Total Quality Management:

Addressing Organizational Culture in a Health Care Institution

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Abstract

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Health care institutions in Montreal are faced with dramatic changes that are taking place in the external environment. Budget tightening and more accountability at the governmental level have translated to an increased competition for scarce resources among various health care institutions. Motivated by the need to achieve higher levels of economic efficiency and client satisfaction, many health care institutions are deciding to introduce Total Quality Management programs.

This paper investigates the adoption of a quality philosophy in a medium sized Montreal based health care organization. It includes the factors that would enable the organization to sustain a desired level of service delivery and guarantee improvements in quality of service when faced with externally imposed resource constraints. The focus will be on understanding the role of organizational culture and structure in the implementation of a TQM philosophy as the basis for managing change. A brief literature review of the importance of culture, its measurement, and its role in organization wide change will be conducted. Towards these ends, an example of a culture-assessing instrument, customized specifically for the needs of a health care institution, will be offered. Once this culture is measured, the next step will be to examine the results to explore how the absence or presence of a TQM approach may have affected that institution's

performance. The implications of these findings for health care organizations, TQM theory, and practice are discussed. Future research suggestions are also provided.

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1 INTRODUCTION

Good health is one of life's most precious assets. The desire to live, be free from sickness, disability and death, are amongst the most important factors influencing the demand for health care services in every society. There is general agreement that

> "***Canadians feel a profound attachment to their health care system and view it as a defining element of their citizenship***"
>
> The Shape of Health Care, Commission of the future of Health Care, Romanow, 2002 pp.1.

In Canada, the belief that access to health care is a universal right is shared by users, providers, government, and other stakeholders. These principles are enshrined and guaranteed to all Canadians, in the Canadian Health Care Act (1984), which states:

> ***"...that the primary objective of Canadian health care policy is to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers."***

The Canadian system reflects a belief in equity, based on a system of distributive justice. Canadians believe that accessibility to health care by all citizens is not just a privilege, but also a right to which all Canadians are entitled. Consequently, the law requires that health care is delivered through publicly funded, non-profit organizational structures, that it is universal, portable, and accessible. In 2001, the Canadian public sector, including federal, provincial, territorial, and municipal governments, as well as social security

programs, paid 73% of total health care expenditure. The remaining 27% was paid for by the private sector, (CIHI, 2002). In addition, in 1998 Canada ranked fourth of all OECD (Organized for Economic Cooperation and Development) countries, spending 9.3% of the Gross Domestic Product (GDP) on health care, (CIHI, 2002). With the public health care spending fluctuations experienced in recent years, it has been suggested that it is becoming increasingly difficult for health care agencies delivering services to plan appropriately, (Romanow, 2002).

Efficient operations in providing these services are becoming increasingly important. Total health care expenditure as a percentage of the GDP, has increased from approximately 7% in the mid 70's to approximately 10% in the last decade, CIHI (2001). This steady increase in the percentage of GDP that is allocated towards health care has raised fears among citizens and governments about the ability of government to finance, and the willingness of taxpayers to pay more taxes to cover increasing health care costs. These uncertainties are exacerbated by the aging Canadian population (Canadian Institute Of Actuaries, 2001), a process that strongly suggests further substantial increases in health care costs will be required. These fears coincided with the governments' preoccupation with the Canadian debt and deficits. An offshoot of these concerns is that Canada's publicly funded health care system has become the target of negative fiscal criticism. These issues have lead to the establishment of the commission on the Future of Health Care, which is trying to engage Canadians on the issues of "funding, quality of care, and access" (Romanow, 2002 pp. 20).

There have been many approaches recommended and applied to reform and restructure the system; budget cuts, hospital closings, privatization, mergers etc. To date, no solution has proven satisfactory to all of the stakeholders (doctors, hospital staff and personnel, users, third party payers and consumers). Currently, some Government officials throughout the country are looking at radical departures from current practices. The study of the current and suggested methods of operation of the system is central to the objective of the Roy Romanow's Commission (2002) on the Future of Health Care in Canada. The objectives of this commission are; to accept and review on its merit, any proposal or recommendations to strengthen the quality, the effectiveness and the continued viability of Canada's health care system on a sustainable basis.

It is the contention of this thesis that whether the health care system is market or public policy driven, the fundamental problem is how to sustain the delivery of quality services while keeping costs within a range that available resources would permit Canadians to afford.

1.1 Study Objective

There seems to be a consensus among Canadians that the organizations in the health care system must be sensitive and responsive to external changes, if they are to provide continuous improvements in the provision of health care while reducing costs. The argument is that a health care organization must be customer focused and should therefore adopt a total quality management (TQM) strategy. For the purposes of this

thesis, that means an organizational model in which the provision of health care services is based on organizational characteristics that integrate internal and external customers, to continuously improve the quality of the services delivered while at the same time, lowering real costs (Deming 1986, Juran 1989, Evans & Lindsay, 1996). Thus the study will investigate the adaptation to change by studying a medium sized Montreal based health care organization, Health Care Centre[1] (HCC) and identify those factors that would enable it to sustain a socially desired level of service delivery, and guarantee improvements in quality of service when faced with severe resource constraints imposed externally. The objective of this paper is to explore the nature of the improvements that may arise from adopting a TQM strategy for health care delivery in the absence of price indicators.

To successfully institute a TQM system, it is important to have an organizational culture that would be conducive to such a system (Radin & Coffee, 1993; Master's 1996). That is to say, the organization must have developed patterns of behaviour, which would enable it to cope with external adaptation and internal integration (David, 1995) as required by a TQM philosophy. Health care institutions in Montreal were faced with the need to adjust to the dramatic non-price related changes taking place in the external environment in the mid-nineties (cutbacks in university financing, national debt reduction policies, hospital closures, reduction in hospital beds). This presented the opportunity to observe organizational change under special non-market conditions. A study of

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[1] The name of the health care organization has been withheld in this document to preserve its anonymity. It will be generically identified as the Health Care Centre (HCC) throughout.

organizational culture will be conducted on a single medium sized health care institution in Montreal, referred to in this document as HCC. This hospital was chosen because of convenience, cost, and the unique research opportunities offered. This will be addressed in more detail in the section on methodology. The approach will be to measure the culture, and then examine the results to analyse how the presence or absence of a TQM philosophy may affect its performance.

In the next chapter, an overview of the health care sector is provided that will establish the context of the study. Following this, a literature review will be conducted on Total Quality Management, organizational change, and organizational culture. The focus will be on understanding the role of organizational culture and structure in the implementation of a TQM philosophy as the basis for managing change. The various themes and principles of Total Quality Management will be explored to understand the role TQM can play in facilitating the adaptation of the organization under investigation to the external changes caused by government fiscal initiatives, by regional demographic shifts, and by innovations in technology and drug therapy.

2 OVERVIEW

2.1 INTRODUCTION: OVERVIEW OF MEDICAL CARE SECTOR

In order to understand and anticipate the effects of changes in government policy on the medical care sector, or the effects of natural, demographic and technological changes on the national health status, it would help to have a model of the medical care sector that describes the relationship between the various factor markets. This includes nurses, doctors, allied professionals and medical educators, and the delivery sub-systems (acute-care, long term health care, alternative medicine), that make up the health care sector. For the purpose of this thesis, the focus will be on the medical care sector.

Medical care is the output of the overall care markets. It is the outcome of several interrelated markets. The following diagram (Figure 1) (Feldstein, 1993 p.38) presents a model of a medical care system. It divides the system into four demand side markets and the corresponding four supply side outcomes.

On the demand side there are:

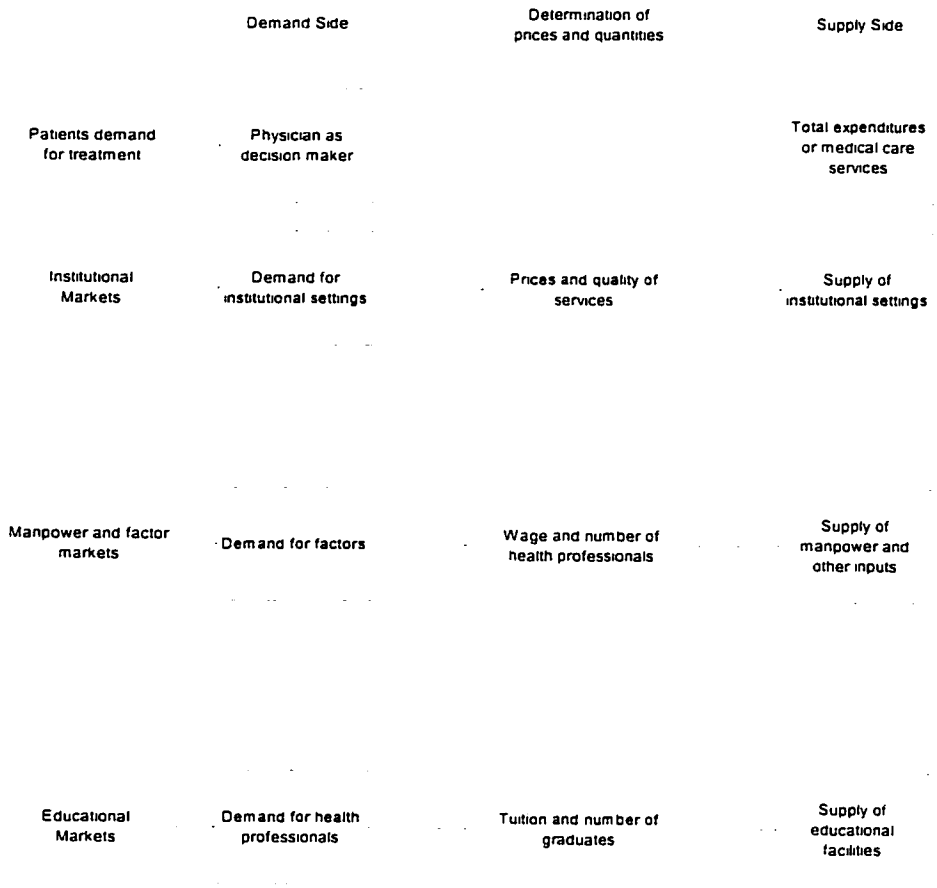
- Patient demands for treatment (general user population)
- Institutional settings (hospitals, nursing homes, clinics, and doctors offices)
- Manpower and factor markets (physicians, dentists, registered nurses, and allied health professionals)
- Educational markets (Universities and colleges)

On the supply side there are:

- Total expenditure on medical care services

- Supply of institutional settings
- Supply of manpower and other inputs
- Supply of educational facilities

Figure 1 - Overview of the Medical Care Sector



Souce: Feldstein, P.J. (1993) Health Care Economics

The following is a description of how the model works and how the markets relate to each other to produce the outputs of this sector (refer to Figure 1).

i) **Patient demand and supply.** The patient's demand for treatment (for a particular diagnostic related grouping (DRG)) results in a visit to the physician. From there on, economic and non-economic factors will determine the type of treatment the patient will receive. The demand is reflected by the total expenditure on medical care services.

ii) **Institutional market.** In response to patient visits, the physician will make a diagnosis, and select one or more of several institutional settings where the treatment will be carried out (hospitals, outpatient facilities, nursing homes, physicians offices, home care). The selected setting(s) and the level of services delivered will depend on the costs or opportunity costs, the efficiency of the institution to deliver the treatment, the nature of the patients' demands, and physician considerations. The chosen institutions may be substitutes or complements for each other as well as for alternative medical care. The actual supply will depend on demand supply forces in the market or third party policies.

iii) **Manpower and factor markets.** The demand for a factor of production is a derived demand. It depends on changes in demand for various settings, and the nature of the interaction between the supply-demand forces in the factor market. Factor payments are determined by competitive market operations, or bilateral bargaining and negotiations.

iv) **Educational markets.** The demand for education by prospective health professionals will depend on the demand for those professionals in the markets described above. In the Canadian context, policy decisions are determined by the federal government in conjunction with the provincial governments.

The general model presented above, shows how demand and supply forces interact to determine prices, fees, wages, salaries, employment and the supply of educational and institutional settings, as well as the level of delivery of medical care services. Although

this model assumes a competitive market driven system, the Canadian system is not a market driven model. Notwithstanding the fact that the Canadian healthcare system is partially a command system rather than a market driven system, the model itself is still useful in helping us to understand the relationships between the subcomponents of a medical care system.

Almost all Canadians want to ensure the poorest in our society have access to health care and that Canadians should not be bankrupted by the cost of acquiring needed health care services (Romanow, 2002). In short, all Canadians should be protected against catastrophic illnesses and injuries. Most believe that their health care needs should always be taken into account, with a majority convinced that it should be the sole factor in determining what core of medically necessary services the system should cover. Most also believe that both levels of government must play a role in reforming the current system (Romanow, 2002). These principles derive from the fundamental belief that the market fails to support our values and must be constrained to support them subject to cost and the basic tenets of quality management.

2.1.1 Application of the model to the Canadian health care system

As previously discussed, the Canadian healthcare system is not a completely market driven system. Nor is it a system of socialized Medicare in which doctors employed by the government provide care. In fact, most physicians in the Canadian healthcare system are private practitioners working independently or as part of group practices and are compensated for services by a negotiated bilateral bargaining fee-per-service payment

system. This allows them a relatively high degree of autonomy and flexibility in their practice. Some doctors work in community health centres, hospital based health practices, or in affiliation with hospital outpatient departments. Private practitioners are generally paid on a fee-for-service basis but submit service claims directly to the provincial health insurance plan for payment.

When Canadians need medical care, in most instances they see a physician or a clinic of their choice, to help them with their particular health issue. Payment for health care is done by presenting a health insurance card that shows the patient is eligible for insurance. A third party pays for the patient; there are no deductibles for the provision of most health care services. However, there may be deductibles for certain prescribed drugs and elective treatments and tests.

In Canada, government intervention, and not the market, plays the most important role in determining the direction for change. Thus, the federal government searches the market for information by engaging Canadians in a debate about (Romanow, 2002):

1. Canadian values and how they are and should be reflected in the Canadian Health Act;
2. Sustainability and funding;
3. Quality and access; and
4. Leadership, collaboration, and responsibility.

Almost all Canadian hospitals (95%) are operated as private non-profit entities run by community boards. These hospitals exist at the will of the provincial government. Management however, has control of the day-to-day decision-making and resource allocations within the constraints of approved government budgets.

The Canadian government and provincial government is the principal third party payer for healthcare services in Canada. The government, through Medicare, accounts for 70% of the expenditure for health care. In large measure, a competitive market for health care goods does not exist. In this role, government is motivated by the principles of accountability and efficiency to reduce expenditures in the provision of healthcare. As a result of the increasing costs of healthcare and the recent economic uncertainties associated with growth in the economy, the Canadian governments at both the federal and the provincial levels have taken action to ensure that health care institutions review how they administer health institutions and that they act to contain costs.

There are many approaches advanced for reducing cost, while improving the health status of Canadians. Typical among these are: improved lifestyles, preventative medicine, and alternative medicine. In fact, the government's aggressive policy for the reduction of smoking is a major strategy in the individual and collective approach to preventative medicine. However, by far the most important method for providing healthcare continues to be traditional medicine. As such, most of the reforms have been in the area of reducing costs in health care institutions by reducing the number of hospitals, the size of hospitals, implementing budgetary controls, and restructuring.

Several provinces, including Quebec, Ontario, and the Maritimes have reviewed their health care delivery models and have taken steps to carry out cost reduction reforms (Régie Régional, 1997; Department of Health Nova Scotia, 1999; Leatt et al., 1994). Recommendations embodied in various task force reports on cost reduction of health services in Canada have had a major effect in the changes and have given priority to the following (McLean & Mix, 1991):

1. An increase in outpatient community based care, including ambulatory care.
2. Introduction of hospitals providing a fuller range of services at lower costs.
3. The establishment of an effective referral system, which optimizes the use of primary and tertiary care.

It is clear that the Canadian Health care environment is undergoing extraordinary change. Nationwide, it is apparent that governments, providers, and consumers are attempting to maintain access and quality of services. Canada is not alone in its search for ways to keep the health care systems viable and sustainable (Romanow, 2002). North America as a whole, in fact most advanced industrial countries are facing a variety of pressures for all health care facilities to be more responsive and accountable. Some of the more important pressures facing North American institutions, including Canadian institutions are (Leatt, et al., 1994; Romanow, 2002):

- A general trend towards more democratic institutions, a departure from traditional hierarchical forms of organization;
- Public demand for a seamless continuum between institutional and community sectors as well as within the community itself, and for reduced bureaucratic barriers

between different services and disciplines in health care delivery;

- A change in demographics towards an older population;
- Greater demands by consumers for information and decision making on diagnostic and prognostic health services;
- A reduction of institutional budgets and greater regulation of the quantity and quality services;
- Expansion of services provided on an ambulatory basis, such as day surgery, and home care;
- Development of strategic alliances among health service provision organizations, in order to rationalize services;
- Implementation of population based models of health service provision;
- New models of governance, such as trustee and management partnerships for strategic planning and management;
- Greater role for external professional associations to define standards and guidelines for professional activity;
- Rapidly developing medical technology and consumer demand for timely access to such services; and
- Increased demand for timely and user-friendly information.

These factors influence the national debate in Canada and the decisions of health service managers in their attempts to choose an organizational strategy that will help them better cope with change.

2.1.2 Economic and Political constraints (Exogenous factors)

The government of Quebec, like the other provinces, intervened into the market with the purpose of bringing about changes in the health care system and a redistribution of health goods. The regional health board acting on behalf of the government wanted to see a reduction in the ratio of cost-intensive in-patient activities to outpatient care. The health care reform plan (Régie Régional 1995; 1997) had envisioned a greater role for local community services, e.g., CLSC's, private clinics, nursing homes etc., and introduced the responsibility of health to the individual and family (Régie Régional, 1995). All these proposed changes would, if implemented, drastically change pre-existing conventions within the system for the consumer. The reorganization was intended to improve the quality of care and life by providing care in an efficient manner, thereby minimizing waste due to misallocation of resources, thus making the provision of quality health care sustainable for the future of the Quebecois. The objectives of the plan to reorganize health care on the Island of Montreal consisted of cuts of $345,600,000, with tertiary[2] care institutions suffering the majority of these cuts, and reallocation of $52,500,000 of those funds, mostly to primary health centres (Régie Régional, 1995). The government had hoped that this reorganization would help to provide a more relevant, seamless approach to health care service delivery. This vision, for a more complete and appropriate health model, called "the continuum of health care" (Régie Régional, 1995), emphasized greater involvement of the community while trying to diminish the dependence upon cost intensive hospital care. The cost savings and benefits would occur

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[2] Acute care, or specialized care facilities.

by providing better and more appropriate services at community based centres, and thus limiting use of more cost intensive sources of health care delivery such as tertiary hospitals.

