28.000	2234.000	.000	.049	115.801	1.000
	Roy's Largest Root	.173	13.890[c]	7.000	563.000	.000	.147	97.231	1.000

a. Design: Intercept + Profession
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level
d. Computed using alpha = .05

The profession has a significant impact on three factors (Table 4.18). Managers reported higher mean scores compared with the other professions on task reflexivity ($P= .018$) and participative trust ($P=.017$); and nurses scored higher on team efficacy and stability ($P< .001$).

Table 4.18: Tests between subject-effect (Profession)*

Teamwork Component	Profession	Mean	SD	F	Sig.
Task Reflexivity	Manager	25.064	3.177	4.195	.018
	Medical staff	23.948	4.032		
	Nursing staff	23.634	3.651		
	Total	23.844	3.690		
Participative Trust	Manager	31.111	5.374	2.689	.017
	Medical staff	30.438	4.495		
	Nursing staff	29.651	5.306		
	Total	29.944	5.202		
Quality of Communication	Manager	18.079	3.405	7.646	.440
	Medical staff	18.333	3.181		
	Nursing staff	19.333	2.945		
	Total	19.026	3.074		
Management Support	Manager	15.222	2.129	4.657	.290
	Medical staff	14.896	2.075		
	Nursing staff	15.624	2.241		
	Total	15.457	2.216		
Team Learning Behaviour	Manager	16.397	2.479	.073	.689
	Medical staff	16.552	2.611		
	Nursing staff	16.507	2.540		
	Total	16.503	2.541		
Role of Effective Communication	Manager	10.587	2.512	4.876	.061
	Medical staff	10.635	2.644		
	Nursing staff	11.320	2.346		
	Total	11.124	2.433		
Team Efficacy and Stability	Manager	10.143	2.639	4.102	.000
	Medical staff	10.063	2.546		
	Nursing staff	10.770	2.498		
	Total	10.580	2.535		

***Medical Staff (n=63), Manager (n=96), Nursing Staff (n=412)

4.10 Impact of Academic Degree on Teamwork Components

The impact of academic degree on teamwork components was also examined using one-way MANOVA. Findings showed statistically significant differences among types of academic degree and three components on the scale ($F(42, 2620.704) = 2.727$, $P < .001$, Wilk's $\Lambda = 0.818$, partial $\eta^2 = .033$, Table 4.19).

Table 4.19: Multivariate Tests between academic degree and the survey factors [a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[d]
Intercept	Pillai's Trace	.679	168.253[b]	7.000	558.000	.000	.679	1177.770	1.000
	Wilks' Lambda	.321	168.253[b]	7.000	558.000	.000	.679	1177.770	1.000
	Hotelling's Trace	2.111	168.253[b]	7.000	558.000	.000	.679	1177.770	1.000
	Roy's Largest Root	2.111	168.253[b]	7.000	558.000	.000	.679	1177.770	1.000
Academic Degree	Pillai's Trace	.192	2.655	42.000	3378.000	.000	.032	111.491	1.000
	Wilks' Lambda	.818	2.727	42.000	2620.704	.000	.033	89.119	1.000
	Hotelling's Trace	.210	2.786	42.000	3338.000	.000	.034	116.995	1.000
	Roy's Largest Root	.136	10.900[c]	7.000	563.000	.000	.119	76.298	1.000

a. Design: Intercept + Academic Degree
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.
d. Computed using alpha = .05

Factors that scored significantly were: quality of communication (*P*= .013); management support (*P*= .018); team learning behaviour (*P*= .009); role of effective communication (*P*= .008); and team efficacy and stability (*P*< .001). In the five teamwork components, diploma holders reported higher mean scores; the only exception was on the factor team learning behaviour, where PhD holders scored higher mean scores (Table 4.20).

Table 4.20: Tests between subject-effect (Academic Degree)*

Teamwork Component	Academic degree	Mean	SD	F	Sig.
Task Reflexivity	Diploma	24.324	3.234	1.988	.075
	Bachelor degree	23.822	3.829		
	Masters	23.085	3.904		
	PhD	23.842	3.253		
	Total	23.844	3.699		
Participative Trust	Diploma	30.062	5.419	.141	.310
	Bachelor degree	29.926	5.218		
	Masters	29.695	5.091		
	PhD	30.421	3.834		
	Total	29.944	5.202		
Quality of Communication	Diploma	19.572	3.253	5.164	.013
	Bachelor degree	19.068	2.877		
	Masters	17.927	3.223		
	PhD	18.895	3.298		
	Total	19.026	3.074		
Management Support	Diploma	15.966	2.209	5.108	.018
	Bachelor degree	15.394	2.164		
	Masters	14.805	2.296		
	PhD	15.474	2.091		
	Total	15.457	2.216		
Team Learning Behaviour	Diploma	16.979	2.567	3.001	.009
	Bachelor degree	16.295	2.494		
	Masters	16.329	2.685		
	PhD	17.158	2.035		
	Total	16.503	2.541		
Role of Effective Communication	Diploma	11.393	2.701	5.734	.008
	Bachelor degree	11.271	2.218		
	Masters	10.134	2.458		
	PhD	10.842	2.794		
	Total	11.124	2.433		
Team Efficacy and Stability	Diploma	10.869	2.904	4.915	.000
	Bachelor degree	10.714	2.318		
	Masters	9.659	2.466		
	PhD	10.053	2.614		
	Total	10.580	2.535		

***Diploma (n=145), Baccalaureate (n=325), Masters (n=82), PhD (n=19)

4.11 Impact of Age, General and Current Experience on Teamwork Components

The other participant characteristics examined in this study included age, general, and current experience. When testing the effect of these characteristics, the multivariate tests did not show any statistically significant differences among these factors and the teamwork components ($P > .05$).

In brief, results indicated that the demographic characteristics of the participants scored variably on the teamwork components. The next section discusses findings from the qualitative data. It explains how participants reflected on their experience of teamwork at KFMC.

4.12 Findings of the Open-Ended Questions

4.12.1 Introduction

The previous sections presented the results of the quantitative data analysis, and used internal consistency measures and factor analysis to demonstrate how these data were valid and reliable. In addition, the study has examined the key aspects of variation that existed between the participants and how these influenced the results of the questionnaire items. In this part of the chapter the participants' responses to the open-ended questions are analysed and presented as themes. Each participant was given the opportunity to comment on their experience of being part of a team at the KFMC. Their comments were generally quite brief and most averaged approximately 100 words. Open-ended questions were included in the survey was because they allowed respondents to add information that they felt was not covered in the questionnaire items. The inclusion of the open-ended free-text questions was designed to illustrate the unique departmental and organisational work culture and to identify areas of practice and any potential issues of concern specific to the setting.

There were 339 (59.4%) participants who responded to the open-ended questions, and 232 (40.6%) who did not. Those who answered reflected and elaborated on their work experience. Three main themes emerged from the content analysis of responses to the open-ended questions: 1) descriptions of teams and teamwork; 2) perceived benefits of teamwork; and 3) challenges to implementing teamwork successfully. Sub-themes also emerged. Table 4.21 illustrates these themes and sub-themes and the number of respondents who reported them.

Table 4.21: Key findings in the qualitative data: themes and subthemes

Main theme	Subthemes	No. of references
Descriptions of Teams and Teamwork	Team composition	299
	Team functions	246
Perceived Benefits of Teamwork	Promoting quality	127
	Improving decision-making	121
	Developing knowledge: sharing and learning among employees	98
	Promoting employee collaboration, commitment and satisfaction	76
	Managing change	69
Challenges to Implementing Teamwork Successfully	The need for a strong leader	165
	Managing team processes	53
	Team membership	49

The main themes and subthemes will be highlighted and explained in the next sections, including quotations from the respondents' responses. The next sections explain how data were analysed, the steps followed to ensure rigour, and supports the identification of emerging themes with quotes presenting the main ideas within these themes.

Based on the steps explained in the Methods Chapter, three main themes emerged. The selected quotes are numbered to identify the questionnaire number, preceded by a code representing the profession of the respondent (i.e. M for manager, N for nurse, and P for physician). The next sections discuss the resulting themes and their corresponding subthemes.

4.12.2 Theme One: Descriptions of Teams and Teamwork

Teamwork has been described in the literature as a group of individuals who work to achieve a particular target or a group of objectives (Griffin, Patterson & West, 2001). Chapter Two explains and critically reviews some of these descriptions and defines the main components of teamwork provided in the literature. This section presents the responses of participants to the open-ended question in this study, which asked them to define teams and teamwork. The respondents explained what they believed teamwork to be. They described it as a group of individuals with a common interest who meet to accomplish a group of objectives that would serve a particular group, the general population and/or the organisation.

As will be seen, the participants described what they thought a team was composed of, and why and how teams function. In relation to 'how teams function' a number of sub-themes emerged,

including the role of the individual within the team, the need for effective communication and the benefits of participating in a team.

4.12.3.1 Team composition

There was consensus among all participants that teams are composed of a group of people, not necessarily from the same profession, but they are gathered and work to achieve a specific target and objective.

As an example, one of the participants commented that teams are:

'… composed of different people from different areas who work in a collaborative and homogenous way with the same goal or objectives, working together to achieve the common goal successfully.'(N149)

Teams were not necessarily dominated by a particular profession in order to work homogenously:

'... as we meet with colleagues from other departments and other specialisations. We all get together in order to achieve a target that represents the main reason for the formation of this team.' (N131)

The respondents suggested that individuals from different specialisations could work effectively in a team and produce the intended outcomes.

4.12.3.2 Team functions

Participants also spoke about what teams do, and the purpose of creating teams. Chiefly, teams were seen as a means of working together in order to achieve a certain outcome or goal:

'… whereby we are gathered or meet in order to achieve a particular objective, or goal, or perform in collaboration in a specific task.' (N212)

Team members gathered to work collaboratively in a coherent manner. The view of respondents was that they gathered in a team to achieve a particular objective or goal. In presenting their understanding of teamwork, the participants made it clear that teams were effective when members had a common goal and that the goal needed to be made clear right from the beginning of the meeting/s. Whether a task-oriented team or a goal-directed team, the respondent referred mainly to group effort and not to their role as individual members. The effort was described as a collective one, whereby all members contributed to the overall achievement of the team. One of the respondents commented:

'…all [members] contribute their best effort, ideas, thoughts and suggestions in the team…' (M25)

Another participant said that teams assist:

'… in accomplishing a task by helping each other with coordination. Individual [members] contribute with their ideas to help each other achieve a common target… using their knowledge and experience to ensure the success of this team.' (N176)

The respondents suggested that members of a team needed to work collaboratively and provide the best they could offer to ensure the team's goals were achieved. Teams also needed a structure that allowed each member to be clear about what they were required to do. Respondents noted that clarity about their roles and responsibilities was not always present:

'…as members, we need to have well-defined roles and responsibilities... These are not always available.' (M13)

One important aspect of teamwork mentioned repeatedly by respondents was 'effective communication'. In addition, a number of the respondents indicated that, along with achieving the goal or mission set for the team, other benefits may also be attributed to good teamwork, e.g. better quality management, care or services. Better and more cost-effective care was linked to many of the comments regarding respondents' understanding of teamwork. One respondent wrote:

'The result [of good teamwork] was an improved quality of care, better client and employee satisfaction, and more cost-effective services.' (P19)

Awareness of the important role of teamwork in improving patient care and safety is evident in many of the participants' comments. For example, a respondent wrote:

'[As a result of working in teams] work can easily be done with quality. It helps us reach our goals easily. It increases efficiency and improves performance so that our clients can notice that we provide a comprehensive and good quality care.' (N329)

The following statement summarises how many of the respondents described their concept of 'team':

'Team can be described as a group of people from different or similar educational, experiential backgrounds and expertise, who are gathered in a well-defined scope of practice, and specific roles for each member, in order to work collaboratively, learn new knowledge and experience

and communicate openly so that they can achieve a specific objective or goal that would improve the quality of work, promote better services and increase employee as well as client satisfaction in a cost- and resource-effective manner.' (N218)

Respondents defined teams as a group of persons belonging to similar or different professions who were assigned by the organisation to achieve a specific set of objectives. These objectives are related to the successful implementation of the organisational processes and seek to promote quality requirements.

It is clear that the respondents' understanding of the nature of teams and teamwork is consistent with definitions in the literature reviewed in Chapter Two.

4.12.3 Theme Two: The Perceived Benefits of Teamwork

Respondents reported many benefits from the adoption of teamwork, which accords with the literature investigating teamwork. These reports are based upon employees' perceptions of their own experience of teamwork while working in the KFMC. This theme is composed of the following subthemes: promoting quality; improving decision making; developing knowledge; promoting employee collaboration, commitment and satisfaction; and managing change.

4.12.4.1 Promoting quality

The importance of working collaboratively with others to achieve a common goal was cited as the key benefit of teamwork by respondents in this study. In particular, several respondents commented on the link between effective teamwork and the delivery of quality care, reinforcing the role of teamwork in TQM. One of the respondents said:

'Teamwork is a cornerstone to quality improvement and safe patient care. It increases efficiency and improves performance and competency.' (P524)

The respondents perceived that teamwork promoted the implementation of quality programs and improved the outcome of work within the organisation.

4.12.4.2 Improving decision-making

Another benefit of effective teamwork noted by respondents is in relation to decision-making processes and outcomes. It was felt that quality decisions can be made through listening to expert opinions, which often reflect a better understanding of aspects that may not be readily apparent to other, non-specialised, team members; hence, quality decisions based on the input of

a number of team members can be more rigorous. The following three comments exemplify these reflections.

‘[Teamwork] improves the decision-making process and work efficiency by making decisions that are credible, accurate and adequate to improve work environment.’ (N155)

‘I believe that teamwork builds productive and competitive relationships among employees. When we meet frequently to discuss a range of issues we feel close, and any formality or unclear ideas about the other could be resolved and replaced with the true thing about those people. So teamwork, in addition to working together and improving our care, it brings us closer together.’ (M20)

‘...teamwork creates a sense of appreciation for us and [creates] harmony.’ (N48)

Another benefit of effective teamwork mentioned by the respondents was that working in a group was less stressful than working alone:

‘Working in teams decreased stress at work and personal bias.’ (N85)

Teamwork was also noted to:

‘…increase efficiency, the ability to focus different minds on the same problem and mutual support and lead to a better decision.’ (P3)

Teamwork results in a more positive workplace atmosphere that promotes better communication and improves decisions that contribute to the implementation of TQM practices.

4.12.3.3 Developing knowledge: sharing and learning among employees

It was suggested by a number of the respondents that during meetings, senior or more experienced members of the team share their expertise so that other members, who were less experienced or who had less experience in relation to the task at hand, benefit from the experiences of others:

‘Employees can develop their own knowledge and experience by discussing and listening to explanations from experts in the field during team meetings.’ (M401)

Teamwork has been reflected by the respondents as a source of learning as it could lead to professional growth and enrich the personal experience of the team member.

4.12.4.4 Promoting employee collaboration, commitment and satisfaction

A number of participants mentioned that collaboration during meetings and while working in teams was both encouraging and supportive. Such collaborative work encouraged workers, especially the newly-employed or new graduates, to share their idea and opinions openly, feeling that their voice had been heard. One respondent commented:

'[Teamwork] encourages personnel [team members] from different specialties to collaborate in order to achieve a common objective.' (N217)

Working collaboratively in order to achieve a specific objective is one of the key factors perceived by respondents in this study to promote a functioning team.

Respondents also said that teamwork increased commitment to overall processes within the organisation. Team members believed that they were part of the decision-making process and that their opinion and ideas were considered, appreciated and adopted where appropriate. In the words of one respondent:

'...since I have become a member in the team I felt that it increased my loyalty, as I became part of the decisions which affected my work...' (M498)

Another respondent wrote that participating in teamwork provided the opportunity to be 'heard'. The participant described how this led to the overall process of making decisions and managing change in the organisation:

'... [teamwork] improved the level of commitment, as I contributed to the decisions through making suggestions that are based on my personal opinion, knowledge and experience.' (N213)

Another benefit of effective teamwork described by participants was that working in teams was beneficial to all employees as they felt that their work, no matter how big or small, was appreciated by managers at all levels. Furthermore, participating in teamwork and meeting with other members from a range of professions, roles and specialisations promoted employees' sense of belonging to the larger organisation, rather than just being siloed into discipline-based groups. In addition to what respondents called loyalty and commitment, they also referred to the process of sharing their opinions, ideas, knowledge and experience:

'Working in teams has truly enhanced our performance and creativity using open communication. It led to good relationships between members, exchange of achievement and power.' (P478)

The power here is coming from engaging in team activities and support from other teammates:

'...sharing ideas and experience and supporting each other. With this kind of support, no one would feel that … their opinion (was) not important or no use at all. It is the value of being an active person in your team...' (N349)

As the respondents reported, the effective implementation of teamwork is beneficial to work and the employees. But the comments from participants suggested that members must be active, knowledgeable and aware of their roles within the team in order to obtain the benefits from working in teams.

4.12.4.5 Managing change

Another aspect mentioned by a number of respondents concerns the effect of teamwork on decisions relating to potential turbulence and change. These decisions can result in flexible plans.

'One benefit of teamwork is that we anticipate the future changes. So we produce suggestions that tackle the impact of those changes to ensure the quality of work.' (P529)

A final benefit of teamwork mentioned by respondents concerns the quality of work and a cost-effective outcome. One respondent wrote:

'Teamwork produces high quality work and decreases the cost of our services by providing more cost-effective alternatives.' (P445)

In brief, respondents in this study reported benefits which indicate their awareness of the importance of teamwork to accomplish quality work and establish a healthy working environment. These benefits, however, are offset by a number of challenges that may hinder the achievement of goals. The next section discusses these reported challenges.

4.12.4 Theme Three: Challenges to Implementing Teamwork Successfully

The challenges to effective teamwork, as reported by respondents, have been organised into three subthemes: the need for a strong leader; managing team processes; and team membership. These subthemes reflect the challenges of implementing effective teamwork and the flow-on effect on the outcome of team projects. If these challenges affect the efficacy of teamwork, it is expected that the implementation of quality programs will also be influenced.

4.12.4.1 The need for a strong leader

Some respondents suggested that teams needed a strong leader. Their own understanding of leadership was explained through comments that appeared to be based on both experience and knowledge. Some respondents elaborated and mentioned specific qualities they perceived in their leaders. The general opinion was that although some leaders were qualified and performed well in their positions, others did not show a similar level of professionalism. The majority of respondents indicated the need for clear guidelines to be employed when choosing team leaders.

The respondents indicated that leadership required a strong personality. One respondent expounded on what constituted a strong personality:

'The leader controls the external influence of powerful persons to change decisions that we make in our team. Some decisions might not be favourable to some managers. So our team leader emphasises what we decide.' (N253)

However, when a good leader was not present, the result was:

'Our team members have conflict, causing some interruption to teamwork.' (P490)

Some respondents elaborated on what they experienced in their teams; the above response explained that conflict among team members was present and caused interruptions to the teamwork. That may be linked to the leader's inability to direct communication and manage conflict effectively.

The influence made by 'powerful persons' within the organisation might interfere in the work and decisions made by the team. Respondents suggested that the leader must emphasise decisions made within the team so that external influences from individuals who were not part of the team did not influence the implementation of those decisions.

In order for teamwork to be successful and achieve its objectives without any interference, it was suggested that the leader needed to be assertive and confident. One respondent also said:

'I believe that teamwork here is not applied in a good way. Many powerful persons [within the organisation] interfere with our work and there are members who either do not attend our meetings or do not know anything about our roles in the team. They are a burden.' (M407)

According to the respondents, leaders have to be able to engage all members to participate actively and contribute to the overall process of team collaborative work, or the opposite will happen:

‘Different levels of educational background, too many ideas, unhealthy debates all destroy relationship at work.’ (M14)

When a leader does not provide effective leadership in the team:

‘...some bad attitudes of staff, which hinder the achievement of our objectives, would appear. Our team leader should neutralise conflict of powers within the team members, and the external impact of powerful individuals within the organisation...’ (N89)

These remarks indicate that the respondents were aware of the impact of the poor team leadership and its impact on the other processes. As reported by the respondents, this (lack of) leadership had led to recurrent ‘bad communication and relationships’ among team members. In terms of their impact on the effectiveness of teamwork, the qualities of the leader were described by respondents in this study as crucial to achieve successful implementation of TQM. According to reports in this study, the respondents had a clear picture of how an effective team leader should conduct themselves, and the impact of poor leadership:

‘... [a good leader should be] able to organise work, [to] set priorities and fight corruption, [to be] autonomous, independent and democratic, but this is not what is happening in our team.’ (M12)

While another respondent said that their leader:

‘Shows the weaknesses and strengths of team members and [directs them to] better ways of communication and coordination.’ (N239)

Another view of respondents focused on the issue of individual differences within the team itself. These differences may be serious and distract the work of the whole team. One respondent suggested that dealing with individual differences among team members was a leadership requirement:

‘...[a leader should] deal with personal differences effectively... The leader should have emotional intelligence and lead by example so that teamwork can be effective.’ (N196)

As the respondents indicated, in order for the team to achieve the best from the effort being invested within it, the leader needed to manage ‘loud voices’ and engage sensitively in all situations and when making suggestions and offering opinions, so that they became part of the team voice and mindfully supported the participation of all members.