In 1995, the provincial health board instituted efficiency criteria to help proceed objectively with its cost reduction program. The assessment of hospital effectiveness and efficiency was based on a five-point criteria scheme. According to the five indicators of resource use mandated by the regional health board during the first round of cuts in 1995, a hospital could attain a maximum score of five points and a minimum score of zero points (Régie Régional, 1995). Refer to Appendix 2 for complete details. Hospitals that scored under three points were proposed for termination. HCC scored five points out of a possible five. Although the hospital managed a perfect score during the first assessment, senior management had decided that it would have to be even more vigilant during the second round of proposed cuts (Régie Régional, 1997).

2.1.3 Organizational response

Other hospitals' experiences have established that implementing quality management principles leads to higher efficiency and improved service delivery. The same forces that pushed the manufacturing industry to adopt a quality approach are pressuring health care towards TQM. (Huq & Martin, 2000; Hanson, 2001; Lim & Tang, 2000; Crane & Crane, 2000)

In order to increase its chances of being one of the hospitals still serving its customers through the new millennium, HCC had decided to adopt a quality management structure. Management[3] believed that adopting a quality approach to health care would strengthen its position as a community hospital thus enabling it to withstand the next assessment round. The TQM literature available (which will be covered in-depth in the literature review), and the positive experiences of hospitals that had implemented TQM, (Leatt et al., 1994) convinced them that it would help HCC provide better care and reduce inefficiencies. In response to the current governmental position, the hospital wanted to focus on patient centred holistic care (Régie Régional, 1997). Therefore, HCC realized that it would have to transform the way it operated in order to meet these objectives. Consequently, the hospital decided to introduce a quality inspired approach called *Program Management*[4], also known as *Patient Focused Care.* This program required that members of the hospital completely rethink their pre-existing defined roles. Management was aware that the shift to patient focused care would involve changes in the day-to-day way in which staff and professionals worked together, and would require acceptance of multi-vocational responsibilities, and a greater emphasis on teamwork. The goal of HCC was to improve their operations by minimizing the bureaucratic nature of the existing departmental structure and to move towards a program management structure involving functional units, known as Strategic Business Units (SBU), a form of

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[3] Interview with manager (name withheld to preserve anonymity).

[4] A program is a collection of organizational resources that is geared to accomplish a certain major goal or set of goals. Program management is defined as the co-ordinated support, planning, prioritization and monitoring of projects to meet changing business needs (Reiss, 2002).

TQM (Leatt et al., 1994). Each SBU produces a distinct product or service and plans to meet its own operational needs as a unit while maintaining a consistency with the organization as a whole. In such a system, decision-making is decentralized, empowering employees to deal with situations they encounter on a daily basis, while senior managers assume greater strategic responsibilities. The SBU is fully responsible and accountable for all human and financial decisions. It was believed that this decentralized decision-making and teamwork model would help the hospital achieve the improved efficiencies that are warranted by the government cutbacks in health care (Leatt et al, 1994).

The Continuous Organizational Learning Team (COLT) was organized within the HR department at HCC. It had been given the mandate to explore possible ways to manage the transformation. The team manager was the director of Organizational Development. The COLT team believed that it had the full support of upper management at the hospital. The major goal of COLT was to convince the hospital to reinvent itself by adopting a continuous learning culture[5] (Senge, 1990) within a program management structure. The continuous learning culture is based on a philosophy that advances the concept of organizational learning by encouraging employees to take cognizance of having an experience, reflecting upon the experience, concluding the experience, and then finally planning the next experience based upon the past (Heintzman, 1995). COLT believed that this culture would allow the hospital to reap the maximum benefits of the program

[5] According to Senge (1990) pp. 3, continuous learning organizations are: "...Organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together."

management structure. Hence, before implementing the appropriate structural changes and culture transformation, it was important to measure and determine the existing organizational culture. This step was important in order for the hospital to assess its strength and weaknesses, and allow it to make appropriate organizational changes required to move towards its desired state.

This section has set the social and economic context in which this study was conducted. As discussed in the introduction, one of the objectives of the study is to determine the required culture and the prerequisites for implementing a quality strategy at the hospital. Thus, the following chapter will review the literature pertaining to quality, change management, organizational culture, and structure in an attempt to clarify the relationships and implications of these topics for their study.

3 LITERATURE REVIEW

3.1 TOTAL QUALITY MANAGEMENT

Factors, exogenous to the health care sector, have challenged health care delivery organizations to adapt to changes in demand for health care. These external factors such as governmental policies, market supply and demand outcomes, technological change, and changes in demographics are causing changes in the demand for and the willingness of consumers and third party payers to pay for health care delivery. Consequently, health care institutions are forced to change their structure and their culture in order to meet the new needs and the increasing demand for improvements in quality (Huq & Martin, 2000; Hanson, 2001; Crane & Crane, 2000).

Motivated by the need to achieve higher levels of economic efficiency and client satisfaction, many health care institutions are deciding to introduce Total Quality Management (TQM) programs. Total quality is known by a variety of names, such as Program Management, Patient Focused Care, and Continuous Quality Improvement (CQI) programs. However there are certain basic underlying principles that are common to these different approaches to the application of Deming's 14-Point model (Deming, 1986). Table 1 - Total Quality Management Dimension and Authors (Zeitz et al. 1997) presents some of the more important TQM principles recognized by scholars in the field of TQM. These themes have been identified as being key within the TQM literature as characterizing a culture that would support TQM initiatives. In summary, these themes embody the following characteristics of a TQM culture:

- ***Quality philosophy***: Where the organization's philosophy is based on quality.
- ***Quality planning***: This is when the organization's planning is in line with meeting quality goals.
- ***Management and leadership***: When leadership is vocally and visibly supporting quality within the organization.
- ***Quality Supervision***: This is when employees' direct supervisors espouse quality expectations, and when their performance is with clear TQM oriented policies.
- ***Continuous improvement***: This theme relates to the ongoing innovation and improvement activities within the organization.
- ***Use of Data***: Where data is used to measure real improvements, such as benchmarking.
- ***Quality Procedures***: This relates to the establishment and implementation of policies and procedures that promote quality.
- ***Equipment adequacy***: The provision of tools to enable individual employee to meet quality objectives.
- ***Supplier relations***: Integrating your supplier within your own processes, creating partnerships and benefiting from synergies.
- ***Teamwork***: Fostering the team concept, where every employee contributes to meeting goals.
- ***Employee feedback***: Providing a safe environment where feedback is sought and used to improve existing processes.
- ***Customer orientation:*** Maintaining a singular purpose that is to focus all organizational wide efforts to serving the customer.

The table identifies how many scholars have made reference to these quality concepts in the literature. The Quality concepts are listed in the columns, whereas the authors are

listed in the rows. Each time an author makes a reference to a particular concept/theme, an "X" is marked at the authors' row, in the appropriate column.

Table 1 - Total Quality Management Dimension and Authors[67]

Author	Quality Philosophy	Quality Planning	Management Leadership	Quality Supervision	Continuous improvement	Use of Data	Quality Procedures	Equipment Adequacy	Supplier relations	Teamwork	Quality Training	Employee Feedback	Customer Orientation
Anderson, Rungtusanatham, & Shroeder (1994)			X		X	X			X	X			X
Berry (1991)	X	X	X		X	X				X			
Crosby (1979)	X	X	X	X	X	X				X			
Dean & Bowen, (1994)		X	X		X	X	X		X	X	X		X
Deming (1986)	X	X	X	X	X	X	X		X	X	X	X	X
Grandzol (1996)			X		X		X			X	X		X
Hackman & Wageman (1995)	X	X	X		X	X	X	X	X	X	X		X
Hunt (1992)	X	X	X	X	X	X	X	X	X	X	X		X
Imai (1986)					X	X		X	X	X		X	X
Juran & Gryna (1988)	X	X	X		X	X	X	X	X	X	X		X
Juran (1995)		X	X		X	X	X			X	X	X	X
Lawler, Mohrman, & Letford (1995)		X				X	X		X	X			X
Saraph, Benson, and Schroeder (1989)	X		X			X	X	X	X		X		
Sholtes (1988)	X				X		X			X	X		X
Spencer (1994)	X		X				X				X		X
Cole (1998)	X	X	X		X		X			X	X		X
Ahire et al., (1996)		X	X			X	X		X		X	X	X
Rao et al., (1999)	X	X	X			X	X		X		X	X	X
Quazi & Padibjo (1998)		X	X			X	X					X	X

[6] From Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management*. 22, (4), Sage, pp. 421.

[7] Cole, R.E., (1999) *Managing quality fads: How American business learned to pay the quality game*. Oxford University Press, New York.

TQM, as defined by the principles described in Table 1, creates a philosophy of management that is so different from the traditional management models that it is considered by many to be a paradigm shift. A TQM system is a customer-oriented enterprise approach that is more organized around processes (Dean & Bowen, 1994; Berry, 1991; Juran, 1995). In many ways, its structure resembles that of a sports team: teamwork is central to its overall processes (Broedling, 1990; Berry, 1991; Juran, 1995, Deming, 1986). TQM is a systematic approach to the practice of management. It requires fundamental change in organizational processes, strategic priorities, individual beliefs, attitudes, and behaviours (Olian & Rynes, 1991; Deming, 1986, Hunt 1992). Initiating a successful TQM program in an organization requires major changes in the culture at all levels (Broedling, 1990, Deming, 1986).

The all-encompassing view of TQM equates it to a total sense of excellence. Quality is seen as maximizing organizational behaviour to enhance the satisfaction of present and potential customers. Organizations embracing TQM principle attempt to encourage behaviours that internalize external customer preferences (Cole, 1998, pp.43-44):

- Quality as a common organizational-wide language of problem identification and problem solving;
- Quality as a strong corporate competitive strategy;
- An all-employee involvement in quality improvement initiatives;
- An upstream prevention focus;
- A well-defined problem solving methodology;
- Training activities that are in line with continuous quality improvement strategies;
- Integration of quality into the organizational policies and procedures, goals, plans and

actions;

- Emphasis on cross-functional cooperation and teamwork to achieve quality objectives; and
- Proactive customer service that includes anticipation of needs even before customers are aware of them.

TQM is not just a concept; rather it is a way of conducting business. TQM is an all-encompassing approach, which is central to high-level organizational strategy. It is cross-functional and links all levels of management. Teamwork and continuous learning are stressed, and adaptation to change is encouraged, all of which contribute to the success of the organization (Evans & Lindsay, 1996; Berry, 1991;Juran, 1995)

A TQM model has an integrated customer focused approach, which is intended to improve the quality of processes, products, and services. At the core of TQM, is the drive for continuous improvement in work processes by purposefully involving employees at all levels, including top managers to front line workers as a means to achieving customer satisfaction. The objective is to continually increase customer satisfaction while lowering real cost. An important aspect of this with respect to customer service is *getting it right the first time*, (Deming, 1986). That is, quality must meet, if not exceed, customer expectations from the first instance of service, thereby eliminating anxiety and disappointment with the product or service.

A prerequisite of the TQM process is the commitment of top management and the encouragement of employee insight on how to better meet customer needs. TQM

requires a long-term commitment and is an on-going process that requires full and active participation from all members of the organization. Quality management techniques involve management and production procedures, which have origins in such disciplines as statistics, engineering, human resource management, psychology, and decision sciences (Kertesz, 1990). The literature indicates that TQM incorporates several aspects of management. Most of the well-known authorities in the Quality management movement, such as Deming, Crosby, and Juran have different approaches to quality management, highlighting different elements of management theory and practices according to their specific situations and contexts.

Known as the founding father of the quality movement, Deming outlined his philosophy in his 14 principles of TQM, which include managerial commitment, process design & control, employee empowerment, training, reducing barriers to participation, removing numerical quotas, emphasizing quality over quantity, continuous improvement, and being customer-driven (Deming, 1986). Deming's interpretation of the quality movement emphasized the fundamental importance of statistical analysis, and highlighted the importance of reducing variance in manufacturing or service provision using Statistical Process Control (SPC) techniques. Juran (1989) advocated the importance of applying TQM philosophy in all stages of product delivery: supplier relations, product design, planning and manufacturing processes, delivery, and customer relationship and satisfaction. Crosby placed an emphasis on the human (soft) factors within the organization, that is to say, organizational culture, training, management attitudes, and leadership (Crosby, 1979).

3.1.1 The outcome of quality;

Whatever be the interpretation of quality management, there seems to be agreement in the literature around the position, that when TQM is properly applied it leads to better products and results. The objective is to please or rather *delight* the customer (Deming, 1986). TQM is more than the application of statistical process control, quality circles, and other quality control techniques. It encourages both effectiveness and efficiency in product and service delivery. The emphasis is on proactively creating a quality product or providing the best service the first time round. This approach has a significant advantage in terms of cost savings and public relations, over finding poor quality services/product after the fact and having to implement damage control. This practice increases cost and time, not to mention customer frustration. Maintaining a close relationship with external (customers and suppliers) and internal (employees) partners produces mutually beneficial and synergistic outcomes for all involved. Proponents of the quality movement argue that the successful implementation of the quality philosophy and methodology would have many benefits. Price and Chen (1993) indicated that TQM is a holistic approach that simultaneously affects customers, employees, and processes to achieve continuous improvement. Other benefits of TQM are cost savings; productivity increases through process improvements, marketing focus, product development effectiveness, organizational decentralization, and employee empowerment.

Supporters of the quality philosophy believe that improved quality will lead to a reduction in total product cost since the savings from its implementation would more than

offset the increased cost of a quality program (Belohav, 1993). These savings would result from reduced defect creation, identification, and repair before and after the products are sold. Some of the savings would include less repeated inspections, less downtime, and less manufacturing rework. Other savings are of management and worker time required to correct quality problems, as well as sales' and customers' time to obtain repairs and fulfill warranties. In addition, a proactive quality approach would reduce or eliminate the potential for lost future sales from dissatisfied customers. Therefore, quality is not just about reducing defects, but is also about a cost-effective strategy for an organization. Attaining high levels of quality enables the organization to pursue not only a market differentiation strategy with above average products and services, but also with a low cost leadership within a market (Belohav, 1993).

Quality management's approach to eliminating defects and poor service usually includes some process engineering, such as work rationalization, some methods improvements, and some process redesign. The influence of these activities often reduces the direct labour content in a product. This reduction paired with the elimination of some defect detection and correction activity, usually contributes to improved labour productivity (Belohav, 1993).

When quality and productivity is simultaneously increased, synergies can be created. In addition, less resistance is encountered on the human resource side, as employees view quality related changes better than simple changes that may be construed as labour reductions. Therefore, managers can achieve both productivity and quality improvements

by emphasizing quality, without a decline in employee moral that may arise with simple productivity activities (Dory, & Schier, 2002).

Above all, the quality movement has stressed employee participation in the decision making process as being critical to achieving quality (Grant, et al. 1994). The quality philosophy requires that workers and managers, within and across departments, work together to identify and resolve quality problems. Managers might expect that the resulting interpersonal habits would carry over to other interactions and decisions. One of the outcomes of these developed behavioural patterns is that the participating employees experience self-realization and human dignity. This improves their attitudes towards their jobs and boosts their job performance (Kanji, 1990). If management wants to implement and benefit from the outcomes of quality management such as cost savings and productivity improvement, they need to include TQM principles within their strategic planning and communicate them to others (Dory & Schier, 2002). Quality advocates contend that TQM will only be successful if the whole organization becomes involved (Garvin, 1991). Proponents of TQM state that it can only be successful if the top management of the corporation has a sustained commitment to it and they become directly involved in its implementation (Hauser & Clausing, 1988). Quality advocates also recognize that adopting TQM entails considerable change on the part of the employees by requiring them to take the initiative, do the analysis, make decisions, and coordinate with other departments. These behaviours may differ from those learned in a hierarchical structure (Hauser & Clausing, 1988). TQM adoption is a long-term process.

This is because of the commitment required in order to conduct extensive organizational change, and the fact that organizational learning does not occur very quickly (Cole, 1999)

3.1.2 TQM and Failure

In summary, in order for TQM to be successfully implemented and in order for it to achieve the desired results for customers, management needs to be committed to the philosophy, and provide effective leadership, and employees need to first buy into the principles of Quality Management. In order to implement the quality management principles, employees must be empowered and receive the necessary training to make decisions that affect their work. Usually, the decision to adopt a TQM environment involves organization-wide change. However, planned organizational change is difficult to achieve. Improperly handled, any change will lead to failure, causing a waste of valuable resources such as time and money on training courses and other preparations for quality programs. TQM is no exception. There are several examples of failed TQM initiatives. In some cases, companies that have undertaken to implement a TQM environment have failed so badly that they had to file for bankruptcy (Stevens, 1993). Some famous examples of failures include Douglas Aircraft, Florida Power and Light, Wallace Co. and Bell Helicopter Textron. In fact, industry surveys have revealed that a large number of executives have been either disillusioned or disappointed with organization-wide TQM results (Stevens, 1993). On the other hand, there have been many well-known cases of success, considering the well-known examples of Xerox, Motorola, Harley-Davidson, and Federal Express among others. This leads to an interesting paradox, what makes some organizations fail, while others succeed?