Additionally, the respondents reported that leaders must be good listeners, encourage free expression of opinion and allow for differences to become part of the teamwork and not a distraction. In that respect one respondent said that their team leader:

'...enhances open, effective dialogue to ensure proper understanding based on different cultures and educational backgrounds...' (N232)

This is clearly important in the study setting, given the demographic profile of the respondents, where the majority come from a range of cultures. The differences present among team members and how leaders are required to understand these differences based on social, or perhaps ethnic, backgrounds and education by improving communication among them was evident in a majority of the comments. It is imperative that the leader can control conflict as it might destroy the work of the team. Following is an example of how this was expressed:

'...conflict could destroy the teamwork where members have different opinions that are hard to [reconcile]... Our leader does not always make the best choice.' (N313)

Team leaders did not always control the debate and choose the best options:

'The leader has to control personal bias and preferences... be knowledgeable, skilful and experienced... but these qualities are not all present in our team leader, which I believe is affecting the outcome of our team.' (P418)

As reported by the respondents, leaders' characteristics are crucial for the team to function effectively. Some characteristics could not be found in their team leaders, which resulted in limiting the achievement of their teams.

4.12.4.2 Managing team processes

The second theme identified from responses to the open-ended questions was about how the process of teamwork is managed. Within this theme a number of issues were reported. The comments were directed mainly toward the meetings of team members and the 'what and how' of these meetings.

One important aspect mentioned by many of the respondents was efficacy and quality of decisions resulting from team meetings and how these decisions were required to reflect high standards as well as accurate understanding of the nature of the environment in which they were to be applied.

A respondent described the process of making decisions in a collaborative manner:

‘During our team meetings we highlight opinions, ideas and thoughts to adopt the best decisions. It is not enough to listen only to the expert, which we usually do for a margin of our time. Our work is complex and, in order for us to achieve the best, this thing needs more than one hand and brain to finish.’ (P16)

Generally, the respondents’ comments were about the way in which team meetings were conducted. A respondent said that during team meetings, they experienced:

‘... poor channels of communications. People hardly respect others’ cultures and points of view.’ (P24)

Although the issue of not respecting others’ cultures was mentioned by this participant, the circumstances are not clearly explained. The challenges of segregation based on gender or nationality were not clearly identified. The open-ended responses in relation to these challenges are extremely limited, general and vague. Therefore, due to the scarcity of quotes that specifically mention gender or cultural segregation, a clear picture of these factors cannot be gleaned from the responses to the open-ended questions. It may be that gender segregation and cultural differences are not obvious in the responses to the open-ended questions, as these are cultural norms in Saudi Arabia.

There were also a few comments on hospital or organisational policies in relation to teamwork. According to the respondents in this study, many aspects of the organisational policies were unclear or ambiguous to them. One respondent wrote that:

‘Hospital policies have to be clear so that preferences are limited. The clearer the policies and guidelines that we need to follow, the better the commitment of both leaders and team members to team’s objectives.’ (N124)

Biased decisions were also mentioned by the respondents as a challenge to effective teamwork. The process of discussing contentious issues sometimes resulted in decisions that were not the best:

‘Decisions are not usually made based on the quality of the opinion or suggestions, but on the gender and nationality of the individual. This is what happens in our teams. I feel that decisions don’t always represent the best practice.’ (P10)

The above quote implies that decisions made within the team are adopted based on the personal preference of the leader. This is also implicit in the following quote by a respondent, who suggested how decisions should be made with the team, but not that they were made in practice:

‘When we meet, the role of the leader is to choose the best decisions and raise the voice of logic. Decisions are not chosen simply because they are personally favoured to the leader or because the leader likes this person. Although this is not a one-man show, it is still practised. This is usually a serious challenge.’ (M334)

The respondent suggested that after decisions were made, it was necessary to see them adopted and applied. It was not clearly described by the participants whether this practice was related to leadership style or the hierarchical nature of the healthcare organisation. According to some respondents, many decisions had been made but never applied at the KFMC. One respondent commented that:

‘It is important to see decisions become true. We do not really see much of our decisions applied. Management has to implement what we suggest as experts, but this is not always the case.’ (N292)

Team members were aware that meetings, discussing important issues and then making decisions or suggesting solutions to these concerns did not always result in implementing those ideas. In that respect, one of the respondents said:

‘It is not enough that we meet and discuss and do our homework of planning and arguing to get the best out of us and then see that all our efforts are gone by not accepting the decisions we made. This is so frustrating.’ (P9)

In addition, several respondents discussed how some decisions were made in response to a particular event or situation. Reference was made to decisions which needed to be revised and changed in order for them to be appropriate for the current situation:

‘Decision review has to be made continuously. A decision is good now, but not for good.’ (N46)

Another respondent was concerned about updating the decisions rather than adopting them as if they were workable at all times and places; this process of updating is clearly crucial to the successful implementation of TQM. This respondent said that there needed to be:

‘... continuous review of decisions in order to modify according to updates. We have meetings and we make decisions and then nothing happens. Nobody tells the team members what were the results or how the implementation process was. Nothing at all.’ (M448)

Based on the above comments it seems that decisions are made and then the relationship between the team and the implementation and evaluation processes ceases to exist. These comments were identified from the texts concerning the process of conducting meetings and

making decisions. There were clearly some tensions and concerns about the roles and contributions of all team members, and the potential disconnect between decisions and actions, which impacted on the successful implementation of TQM.

4.12.4.3 Team membership

Team members were described as the key source of ideas and suggestions. When members from different professions, cultures and levels of management were involved, it was expected that this would produce better results from teamwork. Many respondents suggested that team members needed to be knowledgeable and experienced in the area that the team was addressing. One respondent wrote:

'Team members have to be knowledgeable and experienced. Unfortunately, many team members are in the team because of who they are, and not because of what they can do.' (P483)

Additionally, respondents reported that team members needed certain professional characteristics, including respect for others' opinions, ideas, thoughts and personalities. As one respondent wrote, this mutual respect for each member's opinions did not always exist during team meetings:

'Each member within the team has a mutual respect for other members... You don't find this happening quite often. It is so annoying.' (P538)

Another comment was directed toward the quality of communication that should be based on mutual respect and professionalism. This respondent indicated that issues of professionalism and objectivity were not always present in the team meetings:

'... more professional, less personal communication so that we can work in a faster manner and meet our goals without wasting time discussing minor things.' (P513)

The respondent in the above quote emphasised the importance of directing communication toward discussing important issues during team meetings so that better use of time for the purpose of meeting the planned goals could be achieved. The result of this type of communication appeared in the following comment:

'It helps building trust and respect among members.' (N47)

One respondent reflected on the experience of teamwork by saying:

'… the trouble comes from a single member in our team affecting the entire team negatively.' (P522)

The comments support the earlier theme that the role of the strong leader must be to control any distraction to team effort. Clearly, this leadership style was not present in the experience of the person quoted above.

The final point in this section relates to the sense of appreciation that each team member feels when they are able to participate actively in the team meetings and add to the overall effort of the group. One respondent wrote the following:

'Incentives to all team members are very important to ensure that we do not lose interest.' (M26)

Similarly, another respondent wrote:

'Incentives are important for the team to be able to sustain its activities and improve productivity.' (N22)

The respondents did not mention the type of incentives they expected. The next chapter discusses some suggested incentives as part of the recommendations.

In brief, both benefits and challenges of teamwork described by the respondents in their answers to the open-ended questions reflected a range of personal experiences at the KFMC. In other words, a number of issues concerning teamwork were clearly indicated, even though many of the comments were quite brief.

4.12.5 Summary

In this section the respondents' written responses to the open-ended questions have been analysed, and three main themes and embedded subthemes have emerged. These findings illuminate and supplement the quantitative findings of this study, as discussed early in this chapter. All key conclusions from this study are discussed and integrated in the next Chapter and compared to the literature reviewed in Chapter Two regarding the role of teamwork in total quality management.

4.13 Conclusion

In conclusion, the statistical analyses on the quantitative data showed that gender, nationality and academic degree demonstrated a statistically significant impact on teamwork components. However, the impact of age, current and general experience could not be demonstrated as making a statistically significant difference on teamwork components. Generally, participants

who were female, non-Saudi, nurses and diploma holders reported higher mean scores than the other groups on the study scale.

The qualitative findings identified three themes indicating the participants' view of the teamwork. As can be seen in the analysis, many responses reflected ideal views of what teams and teamwork components should be rather than provide detailed commentary on the current practices of teamwork. However, there were some hints about some of the perceived challenges to effective teamwork; these were linked to factors such as leadership style and communication. As well, the poor implementation of decisions made by teams was mentioned as a potential barrier to reaping the rewards of effective teamwork. Further discussion on the findings is presented in the next chapter.

Chapter 5: Discussion and Conclusions

5.1 Introduction

The focus of this study was to explore teamwork as one factor that influences the successful implementation of total quality management (TQM). This chapter discusses the key conclusions from this study and how they address the research questions. The aim of this final chapter is to relate the key conclusions of this study to the existing literature and conceptual framework, and to identify the implications of these conclusions for policy and practice. Based on the outcomes of this study, future research directions are presented that may improve TQM practices. Finally, a discussion of the limitations of this study is presented.

The research questions presented in previous chapters are further discussed in this chapter. They are as follows: What are the components of teamwork among employees that influence successful implementation of the total quality management program in KFMC? Which aspects of interaction between teamwork components and the total quality management program within King Fahad Medical City influence employees' engagement in the successful implementation process of the quality program? and What are the unique factors that influence effective teamwork in KFMC, as perceived by the employees?

Throughout this thesis it has been argued that it is both appropriate and necessary to examine the impact of effective teamwork on TQM within a Saudi healthcare setting. While it is recognised that TQM is a priority in healthcare organisations, it is argued that the use of effective teamwork to promote the implementation of a quality program needs to be explored. This exploration may contribute to improving the overall outcomes of adopting a TQM program effectively and efficiently. In order to improve the theoretical understanding of the findings, this study applied the Organisational Climate (OC) Theory as a conceptual framework.

5.2 Summary of the Key Conclusions

Seven components of effective teamwork were explored in this study. This study reported findings regarding how these components influence the effectiveness of teamwork and the achievement of TQM objectives at the KFMC. Overall, the participants reported a positive experience and view of teamwork as practiced in their areas. They reported that the implementation of teamwork components was influential and promoted the achievement of TQM objectives. However, findings indicated that there were some areas that clearly required further improvement regarding effectiveness of teamwork.

On the components of teamwork, KFMC employees viewed task reflexivity, participative trust, and communication as the most significant components influencing the achievement of team and TQM objectives. The least influential factor identified among teamwork components was team efficacy and stability.

The items comprising task reflexivity referred to participants' reports of teams reviewing objectives and their approaches toward achieving those objectives. The study respondents reported favourably on a second component, participative trust, indicating that there was trust and respect among team members, which are factors that are reported in the literature that can improve the outcome of teamwork. They also indicated the importance of effective communication in contributing to the success of teamwork and TQM.

Responses in relation to task reflexivity indicated that hospital administration generally acknowledged members' efforts in teamwork and TQM. However, this acknowledgment required further steps to ensure that team members' engagement in the team effort was recognised.

On team learning behaviour, respondents reported participating in meetings where mutual exchanges of ideas took place. These meeting were either formal or informal. Management support for team learning behaviour were less evident, with nearly one-third of participants reporting that there were no incentives, limited informal communication and exchange of information or consultation of experts to solve issues concerning TQM plans.

The participants reported a high turnover among team members, as many employees had left their teams during the past six-month period, resulting in team instability. Some employees reported that although teamwork was beneficial and improved individual experiences, the turnover rate of team members and instability this caused was a challenge to achieving TQM outcomes.

Finally, the role of effective communication was clearly significant as an important factor in teamwork and the successful achievement of TQM objectives. Many participants reported having satisfactory levels of communication with their colleagues, direct managers and administration of the organisation; however, there was clearly room for improvement.

The first key conclusion in relation to research question one is that employees of KFMC indicated that their organisation supported teamwork, allowed for task reflexivity, participative trust and promoted effective communication. However, team efficacy and instability were two major challenges to effective teamwork to achieve the TQM objectives.

The second conclusion concerns the impact of employee characteristics on the teamwork components. It was clear that female participants, who were mainly nurses, perceived a better quality of communication and management support, but less team efficacy and stability than their male counterparts. In addition, the Saudi respondents had a less positive view of the current level of teamwork in implementing TQM than non-Saudi respondents, but a better view on team efficacy and stability. Healthcare professionals (nurses and medical staff) viewed teamwork components as less effective compared with their managers, who generally had a more positive view of the implementation process of task reflexivity and participative trust. Interestingly, the lower the respondents' level of academic qualification, the better they viewed the impact of teamwork, specifically on the following factors: communication, management support, and team efficacy and stability. A degree of variability in these outcomes may be linked to the diversity of nationalities and differences between professional perspectives in this healthcare setting.

The third key conclusion in this study addresses responses to the open-ended questions. These responses reflected the respondents' understanding of the meaning and the process of teamwork and how this impacted on TQM implementation. They also reported what they perceived as the key benefits and challenges of teamwork. They emphasised the positive impact that effective teamwork has on achieving quality plans. They also indicated that effective teamwork improves decision-making processes, enhances the development of employee knowledge and skills, and accelerates the achievement of planned objectives through better collaboration and commitment.

Participants' responses also identified a number of key challenges they encountered during their work within teams at the KFMC. These challenges related to their work experience and also included comments regarding what they wished would occur to improve the effectiveness of teamwork. They reported that the success of teamwork was based on three main factors: leaders' characteristics; team processes; and team membership. The main conclusion in relation to this part of the study is that although the majority of teamwork components are implemented within the KFMC teams, there are still challenges that cause limitations in achieving the TQM objectives, linked to the characteristics of the leader and the teamwork processes. Next is a discussion of each of these conclusions in light of the literature reviewed in Chapter Two.

5.3 Conclusion One: The Positive View of KFMC Employees to Teamwork Components

The results of this study suggest that, overall, teamwork is effective and viewed positively by KFMC employees. Task reflexivity was viewed as the most influential component of effective

teamwork in relation to implementing TQM in the KFMC. Study participants reported that their staff teams were in the habit of reviewing TQM objectives and approaches toward achieving those objectives. They also reported that team members discussed team outcomes frequently and sought information necessary to promote teamwork, while input from each member was considered. The impact of these processes was closely linked to the effectiveness of teamwork and the achievement of quality outcomes related to the level of team adaptability. Task reflexivity also contributed to the teams' abilities to accommodate and make decisions that reflected the actual needs of the organisation and its customers. So this conclusion reflects the findings that the team members' trust in each other, and that teamwork contributed to the decision-making processes with regard to TQM implementation.

Participants also reported high levels of participative trust among team members. This is linked to an ability to navigate the changing environment of healthcare, and display collaborative behaviour and trust among team members. These findings indicate that respondents believed that their achievement of TQM objectives contributed to improved services and decreased errors. Similar to this conclusion, Clements, Dault and Priest (2007) and Valescchi, Wise, Mueller and Smith (2012) suggested that teams which adapted well to changing conditions and which maintained trust in members had positive attitudes and beliefs in their ability to solve problems and improve effectiveness. Smith (2014) also found that decisions made by all or most team members produced better results regarding healthcare services, compared to individual decisions. This is most likely because teams have greater collective knowledge and experience to draw on during the decision-making processes compared with individual members' experiences.

It was clear in the findings that the study participants experienced flexibility in their ability to make decisions as team members, which consequently produced a positive atmosphere and improved their sense of commitment and loyalty. This point can be emphasised and explained by the OC theory. According to Clercq and Rius (2007), the OC theory explains that employee commitment and effort can be improved by experiencing a less idiocentric work environment, meaning that employee commitment is enhanced when the focus is on the work of groups, rather than the contributions of individuals. In addition, findings in this study reflected that the employees perceived an environment of a collaborative nature where generally members of teams felt able to express their own ideas and opinions. Similarly, Glisson, Schoenwald, Kelleher, Landsverk, Hoagwood, Mayberg, Green and The Research Network on Youth Mental Health (2008) argue that organisations with the best organisational climates can sustain new treatment or service programs over twice as long a timeframe as organisations with less flexible cultures, as a result of greater staff input into decisions regarding policies and regulations. As

discussed in Chapter Two, Gombert et al. (2012) found that teams functioned well in complex and variable healthcare environments when they had an open system of communication and the capacity to be flexible. This conclusion supports findings in this study that the KFMC environment was perceived by employees being as open, flexible and encouraging of team members' active participation in the decision-making process, and this boosted the effectiveness of teamwork in relation to the implementation of TQM. Furthermore, Gombert et al. (2012) suggest that when teams display compensatory behaviours (such as those related to adapting to emerging needs of the community or cuts in the budgets within the organisation), team members further develop their decision-making skills.

The conclusions of the current study support the notion that team efforts were valued by the team leaders and the other team members. Such support was seen to bolster team members' confidence in contributing to decisions in the face of changing needs and goals.

KFMC employees who participated in this study reported the presence of high levels of participative trust, which means there is trust and respect among team members. They perceived the presence of respect and friendliness among team members, as they accepted each other even when they had differing opinions. This facilitates empowerment within teams to enable members to contribute to decisions that are comprehensive and reflective of the expertise of all team members. This supports the findings of Irfine, Abdul-Azeez and Hammed (2011), who suggest that increased self-efficacy and better empowerment of employees would improve the effectiveness of teamwork and the implementation of TQM. Self-efficacy and empowerment are reflections of how members perceive the importance of their role as part of a team. However, there were no significant differences among participants in this study on the items related to how they perceived their roles based on gender, profession, nationality or experience (see Chapter Four). As Carney, West, Neily, Mills and Bagian (2010) point out, team attitudes toward the individual personalities of members must include respect of differences in opinions that may influence the level of success that the team is able to achieve. These authors add that teams with a positive attitude towards members' contributions have a tendency to work well, similar to what KFMC employees reported in this study.

Participants in this study reported that they had the opportunity to elaborate on their ideas and thoughts during team meetings, so they made the necessary efforts to promote better team decisions. Similar to this finding, Morgison, Reider and Campion (2005) argue that the presence of a positive attitude allows team members to improve their individual achievements in addition to contributing to team efforts. This finding also supports the work of Grumbach and Bodenheimer (2004), who found that effective and active members' participation is one of the main drivers to creating the climate for people to become initiators and supporters of others,

rather than assuming negative roles such as dominators and recognition seekers. Teams with high levels of participative trust, such as those described in this study, tend to have more productive interpersonal relationships, positive attitudes, and the inclination for collaboration among team members. Jayaram, Ahire, Nicolae and Ataseven (2012) suggest that there is a high degree of interrelatedness among team processes, as the success of one process depends on the proper implementation of the other. Therefore, collaborative efforts reported by the participants are essential to successfully achieving TQM objectives.

Idris (2011) argues that the successful implementation of TQM is driven by factors such as the type of work, commitment and efforts of employees. Alolayyan, Ali, Idris and Ibrehem (2011) add that the results of these factors can be measured in the form of high performance teamwork, high employee morale and a collaborative organisational climate. The link between a positive organisational climate and effective teamwork is evident in the literature discussed in Chapter Two.

Welikala and Sohal (2008) suggest that each member of an organisation is a source of both valuable and valid information that may add to the collective effort. KFMC employees who participated in this study perceived their role as effective, and felt that they were recognised and appreciated within the team, but there were still issues of concern as they reported limited organisational recognition for their efforts. This conclusion is supported by the fact that the 'management support' factor was not among the positive teamwork factors identified in the findings of this study.

The OC theory helped in understanding this conclusion, as organisational climate is a dominant factor that affects the attitude of employees, which in turn affects their productivity, job satisfaction, commitment and performance (Mahal, 2009).The OC needs to be able to acknowledge the accomplishments of staff in order to achieve effective teamwork and job satisfaction (Baxter & Brumfitt, 2008). Study participants indicated that although they experienced limited organisational support or recognition from management for their role, they still perceived that other team members and colleagues appreciated and recognised their contributions to the overall team efforts. This, in turn, may be the link between higher levels of commitment to teamwork and the successful implementation a TQM program.

Employees also said that forms of recognition for achieving anticipated outcomes from management, such as additional financial incentives or letters of appreciation, were very limited at the KFMC. Khan (2011) suggests that misdistribution of resources (including incentives and rewards provided to employees and managers for their efforts) can result in dissatisfaction and a sense of unfairness. Talib, Rahman and Azam (2011) add that the result of organisational lack

or misdistribution of incentives may lead to employees losing interest and lacking engagement in the implementation of TQM programs. Participants in this study expressed the view that their organisation did not provide adequate incentives to improve teamwork. They felt that any improvement in this area would enhance their work and improve team effectiveness. Participants were still committed to teamwork and the TQM programs, but hoped for greater recognition of their efforts and a better incentive system.