Quality management failure is usually attributed to implementation problems (Reger et al. 1994). Research in this area has pointed to the importance of instituting a complete change in the basic organizational philosophy in order to implement TQM successfully (Dobyns & Crawford, 1991). The main reason for failure is attributed to improper approaches taken by upper management (Reger et al. 1994). Among these are situations in which formal quality program policies exist only within upper management, and are institutionalized only at that level. Consequently, in the day-to-day operations at the front line, behaviour and practices may not reflect TQM principles (Zeitz et al, 1997). In other words, quality management may only exist as an abstract concept, and may not be integrated within the operations of the organization and across all its functions. Another reason for failure is the lack of empowerment of the employees: the exclusion of workers from the decision-making processes (Stevens, 1993). Stevens (1993) claims that this leads to the perception by workers that they lack control over decisions affecting them making acceptance of changes difficult. He argues that workers who have been left out will criticize the proposed quality programs and will be reluctant to act on any of the recommendations for change.

Another point at which problems may arise is associated with the fact that successful implementation of TQM requires broad redistribution of resources and power within the organization (Pfeffer, 1981; Deming, 1986). This reallocation and restructuring coupled with a paradigm shift in the culture of the organization, challenges employees' basic assumptions about the workplace. This situation creates uncertainty and poses a certain

amount of risk for the employee, inducing resistance to the mandated change, which may have the effect of creating potential barriers to a successful implementation of TQM (Broedling, 1990; Reger et al., 1994).

Pfeffer (1981) also identified resistance to change as a cause of failure and indicated that the cause of the resistance may stem from perceived loss of power. Certain large and hierarchical institutions (Thompson & Strickland, 1996) view changes due to a TQM program as a disruption of their current culture, with the dismantling of fiefdoms and protected turf (Hauser & Clausing, 1988). Given that quality management advocates that various departments and functions of an organization can be brought together, experience indicates that this goal may be difficult to attain (Radin & Coffee, 1993). TQM implementations that do not address the organizational culture issues are often troubled and may even fail. Masters (1996) compiled a list of the top 15 reasons for the resistance to TQM implementation. This list is reproduced in Table 2.

Table 2 - Barriers to TQM success

Reasons for Resistance to TQM
• Lack of management commitment. • Inadequate understanding and interpretation of quality management • Inability to change organizational culture. • Improper planning. • Lack of continuous training and education. • Inability to foster a learning environment within the organization that supports continuous improvement. • Incompatible organizational structure and isolated individuals and departments. • Insufficient resources. • Inappropriate reward structures. • Use of a pre-packaged program or inappropriately adapting TQM to the organization. • Poor measurement methodology and difficulty accessing data and results. • Short-term approach. • Insufficient external or internal customer focus. • Inappropriate conditions for implementing TQM. • Inadequate use of empowerment and teamwork.
Adapted from Masters, R.J. (1996) "Overcoming the barriers to TQM's success." *Quality Progress*. May. P.54.

These obstacles occur in varying degrees, and exist on some level in every organization trying to implement a quality program. Management must recognize the need to plan and sell their ideas before embarking on any change initiative.

3.2 ORGANIZATIONAL CHANGE

Organizations are facing both external (exogenous) and internal (endogenous) forces that make change inevitable. External forces such as customer satisfaction, changing expectations regarding quality, improvements in productivity, and changes in technology are affecting the operating environment within organizations. At any point in time, the organization may be adapting to both external pressures and internal pressures such as;

financial constraints, the requirements to do more with less, the occurrence of mergers and acquisitions. The type of response will determine its ability to be competitive in the marketplace. The challenge for an organization is to balance the demands and the expectations of all its stakeholders (internal and external): employees, customers, management, government, and society. If management fails to balance the demands and expectations of the organization against those of the government, the users, and society, it risks creating a workforce that is ill prepared to manage change. The net result can be diminishing productivity of labour. Thus, how successful an organization is in communicating the need for change, as well as the ability of its leadership to motivate its work force, will determine how effectively it is able to change the way it does things. That is to say, how successful it is at changing the culture of the organization.

Adopting total quality management principles is seen as a method of implementing organizational change (Druckman et al., 1997). Continuous improvement is a cornerstone of contemporary quality. Improving any aspect of performance usually translates into doing something different, which means some sort of change. Change is the object of long-standing organization and individual resistance. A successful implementation of total quality management demands change in all aspects of the organization. This change requires a realignment of the behaviours, attitudes, and culture with quality principles. Organizational change is one of the most daunting tasks that managers face. These changes necessitate modifications in the way an organization works. Successfully winning over an entire organization to the proposed changes can be difficult. An inadequate approach can lead to the rejection of the proposed changes.

3.2.1 Threshold of change

Change is the constant that is continuously challenged. Individuals will resist change and changes even though the results may lead to new knowledge or to a better state. Organizations also resist change even though it may lead to a better and more effective system. Clearly, the culture and structure of the organization set limits to the rate of change that an organization can tolerate. This is called the *threshold of change*. Large organizations such as hospitals tend to be entrenched in the past, and have low thresholds of change (Marsalek-Gaucher et al. 1991). The threshold will depend on the nature of the proposed change, the way the mission is crafted and the buy-in achieved among the parties affected. The strategy is to make improvements in a timely manner without exceeding the threshold.

In general, changes consistent with the status quo and vision will have a higher threshold. On the other hand, changes that require drastic modifications to current situation and that the implication of which is perceived as arbitrary will have a lower threshold of change (Marsalek-Gaucher et al. 1991). Such a change will be much more difficult to effect.

Before initiating any change management project, it is vital to understand the existing situation of the organization. To implement effective organizational change, it is important to (Marsalek-Gaucher et al. 1991):

- Understand the internal environment - what is the state of the organization?

- Understand the external environment – what are the external forces?
- Determine employees' and other stakeholders' positions on the proposed change – is there general agreement regarding the issues and their proposed solutions?
- Measure resistance to change – how much resistance will be generated by the change, and from where?

With this basic information on the current situation, the change management approach will be easier to develop and execute. The challenge today is that change is not an "engineering" problem. Change involves people, and can call up emotions, uncertainties, and inconsistencies. Success is often the more formidable obstacle to change. Once a person or organization achieves a certain level of success, there is often inertia to revolutionary change. It is relatively easy to promote visions of change in new companies or organizations, but far more difficult to promote visions of change in mature companies with established cultures, values and traditions. Without change, organizations cannot sustain growth or maintain success.

Kurt Lewin (1947) the originator of the Field Theory, proposed an approach to accomplish change, which includes three progressive steps:

- *Unfreeze*: Create change within the current situation and level of functioning;
- *Change*: Implement change that augments performance in the desired direction;
- *Refreeze:* Make it part of the culture and organizational building blocks. Promote the acceptance of this change within the organization.

Lewin's concepts influenced much of the change literature. Kotter (1996) suggested a change model that also is based on a similar three-part framework:

1. Lay the groundwork for change. Defrost the status quo.
2. Take actions that encourage and implement change.
3. Anchor these changes in the corporate culture.

These elements served as the basis upon which Kotter (1996) outlined what he considered were the essential steps to successfully implementing change.

The *Defrost* phase consists of the following four elements; creating a sense of urgency, leadership sponsorship, creating a vision for change, and communicating the vision for change (Kotter, 1996). These elements are discussed here.

- *Create a sense of urgency,* convey the need and purpose for change. Individuals need a reason that they value and trust in order to justify change. Leaders need to examine market realities and identify an urgent need, be it a crisis, potential crisis, or potential opportunity that would affect the organization. This is based on the Lewin's (1947) observation that change is often easier to implement when there is a compelling predicament that may affect individuals directly. This is a necessary step to rouse individuals from complacency, which makes change difficult. The need must be made clear and the people must sense some need for change. The purpose of the change should be communicated and the direct and indirect benefits made public (Marsalek-Gaucher et al.1991). Kotter (1996) observed that approximately 50% of all change efforts could potentially fail if the sense of urgency cannot be communicated well. Furthermore, to successfully complete change, he suggested that 75% of the organization workforce must accept this urgency as genuine and believable.

- *Demonstrate leadership,* form a guiding coalition. Change must be nurtured and supported by a dedicated group of influential leaders throughout the organization.

This leadership must be perceived as powerful and influential within the organization. Without sufficient influence or power, the group will only achieve apparent change, which may not be long term. A manager's commitment to change must be evident. If the leader is not trusted or perceived as committed, there is a low threshold of change (Marsalek-Gaucher et al.1991). It takes time and effort to raise the threshold of change. Success depends on the confidence the employees have in their leaders, as well as on the employee's and leaders' own personal sense of risk. The importance of leadership in the successful implementation of TQM is widely advocated in the research. Leaders need to be capable change agents, and establish organizational objectives consistent with TQM (Crosby, 1986).

- *Promote and communicate the vision:* The vision for the organization is the framework for change. Both the mission and the vision should be understood, identified, and supported by employees. Without a vision, the change effort can dissolve into a series of incompatible projects that start to look like change for change's sake. Failed change efforts often have several plans and directives but no codifying vision. The vision must be clear and concise (Kotter, 1996). Obtaining comments directly from employees is very useful (Marsalek-Gaucher et al.1991). Collectively, employees embody the corporate culture, and they are the people who live out the new values. Leaders must create and communicate a vision for change. They must encourage others in the organization to accomplish the change.

The second phase in Kotter's (1996) model is the *action* phase, which includes three steps. The first step is to empower the people, the second is to plan and create short-term wins, and the third is to consolidate these successes.

- *Empower individuals to act on the vision.* Involve people in change. Leaders must clear the way for employees to develop new ideas and approaches without fear or limitations posed by the traditional ways. Reduce personal risks: job security and maintenance of social relations are important. The involvement will lead to understanding, ownership, and support in implementation (Marsalek-Gaucher et al.1991). Leadership must remove obstacles that may be entrenched in organizational

processes, or exist only in the minds of employees.

- *Plan and create short-term wins.* A vision without results cannot be followed indefinitely. Employees must see results within 12 to 24 months, or they will give up or perhaps even resist change (Kotter, 1996). Short-term wins validate the effort and maintain the level of urgency. Leaders have to plan for results that have clear benefits directly related to the change effort. Rewarding people responsible for these benefits is essential.
- *Consolidate improvements and produce more change.* Develop a record of successful changes as success raises the threshold of change (Marsalek-Gaucher et al., 1991). Short-term wins must be stepping-stones to greater opportunities and bigger wins, all consistent with the vision driving the overall effort.

The third and last phase of the change model (Kotter, 1996) involves making the changes permanent.

- *Institutionalize the new approaches:* Reinforce changes, and make them permanent, Leaders must continuously align the new desired behaviours with organizational success, showing that the new standards are not a passing fad, but are permanent. The leaders themselves must espouse the changed approaches.

Kotter (1996) advocates that all of the stages must be worked through in their entirety to ensure successful change. Pressures to show results may lead to de-emphasizing certain steps, however, without a solid base it may be difficult to implement long lasting change. Failing to reinforce earlier stages as you move on may lower the momentum, and buy-in from the stakeholders.

The prevailing concept in the change discussion so far is the presence of effective leadership and management. Leadership can be viewed as the macro organizational policies that define an organization's vision of change, the transformation strategy, and the evaluation and redefinition of change. Management can be defined as the micro-organizational policies that involve the implementation of change, which includes areas such as human resource policies exhibited in hiring, remuneration, training and motivational strategies (Kotter, 1996)

The change management approach as advocated by the research in the above discussion is in alignment with the themes in the TQM (Deming, 1986; Juran 1989; Cole, 1999) literature. Leadership, the communication of vision, creating a safe work environment are themes common to the change and TQM literature. Change in TQM requires the establishment of a culture of continuous improvement of work processes, which is key in achieving customer satisfaction. It reorganizes the way people work, and involves employees at all levels, from upper management to front line workers. Leaders must establish and demonstrate new behaviours and serve as role models and mentors during change processes (Crosby, 1979). Establishing the quality environment requires the continuing monitoring of the process, as well as the measurement of the structure and culture.

In conclusion, change can be threatening to individuals and organizations. It challenges the comfortable status quo and often raises the possibility of job loss or at least a change in job quality, status, and scope. To overcome the natural inertia this reality produces,

significant organizational change often requires a strong awareness of crisis before the work force can be mobilized and motivated to accept change (Marsalek-Gaucher et al., 1991). Researchers believe that in order to bring about change, leadership must instil a sense of urgency, and importance in the work force when no crisis is apparent. Whatever the reason for the crisis, bringing about successful change requires effective leadership and communication, and an understanding of culture.

TQM goes beyond the practices and philosophy of quality control, and measurement. It assumes certain behaviours and attitudes. As previously discussed, the successful implementation of TQM requires a receptive organizational environment. In the case where the organizational culture is not hospitable towards a quality program, the culture must be changed, or the efforts may be in vain. Thus, according to Sashkin & Kiser, (1991), "TQM means that the organization's culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques, and training. This involves the continuous improvement of organizational processes, resulting in high quality products and services."

The preceding section looked at the various components needed for change. In the following section, the importance of structure and culture for the acceptance of change will be explored.

3.2.2 Organizational Structure:

The organization is affected by several factors. Some of these factors are found in the external environment, and some of them exist within the organization's own internal setting. These factors may individually or collectively influence the implementation of a quality environment. It is important to have an appropriate organizational design that would enable a quality environment to exist. That is to say, a type of flat organizational design that would facilitate decentralized decision-making, and that supports a multi-vocational team structure (Thompson & Strickland, 1996). Organizational structure can affect the culture, dictate how resources will be allocated and how objectives and policies will be established (Thompson & Strickland, 1996).

Typically, there have been several organizational designs that have served Canadian health care institutions (Leatt, 1994). Of the different type of structures that exist, the two most popular in health care institutions are the functional and the divisional organizational design (Leatt, 1994).

A functional design divides the organization into departments according to the functions performed. The number of departments depends on the number of functions. Traditionally this design works best for small health care organizations that have limited goals and that function in a simple environment (Leatt, 1994). An organization with a functional design has a simple reporting structure, a simple promotion policy, and is typically hierarchical in nature. Examples of such organizations include nursing homes, long term care facilities, and small community institutions. This structure, according to

Thompson & Strickland, (1996) becomes unsuitable in an environment that is in the midst of change, or when more goal-oriented results are desired. The weaknesses that can arise from such a structure include; slow response to the rapid changes in the health care system due to the centralized decisions, a restricted or narrow view of organizational goals, a low level of innovation, poor horizontal coordination or communication, and hierarchy overload (Leatt, 1994).

Another type of organizational structure is the divisional design (Thompson & Strickland, 1996). This type of design is mostly found in teaching hospitals, academic institutions, and in large community hospitals, which have multiple goals and stakeholder interactions (Leatt, 1994). Usually there is a high level structure, but the organization itself is further subdivided into a set of smaller semi-autonomous units. These sub-units are normally organized around traditional medical specialties. Each has a management team that is responsible for the units daily operations (Leatt, 1994). The team usually consists of medical and administrative staff. This design is believed to provide advantages in terms of faster decision-making by individuals with specific expertise and more efficient and effective management control because local managers have a larger control over their unit resources (Leatt, 1994). The weakness in this semi-autonomous structure has been shown to be that the units may become difficult to co-ordinate, produce a duplication of services and activities, may compete with each other, and could finish by developing goals that are inconsistent with the corporate mission and vision (Leatt, 1994).

The change management research clearly outlines the need for a structure that would support the goals and objectives for the change. Change theory also suggests the importance of the role organizational culture plays in any initiative. In addition, culture was identified by the quality literature (Olian & Rynes, 1991; Broedling, 1990; Deming, 1986, Hunt 1992). Given its importance, the following section describes in detail the concept, application, and implications of organizational culture.

4 ORGANIZATIONAL CULTURE

Organizational culture has been defined as a set of shared meanings, values, and beliefs that are held by members of an organization. These shared beliefs and values then affect the groups' view and interpretation of happenings and shape what they perceive as being appropriate actions (Geertz, 1973). The culture determines the behaviours and policies that are supported by the organization. These specific values and beliefs are important for organization leaders who communicate them to the members to foster quality behaviour. Several researchers have found that organizations that were successful at implementing quality management tended to have cultures conducive to sharing information, advocating teamwork, and that supporting learning (Master, 1996;Bushe, 1988, Radin & Coffee, 1993; Pfeffer, 1981; Deming, 1986). On the other hand, organizations that had difficulties implementing quality management tended to have cultures that supported the practice of seeking quick fixes to problems, encouraging the withholding of information, and producing an environment that supports the practice of non-participative decision-making.

Having argued that the adoption of TQM in any organization requires a hospitable culture in order to enable its successful implementation, we will now explore the various types of organizational cultures, and determine which cultures are most supportive of TQM.

4.1 ORGANIZATIONAL CULTURE DEFINED

Culture Sociologists and organizational researchers have defined organizational culture from different perspectives, but they all share a commonality amongst them. Table 3, presents the well-known scholars within the field of organizational culture. Within each definition, the collective theme is the notion that the concept of culture is "a set of cognitions shared by members of a social unit". These cognitions are developed through social learning and socialization processes that expose individuals to a variety of culture-bearing elements (Martin, 2002). Table 3 reflects the following three common threads of organizational culture; 1) Shared values, where members possess values that are common amongst them; 2) Common understanding, when the group uses their values to process information in a similar way, and; 3) Pattern of beliefs and expectations, where organizational members develop and maintain similar beliefs and develop common expectations.

Table 3 - Organization culture definitions

Source	Definition
Kroeber & Kluckhon (1952)	Transmitted patterns of values, ideas, and other symbolic systems that shape behaviour.
Becker and Geer (1970)	Set of common understandings expressed in language.
Swartz & Jordan (1980)	Pattern of beliefs and expectations shared by members that produce norms shaping behaviour.
Ouchi (1981)	Set of symbols, ceremonies, and myths that communicate the underlying values and beliefs of the organization to its employees.
Louis (1983)	Three aspects: 1) Some content (meaning and interpretation) 2) peculiar to 3) a group.