As effective communication was evident within teams, this may have mitigated the negative effects of limited incentives, instability and high staff attrition rates. Rad (2006) argued that the successful implementation of a TQM was related to the type of communication between and among staff members and managers, which, in the case of the KFMC, positively affected teamwork. Similarly, Cartmill, Soklaridis and Cassidy (2011) suggest that in order for teamwork to be successful, it requires effective communication to contribute to health professionals' satisfaction and to improving the achievement of TQM objectives. This was especially important in relation to communication from managers to staff members. KFMC participants in this study reported a satisfactory level of communication with their colleagues, but there was clearly a desire for more effective communication with their direct managers and the senior administration of the organisation, in order to produce the required positive effect on the teamwork and the implementation of TQM. According to reports in the literature, a healthcare system adopting TQM requires a good communication model, effective meeting processes and shared decision-making among its staff members in order to achieve the objectives of this program. For instance, Tanco, Jaca, Viles, Mateo and Santos (2011) and Neily, Mills, Young-Xu, Carney, West, Berger, Mazzia, Paull and Bagian (2010) indicate that quality communication improves safety measures, reduces errors and improves professional behaviour among healthcare professionals, which results in better quality services.

Similar to findings in this study, Cartmill, Soklaridis and Cassidy (2011) suggest that three forms of communication foster and maintain effective teamwork: formal communication; informal communication; and education and training opportunities. Walston, Al-Omar and Al-Mutari (2010) indicate that communication and effective teamwork between employees are critical variables that influence the climate of client safety, which is important to the successful implementation of TQM. They also suggest that organisational climate is pivotal to promote or suppress all forms of communication; it emphasises that good communication supports all vital processes within a healthcare organisation, including quality objectives. In KFMC, the participating employees indicated that they experienced open, effective communication, which facilitated teamwork, as described in the literature regarding organisational climate. Gombert, Jahn and Rivera-Rodriguez (2012) contend that it is crucial that employees have transparent and

well-defined lines of communication so that messages are sent clearly and without any distractions (Walston, Al-Omar & Al-Mutari, 2010). In the current study communication with different specialisation, such as colleagues, supervisors, managers, and the administrators were all ranked as positive. Participants indicated that in all forms there was an easy flow of information and open lines of communication, which, according to the literature, is an indication of a positive organisational climate which facilitates effective teamwork, minimises errors and improves the quality of services provided. Thus, the OC theory adopted as the theoretical framework for this study has provided insight into the link between the quality of communication and the achievement of positive outcomes, in this case effective implementation of TQM. The outcomes of the current study suggest that the organisational climate of KFMC is supportive to open communication and promotes a positive workplace atmosphere for teamwork and TQM.

Another issue that has been linked in the literature to the clarity and effectiveness of communication is human error that may cause serious consequences to clients' health outcomes. As KFMC is a healthcare organisation, the risks may include jeopardising the safety of patients' health and wellbeing. According to Morrison, Lanken and Goldfarb (2010), errors occur when communication problems arise due to limited feedback from colleagues and managers. Ödegård and Hallberg (2004) suggest that organisations with a strong 'patient safety' climate develop services through robust feedback and learn from errors through open communication. Additionally, Mwachofi, Walston and Al-Omar (2011) stress the crucial role of effective communication in reducing mortality rates, length of stay of patients, decreased legal and medical complications, and thus promoting a better organisational climate to support patient safety. True, Stewart, Lampman, Pelak and Solimeo (2014) also suggest that the openness of communication among team members can predict the degree to which these members report understanding organisational as well as team objectives and then committing to achieving them. Participants in the current study reported their awareness of the crucial role that effective communication has in determining many aspects of the quality of teamwork, quality management plans and patient safety outcomes.

Oandasan, Conn, Lingard, Karim, Jakubovicz, Whitehead, Miller, Kennie and Reeves (2009) suggest that quality management objectives can be achieved when the organisational climate supports open, clear channels of communication within and across teams and with other employees. All the above literature supports this first conclusion that employees of the KFMC indicated that their organisation supported teamwork, allowed for task reflexivity, demonstrated participative trust and promoted better communication. However, team efficacy and instability were the major challenges to effective teamwork. KFMC employees reported perceiving a high

turnover of team members. This finding appeared clearly in the responses to the efficacy and stability factor where employees felt that many team members had left their teams during the past six-month period, which resulted in less team efficacy and a sense of instability among them. Finn, Learmonth and Reedy (2010) explain that healthcare work environments are subject to constant change and this could have a dramatic influence on the model of care adopted to provide services and in procedures within the organisation. According to Le Pine (2003), teams which are adaptable and stable often own the skills to change their strategies accordingly and establish effective teamwork outcomes in the face of different organisational challenges.

Lankau and Scandura (2002) suggest that even unstable teams can become adaptable by relocating resources to where they are needed most, as determined by what information is brought to the awareness of the team. Interestingly, however, findings in this study did not link team membership instability and team inefficacy. In fact, KFMC employees reported that although team membership was not always stable, teams were adaptable, and the effectiveness of teamwork and the achievement of TQM outcomes were not compromised due to the stability factor.

In contrast to reports in this study, Chen (2010) argues that a high turnover rate of employees influences organisational commitment and culture negatively; whereas, professional development opportunities influence organisational commitment positively. Findings in this study backed the report by True, Stewart, Lampman, Pelak and Solimeo (2014) about the importance of stable team membership in achieving quality goals. Sexton, Helmreich, Neilands, Rowan, Vella, Boyden, Roberts and Thomas (2006) found that stability in employment could ensure that tasks and responsibilities were covered during both short- and long-term absences of a team member for different reasons. The current study found that employees believed the previous six months reflected a high attrition rate and lower retention rates in the healthcare facility. With the exception of this finding regarding the perceived instability in their teams, no information exists on the reasons for the high attrition rates within the organisation. However, given the profile of the health workforce at KFMC, where the majority of workers are non-Saudi citizens on short-term contracts, this high turnover rate is hardly surprising.

Team stability, according to the Organisational Climate (OC) theory, is linked to the degree of engagement of employees, which influences both their commitment and intentions to stay or leave the organisation (Mahal, 2009).This suggests that the high attrition rate may reflect a lack of commitment, which undermines effective teamwork at KFMC; however, the previously discussed findings do not seem to support this. Wang and Fwu (2001) argue that better job stability leads to higher commitment and greater passion toward serving the organisational objectives. In addition, Randhawa and Kaur (2014) explain that the OC theory emphasises that

an employee who gains confidence within an organisation usually exhibits better innovative behaviours and stays working longer in the organisation. Yet, despite the somewhat unstable organisational climate of the KFMC due to high staff turnover rates, the findings do not suggest that the high staff turnover rates have undermined perceptions of effective teamwork at KFMC.

To sum up, and according to the first conclusion, employees at the KFMC reported that task reflexivity, participative trust and communication were positive factors that had led to effective teamwork and implementation of TQM plans. Levis, Brady and Helfert (2008) explain that when implementing teamwork effectively, employee experiences, ideas and opinions are valued in a supportive climate, which results in an environment where the sharing of ideas and suggestions is encouraged. The main challenge in relation to this conclusion is the instability that is related mainly to the high staff turnover rates. Consequently, team efficacy at the KFMC may be influenced, as it takes time for new staff members to become aware of the team dynamics, build trust, identify strengths and weaknesses, and contribute to the overall effort of the team. Although the impact of staff turnover was not viewed as a significant barrier to the effectiveness of teamwork, employees might be unaware of the full impact of the regularly high turnover rates, and thus did not report it.

5.4 Conclusion Two: Impact of Employee Characteristics on Teamwork Components

The second conclusion is focused on findings about the impact of employee characteristics on teamwork components. Female participants and non-Saudi participants perceived a better quality of communication and management support, but less team efficacy and stability than male Saudi participants. This may be linked to the fact that many male Saudi participants tend to be concentrated in managerial/team leader roles. Managers reported a higher level of task reflexivity and participative trust compared with physicians and nurses, while nurses perceived less team efficacy and stability than all other participants. In addition, the lower the academic qualification the better the perceived quality of communication, management support and team learning behaviour, but the lower the perceived team efficacy and stability.

As previously discussed, the majority of the participants in this study were female nurses. Nurses' work depends on effective communication to send and receive messages concerning patient health. Castner, Foltz-Ramos, Schwartz and Ceravolo (2012) explain that nursing is based on teamwork and collaboration, which is not always found in other professions; hence, nurses tend to have better developed communication skills that they can utilise when working in teams.

Furthermore, the gender segregation, where both genders work in a very limited scope with each other, is a feature of Saudi culture. However, the organisational culture within the KFMC is different than the external one, as females and males are able to work together in a professional atmosphere that is controlled by rules determined by the nature of the work and not by the nature of the Saudi culture. Generally, the presence of large number of females from similar [cultural or ethnic] backgrounds has made it easier for them to work together as this is more convenient for them. It is well-known that human beings tend to feel more comfortable when working with those they feel are close or familiar (Malat & Himilton, 2006). This may mean that nurses experiences reflected on the findings of this study; female nurses predominantly work in teams with each other, rather than in mixed-gender, inter-professional teams. Therefore, nurses' reports on the effectiveness of teamwork in their area of practice are more likely to be a reflection of their experiences in working with other female nurses who have similar experiences. This is clearly a major limitation of this study, as the findings with regard to female nurses are not reflective of working with other professions, genders or levels of staff to implement TQM.

Castner, Ceravolo, Foltz-Ramos and Wu (2013) suggest that quality of care and patient safety are essential components of nursing care, which depends on effective communication and teamwork. As the percentage of nurses who participated in this study was high (nurses represented 72.2% of the sample), the findings reported in this study regarding communication are predominantly a reflection of nurses' communications and perceptions of working with each other.

Fitzgerald and Davison (2008) suggest that nurses are usually intuitive in communicating with other professionals while working in teams, which can contribute to the success of teamwork and establishes mutuality and respect for others' roles. Rose, Schwarzkopf and Kiger (2011) found that nurses facilitate communication with other professions in what is called trans-professional communication. According to these authors, facilitative communication, both within or between teams, improves the function of teams and job satisfaction, and enhances patient safety. Therefore, given that the majority of participants in this study were nurses, it is hardly surprising that they reported effective communication as a key component of good teamwork. What is missing from this study is the report on communication among teams from different areas of specialisations; it would be worthwhile to examine communication among teams to understand this relationship better in a Saudi context.

Leonard, Graham and Bonacum (2004) explain that nurses are usually educated using a narrative approach that enables the exploration of holistic care of others, while doctors learn to be more specific, concise and focus on the symptoms and diagnosis of disease, so that they can

get to the headline quickly. Therefore, nurses often relate well, and develop a deeper understanding of the needs of others that can contribute to effective teamwork. The findings of the current study support these earlier studies reported in the literature that nurses, who made up the bulk of the participants in this study, brought a level of open, facilitative communication that contributed positively to teamwork. This communication occurs mainly in teams made of female members, and there were factors limiting communication with other team members, perhaps male. The limited communication could be related to the presence of male managers, which contributed negatively to the quality of communication between different teams. This assumption, however, needs further investigation and cannot be confirmed from findings in this study.