Source	Definition
Martin & Siehl (1983)	Glue that holds together an organization through shared patterns of meaning. Three component systems: context or core values, forms (process of communication- such as jargon), strategies to reinforce content (rewards, training programs)
Smirich, (1983)	The set of meanings that evolves and gives a group its own distinctive character expressed in patterns of belief (ideology), activity (norms and rituals), language and other symbolic forms though which organization members both create and sustain their view of the world.
Uttal (1983)	Shared values and beliefs that interact with an organization's structures and control systems to produce behavioural norms.
Schein (1985)	A pattern of basic assumptions-invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation or internal integration that has worked well enough to be considered valid, and therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems.
Burke, & Litwin (1989)	The way we do things around here.
Dennison, (1990)	The underlying values, beliefs and principles that serve as the foundation for an organization's management system as well as the set of management practices and behaviours that both exemplify and reinforce those basic principles. These principles and practices endure because they have meaning for members of an organization.
Trice & Beyer (1993)	Shared emotionally charged belief systems.
David, (1995)	A pattern of behaviour developed by an organization as it learns to cope with its problem of adapting to external changes and internal integration.
Martin (2002)	Aspects of organizational life such as stories explaining *how things are done around here*, the ways in which offices are arranged, personal items are displayed, jokes people tell, the working atmosphere, relations among people, the organization's official policies, the amounts of money different employees earn, and reporting relationships.

Source	Definition
Ogbonna, & Harris (2002)	The dynamic set of assumptions, values, and artefacts whose meanings are collectively shared in a given social unit at a particular point in time.

In summary, the literature supports the following aspects of organizational culture:

- Cultures are a property of groups of people, not individuals
- Cultures engage the emotions as well as the intellect.
- Cultures are based on shared experiences and thus on the histories of groups of people.
- Culture is not formed immediately it is developed over time.
- Cultures are infused with symbols and symbolism.
- Cultures continuously change because circumstances force people to change.
- Culture is unique to the organization.

Manifestations of culture include rituals, stories, humour, jargon, physical arrangements, and formal structures and policies as well as informal norms and practices. Values are used to describe and show the relationships among interpretations of the meanings of these manifestations. These are the essential elements required to understand the theoretical assumptions underlying culture (Martin, 2002). Manifestations are the most visible part of culture, however, culture is a more complex phenomenon, consisting of several layers.

Culture can be considered as a continuum, from the most subjective aspects to the most observable. Schein (1985) divided this continuum into three levels of awareness, consisting of:

1. Artefacts
2. Values
3. Underlying assumptions

- Artefacts

These are the visible organizational structures and processes.

- Values

Espoused values are somewhat less evident, and are represented by strategies, goals and philosophies expressed by managers and other members of the organizational culture.

- Underlying assumptions

These are the least evident, and are the unconscious and assumed beliefs, perceptions thoughts, and feelings. These are seen as the critical source of values and behaviours.

Other writers have applied the metaphor of layers to Schein's basic conceptualization, portraying culture as consisting of successive encompassing layers (Rousseau, 1990). These concepts have been likened to the layers of an onion, where the outer layer is composed of the observable aspects of culture, while the two inner layers are inferred. Trice & Beyer, (1993) describe these two aspects of cultures as substance and forms. They define the substance of cultures as the shared and emotionally charged belief systems. These are the shared, related sets of beliefs that can be defined as the norms that tell people how they should behave and the values that show what is worth doing. The substance aspect of culture is not readily observable. Cultural forms are the observational entities, which include actions through which members of a culture express, affirm, and communicate the substance of their culture to one another. These forms are observable

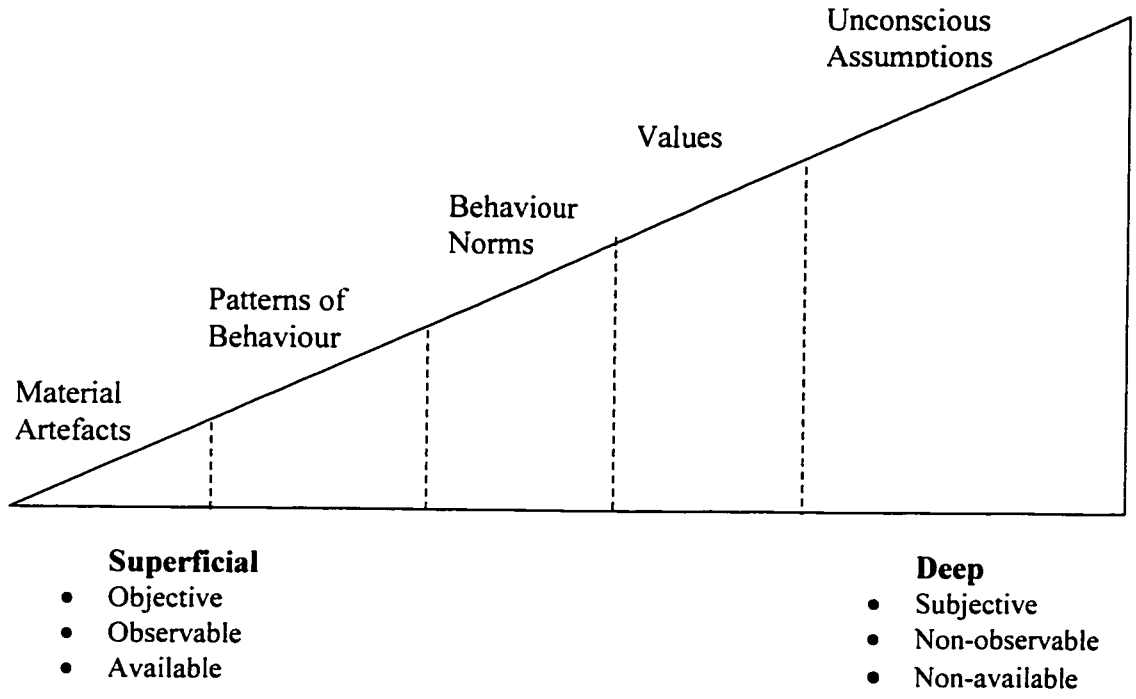
through team meetings, in the company cafeteria, and when consensual decision-making is used to symbolically communicate and affirm new beliefs and values.

Rousseau, (1990) identified the following five layers of organizational culture:

1. Material artefacts;
2. Patterns of behaviour;
3. Behavioural norms;
4. Values; and
5. Unconscious assumptions.

The layers are culture-bearing elements and may vary between two extremes, from the "superficial" (objective, observable, available) to "deep" (subjective, non-observable, non-available). Figure 2 presents these five elements on a continuum from superficial to the deep. The left hand side of the continuum indicates the readily available culture bearing elements, while the right side presents the less accessible elements. The deep set of elements typically develops over a longer period and affects much wider areas of understanding and perception.

Figure 2 - Continuum of Culture-Bearing Elements[8]



- Material artefacts;

Material artefacts reflect the physical manifestations and products of cultural activity, which might even survive after the individuals and their social unit cease to exist (e.g. logos, badges). Examples of material artefacts can be structure and processes.

- Patterns of behaviour;

Organizational structures affect patterns of behaviour. These behaviours then determine decision-making, coordination, and communication mechanisms within an organization. In general, these patterns of behaviour are observable to individuals whose function is to help solve basic organizational problems, such as planning and adaptation.

- Behavioural norms;

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[8] Adapted from, Rousseau, 1990.

Behavioural norms are people's beliefs regarding acceptable and unacceptable behaviour. These beliefs promote mutual predictability, but they may be difficult to access without direct information from members.

- Values;

Values are priorities assigned to certain states or outcomes, such as innovation versus predictability; and participative orientation versus bureaucratic orientation. To assess this element, a researcher must use informants from within the organization.

- Unconscious assumptions.

Unconscious assumptions are those aspects of culture that are implied in the action and speech of organizational members. These are known to be the source of values and beliefs. To interpret these assumptions from organizational action and speech is very difficult, as it may not be well understood, even by organizational members.

As part of the attempt to understand culture, researchers have developed tools to measure it. However, the effectiveness of measuring culture is at best approximate. The continuum from the easily accessible material to the deep unconscious elements of culture has implications when measuring culture. While the behaviours and actions are easily accessible, the deeper constructs of values and beliefs must be inferred, and the measurement models available become less objective and reliable. The following section outlines some of the elements of measuring culture.

4.2 Measurable Cultural Constructs

Killman et al. (1985) outlined the following measurable constructs that identify and define culture:

4.2.1 Behaviour and Norms

Behaviour and behavioural norms are the unwritten rules of the organization and describe the behaviours and attitudes that members of the organization use to pressure and control (implicitly or explicitly) each other (Kilman et al., 1985; Cooke & Rousseau, 1988). Behavioural norms include acceptable standards of dress, work habits, and co-worker relations. However, it is important to note that culture is not necessarily uniform within an entire organization. Behavioural norms may differ from group to group within the organization, as certain groups may have different standards by virtue of their function and set-up (Kilman et al., 1985).

Kilman, Saxton and Serpa, (1985) go on to suggest that behavioural norms are at the most basic level of the culture in the organization as they are easily identified, relatively well accepted and are modifiable. Norms can be effortlessly modified when the need arises out of environmental changes. Changes may include new technology (spurring the need for training or the hiring of new specialized resources), government policies and regulations (budget cuts requiring rationalization of services), and rising expectations for quality services and products (adhering to ISO standards and the efforts required for certification).

4.2.2 Values

Isolating and changing values is much harder. They are found at a deeper level of the organization. They consist of hidden assumptions, which are behind all decisions and

actions. However, values are not as tangible or visible as are behavioural norms (Kilman et al., 1985; Cooke & Rousseau, 1988). Therefore, they do not lend themselves as easily to measurement as behavioural norms. They represent the organization's attempt to understand what has lead to success in the past, and validates beliefs. Values are related to the nature of the environment, and the needs and desires of different stakeholders (Hall & Norburn, 1989). Sometimes organizations try to verbalize values into statements, and capture the essence of what makes their business special in the eyes of their customers or employees. Research has shown that the core values of an organization may drive its success or failure. In a landmark study that later formed the basis for the 1992 book, "Corporate Culture and Performance", researchers John Kotter and James Heskett found that key clusters of cultural values held by employees had a dramatic effect on the overall financial performance of certain firms.

Some examples of some corporate value statements are:

◆ *Concordia University "Real education for the real world."* Commitment to providing education relevant to the market. Source: www.concordia.ca accessed July 2002.
◆ *McGill University Health Centre (MUHC) " We care for life"* Reiterating the importance of well-being and life. Source: www.mcgill.ca, accessed July 2002
◆ *Private Health Care Organization in US. "When waiting is not an option."* When the consequence of waiting is fatal. Source: *Billboard- Kansas City,* HWY 435, June 2002

The importance of these phrases is the degree to which they capture the organizational essence, which the employees sincerely believe in and to which they are deeply committed. Value statements also indicate the type and strength of culture at these organizations. These words visibly help link the basic concept and strategy of the business with the attitudes, and behaviours of employees, in achieving the organization's goals (Hall & Norburn, 1989).

Ever since organizational culture was first recognized as a bona fide factor in explaining business performance, managers and leaders have sought to develop positive organizational cultures to gain competitive advantage. At its most visible level, organizational culture is observable through employees' dress, response to colleagues and customers' queries and complaints. These behaviours have a significant impact on how a business conducts business, and determines how members of an organization deal with their customers, each other, and the way leaders and managers in the organization motivate, reward, and develop people. Organizational culture is shaped by a variety of factors, including the organization's history, values, shared beliefs, and assumptions of the actual business itself. Identifying and understanding the drivers of these behavioural patterns is important yet often overlooked by most organizations. It is the position of this thesis that organizations that understand culture can address potential barriers and increase their capacity to change when the need arises. Therefore, it is important to understand and develop better measures of culture.

The previous discussion identified what constitutes culture, and what aspects can be measured to determine what type of culture exists, the following section links organizational culture and TQM theory, and highlights the importance of culture and quality.

4.3 Organizational Culture and TQM

Where the culture leads to cohesion and organizational efficiency, it eventually influences the creation of a distinctive competence and economic success, which in turn reinforces the values and beliefs that define this culture (Gagliardi, 1990). This is referred to as the *Virtuous Cycle*. In the absence of outside influences, the organizational culture is reinforced and perpetuated in a Virtuous Cycle (Gagliardi, 1990). However, when the problem-solving alternative offered by the culture proves incapable of coping with the changing environment, the Virtuous Cycle eventually becomes the *Vicious Cycle* and hinders the organizations from adapting (Gagliardi, 1990). A Vicious Cycle is a perpetuation of a negative culture. Scape-goating is one example of negative behaviour that can create a Vicious Cycle. This Vicious Cycle also exists when the organization is complacent, and sees no need for changing what they perceive as being an adequate culture, when in reality their situation is in need of amelioration (Gagliardi, 1990).

Culture captures the subtle, vague, and largely inferred forces that help define an organization (David, 1995), and cultural products include shared values, attitudes, behaviour, rituals, myths, and heroes (Geertz, 1973). It is the fostered behaviours of the

organization's members, which need to be addressed when faced with the requirement to change, as these are the behavioural patterns that make up the character of the organization.

Ever since the literature of the eighties (such as Deal & Kennedy, 1982; Peters & Waterman, 1982) emphasized that organizational culture was a bona fide factor in explaining business performance, managers and leaders have sought to foster positive organizational cultures to gain competitive advantage. At its most visible level, organizational culture is observable through employees' dress, response to colleagues and customers' queries and complaints. These behaviours are thought to have a significant impact on how a business conducts business, and determines how members of an organization deal with their customers, each other, and the way leaders and managers in the organization motivate, reward, and develop people. However, other studies on culture conducted in the early 90's questioned the view that organizational culture was associated with performance (Anthony, 1990; Wilmott, 1993).

Aligning goals with an optimal organizational culture can be a powerful strategy to help encourage employees to support TQM objectives (Crosby, 1979). A work environment where the culture matches well with the conditions for positive strategy implementation consists of a system of informal norms and social (peer) pressures regarding job related behaviours. Behaviours in synch with the organization culture will thrive, whereas, those behaviours that are not, will be punished, and thus discouraged (Barney, 1986). A strong strategy and goal fit may motivate and encourage employees to perform at their best. It is

thought to help define structure, standards, and value systems that help individuals and clarify their roles in the work place (Thomson & Strickland, 1996).

4.4 NEED FOR APPROPRIATE CULTURE

There has been much emphasis placed on the existence of a strong culture, in successful organizations, however, there is also a recognized need for an appropriate culture (Hall & Norburn, 1989). If the culture is causing the organization to behave in ways that are in conflict with the corporate strategy, then the impact of the culture will be in the opposite direction. This damage may be lessened if the negative culture is not homogenous and pervasive within the entire organization. If there are pockets of different cultural beliefs where members do not feel pressured to follow the dictates of the undesired culture, it may be easier to implement change culture (Hall & Norburn, 1989).

A culture, thus, will be most beneficial to an organization if it is encouraging behaviour that is in line with the strategic direction it wants to evolve towards. A negative culture is one that encourages practices, norms, values, and beliefs that are antagonistic with the overall strategy of the organization (Hall & Norburn, 1989).

Research has found that those cultures that reward, encourage and promote customer centric behaviours, outperform restrictive bureaucratic cultures in four ways (Schneider 1973)

- These customer-focused companies establish a solid and positive reputation that

generate customer loyalty and recommendations to associates and friends

- These companies earn higher profits over the long term, when repeat business and add-on business is generated from satisfied customers.
- The workplace is more efficient and a preferred place to work, generating an atmosphere that is positive and productive
- The workplace has atmosphere energy, spirit, and fun, with people wanting to work to win the game, instead of doing the bare minimum to stay out of the trouble.

These four key results; reputation, follow-up business, higher profits, and positive work atmosphere, affect the bottom line of the organization, and therefore is an element that cannot be ignored. However, research has shown that a strong organizational culture alone is not an indication of business success, rather strong cultures that foster adaptive behaviours and strategies in pace with changes in the marketplace do succeed (Kotter & Heskett, 1992).

Several researchers have tried to understand how culture affects the workplace. While an organization may have a predominant culture, there may also be multiple cultures to which organizational members belong. Schein (1997) takes the view that culture develops based on shared experience and common history of a distinct, stable group. However, while an organization may be considered one group of people, it may consist of several clusters of people that work towards one organizational goal, but are affiliated to specific sub-groups due to reasons such as departmental structure or vocation. Therefore, within an organizational culture, there may exist several other subcultures. These subcultures may behave differently from one another due to variations within their norms

and beliefs. Schein (1997) outlined three such sub-cultures; Operator, Engineer, and Executive.

4.4.1 Operator Culture:

This culture consists of people who deliver products and services directly to customers as promised by the organization. They typically work in the front line. The operator culture relies on high levels of communication, trust, and teamwork in order to get the work done. The reality for this culture is that there are always unpredictable contingencies and surprises that must be dealt with on a daily basis. Regardless of how well policies and procedures are put in place, members of this culture must deal with unexpected situations in their day-to-day operations. This group realizes that individual employees make the difference and are the organizations ultimate asset.

4.4.2 Engineer culture:

This culture group plans and designs the processes by which the organization delivers its products and services. The engineer group share a common worldview based on education, shared technology, and work experience. They rely on technological capabilities to achieve reliable and efficient operations. While the operator culture recognized its interdependence with others in their group, the engineer culture views itself on a global basis, identifying with its professional groups outside the institution rather than with coworkers and colleagues within their own organizations.

4.4.3 Executive culture:

Executives are responsible for the strategic survival of their organization and concern themselves with maximizing profits while reducing costs. The executive believes that hierarchy is intrinsic to organizational control and coordination, and usually they are detached from front-line operations. In order to accomplish their tasks, the executives depend on information to which they have access, which may be imperfect. They often favour short-term coping strategies (i.e., increased market share, decreased costs) over long-term goals such as organizational adaptability, innovation, and cohesiveness. They may feel isolated, alone, and responsible. Similar to engineers, the executives often identify with their counterparts outside the organization, rather than their colleagues within the organization.

The variations among these three sub-cultures provide checks and balances that are essential to the success of the organization (Schein, 1997). There is also, however, a potential for conflict between the three cultures, which may negatively affect the sense of cohesiveness, commitment, and shared mission for the organization.

The executive and engineer cultures have different outlooks on norms and beliefs. While engineers seek to innovate towards technological solutions that are reliable, efficient, and free of human error, the executives view technology as expensive and limiting, focused only on the type of information that can be brought forward electronically. Each culture group would be expected to have different priorities and typically react differently to the nature of their mandate, and what they were expected to accomplish. Executives for

instance, would be more concerned with analyzing the benefits versus the costs before embarking on a project. The engineers would be more interested in technological capabilities, while operators would be more concerned with issues that dealt with better customer services. Different priorities, mandates, and different levels of knowledge sometime may lead to a variance between the various cultures (Schein, 1996).

The multiplicity of cultures to which organizational members belong may complicate the understanding how cultures affect work. Although the presence of multiple cultures in organizations is generally recognized, most studies and theories of organizational culture have tended to focus on one level of culture at a time (Dennison, 1990: Rousseau, 1990). The most likely reason for this limitation of focus is methodological. Trying to study even a single level of culture is difficult and is time consuming. Few studies include the measure of adjoining cultures within an organization such as Smith et al., (2000) did. Even these study attempts are neither systematic, nor have similar enough results to clarify the separate effects of different levels of culture (Druckman et al., 1997). This study will not attempt to measure adjoining sub-cultures; rather it will focus on the overall culture of the organization.

Cooke and Rousseau (1988) studied the concept of culture, and developed a classification of the type of cultures that may exist within an organization. They advanced the theory that there are three major cultural styles, which consist of the following:

- Constructive cultures
- Passive defensive cultures

- Aggressive cultures

There are certain benefits and disadvantages associated with certain cultures, which make them hospitable or inhospitable to the implementation of a TQM environment. A constructive culture is one that encourages adaptation and is considered a positive force in the organization. The passive defensive and aggressive defensive cultures are considered to have a negative effect on the organization (Cooke, & Rousseau, 1988). This framework will be discussed in detail the methodology section, and its usage as a classification method will be employed in the task of measuring organizational culture at HCC. However, before detailing the methodology employed for this study, the following summary reviews the major themes explored thus far.

Environmental pressures presented a case for health care institutions to engage in change initiatives to enable them to better respond to stringent calls for better performance and service delivery. The quality approach was explored and found to be a viable strategy that would enable institutions to reach their objectives, however, in order for TQM to be successful, existence of certain criteria were vital. The major elements for the successful adoption of TQM included the existence of a supportive organizational structure and culture. Organizational culture was not only identified as an entity that was important for the successful implementation of quality, but it was also found to be vital for the acceptance of any organizational change initiative. The recognition of these elements and their relationships shaped the approach of the research. Therefore, the research focus was based on the study of a health care organization in an environment that was

encouraging change but needed to identify whether it was ready for a quality management philosophy. The prerequisites for the successful adoption of TQM, such as organizational culture, and organizational structure were reviewed and analysed. In the next section, the methodology details the approach and tools used in the study. It describes the research design, the development of a survey instrument to measure organizational culture, and the data collection process.

5 METHODOLOGY

Before going into the details of the methodology, it is important to put into perspective the time line involved for the data collection and the actual analysis and presentation of this thesis.

This thesis was inspired by work that was part of an internship project at a small-medium sized hospital. This work was completed as part of the fulfillment of the requirements of the graduate Diploma in Administration. The research was completed under the supervision of Drs. Bayne, Etezadi, and Gopalakrishnan. The design of the research and data collection was completed in 1997. As a result of this work, two papers were written with the help of Professors Bayne, Etezadi, and Gopalakrishnan, and were presented at two peer reviewed academic conferences; the 15th Annual Conference of the Association of Management, Montreal, Quebec; and the 27th Annual Atlantic Schools of Business Conference, Fredericton, New Brunswick. This researcher was then admitted to the M.Sc. Administration program, where the scope of the study was expanded under the supervision of Drs. Appelbaum, Bayne, and Etezadi. Work continued at a rapid pace during 1998, until certain personal events slowed the study's pace. However, because of the encouraging reviews of the two published papers, and the relevance of this type of research for health care management (Hanes, 2002), the researcher has been motivated to complete this research.

5.1 RESEARCH DESIGN

In the introduction, the argument was made that an organization must be customer focused and should therefore adopt a total quality management (TQM) strategy. As such, throughout this thesis, the purpose has been to determine the characteristics required of a health care organization where the provision of health care services is based on providing high quality services, and continuously improving upon these standards, while at the same time, increasing efficiency. The empirical work for this study was conducted between 1996-1997, at a time when the socio-political environment was changing dramatically. This made it possible to observe the potential for the adoption of change by the health care organization of interest to the researcher. The inquiry concerned itself with those factors that would enable the organization to sustain a socially desired level of service delivery and guarantee improvements in quality of service when faced with severe resource constraints imposed externally.

With the importance of organizational culture established, it becomes essential to develop a measure to determine the type of culture associated with the chosen organization. The specific objective is to determine whether this culture is supportive of the implementation of a TQM program. This issue is pertinent to the concerns of the managers of the organization and to this study's research objectives. In large measure, the quality literature supports the view that when TQM philosophy is properly applied, it has a strong likelihood of success as a strategy for continuous quality improvement and cost reduction. However, the literature supports the position that one of the more important conditions for organizational success is the presence within the organization of a

constructive culture (Rousseau, 1990; Gagliardi, 1990). This will be accomplished by using a tool that will determine whether this organization has the required culture that would support the TQM initiatives of the organization.

The argument set at the beginning outlines the importance for an organization to have characteristics that would enable it to adapt to a quality system; a culture, an organizational structure, and the presence of other key factors that would support TQM. Based on these requirements, the following research questions were posed:

Research issue # 1: Is the structure of the HCC one that facilitates or hinders a TQM environment?

Research issue # 2: Is there evidence that a positive culture exists at HCC?

Research Issue # 3: Do the factors necessary for the implementation of TQM exist?

The approach to collecting information to support or refute the above will involve several sources of data. Given the scope of this study, and availability of information, a single institution was investigated. However, in an ideal world, it may have been a better strategy to apply random sampling methods to select a number of hospitals across Canada, or just in the provinces of Quebec, and Ontario. A multi-province approach, while allowing for a greater sample, may have improved upon the generalizability of the study, given the subtle and not so subtle differences in their environments. However, the costs of such an in-depth investigation to seek answers to the questions posed would have

been very high. Moreover, prioritized access to other hospitals may not have been obtainable. In addition, the time requirements for such an ambitious project would have been beyond the scope of this study given the constraints of the current educational program this researcher is enrolled in.

Moreover, management, at the hospital in this study was facing a crisis that threatened its existence (Quebec health care reforms). The hospital required answers to its questions urgently. This hospital accepted that it needed to change to meet the challenges presented by its internal and external environment. Management at the hospital approached the university for help. The researcher and a colleague were assigned to this project under the supervision of three professors. The research team worked in collaboration with HCC's COLT (Continuous Organizational Learning Team) team to develop and implement a questionnaire to measure organizational culture at the hospital. The hospital allocated funds to cover the costs for the study. These circumstances provided a unique opportunity to gain access to a rich body of information relating to HCC, and relevant to this study. The Quebec health care reform initiatives provided the impetus for HCC and presented a unique situation to study. The presence of cadre[9] within COLT gave the researcher easy access to key hospital personnel, sources of primary data and informer information on values. For these reasons, the researcher decided to use the Single-Case research method (Whitley, 1996; Yin, 1984). It was felt that this approach would allow the researcher to use HCC as a *critical case* that would permit the use of the instrument for measuring culture and using the results to test a

[9] Term used internally at HCC to describe middle management.

number of propositions concerning the role of culture, structure, and TQM in measuring organizational change.

5.1.1 Single Case study

The single case study is an intensive form of study of an organization (Whitley, 1996; Yin, 1984). It focuses on a single instance of the phenomenon in an unconstrained natural situation in which the organization under study carries out its operations. This form of study is empirically based. This is especially relevant when it is difficult to isolate the phenomenon under study from external environmental factors that may themselves be interrelated. Yin, (1994) presents three sets of conditions under which the case study would be a valid methodology to use and a compelling reason for the research:

- When the situation represents a critical case;
- When the conditions represent a unique case that would be difficult to reproduce; and,
- When the situation was revelatory in nature, and would contribute to enhancing knowledge.

All of the above conditions are present in the current study. HCC was faced with a critical situation that constituted a threat to its existence. The conditions are unique in the sense that it gave the researchers access to information not normally available and the opportunity to observe organizational change for a medium sized health care institute under non-market conditions.

This study will attempt to assess the HCC's readiness for change under very special conditions relating to exogenous factors such as socio-political trends, pressures to cut costs, and hospital closures. In a single case study situation, the research strategy is flexible, and allows for the use of several data collection methods and sources (Yin, 1994). The information for a case study can be gathered using direct observations of the phenomenon in question (such as artefacts), organized interviews, and review of existing documentation, information from informants (Yin, 1994). This is appropriate for this study, which uses data collected from different sources: existing documentation, interviews, personal observations, and field notes. A major source of data is a study of the culture at the hospital carried out to assess the institution's capacity to adapt to change in a crisis.

This study addressed events as they occurred and as such, the behaviours of interest were not modified or controlled. As per Yin, (1994) it is expected that the single case study will contribute to the knowledge and theory building effort, while determining whether theory set out in previous sections applies to HCC's unique situation. The case study helps answer "how and why" research questions. In this case, the research objective was to understand the readiness for change to a TQM environment and how that change could be enabled. Since the principal hypothesis, stated in the reviews, is that a positive culture is a catalyst to this type of change, a survey of the hospital staff and employees is essential. As such, the survey methodology was employed, as a source of data collection to help determine what type of culture existed at HCC at the time of the study.

One of the greatest criticisms of the case study method has been the argument that case study research lacks rigor (Yin, 1994). The point is made that there is a danger of biased views that may colour evidence that could influence the outcomes and the findings. In addition, interview and survey questions can be influenced by the perceptions and agendas of those designing them (Druckman et al., 1997). Another concern expressed is that the single case study method is not based on random sampling techniques (Yin, 1984), and as such, cannot be generalized to all hospitals. However, the view taken is that the purpose of the case study is not to achieve statistical generalization, but rather analytical generalization. Statistical generalization would entail multiple repetitions based on random sampling, thus ensuring that the phenomenon is not a result of a coincidence. In the single case study, the purpose of theoretical (analytical) generalization is to expand the analytical instances and in so doing, better understand theories (Yin, 1994). Understanding the role of organizational culture in the change towards a TQM philosophy is key to this study.

5.2 Culture and Measurement Issues

There is debate within the culture literature as to the validity and feasibility of studies of culture (Martin, 2002). The concerns centre upon a researcher attempting to study culture with a flawed measurement instrument. Such debates are ultimately inconclusive because any method advanced has its strengths and weaknesses (Martin, 2002). Techniques to measure culture include qualitative and quantitative methods. Qualitative methods include long-term ethnographies based on participant observation, short-term

qualitative studies, textual and dialogue analysis, and analysis of visual artefacts such as pictures. Quantitative research includes experiments, surveys, archival studies of large data sets, and content analysis (counts of categories of qualitative data) (Martin, 2002). Critiques of qualitative data include comments that it lacks rigour and that the language should be more neopositivistic in nature. That is to say, it should use a more empirical approach with language such as "the data proves that ...". Quantitative methodology has been criticized for being narrow, dry, and restrictive of the kinds of ideas that could have been explored. However, Martin (2002) considers this dichotomy oversimplified to be of use for the range of methods used in organizational studies of culture and recommends a hybrid method that includes elements of both qualitative and quantitative methods. The criteria used to judge the quality of a cultural study should include attributes used by quantitative research, such as large sample size and measures of reliability and validity. Other criteria used to study culture at an organization should include considerations such as a detailed description of the organization, its environments, and insight from its members to better build an understanding of the subject. As detailed in the previous discussion on the requirements for a sound Case Study methodology, this thesis takes the position that a hybrid approach is more suited to understanding the culture at HCC. Given these considerations, the following section outlines the methods used to collect data and the approach used to analyze it.

5.3 Data Collection and Analysis

Yin advocated three principles of data collection that increase both the validity and the reliability of the planned results. They are:

1. The use of multiple sources of evidence;
2. The creation of a case study database; and
3. The maintenance of a chain of evidence.

These three principles were employed in this study to raise the reliability and validity of the research. The sources of evidence that were employed were: documentation records (planning reports, annual reports, newsletters, chapters from books, newspapers, management statements, case study notes, web-sites, and advertisement), archival records (organizational records, and organizational charts), interviews, and the implementation of an organizational wide survey. According to Yin, (1994) using multiple sources of evidence benefits from convergent lines of inquiry, thereby increasing the validity of the findings of the study. Finally, by outlining all the steps taken to obtain and analyse the data, a chain of evidence was created so that future researchers could see how the conclusions were drawn throughout the completion of this study.

The following sections detail the organization used in the study, the development of the questionnaire used to measure culture and the time line during which the events were undertaken.

5.3.1 Chain of events, Project timeline

Once the hospital had determined it required external resources to help understand whether the organization was ready for change, it contacted the DSMIS university department and a research team was created to accomplish the project. The following points outline the major tasks completed in the completion of the study:

- Sept. 1995 - Research kick-off meeting
- January 1996- Review of questions from various sources to assess their coverage of the different factors in organizational culture.
- Jan, June- 1996 - Series of five Change Management Workshops at the hospital open to all members of the hospital by presenter- Jacques Sauvageau of Shepell Associates, This workshop's objective was to build momentum within the hospital for change.
- April, 1996 - Meeting with research team (professors & COLT team) to review the following:
    - Content validity of questionnaire
    - Review covering letter, (such as confidentiality, Concordia's role as partners)
    - Implementation and administration
    - Sampling strategy
    - Discussion on type of analysis
    - French translation requirements
    - Scheduling of events
    - Relations between the hospital and Concordia University
- May 1st, 1996; Revision of questionnaire
    - Grouping of questions such as separating boss and co-worker questions;
    - Spacing, choice of words;
    - Reordering of certain questions;
    - Spellings/ punctuation/ style/ rewordings;
    - Clarifications;
    - Improvement of demographic items (groupings, revising scales); and
    - Data entry issues.
- May 1996 – Translation of questionnaire

- June 1996 - Pre-test conducted with n=13 (staff members (nurse, auditory specialist, education, middle management, upper management- Dir. Human Resources) physicians, external (pharmacological)
- June 1996 - Marketing initiated, with introduction of culture at the hospital, via inserts in pay-stub mailings
- May - June 1996 - Communications to hospital employees and staff via Newsletter article- "How do you feel about your work" that communicated upcoming organizational culture survey in
- June 1996 - Printing of survey
- July 1996 - Questionnaire implementation
- September 1996 - Data Entry
- October-November, 1996 - Data analysis
- December, 1996 - Presentation of summary findings
- May 1997 - Formal presentation of data to upper management and hospital staff

Given this chain of events, the subsequent paragraphs describe in greater detail the organization under study. Given that the data was collected in 1996, the literature on culture and TQM subsequently did not have an influence on the questions included in the survey instrument. However, a review of more recent literature upholds the relevance of this research as identified in table 1 and table 4 (Chassin, Galvin (1998); Cole (1999); Crain and Crain (2000); Dory and Schier (2002); Hanes (2002)).

5.3.2 Organizational Background

The organization selected for our study is a medium sized 300-bed community hospital in Montreal, identified as HCC throughout this document. Given the readily available access to the organization, the willingness of management to share organizational information, and the existing environmental situation, HCC was an ideal candidate for this study (refer to sections 1.1, 2.1.2, 2.1.3 for more detail). The total headcount at HCC at that time of the study, (1996-1997), consisted of 8 senior managers, 45 middle managers (cadre) and approximately 1,700 employees.

Administrative Structure

An organization is shaped by several factors including the external environment and its own internal setting. Organizational structure has an impact that determines the culture and groupings of activities as well as it dictates how resources will be allocated and how objectives and policies will be established (Thompson & Strickland, 1996). HCC's corporate activity is functional in form with the organization structured by departments e.g., Medicine, Surgery, Paediatrics, and Obstetrics. Refer to Appendix 4 for the organizational chart. Departments were created according to the type of service they delivered (e.g. Geriatrics was separate from Neurology since the diagnoses were different). The medical departments manage the activities of health care personnel and provide a structure for grouping patients with similar illness. These departments do not integrate with the corporate support services, including human resources, finance, nursing, and patient-services. Therefore, there is a low need for horizontal coordination, such that the departments are working in silos. Senior management executives hold

essential administrative positions and the authority and final decision making is centralized. Resource distribution is within the organizational functional form.

There was a predisposition and a commitment on behalf of the COLT for plans to restructure from a "typical" functional organizational structure to a more "process-oriented" functional organizational structure. The functional form is appropriate when the environment is stable, when there are only a few product lines, and when the technology is routine (Thompson & Strickland, 1996). However, there are several weaknesses associated with the form that includes slow response to the rapid changes in the health care system due to the centralized decisions, a restricted or narrow view of organizational goals, low level of innovation, poor horizontal coordination or communication, and hierarchy overload.

Once the guidelines of the study were established, the next steps involved the reasoning and the selection of the approach. The following section outlines the theory that will be used as the framework in determining the key questions posed earlier.

5.4 THEORETICAL FRAMEWORK

Cooke & Szumal, (1993) state that an organization with a *constructive* culture will be more conducive to the changes required to successfully adapt to a TQM structure, as compared to an organization that fosters features of an *unconstructive* culture.

Considering that an organization has selected a TQM structure, the questions of interest may be:

- What are the enablers of change?
- How does organizational culture play an important part in bringing about organizational change?
- What particular type of culture is essential for a successful transformation in a health care organization?

Both the organizational culture and the TQM literature have emphasized the importance of developing and fostering a healthy culture. The drawbacks of not considering culture as an important factor can lead to major setbacks, such as the failure of the organization to adapt to the required change. Establishing control over organizational culture is vital for any organization, especially one facing change. Any organization considering change should have knowledge of their existing culture before any intervention is considered. Since the organization selected for the study, like all other health care organizations in Montreal, was forced to adapt to external change, an important part of our thesis will deal with the measurement of culture and whether that culture accommodates a TQM philosophy. The thesis is seeking to illustrate that a TQM system of management is essential in order to enable the organization to sustain the level of service delivery and guarantee improvement of quality of service under conditions of severe resource constraints. It is argued that to successfully institute a TQM system, it is important to have an organizational culture that would be conducive to such a system.