Another important point to mention is the impact of the Saudi community culture in forming the organisational culture of KFMC. The Saudi culture is unique; it can be described as conservative and restricts female participation to 'culturally-appropriate' professions, including healthcare (El-Sanabary, 1993). During the past three decades, Saudi women have gained high literacy levels and professional opportunities in Saudi Arabia, as the country planned to replace Saudi nationals with non-Saudis through the Saudisation process (Meijer, 2010). However, their freedom to travel, receive education, and work is restricted through requiring the approval of a male relative (Keene, 2003). In part, this culture might have influenced some organisational processes and teamwork within the healthcare organisations, including the KFMC; however, professional and collegial work among professionals from both genders has been frequently reported within healthcare organisations (Vidyasagar & Rea, 2004). As suggested by Vidyasagar and Rea (2004), Saudi women have gained career opportunities and senior positions within healthcare organisations less easily than women in many countries. Vidyasagar and Rea (2004) add that Saudi women are 'protected' from domestic labour and low-paid jobs. Although some women report restrictive segregation practices in many areas in Saudi Arabia due to the conservative nature of Saudi culture, these were not widely reported in healthcare as working in teams made of both genders, while governed by the cultural norms, is unavoidable. It has been reported in many cases that people prefer to deal with other colleagues from similar backgrounds, gender or ethnicity (Malat & Hamilton, 2006). In the present study, nurses reported that their communication and teamwork were effective and did not report concerns. On the other hand, they reported some concerns with regards to communicating, working and collaborating with other teams, formed from other professions and departments other than nursing. This finding is unique to this study and requires further investigation in order to explore reasons for this concern and whether it was made of realistic expectations or not. Another important point to mention is the relatively low proportion of Saudi women in the workforce: in this study the percentage was less than 5%.

Another interesting point within the findings of the present study is that non-Saudi participants perceived better implementation of effective teamwork components than Saudi participants on quality of communication, management support, team learning behaviour, but less on team efficacy and stability factors. Support or discussion of this point is difficult as the Saudi work context is complex, and opposite to what is seen in many countries around the world, in that Saudi citizens do not represent the majority of the healthcare workforce in the country. Generally, there are no obligations to female participation as team membership is based on the position and the need of the team. The organisational environment is then defined by this factor, where healthcare workers from many nationalities, ethnic groups and backgrounds work together and provide services to a culture that is generally different to their own. Therefore, the organisational culture within the KFMC is a reflection of this component rather than being a reflection of the local Saudi culture. This multinational organisational culture perhaps brings satisfaction to the international employees, who would feel they were part of a larger community where they become a component of this mixture, but to a lesser degree for the Saudi nationals. However, these assumptions have not been established based on this empirical study, rather these are inferences drawn from the demographic data and key findings.

Another interesting finding in the current study is that the managers reported better task reflexivity and a higher level of participative trust when compared to the other groups of participants. Perhaps this finding is related to the nature of their work as managers, in which they are used to negotiations and discussions to inform decision-making compared with the nurses and the physicians whose work is based mainly on a direct, clear set of verbal and written steps or orders. Hence, the managers, who were mainly Saudis (65.1%, n=41), may perceive that open discussions which take place during team meetings are normal in the process of making the best decisions, while health professionals may view this as a waste of time, or contrary to their expert clinical judgement. However, there was no literature located on this aspect of the study comparing both models of communication: one which considers a clear set of information that consumes less time and effort and usually leads to a specific decision, the other which depends on open dialogue and debate to achieve the best and most applicable decisions, but consumes more time and effort.

According to the OC theory, employees are sensitive to organisational factors that either limit or encourage active participation in the decision-making processes at different levels of management (Haakonsson, Burton, Obel & Lauriden, 2008). These factors include those investigated in this study, such as task reflexivity, participative trust, team learning behaviours and communication among employees. According to the OC theory these factors are among the main determinants of organisational climate and teamwork effectiveness, and influence

employee motivation, job satisfaction and productivity (Mahal, 2009; Randhawa & Kaur, 2014). Therefore, while the first two conclusions clearly address the research questions, they also pose other questions that are partly answered by the final conclusion.

5.5 Conclusion Three: KFMC Understanding of Effective Teamwork and its Impact on TQM Implementation

The third main conclusion in this study addresses all the research questions via the responses to the open-ended questions. These responses reflected the respondents' understanding of the meaning and the process of teamwork and how this impacted on TQM implementation. This final key conclusion identifies that, although most teamwork components implemented within the KFMC teams were viewed positively, there were still some challenges that caused limitations in achieving the TQM objectives. These were mainly linked to the characteristics of the team leader and the teamwork processes. When the KFMC employees who participated in this study responded to the open-ended questions, many described teams as a group of individuals who have different or similar professional backgrounds and meet to achieve a particular set of objectives. They indicated that these can be achieved by working collaboratively, using distributed roles, and defined responsibilities. Similarly, Nejati, Nejati and Nami (2010) indicate that a team is a group of people linked to achieving a common purpose. Graeve, McGovern, Nachreiner and Ayers (2014) explain that teammates work together to achieve pre-planned goals and objectives.

In addition, Graeve, McGovern, Nachreiner and Ayers (2014) suggest that teammates may belong to similar or different professions and disciplines and determine their role through communication and collaborative work to achieve their goal, which is another point that has been reported by participants in this study. Weaver, Rosen, DiazGranados, Lazzara, Lyons, Salas, Oglesby and King (2010) suggest that teammates add to team effort through their shared knowledge, experience and contribution to the work needed in order to collaboratively teach and learn from other team members using open, multi-channelled communication. The participants in this study were mainly from similar professions, and indicated that knowledge and skills were shared by teammates as a mode of learning among them. Although this finding is encouraging and supports the idea that teamwork in the KFMC is well-established, the presence of more than 70% of nurses in the study sample implies that these responses represented mainly what those nurses practiced in their teams. Therefore, assumptions based on

this fact need to be made carefully, as they might not truly reflect teamwork status in the KFMC.

On the role of communication, the participants clearly understood the importance of effective communication as a component of teamwork in promoting better patient safety and quality management. They explained that effective communication improves teamwork and the achievement of quality objectives through receiving messages accurately and participating in the decision-making process efficiently. Similar to this finding, Tanco, Jaca, Viles, Mateo and Santos (2011) suggest that healthcare systems that support effective teamwork, adopt a good communication model, and apply effective meeting and decision-making processes among staff members can improve the quality of patient care and enhance patient safety. Many studies, such as those by Huber (2010), Mwachofi, Walston and Al-Omar (2011), and Neily, Mills, Young-Xu, Carney, West, Berger, Mazzia, Paull and Bagian (2010), agree that effective communication is one of the most influential factors in reducing the error-rate of healthcare professionals. As well, participants in the current study reported that effective communication was the cornerstone of teamwork related to TQM implementation.

Gorji and Farooquie (2011) found that effective communication influenced the successful adoption and implementation of TQM programs. In addition, Walston, Al-Omar and Al-Mutari (2010) emphasise that a positive safety climate, based on mutual trust and effective communication, improves the quality of services provided within an organisation. Further to this, Cartmill, Soklaridis and Cassidy (2011) suggest that errors and poor quality management can result from ineffective communication. Wardhani, Utarini, van Dijk, Post and Groothoff (2009) stress that good communication is essential to the successful implementation of any TQM program. Burcher, Lee and Waddell (2010) found that inadequate communication was the main barrier to effective TQM program implementation.

Participants in this study said that teamwork improved decision-making processes, as team members actively participated in this process. They also said that effective communication enhanced the development of employee knowledge and skills, improved employee satisfaction and commitment, and accelerated the achievement of planned objectives through better collaboration and commitment. Alolayyan, Ali, Idris and Ibrehem (2011) argue that the engagement of team members in formulating and adopting a decision necessitates that all members are part of the decision-making process to ensure the achievement of quality objectives and facilitate change within the organisation. Likewise, Castner, Ceravolo, Foltz-Ramos and Wu (2013) suggest that teamwork promotes intra and trans-professional communication, improves understanding of the scope of other professions, and facilitates the articulation of different opinions that reflect the team effort. Lam and Robertson (2012) suggest

that team members who perceive that their organisation has flexibility and willingness to change tend to participate actively in the process of making decisions and contribute to the overall process of quality management.

The KFMC respondents indicated that they participated in the decision-making process and became advocates of the decisions to facilitate their implementation. Ooi, Arumugam, Teh and Chong (2008) suggest that participation in making organisational decisions brings team members together as well as acts to facilitate the team members becoming strong advocates for team decisions. Ooi, Arumugam, Teh and Chong (2008) add that an organisational culture where employees have a positive relationship with management and autonomy in team functions and decision-making usually exhibits better levels of employee job satisfaction and loyalty. Although loyalty is a complex concept that may not be easy to address and was beyond the scope of this study, the participants indicated that they were interested in improving the current practices of teamwork, which might be viewed as an indication of professional commitment and loyalty to the organisation and the implementation of its TQM program.

Participants in this study indicated that the relationship with their management was reasonably acceptable; they felt that their management supported many of their team's decisions. However, some participants reported that autonomy was an issue of concern. Another look at the KFMC community and structure shows that there are employees from a range of backgrounds. The nature of the multinational mix of employees in the KFMC, where many work, educational and experiential backgrounds are present within one place, makes it challenging. The creation of an atmosphere that is supportive and positive to all employees is very difficult. As reported in Chapter One, the KFMC has become one of the pioneer healthcare facilities in Saudi Arabia despite this mixture, and this was achieved by the efforts of both the administration and the employees, the latter being from more than 50 different nationalities (KFMC, 2014). Such results can hardly be achieved unless both employees and management are working with a high degree of collaboration where employees have loyalty, commitment and autonomy to apply what they believe is best for the work.

Mickan (2005) explains that when organisational culture supports effective teamwork and allows employees to be part of the decision-making process, team members experience increased job satisfaction, improved job clarity, and improved overall well-being, all of which are reported benefits in this study. Escriba-Moreno, Canet-Giner and Moreno-Luzon (2008) argue that decentralisation within the organisation leads to more coordinated and autonomous teamwork, which improves the chances that teams become more successful. Valsecchi, Wise, Mueller and Smith (2012) suggest that team autonomy and access to necessary information and resources to make decisions within a culture of collaboration often results in more effective

teamwork and better quality management outcomes. The presence of these factors was evident in the findings of this study.

Valescchi, Wise, Mueller and Smith (2012) explain that when a sense of support exists between managers and employees, teamwork creates a sense of solidarity and hence dissipates the conflicts sometimes inherent between these groups. The participants in this study clearly indicated that they experienced collaboration among team members that improved their sense of satisfaction and commitment to the team objectives and the quality management goals.