5.4.1 Themes Common to TQM and Organizational Culture

Based on the literature presented thus far, there are certain themes that are common to culture and quality management philosophies (Hall & Norburn, 1989). The boundary between TQM and culture is fuzzy. Several TQM related themes contain dimensions and elements that may be interpreted as belonging to organizational culture or climate (Zeitz et al., 1997). It has also been argued that the essence of TQM is culture change and that TQM practices are merely tools for cultural transformation (Flood, 1993). Zeitz et al., (1997) distinguish TQM from culture, with TQM centring on practices that are formal, behavioural, and programmatic, while they view culture as attitudes, beliefs, and situational interactions. However, to successfully implement TQM, it is important to have a culture in place that is in line with change and that promotes and encourages TQM principles. Table 4 presents a collection of cultural themes that support TQM dimensions.

Table 4 - Culture Dimensions and Authors

Authors	Communication	Conflict Resolution	Empowerment	Innovation	Job Challenge	Commitment	Rewards	Clarity of Role Expectations	Social Cohesion	Trust
Barry (1991)	x		x			x				
Carr and Littman (1990)	x		x	x		x	x		x	x
Crosby (1979)	x			x						x
Deans and Evans (1994)	x	x	x	x	x	x	x			x
Deming (1986)					x		x	x		x
Hunt (1992)	x		x	x		x			x	x
Juran (1995)	x		x				x			x
Lawler, Mohrman, and Ledford (1995)	x		x	x			x			
McMillan (1989)	x	x	x		x	x			x	x
Ross (1993)	x		x		x	x				
Schmidt and Finnegan (1992)	x		x		x		x		x	x
Scholtes (1998)	x	x	x			x			x	
Denison (1996)	x		x		x		x	x	x	
Hofstede (1984)		x	x							
Litwin and Stringer (1968)		x	x	x		x	x	x	x	
O'Reilley, Chatman, and Caldwell (1991)				x						x
Payne and Mansfield (1973)	x	x	x	x	x	x		x	x	
Weatherly and Beach (1994)	x		x	x		x	x			x
Cole (1999)	x		x	x		x	x			
Ahire et al., (1996)	x		x			x	x	x	x	x
Rao et al., (1999)	x		x			x		x		

These cultural themes, as referenced in the literature, seek to support TQM strategy implementations. One of the goals of this paper is to review the culture literature that supported the TQM philosophy. The following themes are recognized by the research literature. They were compiled following a meta-analysis of the existing empirically tested literature, and serves to validate the methodology used in this paper, which

includes these variables in its analysis. Table 5 brings together themes derived from the TQM dimensions identified in a literature review presented in Table 1 and the Cultural dimensions presented in Table 4:

Table 5 - Common themes in TQM and Organizational Culture

Common themes	Explanations
Communication	Effective communication between upper management and employees.
Empowerment	Enabling employees to take part in defining the way they do their work. This includes concepts such as participatory decision-making.
Trust	The establishment of trust between coworkers, and between managers and employees. Perception of equity and knowing that evaluations are fair.
Innovation	A culture where new ideas concerning work methods are supported.
Continuous improvement	An environment where innovation and improvement at the personal and job level. Learning is encouraged.
Social cohesion	The quality of the relationships between employees and their superiors, whether there is credibility within the relationships, or competition. This is fostered by teamwork, and effective conflict resolution.
Organizational commitment	The extent to which employees identify with the organization. This can be considered the internalizing of quality efforts, which include the importance of customer focus to the organization.
Clear role expectations	Monitoring and accomplishing realistic job expectations.
Job Challenge	Accomplishing realistic but challenging goals.

For the purpose of this study, these themes will be considered as part of a set of hypotheses and research questions that are basis for the construction of a measurement tool that will be developed, and which will be used for the critical analysis portion of the paper. The following paragraphs review the dimensions outlined in the table above and discuss their associated factors.

5.4.1.1 Shared Values and organization commitment

Most of the research conducted today emphasizes the importance of a set of corporate values that are shared throughout the organization. It is generally hypothesized that management is aware of the importance of values, seeks to align them with the overall strategy of the organization, and tries to reward those values to encourage them. Successful application of TQM includes shared values (Crosby, 1979; Dean & Evans, 1994; Hunt, 1992; McMillan 1989; Ross, 1993; Scholtes 1988; Ahire et al., 1996; Rao et al., 1999). These values may also be used to assess the strength and pervasiveness of the corporate culture (Barney, 1986; Hall & Norburn, 1989; Gordon & DiTomasio, 1992). Organizational commitment is the extent to which the employees identify with the organization's interests. Employees need to be committed to improving the organization personally (Deming, 1986). A quality culture cannot be adequately sustained only through a system of rewards and punishments.

5.4.1.2 Customer Orientation

The TQM literature clearly states that an organization's "raison d'être" is to serve its customers (Deming, 1986). Therefore, it is imperative that the organization be geared toward satisfying the needs and expectations of their customers in order to maintain their strategic edge (Peters & Waterman, 1982; Deming, 1986). Such an aligned culture normally identifies with a strong customer orientation. Organizations that are close to their external customers focus on customer service and satisfaction. Thus, it can be hypothesized that by staying close to one's customer, the organization can obtain timely market information, joint product development activities, and intense brand loyalties.

These benefits result in higher sales and increased margins, and have a direct impact on financial returns (Peters & Waterman, 1982). Within the health care context, this could translate into more appropriate care, greater efficiency, and improved service and outcomes.

5.4.1.3 Innovation and Creativity

Research has stressed the importance of a firm's innovative stance, which is especially important in today's ever-changing environment (Peters & Waterman, 1982). Innovation in culture must both be expected and fostered. Individuals should be encouraged to take risks, and do so without fear of repercussions or failure (Deming, 1986). Non-conformity and freedom from oppressive and limiting routines, procedures, and bureaucracy are also considered as hallmarks of the innovative culture within the organization.

5.4.1.4 Empowerment, teamwork, positive work environment, and establishing an environment of trust

The importance of people in the organizational culture is paramount. The effective management of human resources is an important component for strategic success (Crosby, 1979). Human resources are normally difficult for an organization to manage, and improvements are not as black and white, nor as immediate as other financial or accounting controls. Nonetheless, the pay-off is potentially long-term and large, and a well managed and people focused (as opposed to task focused) culture can be an organization's best protection from difficult times (Barney, 1986). Empowering employees to make time sensitive critical decisions, involving employees when decisions are being made, considering equity issues in the workplace, encouraging learning and

growth as part of the culture, and promoting teamwork are themes that support and enhance the human potential of the organization (Deming, 1986; Crosby, 1979; Block 1986; Imai, 1986)

Organizations that are successful at obtaining productivity through their employees typically have a culture that supports and values the worth of the worker. Firms lacking this supportive culture fail at maximizing their productivity (Barney, 1986).

5.4.1.5 Leadership, management style/ relationships between employees /equity

Strong cultures have been associated with a decentralized corporate structure (Cooke & Rousseau, 1988). A decentralized corporate structure is one where decisions are made at a team level (Cole, 1999; Ahire et al. 1996). Active participation of all levels of the organization in the decision making process is key (Cooke & Rousseau, 1988). It is hypothesized that for the organization to successfully change, it must have leadership that is committed to change, that inspires confidence, and that is able to effectively communicate the reasons for change, as well as a leadership that understands the internal and external barriers to change and is capable of raising the threshold of change. To achieve this, leaders need timely access to different measures of internal and external performance (Whalen & Raheem, 1994).

5.4.1.6 Communication / Decision making conflict resolution

Good communication between management and employees is a pre-requisite for the implementation of a TQM program (Zeitz, et. al., 1997). The decentralization of decision-making is consistent with a trend towards informality (less bureaucratic, less

hierarchical), which is characterized by open and honest communication (Cooke & Rousseau, 1988). It is vital for the successful organization to have credible, timely, and effective communication channels open both vertically and horizontally within the organization (Hall & Norburn, 1989). Trust between management and employees (Deming's (1986) concept of *driving out fear*) is considered a core feature. Both, organizational cohesion, which is fostered by teamwork, and effective conflict resolution all promote a culture that is in line with TQM philosophy (Zeitz, et al., 1997).

These themes, common to both the TQM and the culture literature, provide the basis for research and examination of the extent to which they are present at HCC. These themes will be used to assess the type of culture that exists. Furthermore, they will be used to determine the extent to which this culture has enabled HCC to implement a quality environment, and whether this has allowed it to adapt to major change. That is, whether the organization has been sensitive and responsive to external changes and whether it has been able to provide continuous improvements in the provision of health care while reducing costs. As presented in earlier sections, the purpose of the research is to determine whether HCC represents an organizational model in which the provision of health care services is based on a structure and culture that integrates customers to continuously improve the quality of the services delivered, while at the same time, lowering real costs.

The intention is to examine whether the organization has developed a pattern of behaviour, which would enable it to cope with external adaptation and internal integration as required by the TQM philosophy previously summarized.

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In order to conduct these analyses, it is important to have a tool to measure organizational culture. Having measured this culture and determined the type of culture, the objective will be to examine the results to see whether the type of culture supports or hinders the TQM approach. Furthermore, an assessment will be completed to determine whether the presence or absence of a TQM environment has enabled change within the organization as an effective response to changes in the external environment.

As part of the research objectives, the following section reviews the types of survey instruments that can be used to measure culture within an organization.

5.5 MEASURING CULTURE

There are several survey methods used to measure culture. However, the following are the three types of measurement models generally used (Hall & Norburn, 1989):

- Longitudinal in-depth surveys;
- Climate surveys; and
- Questionnaires.

5.5.1 Longitudinal

This is the traditionally method to measure culture and is based on in-depth internal examinations of the organization (Hall & Norburn, 1989). This approach involves the direct observation of group behaviour and decision-making using focus groups to discuss values, and obtaining longitudinal validation of the values by observing the organization at work over an extended period time. These methods are very helpful in observing the organization while it is in a state of flux as a response to the changing environment (Hall & Norburn, 1989).

5.5.2 Organizational Climate Surveys

A climate survey measures the strength and infers the existence of a culture through observed responses that are closer to the surface (thus more observable, objective-oriented, and readily available, see Figure 1) of the organization (Rousseau, 1990) Historically climate surveys dealt with the quantitative side, where generalizations across social settings were the primary objectives of research. However, culture surveys require qualitative methods and an awareness of the unique aspects of individual social settings. For example, within the continuum of culture-bearing elements, it would be classified as *deep*.

While culture studies emphasized the underlying assumptions and the insider's view of the organization, climate research typically highlighted the organizational member's perception of observable practices and procedures (Denison, 1996). However, as

revealed in the literature (Cooke & Rousseau, 1988) cultural studies have begun to follow climate research methodologies, and both climate and cultural studies have begun to integrate quantitative and qualitative methods, and theoretical constructs, to enrich future research by complementing each other (Denison, 1996).

For this study, we need a measure of culture that will enable us to view the *superficial* and the *deep* aspects of cultural bearing elements. This brings us to the method of cultural questionnaires

5.5.2.1 Cultural Questionnaires

Cultural questionnaires are one of the more popular methods of gauging culture, due to its relative ease of implementation and the fact that it can be tested for reliability (Hall & Norburn, 1989). Questionnaires seek to measure culture through measuring variables that identify different characteristics of culture (Cooke &Rousseau, 1988). Cultural questionnaires seek to study different dimensions of the various factors that make up the culture in the organization. There are certain factors that are key and are the focus of most cultural questionnaires (Cooke & Rousseau, 1988). A cultural questionnaire will be developed to measure the health care organization that had been selected of the hospital.

5.5.2.2 Development of the questionnaire

The first step in the construction of the questionnaire was to observe and use what other researchers and practitioners had done in the past. In practice, research tells us that instruments are usually based on what people have considered being relevant, important, and discriminating (Streiner & Norman, 1995). Thus, other questionnaires are good

sources of information. Other reasons for re-using items from other questionnaires includes (Streiner & Norman, 1995):

- Saves work and the necessity of constructing new items;
- Usually has gone through repeated exercises and testing;
- Usually the are statistically and psychometrically sound; and
- There are only a limited number of ways to ask a question to get information about a specific problem.

Some of the problems with re-using questionnaire items include the following (Streiner & Norman, 1995):

- Outdated terminology which may no longer be relevant in current environment; and
- Items may not be relevant to what is required.

When reviewing existing questionnaires, the culture bearing concepts as defined in Table 5 - Common themes in TQM and Organizational Culture were deemed important for selecting the items to be included in the survey instrument. For convenience the themes are listed below:

- Communication;
- Empowerment;
- Trust;
- Innovation
- Continuous improvement;
- Social cohesion;
- Organizational commitment;
- Clear role expectations; and

- Job Challenge;

Several types of cultural questionnaires exist in the literature. Several available models were observed and two groups of surveys were reviewed and assessed for use. One set consisted of questionnaires that reportedly measured behavioural norms as expectations about how members should behave and interact with each other. These are the organizational culture inventory (OCI) (Cooke & Lafferty, 1989), and the Culture Gap Survey (CGS) (Kilman and Saxton, 1983). Another set of questionnaires, which attempted to measure corporate values as reported priorities or preferences, are those included the Organizational Beliefs Questionnaire (OBQ) developed by Sashkin (1984), and the Corporate Culture Survey developed by Glaser (1983). The following are summaries of the questionnaires that were reviewed:

5.5.2.3 Measuring behavioural norms:

5.5.2.3.1 Organizational Culture inventory (OCI) (Cooke & Lafferty, 1989)

The OCI focuses on behaviours that facilitate adapting to an organization and meeting the expectations of co-workers. It consists of 12 sub-scales:

1. Humanistic
2. Affiliation
3. Achievement
4. Self-Actualization
5. Approval
6. Conventionality
7. Dependence
8. Avoidance
9. Oppositional
10. Power
11. Competitive
12. Perfectionism

There are 120 items in this survey, each one rated on a 1-5 Likert scale. The Cronbach[10] alpha coefficient of internal reliability has been reported to range from .67 to .92 (Cooke & Rousseau, 1988). The validity of the measure was reported to have moderately high levels of within-organization agreement on OCI responses and stable factor solutions across samples (Cooke & Rousseau, 1988). The empirical support for within-organization perceptual agreement validity of the OCI scores was measured by using eta-squared statistics. Cooke and Rousseau (1988) used a sample of 661 respondents (526 members of 18 organizations). The results indicate that there is intra-organizational consensus regarding the culture, i.e., the perceived norms and expectations (refer to Table 6). The level of agreement varies across the cultures and is not very high, but is consistent with what has been found in the literature (James & Sells, 1981). These results suggest that the OCI is measuring organizational-level phenomena, while agreement within organizations is moderate. Cooke and Rousseau (1988) suggest that this finding reflects the fact that the intensity of the cultures of the organizations in this sample varies, in that some organizations have strong cultures, where consensus is high, while other organizations may have relatively weak cultures. In addition, Cooke and Rousseau, 1988 explained that the results might have been affected by horizontal and vertical differences within the organizations.

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[10] Measure of Reliability = subject variability / (subject variability + measurement error)

$$\alpha = \frac{n}{n-1}\left(\frac{1-\sum_{i=1}^{n} Var(Xi)}{Var(T)}\right)$$ where X_i = the score for each item, T = sum of all item scores. *Convention is that the larger the result (sigma), the higher reliability.*

Table 6 - Analysis of Variance for Culture Scales by Organization

Culture	N^2	F	p
Humanistic- Helpful	.12	3.77	.001
Affiliative	.12	3.63	.001
Approval	.10	3.14	.001
Conventional	.08	2.40	.01
Dependence	.13	4.10	.001
Avoidance	.07	2.04	.01
Oppositional	.07	2.12	.01
Power	.06	1.68	.05
Competitive	.12	3.52	.001
Competence/ Perfectionist	.10	3.01	.001
Achievement	.10	3.07	.001
Self-Actualization	.10	3.05	.001

NOTE: Individual N= 506 to 523; organization N=18, (from Cooke & Rousseau, 1988, page 261)

5.5.2.3.2 Culture Gap Survey (CGS) (Kilman and Saxton, 1983)

The CGS was developed to measure behavioural norms. There are four subscales reflecting a 2x2 framework (Technical/Human Concern and Short/Long-Term Orientation), which include:

1. Task support;
2. Task innovation;
3. Social relations; and
4. Personal Freedom.

Test-retest reliabilities (approximately 1 month apart) ranged between .83 to .94. Construct validity was demonstrated by stable four factor solutions across samples (Saxton, 1987).

5.5.2.4 Measuring corporate values

5.5.2.4.1 Organizational Beliefs Questionnaire (OBQ) (Sashkin, 1984)

This 50-item questionnaire, also using the 5-point Likert scale (Strongly Agree to Strongly Disagree) measures organizational values. The inventory has 10 subscales:

1. Work Should Be Fun;
2. Being The Best;
3. Innovation;
4. Attention To Detail;
5. Worth and Value of People;
6. Quality;
7. Communicating to get the Job Done;
8. Growth, Profit, and other indicators of success;
9. Hands-on Management; and
10. Importance of a Shared Philosophy.

The authors chose 50 items to minimize social desirability. For each subscale, one item is stated positively, and other one is stated negatively. In addition, the wording is constructed to make it difficult to determine the item's desirability. Consensual validity is demonstrated by relatively low variances in responses within the organization (Sashkin & Flumer, 1985)

5.5.2.4.2 Corporate Culture Survey (CCS) (Glasser, 1983)

The development of this questionnaire is based on the Deal and Kennedy's (1982) description of culture types and intends to measure organizational values. It consists of 20 items rated on a 5 point Likert scale, from 5 (Strongly Agree) to 1 (Strongly Disagree). The questionnaire consists of four subscales, as follows:

1. Values;
2. Heroes/ Heroines;
3. Tradition/rituals; and
4. Cultural network.

There are no reported coefficients of reliability, or any known demonstration of the questionnaire's validity.

Of the four questionnaires reviewed, the research team found the OCI to be the best measuring culture in the sample institution researched. Although there were many aspects in the other questionnaires that were useful, they were not as comprehensive as the OCI in terms of the coverage of the cultural and TQM themes identified earlier. One of the questionnaires did not have reported coefficients of reliability, or any known demonstration of the questionnaire's validity. Thus, by a process of elimination, the Organizational Cultural Inventory, (OCI) developed by Cooke & Rousseau (1990) seemed to meet most of the criteria discussed. Moreover, this questionnaire had the advantage of being tested for its validity and reliability (Cooke & Szumal, 1993 pp. 1312-1314; Ware et al., 1985).

Even though this questionnaire was closest to the requirements of the research, it was still found necessary to modify the questionnaire to meet the specific requirements of the situation. Particular changes were required:

- To ensure that the language and terms reflected the medical setting, geographical, and socio-economic situation; and
- To expand coverage of questionnaire to address the concept of customer-focused care. To suit the purpose of the study, the OCI model was modified by adding key sections. These new segments were based on specific quality principles and values relating to customer-focused care, i.e., internal and external customers. Emphasis was given to the value of assessing and maintaining satisfaction of both types of customers.

In general, the final questionnaire was developed based on inputs from various sources:

- Research and theory: Quality management, organizational culture, and change management literature
- Expert opinions: COLT team at the hospital, Concordia University professors, members of the hospital, other researchers,
- Observations: In the early stages of the project, the researchers attended several meetings, seminars, workshops, conducted interviews with key people and reviewed relevant documentation (value, mission, and vision statements etc.), in order to get a better understanding of the environment of the hospital and its concerns.

Once the mandate and approach was decided, the research team set out to develop the most appropriate method of assessing the type of culture at HCC. The following section outlines the framework used for the survey instrument implemented at HCC.

5.5.3 Theoretical framework for the design of the OCI questionnaire

The OCI questionnaire was based on the perspective of normative beliefs and shared expectations (Cooke & Szumal, 1993; Cooke & Rousseau, 1988). Norms and expectations define how individuals will deal with their work, and interact with their colleagues in the work place (Cooke & Rousseau, 1988). The resulting behaviour is considered to be an important constituent of organizational culture, as it is influenced by the basic values and assumptions held collectively by the members of the organization.

It is focused on 12 sets of thinking and behavioural styles that might be implicitly or explicitly expected for employees to be a part of the organization (Cooke & Rousseau, 1988). Shared behavioural expectations are measured by the agreement of the respondent with the perceived organizational expectations (Cooke & Rousseau, 1988). When there is a high consensus among organizational members for these normative and shared behavioural expectations, a strong organizational culture and a clear pattern of underlying values and methods of seeing things is indicated (Cooke & Szumal, 1993). Such cultures are considered pervasive and are normally not conducive to change (Hall & Norburn, 1989). The 12 sets of normative beliefs and behavioural expectations can be divided into three major types of organizational cultures (Cooke & Szumal, 1993):

- *Constructive cultures*, where employees are encouraged to deal with each other and work in ways that will help achieve their higher order needs
- *Passive defensive cultures* which are present where members behave and believe they must interact in ways that help preserve their security needs

- *Aggressive defensive cultures* in which employees are expected to aggressively and openly protect their status and security needs in the organization.

5.5.4 The benefits of adaptive (constructive) cultures

As discussed before, in a changing environment, the ability to introduce new strategies and organizational practices is vital to the performance and the very survival of the organization (Thompson & Strickland, 1996). This requires an organization to maintain and promote a culture that helps it to adapt quickly to the demands of the external environment. The current situation in the health care sector is requiring and motivating hospitals to adapt quickly and find ways of meeting the challenges of external change. A proactive behaviour is required to address the changes demanded of the organization as a result of the environmental pressures. This proactive behaviour is dependent upon leaders with vision, and employees who are receptive to risk taking. It requires managers who openly supported innovation (Thompson & Strickland, 1996).

5.5.5 The negative aspects of unconstructive cultures

There are unhealthy cultural characteristics (Thompson & Strickland, 1996) that can negatively affect an organization such as:

- Hostility to change
- Rigidity

5.5.5.1 Hostility to change

This is a negative cultural trait that can plague organizations that must deal with change due to shifts in the external environment, such as changes in the economy, demographics, governmental funding, and policies, etc. Managers who do not value employee behaviours, such as taking initiatives or developing new ideas, may discourage the innovation or other positive behaviours among employees. This trait is usually found in organizations with many hierarchical layers of bureaucracy, where they are accustomed to a stable external environment (Thompson & Strickland, 1996).

5.5.5.2 Rigidity

Another unhealthy characteristic is an excessive emphasis placed on policies and procedures. This characteristic promotes managers who understand structure, systems, budgets, and controls better than vision, strategies, and quality (Thompson & Strickland, 1996). It is very difficult to change problem cultures. Once they have developed as they perpetuate themselves. This phenomenon was identified by Gagliardi (1990) as a characteristic of a negative culture that is caught in a vicious cycle and unable to break out of it. The negative behaviours associated with problem cultures are difficult to change because they are embedded in values, habits, traditions, and the *status quo* (Thompson & Strickland, 1996). For example, rigidity is a negative cultural trait that can plague organizations and makes it difficult for them to deal with issues, such as change due to shifts in the external environment.

This section outlined the implications of negative and positive cultures. Having reviewed the different alternatives to measure culture, the next section will describe the tool in greater detail.

5.6 OCI Model: The 12 Sets of Normative Beliefs

The 12 OCI cultures and their representative factors are grouped into three sections; Constructive, Passive Defensive, and Aggressive Defensive. The 12 sets of normative beliefs and behavioural expectations can be defined by the two major underlying dimensions (Cooke & Szumal, 1993):

- Concern for people versus tasks.
- Fulfillment of higher order needs versus lower order needs.

Constructive Cultures

Achievement: ***An achievement culture characterizes that to do things well and value members who set and accomplish their own goals. Members are expected to set challenging but realistic goals, plan to reach these goals, and pursue them with enthusiasm.***

- Planning realistic, but challenging goals
- Monitoring realistic, but challenging goals
- Accomplishing realistic, but challenging goals
- Empowerment
- Evaluation System
- Conflict resolution
- Supervisor Relations
- Credible Relationship

Self- actualization: ***A self-actualizing culture characterizes organizations that value creativity, quality over quantity, and both task accomplishment and individual growth. Members are encouraged to gain enjoyment from their work, develop themselves, and take on new and interesting activities.***

- Growth T & D

- Innovation
- Accomplishing realistic, but challenging goals
- Empowerment
- Evaluation System
- Conflict Resolution
- Supervisor Relations
- Credible relationship

Humanistic-Encouraging: ***A humanistic-encouraging culture characterizes organizations that are managed in a participative and person-centred way Members are expected to be supportive, constructive, and open to influence in their dealing with one another.***

- Helping others develop
- T & D
- Innovation
- Participative environment
- Empowerment
- Evaluation System
- Conflict Resolution
- Supervisor Relations
- Credible Relationship

Affiliative: ***An affiliative culture characterizes organizations that place a high priority on constructive interpersonal relationships. Members are expected to be friendly, open, and sensitive to the satisfaction of their work group.***

- Friendliness
- Participative environment
- Empowerment
- Evaluation System
- Conflict Resolution
- Supervisor Relationship

Passive-Defensive Cultures

Approval: ***An approval culture describes organizations in which conflicts are avoided and interpersonal relationships are pleasant, at least superficially. Members feel that they should agree with, gain approval of, and are liked by others.***

- Conflict Resolution
- Agree with people
- Please people in authority
- Supervisor relation
- Credible relationships
- Evaluation system

Conventional: ***A conventional culture is descriptive of organizations that are conservative, traditional, and bureaucratically controlled. Members are expected to conform, follow rules, and make a good impression.***

- Conforming to rules
- Participative environment
- Innovation
- Supervisor relations
- Evaluation system
- Empowerment
- Conflict Resolution

Dependent: ***A dependent culture is descriptive of organizations that are hierarchically controlled and non-participative. Centralized decision making in such organizations leads members to do only what they are told and to clear all decisions with superiors.***

- Conforming to rules
- Participative environment
- Innovation
- Supervisor relations
- Credible relationships
- Evaluation system
- Empowerment
- Please people in authority
- Conflict Resolution

Avoidance: ***An avoidance culture characterizes organizations that fail to reward success but nevertheless punish mistakes. The negative reward system leads members to shift responsibilities to others and avoid any possibility of being blamed for mistake.***

- Evaluation system
- Conflict Resolution
- Innovation
- Supervisor relations
- Credible relationships
- Avoidance of responsibility

Aggressive-Defensive Cultures

Oppositional: ***An oppositional culture describes organizations in which confrontation and negativism are rewarded. Members gain status and influences by being critical and thus are reinforced to oppose the ideas of others.***

- Employee antagonism
- Innovation
- Supervisor Relations
- Credible relationships
- Evaluation system

- Conflict Resolution

Power: ***A power culture is descriptive of non-participative organizations structured based on the authority inherent in members' positions. Members believe they will be rewarded for taking charge, controlling subordinates and, at the same time, being responsive to the demands of superiors.***

- Control
- Please people in authority
- Credible relationship
- Supervisor relationships
- Conflict resolution
- Evaluation system

Competitive: ***A competitive culture is one in which winning is valued and members are rewarded for outperforming one another. Members operate in a "win-lose" framework and believe they must work against their peers to be noticed.***

- Competition
- Unrealistic goal-setting
- Credible relationships
- Supervisor relationships
- Conflict resolution
- Evaluation system

Perfectionist: ***A Perfectionist culture characterizes organizations in which perfectionism, persistence, and hard work are valued. Members feel they must avoid any mistake, keep track of everything, and work long hours to attain narrowly defined objectives.***

- Workaholic environment
- Unrealistic goal-setting
- Credible relationships
- Supervisor relationships
- Conflict resolution
- Evaluation system

These cultures and factors are presented in greater detail in Appendix 5. The Appendix includes an identifier following each statement that denotes what the expected results should be when that culture exists within the surveyed organization.

Outlined below are the factors that were used in the questionnaire, their descriptions, and the number of questions used to measure each factor.

Planning realistic, but challenging goals: Planning has been characterized by three separate items that address an individual's foresight and their efforts to develop goals for their job.

Monitoring realistic, but challenging goals: This factor consists of two questions, which provide a picture on an employee's efforts to seek feedback from their boss and their colleagues.

Accomplishing realistic but challenging goals: To measure this factor, two items dealing with the accomplishment of challenging work and the pursuit of excellence have been utilized. Both of these items illustrate employees' efforts in accomplishing their goals.

Empowerment: This factor measures the freedom a person has in setting the pace of their work, as well as the type and amount of work they do. Also, the extent of freedom a person has in determining the policies and procedures for their job is ascertained through this factor. Five items have been utilized to measure empowerment.

Evaluation System: This particular factor has been viewed as a dichotomy. Five questions have been asked to judge whether the evaluation system is fair or unfair. Questions have been asked from both, positive and negative perspectives, as to ascertain the respondent's consistency on this sensitive factor.

Conflict Resolution: Three items have been utilized to measure this factor. Each item relates to a specific manner in which a conflict can be resolved.

Supervisor Relations: The relationship between an employee and their boss is measured through three questions that deal with the degree of strictness, friendliness and availability of the boss.

Credible Relationships: This factor provides data on open and honest communication between employees and their box and colleagues. Two items deal with openness and honesty between an employee an their co-worker, with the other two items provide data about the openness and honesty between an employee an their boss.

Growth/T & D (Continuous Improvement): Four items measure this factor from two viewpoints. Two questions measure an employee's effort to train them for the current job, whereas the other two questions provide data on the person's actions to develop themselves for future jobs. These questions are vital, as the current hospital environment demands staff to do well in their current job, but also be ready to take on other responsibility.

Innovation: This factor looks at the creativity and risk taking behaviour of employees. Seven questions have been utilized, due to the sensitive nature of the topic. Questions have been asked from both, positive and negative perspectives, as to ascertain the internal consistency of the respondent's answers.

Helping others develop: Five items have been asked in the questionnaire to measure this factor. Three of the five items provide data about an individual's effort to train & develop their colleagues. These questions deal with mentoring, criticizing, and helping behaviours. The remaining two items ask about a person's effort to encourage their colleagues to be more innovative.

Participative Environment: This factor is characterized by two items on an individual's impact on the decision making of their boss and colleagues. Another two question are related to the degree of freedom an individual has in sharing their concerns with their boss and colleagues. These four questions will provide a perspective on the degree of participation within each department.

Friendliness: This factor has been measured through three items that deal with the degree of friendliness an individual shows to their colleagues and others outside of the department.

Agree with People: The tendency of a person to agree with other people has been measured by four questions. The four items are similar to one another, because it would ascertain the internal consistency of the respondent's answers to this sensitivity factor.

Please people in authority: This factor looks at the degree to which a person acts to please people in authority. This factor has been treated similarly to the one above. The

four items providing data on this factor are similar to one another, but this has been necessary to once again, ascertain the internal consistency of the subject's answers.

Conforming to rules: An individual's tendency to conform to the organization's rules has been measured with size items. Three of the six items ask subjects about the degree to which they follow orders. Another two items deal with the importance the subject places on conforming to rules. The sixth item is a general question that would confirm the subject's answers to the other items in this factor.

Avoidance of Responsibility: Avoidance of job responsibility has been characterized by three separate questions. Each question describes a different situation in which an individual can avoid their job responsibility. One item deals with unfamiliar situations, while another item is related to a circumstance in which the individual makes an incorrect decision. The third item looks at avoidance of responsibility when an individual faces a major work related decision.

Employee antagonism: This factor measures the amount of antagonism that exists between co-workers. Three of the five items are related to the individual's efforts to oppose the ideas of the co-workers. The other two questions deal with a person's tendency to point out the other individual's personal and work related flaws.

Control: This factor measures the degree to which an individual is domineering in their job. Four of seven items provide information about the importance an individual places

on possessing authority. Another two items provide a picture of the person's tendency to negatively challenge an individual's ideas.

Competition: This factor measures the degree to which an individual perceives their job as a contest. Three of the seven items look at the importance an individual gives to making a good impression in front of their co-workers. Another two questions measure the importance a person gives to being correct in any organizational situation. Finally, the remaining two items are general question that directly ask the respondent whether they perceive their job as a contest.

Unrealistic goal setting: Two questions are utilized to measure this factor. One item looks at unrealistic goal setting from the perspective of the department, while the other question asks the respondent the degree to which they have unrealistic goals for their jobs.

Workaholic environment: Questions within this factor provide data on the extent to which a person endures and persists at their job. Three of the seven items measure the degree to which an individual exhibits perfectionist behaviour. The remaining four questions look directly at a person's persistence towards doing their job.

In addition, the questionnaire also addressed the following concepts, which were related to the above culture factures:

Employee Satisfaction: This is an overall indicator of an individual's feelings toward their job and organization (Johns, 1993). Within the questionnaire, three items have been utilized to measure this factor. Two questions deal with the satisfaction that an individual gains from the organization, while the remaining items looks at an individual's satisfaction with their job.

Customer-Orientation: This concept deals with the organization's focus on customer satisfaction (National Quality Institute, 1995). In general, the questions within the survey have been related to five aspects of customer satisfaction. They are 1) A process to obtain satisfaction information, 2) Quality improvements due to feedback from the customers, 3) Use of customer needs to determine job and departmental standards, 4) A process to respond to customer complaints, and 5) Staff's commitment towards customer satisfaction. In total, 10 items measure this factor. Five of the questions deal with the patient as a customer, while the rest address the internal staff as customers.

Readiness for Change: The looks at the propensity of an organization to adapt to new situations (Peters, 1995). Three questions address this factor by measuring an individual's ability to adjust to new jobs, as well as changes to organizational policies.

5.6.1 Validity and Reliability of customized questionnaire

Of the 106-attitudinal questions, the research team (Razvi, et al.1997) had selected and further analyzed 50 questions belonging to 12 factors, which were found to have a large impact upon the organization's culture. These factors dealt with issues such as

innovation, employee satisfaction, relations with co-workers and superiors, people focus, individual initiative, communication, empowerment and monitoring, planning and setting goals. All the responses to the questions were found to be significant from the neutral midpoint (two-tailed $p < .05$); therefore, responses above or below the midpoint were considered as indications of agreement, or disagreement with the question.

To assess the validity and reliability of these questions, several exploratory factor analyses[11] were conducted (Razvi et al. 1997). The results were examined in terms of chi-square goodness of fit, magnitude of residual and interpretability of the factors. A solution with 10 factors provided the most interpretable results. The chi-square goodness of fit was found to be significant (1498.215 with 730 degrees of freedom), however, the ratio of the chi-square to the degrees of freedom is less than three (2.05), which is considered good and acceptable (Hayduk, 1988).

Overall, the residuals were acceptable, about 95% of the residuals were less than 0.05. The most meaningful results were provided by the Maximum Likelihood method. The Oblimin Kaiser Normalization rotation was used. Of the twelve initial factors, ten were confirmed via the procedures, and consequently, of the original fifty questions, seven were removed for having small factor loadings (less than .3). Table 7 provides factor-loading estimates along with the coefficient alpha as a measure of reliability index for the factors. These values are all within the acceptable range showing that the individual

[11] Factor analytic techniques seek to reduce the number of variables and detect a structure in the relationship between the variables to classify them. Definitive testing of hypothesized factor structures for the set of variables is done via confirmatory factor analysis using techniques such as Structural Equation Modeling, which is out of the scope of this current study.

items are good indicators of their corresponding factors. These factors are labelled: "learning" (as new knowledge and skills are concerned), "Supervisor relationship", "Employee satisfaction", "Empowerment", "Conforming", "Monitoring and accomplishing realistic goals", "Co-worker relationships", "Planning work goals", "Task versus people focus", and "Individual initiatives".