KFMC employees who participated in this study also explained the challenges they encountered while working within teams. They reported that the success of teamwork depended on three main factors: leaders' characteristics; team processes; and team membership. Similarly, Thomas, Sexton, Lasky, Helmreich, Crandell and Tyson (2006) argue that one of the key aspects of successful teamwork is effective leadership and leader characteristics, which are significantly correlated with better quality outcomes and improved patient safety. The participants in the current study emphasised that among the challenges encountered in teamwork is the need for a strong leader; they referred to the need for a leader who can implement decisions made by the team, has autonomy, and the ability to control debates within the team and resolve conflicts among team members. The team leader needed to be a good communicator, encourage open and effective discussions, be knowledgeable, skilful and experienced. It was clear from responses to the open-ended questions that the participants wanted their team leaders to be able to control internal team processes (such as time management during the meetings, discussion, conflicts, and the quality of decisions) and external factors influencing the outcomes of the teamwork (such as ensuring that decisions made by the team are not subject to change based on the preferences of those in more powerful positions). It is clear from the literature that if a leader cannot manage these issues, the result can be that team members either lose their enthusiasm or do not participate actively in team processes (Jaca, Viles, Tanco, Mateo & Santo, 2013).

On the issue of leaders' behaviours, Nwabueze (2011) suggests that active involvement of team members, especially the leaders, in open communication with other employees within the organisation and participating in teamwork, usually bring better results from the adoption of TQM. Hence the leaders' role is vital for effective teamwork and the achievement of TQM objectives, and the participants in the current study clearly reflected this. Gombert, Jahn and Rivera-Rodriguez (2012) argue that when a leader is competent, team members are more likely to become cohesive and more trusting of each other. They further add that time management, quality of decisions and achieving the planned outcomes are more likely to be successful when the team is led effectively. It was clear from the findings of the current study that the

participants were aware that problems arose when team leaders did not have these skills. Some participants reported having issues with team leaders that influenced their ability to fully engage in effective teamwork.

According to Clements, Dault and Priest (2007), problems that can impact on teamwork include lack of cohesiveness, where each member works individually to their own agenda, leading to limited outcomes, low quality decisions that cannot meet the required quality needs of the organisation and, above all, a low level of member commitment. Some of the KFMC employees who participated in this study reported having ineffective leaders. They also reported that some team members appeared to have objectives different to those of the teams, and this was displayed when individual team members lobbied to influence decisions that did not match with the overall team objectives. Mosadeghrad (2013) emphasises that TQM programs will not succeed unless embedded in a positive organisational culture that includes supportive leadership. In this regard, KFMC employees reported that they all 'hoped' to work with leaders that displayed these characteristics.

Mosadeghrad (2013) contends that poor leadership inevitably hinders teamwork and limits the achievement of quality outcomes. According to Randhawa and Kaur (2014), organisational climate is a crucial factor that determines leadership success or failure. This climate is either supportive of leaders or limits their autonomy to make decisions that team members believe represent the best choices. For the implementation of TQM to be successful, there needs to be support of strong leaders to emphasise effective teamwork processes, and there needs to be an organisational climate that supports strong leaders.

As reported by the KFMC employees who participated in this study, the team leader guides team processes by guiding members' efforts toward achieving their shared objective. They also said that the leader was required to accomplish tasks through others, by inspiring team members to work together, breaking down barriers to communication, and delegating responsibilities to those most capable and knowledgeable to perform tasks. However, it was interesting to note that most of these comments were reported as more of a 'wish list' rather than a reflection of the current environment.

Among other qualities of a team leader discussed by the participants, they desired a leader who could encourage open, effective discussions. Likewise, Hirtz, Murray and Riordan (2007) say that a good leader needs to be a good listener, have emotional intelligence, passion for the role, be a good negotiator, solve conflicts, remain objective, be fair, and act as a role model to colleagues. McLaurin (2008) explains that a strong leader rotates tasks and delegates responsibilities according to both the skills and development needs of teammates. This comment

was also reflected in the findings of this study when participants indicated that they wanted to work with a team leader who was knowledgeable and skilful when it came to delegating responsibilities based on the abilities and skills of team members.

Participants in this study said that they hoped to work with a strong leader who could limit external interference from powerful individuals within the organisation, as well as manage powerful individuals within the team itself, thus promoting equality and spreading the sense of fair treatment among teammates. This could be related to the type of profession, as medicine is traditionally one of dominance in healthcare organisations (Mosadeghrad, 2013). However, it was evident in many of the responses to the open-ended questions that this type of leadership was not evident and their current team leader did not display these qualities. Similarly, Khan (2011) says that while a strong personality is a requirement in a successful leader, the need to balance strength with encouraging collaborative work and contributions from all teammates is also crucial. Khan (2011) suggests that among the basic qualities of a leader is the ability to organise duties, distribute responsibilities and set schedules to perform tasks. Gombert, Jahn and Rivera-Rodriguez (2012) suggest that a strong leader encourages individuals with different characteristics to bring their best for the sake of achieving the common objective of the team; however, this was not evident in the comments of most of the participants in this study. Similar to findings in this study, Cartmill, Soklaridis and Cassidy (2011) suggest that a leader is required to control cultural differences, making discussions focused on the main issues rather than personal factors. This characteristic is vital in the context of the current study, where staff from many different cultural backgrounds come together. Cartmill, Soklaridis and Cassidy (2011) also added that organisational structures which create a climate of support will use this to promote teamwork. These issues were discussed by participants in this study when referring to debates, conflict resolution and organisational structures that hindered their work within the team and decreased their efficacy. From the responses of the participants, it can be implied that these characteristics were not present, as many of the responses included ‘should be’ or ‘need to be’, indicating that they wished for their leaders to have these qualities.

Mahal (2009) explains OC theory and indicates that a transformational leadership style promotes open channels of communication, encourages individual input into the decision-making process and improves employee motivation to be an active part of the organisation. This author considers this leadership style to be ideal when considering the implementation of TQM. Haakonsson, Burton, Obel and Lauriden (2008) support this, stating that other styles of leadership, such as transactional leadership, do not encourage active staff participation in the processes of the organisation, and this leads to less effective organisational climate and teamwork functioning. Therefore, the findings in this study suggest that KFMC might benefit

from professional development that encourages more transformational leaders; this will be discussed in more detail in the recommendations that flow from this study.

Leggat (2007) suggests there is need for focused teamwork development approaches, and argues the case for structuring the teamwork teaching and learning model so that teamwork competencies for health service managers can be developed.

Findings in the present study also pointed to the need for better senior management support in promoting a more conducive organisational climate to enhance teamwork. Talib and colleagues (2011) stress the important role of senior management in ensuring the successful implementation of TQM, as these managers facilitate, promote and enhance positive communication, empowerment and teamwork throughout the organisation.

Although participants encountered challenges in implementing effective teamwork in the organisation, they generally reported that KFMC's organisational climate was conducive to supporting teamwork to achieve TQM objectives.

In relation to successful teamwork, managing team processes was another challenge for participants in the current study. This challenge refers to the processes where decisions are made and the quality of communication during, before and after the meetings (including formal and informal communication), and the role of the leader in limiting issues concerned with members' personal agendas (such as gender and nationality issues). Participants felt that team members should know that their decisions would make a difference; however, this was not the reality reflected by many participants. They reported that some of the team decisions were not implemented; they did not know at what organisational level these decisions had reached or who decided not to implement them. According to Salas, Sims and Burke (2005), team members need to have a clear vision and understanding of their duties and roles in the team, available resources, and teammates' knowledge and experiences. However, participants in this study were concerned about these issues, as their role and the boundaries of their roles were not made clear, which inevitably influenced their contributions to the overall team efforts. Wilson, Burke, Priest and Salas (2005) emphasised that all team members should have a common understanding of each other's roles, and those roles needed to be flexible enough to accommodate individual differences and needs. This would reduce the risk of ineffective teamwork, thereby reducing human error, and the result could be better decision-making processes.

Team decisions may be rejected at a higher organisational level for logical and legitimate reasons, perhaps because a decision is not in the best interests of the organisation; however, if

this is not communicated to the team, all they can surmise is that the time and effort they put into making the decision was wasted.

As reported in this study, Mathieu, Travis Maynard, Rapp and Gilson (2008) also suggest that empowerment of teams and autonomy in making decisions within the team are key factors in the successful implementation of teamwork. Firth-Cozens (2004) explains that employees must be engaged in the decision-making processes for their decisions to be influential. Some comments in the current study indicated that the participants found such autonomy and empowerment missing or limited when working within their teams. A number of comments indicated issues concerning female and nationality-based segregation; however, there was no significant link between these remarks and the gender or the nationality of the participants, as both genders and employees from different nationalities, including the Saudis, made these comments. While there were limited specific comments made about gender and nationalities, this may be viewed as a reflection of cultural norms.

The participants from KFMC raised concerns about the process of choosing team members and the team leader, and commented on the tendency to choose leaders regardless of their ability to lead, or their ability to add to the team effort. In addition, questions were raised about the quality and qualifications that were considered when choosing team members. The result, according to the participants, is limited teamwork efficacy and weak decision-making processes. It was noted that, in order to solve the team leader and team members' limited contribution to the teamwork, there should be transparent and equitable leadership criteria in place based on team purpose and the need of the organisations. It was clear from the findings of this study that participants resented the perceived preferential treatment given to selected leaders who may be under-qualified or ill-equipped to lead the team. The general comments stressed that teams should be formed of leaders and members whose knowledge, skills and experience qualified them, and not because of any other reason such as nationality, gender or the biased preference of the administration for reasons other than qualification and skills.

The final challenge identified by participants in relation to effective teamwork related to the lack of incentives for teams to achieve the planned objectives. This point has been discussed earlier in this section, in relation to the teamwork factors explored by the closed-ended survey questions. Generally, participants felt that there should be incentives in the form of financial bonuses, letters of appreciation or trophies that carried the names of employees whose contribution was considered highly significant. Regardless of the type of incentive, a need for positive reinforcement was evident in a number of the participants' comments.

Based on work by Aaron, Sommerfeld and Willging (2011), the OC theory determines that the major factors that influence the growth and advancement of teamwork include employee perceptions of teamwork, acknowledgement of their contributions, fairness in the workplace and clarity of tasks. The absence of these perceptions, according to Maslach, Schaufeli and Leiter (2001), can provoke a sense of emotional exhaustion (e.g. fatigue that is related to job demands) and depersonalisation (e.g. feeling removed from those served). Participants in this study indicated that the introduction of incentives, or even acknowledgement of their efforts, would help alleviate the identified instability based on high staff turnover, as discussed earlier.

5.6 Implications and Recommendations to Promote Better Teamwork within Saudi Health Organisations

Supporting effective teamwork clearly creates challenges for healthcare planners and managers to meet total quality management objectives. This study identified teamwork components influencing the successful implementation of a total quality management program in King Fahad Medical City in Saudi Arabia, and explored aspects of interactions between elements of teamwork that affected employees' engagement in the process. It is crucial that decision makers at KFMC, and other healthcare organisations in the country, consider the findings of this study in their plans to ensure that TQM processes are effective. The challenges identified in this study can be summarised as the need for stronger management support and systems of incentive to teams, exploring the reasons for and managing the high staff turnover rates, and setting clear, equitable and transparent guidelines for choosing team members and leaders.

While the findings of the closed-ended questions showed an overall positive perception of teamwork, in the open-ended question responses employees indicated their concerns and expanded on the challenges that influenced the practices of teamwork. The responses to the open-ended questions added to the data set by allowing participants to comment on issues not clearly explored in the closed-ended questions. In particular, leadership style and influence on the team and how leaders might support effective teamwork was mentioned by many of the participants. Additionally, respondents reported that there was a need to ensure that decisions made by teams were not undermined by influential individuals within the hospital administration with their own agendas.

In addition, participants reported the need for incentives and acknowledgement for participating and contributing to effective teamwork and TQM outcomes. While participants reported many positive practices of teamwork, they also raised concerns about the processes of choosing team members and leaders, the absence of clear policies and guidelines that explained the boundaries

and tasks for the team, clear pathways for decisions made at the team levels, and how they would be adopted and applied. Therefore, it is recommended that managers are supported and encouraged to be more open when discussing the purpose and objectives for establishing teams. The process of choosing the team leader should be based on the qualifications required to achieve the objectives of the team, regardless of nationality, profession or gender of staff members. Additionally, it is recommended that team leaders be offered professional development to encourage a more transformative style of leadership, develop skills in being a good listener, and improve their ability to open channels of communication between employees and their managers, by considering differing opinion equally. The development of these skills would support team leaders to better manage differences to achieve desired outcomes.

Perhaps more efforts are required to ensure that all staff receive support and training on effective teamwork models, the roles and responsibilities of members, and how they can engage in group work where individual members' contributions are reflected in the team effort as a whole. This can be achieved by engaging employees in workshops that address professional communication skills and teamwork elements, and how these skills can be developed to achieve the target of the team. It is also recommended that individual initiatives be enhanced through advertising a competition among all employees for the best ideas to achieve particular quality goals or promote a specific new model that underlines the implementation of the organisational objectives. Individuals with certain qualifications and talents could then be involved in teamwork and TQM. Generally, this process might promote better individual engagement in the organisation's overall quality management processes, and would allow for the exploration of individual potential and abilities that could not be discovered following the conventional method of teamwork.

Management's provision of such workshops or professional development opportunities may also serve to provide incentives in appreciation of team members' achievement of planned objectives, making their efforts known to colleagues as a good example. Financial and non-financial incentives may be offered to produce good results; these might include an annual or half-yearly salary bonus, eligibility to apply for promotion at work, trophies and/or acknowledgements indicating organisational appreciation of employee contribution in achieving the intended objectives (Berlin, 2014).

The findings in this study indicate that, if quality objectives are to be achieved, it is essential to address the factors that influence the effectiveness of teamwork. It is therefore recommended that quality management planners consider these strategies when planning quality objectives so that they guide team efforts to become more quality oriented and enhance the implementation of a TQM program.

Future research is required to examine the organisational factors that might have influenced these employees' opinions. In Saudi Arabian healthcare facilities the impact of cultural diversity on teamwork is also an area that could be explored in future research. In addition, it is recommended that future research should address the impact of several unique factors on the organisational culture, teamwork, decision-making processes and implementation of TQM, for example, the diverse number of nationalities, the status of healthcare professional groups, and gender segregation, all of which contribute to the creation of a complex organisational climate.

It is necessary to mention that there were no Middle Eastern or international norms against which mean scores of the whole scale and the sub scales obtained on the study tool could be compared. It is perhaps better to have established norms so that a researcher can set comparisons and make logical deductions based on the theoretical understanding of the real situation (or the findings of the study). These norms could reflect an accurate representation of the actual status in Saudi Arabian healthcare organisations due to, for instance, the cultural influences, educational preparation, organisational structure and language differences. The researcher would have welcomed the presence of such norms that could facilitate a better understanding of the findings based on mutuality and comparability, especially in terms of culture. So, for the purpose of explaining findings in this study, the researcher depended on the international literature on this particular topic.

5.7 Theory of Organisational Climate

The theory of organisational climate (Mahal, 2009) provided the theoretical premise that helped to explain the findings in this study. While quality management is linked to the efficacy of teamwork, organisational climate has a significant influence on how well teams work. Similar to reports from participants in this study, Wardhani and colleagues (2009) contend that the key success factor in quality management program implementation is the organisational climate that emphasises standards and values associated with affiliation, teamwork and innovation, and an assumption of change and risk taking. KFMC employees reported that the administration was supportive and that there was a positive atmosphere to promote effective teamwork. Participants reported that decisions made by the team members' initiatives promoted shared motivation and commitment. Generally, the study findings indicate that the OC is supportive to effective teamwork within the KFMC (see section 4.5, Chapter Four).

Additionally, Cartmill, Soklaridis and Cassidy (2011) emphasise the importance of an organisational climate and structure that promotes both inter and intra-disciplinary approaches as well as open communication among colleague from different professions in order for teamwork to promote better quality management. Similarly, these factors were reported in this

study in the responses regarding quality and role of communication, which were perceived by the participants as positive. While KFMC employees reported that they had participated in teams, which were effective and made many decisions, there was also clearly room for improvement. This can be seen in the factor 'task reflexivity', which relates to an environment where employees can revise and modify their objectives and approaches in the light of any new circumstances. The challenges encountered were uncertainty about the scope of roles, guidelines and mission, and a clear process for team decisions and how these decisions translated into changes in organisational functions and the achievement of quality management objectives.

In addition, teamwork cannot be understood without asking questions about the leadership style adopted in an organisation, where hierarchical structures, types and lines of communication, and level of autonomy in teams are all part of the organisational climate that determine how an employee perceives their work environment. According to Zhang (2010) organisational climate also has a significant effect on organisation effectiveness, which impacts on teamwork, employee commitment to the organisation and its quality management objectives.

Participants' responses to both quantitative and the open-ended questions flowed from their understanding of their organisational climate, which represented the physical, professional, cultural and social aspects of the work environment. Their responses to how they perceived the implementation of teamwork components, for example, reflected what they practiced in their teams, while a number of the responses to the open-ended questions indicated what they wished teamwork to be. These findings reflect the organisational climate that those employees were living and experiencing. Therefore, the OC provided a basis for which to interpret the findings, especially by relating the components of the OC and the factors found to influence effective teamwork.

5.8 Limitations of the Study

This study was conducted within a single healthcare organisation in Saudi Arabia. This organisation represents the Ministry of Health, which is the largest healthcare provider in Saudi Arabia. Other healthcare sectors were not included, such as the National Guard Health Affairs and Ministry of Defence, due to the time constraints and lack of funding associated with undertaking a PhD study. To build on the outcomes of this study, the researcher is considering repeating this study in other locations as the focus for funding applications in the future to gain a wider sample of medical, nursing and management staff. In addition, this study modified an existing self-reported questionnaire, this was not considered a limitation as the researcher did not create a new instrument; however, in future studies further modifications to this instrument might better capture information about some of the key challenges identified in this study. The

use of convenience sampling was another limitation of this study however this method was the most obvious choice for a time-limited, unfunded project such as this one.

This study could not identify the nature and the quality of communication among different teams representing different departments and professions. As well, it did not investigate the components of the team that the participants reported. Teams could be formed at different levels, such as departmental, directorate and organisational. This study could not examine the impact of team level and the components and the processes in different team levels.

Finally, the issue of equity and segregation has been mentioned in the findings on this study as a factor that influences the effectiveness of teamwork. In different instances, the Saudi culture accepts segregation based on gender and nationality in different aspects of life. Although limited reports could be seen in the findings of this study, this segregation was also reflected in the KFMC. The international literature describes factors that influence effective teamwork based on equality, merit-based selection of leadership roles, equity, and participation that is not linked to gender, some of which are conditions that are not applied in Saudi Arabia. However, the presence of literature that explores effective teamwork under conditions similar to the Saudi is extremely limited. Therefore, comparisons of findings in this study without acknowledging this difference might be problematic.

5.9 Conclusion

Teamwork and its components significantly influence the successful implementation of TQM programs in healthcare organisations. In an effort to understand the link between teamwork and TQM in Saudi Arabia, this study examined how well the participating KFMC employees perceived the functioning of teamwork, and how well teamwork components were supported and managed within the organisation. The findings of this study provide important insights into how the KFMC employees perceived teamwork, and how they thought it could be improved in order to achieve the objectives of TQM.

Findings in this study pointed to three main conclusions. The first conclusion indicated that the general view of respondents was positive toward teamwork; however, some components of teamwork were not as influential as others. The most significant components found to influence the achievement of team and TQM objectives were task reflexivity, participative trust and communication.

The second conclusion concerned the impact of employee characteristics on teamwork components. Employees' gender, nationality, position and academic qualifications were found

to influence how employees perceived the components of teamwork. For instance, the lower the respondents' academic qualification, the higher they perceived the qualities of communication, management support and team learning behaviour, but the lower they perceived team efficacy and stability.

The third main conclusion was that, although the majority of teamwork components functioning within the KFMC teams were positively viewed, there were challenges to achieving effective teamwork linked to the characteristics of the leader, the recruitment of team members, incentives for participation and teamwork processes.

Literature provided evidence that teamwork enhances quality management and increases the likelihood of achieving quality objectives. Furthermore, in healthcare contexts teamwork has been reported to influence all aspects of care that determine client safety and quality of service.

As discussed in different area in this thesis, the majority of health workers and professionals employed at KMFC are non-Saudis and this has a significant impact on the findings of this study and the successful implementation of TQM objectives. There is also a need to examine how effective teamwork is in achieving TQM objectives compared with the resources provided to ensure its success. There are issues that surfaced from this study that are essential to address in order for Saudi healthcare organisations to achieve successful implementation of TQM programs. These issues include transparent and equitable processes of choosing team members and team leader, consideration of cultural differences, and supporting all staff to contribute their expert opinions in determining policies and regulations, the presence of an incentive system to enhance team members' productivity, and taking expertise as the main determinant of team efficacy and contribution, rather than nationality and gender.

Finally, thanks to all the willing participants, this study has provided a contribution that promotes a better understanding of the complex relationship between teamwork and TQM in a Saudi Arabian healthcare setting. It is recommended that further research be conducted to elaborate on other factors that might impact on achievement of TQM objectives in the Saudi Arabian healthcare system.