Table 7 - Results of Factor Analysis

Factors and Cronbach Alphas	Questionnaire items (variables)	Factor loading
Learning α= 0.8522	Learning for job Learning for other jobs Staying up to date Finding new ways to work	0.791 0.733 0.772 0.495
Supervisor Relationship α = 0.8571	Friendly Easy to talk to Gives information Gives credible information Follows the rules Listens to concerns	0.896 0.928 0.388 0.454 0.414 0.456
Employee Satisfaction α = 0.7666	Best place to work Proud of organization Satisfaction with work situation Like type of job Organization doing enough for survival	0.891 0.869 0.595 0.381 0.385
Empowerment α = 0.7684	Control over job content Control over quotas Control over pace of work	0.868 0.692 0.578
Conforming α = 0.7296	Rules preceding ideas Rules preceding people Sticking with habits Fitting into the mould Wait for others to take action Maintaining traditions	0.749 0.658 0.577 0.583 0.398 0.336
Monitoring/Accomplishing Goals α = 0.766	Seek co-worker feedback Seek supervisory feedback Accomplish challenging tasks	0.910 0.709 0.328
Co-worker relationships α = 0.6884	Co-worker gives information Co-worker is credible	0.831 0.679

Factors and Cronbach Alphas	Questionnaire items (variables)	Factor loading
Planning goals $\alpha = 0.7841$	Planning challenging goals Enthusiasm Planning ahead Explore alternatives Pursuit of excellence	0.545 0.629 0.455 0.377 0.377
Task vs. People focus $\alpha = 0.6248$	Avoid issues and problems Following incorrect directives Solve problems constructively Show concern for others Share concerns with others	-0.463 -0.509 0.341 0.345 0.311
Individual Initiative $\alpha = 0.7049$	Making procedures Handling unusual situations Original input Try new ideas in work Nonconformity Risk taking	0.478 0.404 0.466 0.370 0.320 0.289

Scale: 1=Strongly Agree to 5= Strongly Disagree. Source: (Razvi, S. et al. 1997)

These results provided evidence that the questionnaire was based on factors that were statistically valid and reliable.

5.7 QUESTIONNAIRE DEVELOPMENT

A customized form of the OCI was constructed with the help of the research team consisting of the researchers, Concordia professors, and the COLT team at HCC. There were 26 distinct factors to identify the culture. The final questionnaire had 106 questions that dealt with the assessments of cultural expectation, 10 questions that assessed customer focus, and nine that were demographic items.

Table 8 - 5 point Likert scale (Likert, 1932)[12]

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1	2	3	4	5

The remaining demographic items provided the participants with a forced choice selection (e.g. 1=Male, 0=Female). The first 116-attitudinal questions were measured on the five point Likert scale. The questions were geared to measure norms and values that covered beliefs and behaviours. Since norms and values are not visible, they were measured indirectly (Rousseau, 1990). In order to determine whether communication was open and honest, behavioural questions were asked that corresponded to this underlying theme. The questionnaire was grouped into eight different sections.

1. Relationships;
2. Work atmosphere;
3. Achievement at work;
4. Performance evaluation;
5. Coping with change;
6. Patient satisfaction;
7. Hospital staff satisfaction; and
8. Demographics.

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[12] Scale for attitude measurement. Structurally, this attitude scale is anchored by two extremes, ranging from favourable to unfavourable, with a neutral midpoint for each statement (Likert 1932). The scale's values range from 1 to 5; the mid-point of the scale is reserved to reflect an undecided position.

The first five sections were related to organizational culture, as well as employee satisfaction and readiness for change. The last three sections were based on items related to customer (internal and external) satisfaction and demographics. At the end of the questionnaire, a "comments" section was designed to provide participants the ability for feedback.

Face validity testing was conducted with the professors and the COLT team. Since most of the questions came from the OCI, they were already tested and proven to have passed validity and reliability tests (Rousseau, 1990). Nevertheless, a pre-test of the modified questionnaire was conducted to further assess the face validity and appropriateness of the format of the questionnaire. Thirteen individuals, including staff members, medical professionals, upper-management, and one external individual were given the questionnaire to provide a cross-sectional perspective on the questionnaire. Each was asked to complete the questionnaire, and note any ambiguities. Once the pre-test of the questionnaire was completed, an interview was conducted with each individual. The interviews focused on four aspects of the survey:

- The covering letter;
- Instructions;
- Intended meaning of the items; and
- Type setting and syntax.

All the participants were very cooperative and useful information was gathered. Most of the improvements were related to the rephrasing the syntax with the goal to provide an instrument, which would be of more relevance to the survey participants at the hospital.

5.7.1 Data Collection

The survey was translated into French through a professional service. As a small percentage of the employees did not list English or French as their first language, interpreters were assigned to verbally translate the questionnaire for them. The departmental heads were enlisted to distribute the survey and ensure its completion by their staff. The respondents filled up the questionnaire at their place of work in groups or in alone in their spare time. They were not required to identify themselves by name on the questionnaire. They were informed that the HR department and Concordia University were interested in doing a "staff survey" and that their help was required. Additionally, they were advised that a report would be written by researchers at Concordia University and that the report would be made available to them. The questionnaires took between 40-45 minutes to complete.

A total population survey approach was taken in that the entire population of the hospital, medical and non-medical staff was surveyed to assess the culture at the hospital. The intent was to limit the problem of non-response. This was made possible with the help of the COLT team who facilitated full cooperation of upper management, staff, and medical professionals. The response rate was 57%, which is considered a high level of response. Very few questionnaires were incomplete or spoiled and no reports were received

concerning the subjects' inability to understand the instructions. As a follow-up, organization members received a written report on the survey findings, which was disseminated to the participants. Once the questionnaire forms were completed and returned, a professional firm entered the data. Following the data entry, the raw data was verified and summarized using SPSS software. This information will be summarized and presented in the next segment, the results section.

In summary, the methodology employed in this study consisted of various tools and approaches. In line with the single Case Study method (Yin, 1994), the research was conducted based on several data sources:

- Interview Transcripts, (Appendix 6)
- Environmental scan (Appendix 7)
- Survey (Appendix 8)

A structured questionnaire was developed to measure organizational culture. The 5-point Likert scale indicates the extent to which a described behaviour is viewed as a characteristic of the organization. This questionnaire was distributed to all members of the hospital. For data convergence purposes, information gathered from the interviews with members of HCC and existing documentation will be used to corroborate the findings of the questionnaire. Transcripts of these meetings can be found in the appendices. A detailed examination and summarization of these various sources of data will be presented in the discussion section.

Having established the tools and methodology for this project, the following chapter will outline the results of the survey tool.

6 RESULTS

This segment focuses on presenting the results of the organizational culture questionnaire completed by the members of HCC. The response rate for the questionnaire was 57% (760 responses, people on vacation were not included) with the physician response rate only 7.5% (15 responses out of a possible 200).

A test was conducted for the presence of each of the 12 cultures to assess whether the type of culture present at the hospital was positive or negative in nature. A culture consists of a distinct set of factors, each of which requires its own set of questions. The measurement of the amount of support for any given culture was determined by averaging all the responses for the questions that make up each of the dimensions/factors. The factor scores were then aggregated, and the average taken. It was this average that was used as a measure of the culture. This process was repeated to derive measures of the various cultures.

To illustrate this, the factor Employee Satisfaction was measured by averaging the means of the five questions in the table below to derive an average score of 2.386 for that factor/dimension. On a one to five scale, this means that the result indicates that there tends to be a reasonable degree of satisfaction among the employees.

Table 9 - Factors calculated

	Cultural characteristics	Actual Results							
		Total Population n=760				Physician group n=15			
		mean[13]	stddev[14]	z-test[15]	sig[16]	mean	stddev	t-test[17]	sig
Culture	**III. Humanistic Encouraging**	2.52	0.41	-32.27	*	2.43	0.46	-4.80	*
Factor	**Employee Satisfaction:**	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Question	53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
Question	54. I am proud to tell others that I am part of HCC. (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
Question	55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
Question	61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
Question	104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*

In other words, the average of the questions that made up the factors was taken, and then the average of these factors, which constituted the culture, was taken. This process was repeated to calculate each culture. The score with the strongest agreement level was represented by the lowest number (Likert scale, 1= Strongly Agree, 5= Strongly Disagree) and determined which culture had the strongest support in the institution (see Table 10). For the detail results of the Cultural Inventory, refer to Appendix 12. In order to assist the reader in understanding the data in the appendix, the following example is

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[13] mean: Arithmetic mean is a value that is computed by dividing the sum of a values by the number of values (n).

[14] stddev: Standard Deviation measures of dispersion in a frequency distribution, equal to the square root of the mean of the squares of the deviations from the arithmetic mean of the distribution.

[15] z-test: A measurement of normal deviate to determine randomness of the population. The z test provides that proportion of the total area under the normal distribution curve that lies outside of the z value.

[16] sig: An asterisk in this column indicates that the z-test or the t-test values lies within the acceptable range (z-test = 1.96, t-test = 2.15) therefore is significant.

[17] t-test: It is similar to the z-test but is necessary when the population (n) is insufficient.

given. For this example, in order to understand the layout of the table and its construction, it is important to consider that each culture consists of a number of factors. For the culture titled, *Humanistic Encouraging*, the factors are as listed:

- Helping others develop (Supportive)
- T & D (Supportive)
- Innovation (Supportive)
- Participative environment (High)
- Empowerment (High)
- Evaluation System (Fair)
- Conflict Resolution (Constructive)
- Supervisor Relations (High)
- Credible Relationship (High)
- Employee Satisfaction (High)
- Readiness for Change (High)

The factors are calculated by getting the means of each of the factor's questions. The following example (Table 10) gives an illustration of the layout of the appendix of culture measurement. The example includes responses for total population (n=760) and for the physician responses (n=15). The mean and the standard deviations as a measure of central tendency and variation are included.

Table 10 - Example of calculation of culture

	Cultural characteristics	Actual Results							
		Total Population n=760				Physician group n=15			
		mean	stddev	z-test	sig	mean	stddev	t-test	sig
Culture	**III. Humanistic Encouraging**	2.52	0.41	-32.27	*	2.43	0.46	-4.80	*
Factor	**Helping others develop: (Positive)******	2.57	0.50	-23.71	*	2.51	0.99	-1.92	
Factor	**T & D:******	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
Question	10. Help people in my department improve their job skills. (Agree)	2.04	0.89	-29.74	*	2.13	0.99	-3.40	*
Question	19. Criticize others constructively in my department to improve their job performance. (Agree)	2.83	1.10	-4.26	*	2.40	0.99	-2.35	*
Question	46. Act as a mentor or coach for people in my department. (Agree)	2.65	1.08	-8.93	*	2.66	1.20	-1.10	
Factor	**Supporting Innovation: (Positive)******	2.69	0.92	-9.29	*	2.63	0.93	-1.54	
Question	45. Help others in my department to find different ways to do their jobs. (Agree)	2.58	1.03	-11.24	*	2.46	1.10	-1.90	
Question	47.Keep an "open mind" about the new ideas of others. (Agree)	1.81	0.68	-48.24	*	1.80	0.56	-8.30	*
Question	91. Find new ways of doing my work. (Agree)	2.39	0.93	-18.08	*	2.46	1.10	-1.90	
Question	92. Take risks. (Agree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
Question	94. Resist conformity. (Agree)	3.44	0.86	14.10	*	3.40	0.99	1.56	
Question	95. Come up with original ideas at meetings. (Agree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
Question	97. Generate and implement new ideas in my department. (Agree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
Question	98. I wait for others before taking actions in a new situation. (Disagree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
Question	103. The usual way is the best way to do things. (Disagree)	3.76	0.95	22.05	*	4.06	0.88	4.67	*
Factor	**Participative Environment: (Positive)******	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
Question	1. Share your concerns freely with your immediate boss. (Agree)	2.27	1.06	-18.99	*	2.00	1.10	-3.52	*
Question	8. Share my concerns freely with my co-workers. (Agree)	2.33	1.03	-17.93	*	2.20	0.78	-3.97	*
Question	15. Show concern for others. (Agree)	1.77	0.78	-43.47	*	1.66	0.61	-8.51	*
Question	59.My input has an effect on the decisions made by my boss. (Agree)	2.77	1.04	-6.10	*	2.06	0.59	-6.17	*
Question	60.My input has an effect on the decisions made by my co-workers. (Agree)	2.61	0.91	-11.81	*	1.86	0.51	-8.66	*
Factor	**Empowerment: (Positive)******	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
Question	49.Make policies & procedures about how my work is done. (Agree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
Question	50. Determine how unusual work situations are to be handled. (Agree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
Question	66. Set the pace of my work. (Agree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*

	Cultural characteristics	Actual Results							
		Total Population n=760				Physician group n=15			
		mean	stddev	z-test	sig	mean	stddev	t-test	sig
Question	67. Decide what tasks I will perform from day-to-day. (Agree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
Question	68. Set limits on how much work I have to complete. (Agree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	
Factor	**Conflict Resolution: (Constructive)*** **	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
Question	14. Solve problems constructively with the people involved. (Agree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
Question	20. Deal with disagreements and problems by avoiding the issues. (Disagree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Factor	**Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
Question	81. I am always recognized for a job well done. (Agree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
Question	82. My good work is ignored. (Disagree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
Question	83. Poor performance is always punished in my organisation. (Disagree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
Question	84. Performance appraisals are fair and objective. (Agree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
Question	85. My performance appraisal centres on my mistakes rather than achievements. (Disagree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
Question	86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Disagree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Factor	**Teamwork: (Positive) *** **	2.16	0.86	-26.93	*	2.00	0.93	-4.16	*
Question	32. My co-workers get in the way of my work. (Disagree)	3.84	0.86	26.93	*	4.00	0.93	4.16	*
Factor	**Supervisor relations: (Positive)*** **	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
Question	24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
Question	25. My boss is easy to talk to. (Agree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
Question	26. My boss following the rules. (Disagree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Factor	**Credible relationships: (Positive)****	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
Question	27. My boss sends information that I can believe. (Agree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
Question	29. My boss keeps me well informed about developments in the hospital. (Agree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
Question	30. My co-workers keep me well informed about developments in the hospital. (Agree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
Question	31. My co-workers send information that I can believe. (Agree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Factor	**Outcomes: (Agree)*** **	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Factor	**Employee Satisfaction:**	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Question	53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
Question	54. I am proud to tell others that I am part of HCC . (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
Question	55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*

	Cultural characteristics	Actual Results							
		Total Population n=760				Physician group n=15			
		mean	stddev	z-test	sig	mean	stddev	t-test	sig
Question	61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
Question	104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Factor	**Readiness for change:**	3.02	1.09	0.51		3.03	0.90	0.13	
Question	105. I don't mind moving from job to job. (Agree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
Question	106. I adjust quickly to changes to changes in organisational policies.	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

The mean for the Humanistic – Encouraging culture was 2.52 (with a standard deviation of .1 for a sample size (n) 760. The mean for the physician sample was 2.43 with a standard deviation of .46 for a sample size (n) of 15.

6.1 SUMMARY TABLE

Based on the information obtained from the questionnaire responses, we have developed summary measures of twelve possible cultures. Tables 10 to 22 below show measures of the cultures relevant to this study and the factors that define those cultures. Each table shows the measure and scores of the factors that make up the culture. Table 20 shows the scores for the 12 cultures. The dominant cultures, seem to be in the constructive realm, and are; *Achievement Culture* = 2.42; *Self- actualization, 2.49, Humanistic encouraging 2.52, Affiliative, 2.44.* Other cultures had scores of above 3.29 and were not considered to have strong support. The implications will be discussed in later sections.

Table 21 presents the factor scores. Depending on the factor score, it will be possible to determine the degree of support that exists for specific behaviours and beliefs required for change. The information in this table will assist in providing details on the culture, and the analysis in the following sections.

Table 11 - Achievement Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
I. Achievement:	2.42	0.45	-35.53	*	2.39	0.49	-4.82	*
Planning realistic but challenging goals: (Agree)****	2.09	0.69	-36.36	*	2.04	0.91	-4.09	*
Monitoring realistic but challenging goals: (Agree)***	2.32	0.88	-21.30	*	2.63	0.86	-1.67	
Accomplishing realistic but challenging goals: (Agree)***	1.87	0.57	-54.65	*	1.73	0.49	-10.04	*
Empowerment: (Agree)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
Conflict Resolution: (Fair)	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
Supervisor relations: (Agree)****	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
Credible relationships: (Agree)****	2.54	0.87	-14.58	*	2.70	0.70	-1.66	
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	

Table 12 - Self-Actualization Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	Sig
II. Self-actualisation:	2.49	0.43	-32.70	*	2.42	0.44	-5.11	*
Growth and T & D: (Positive)****	2.37	0.83	-20.93	*	2.27	0.93	-3.04	*
Innovation: (Positive)****	2.60	0.53	-20.81	*	2.55	0.95	-1.83	
Quality over Quantity: (Positive)****	2.36	1.08	-16.34	*	2.00	0.75	-5.16	*
Accomplishing realistic but challenging goals: (Agree)***	1.87	0.57	-54.65	*	1.73	0.49	-10.04	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	Sig
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
Conflict Resolution: (Constructive)****	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
Supervisor relations: (Agree)****	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
Credible relationships: (Agree)****	2.54	0.87	-14.58	*	2.70	0.70	-1.66	
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	

Table 13 - Humanistic Encouraging Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
III. Humanistic Encouraging	2.52	0.41	-32.27	*	2.43	0.46	-4.80	*
Helping others develop: (Positive)****	2.57	0.50	-23.71	*	2.51	0.99	-1.92	
T & D:****	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
Supporting Innovation: (Positive)****	2.69	0.92	-9.29	*	2.63	0.93	-1.54	
Participative Environment: (Positive)****	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
Conflict Resolution: (Constructive)***	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
Teamwork: (Positive) ***	2.16	0.86	-26.93	*	2.00	0.93	-4.16	*
Supervisor relations: (Positive)***	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
Credible relationships: (Positive)****	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	

Table 14 - Affiliative Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
IV. Affiliative:	2.44	0.43	-35.90	*	2.34	0.46	-5.56	*
Teamwork: (Positive)****	2.16	0.86	-26.93	*	2.00	0.93	-4.16	*
Friendliness: (Positive)****	1.99	0.64	-43.51	*	2.00	0.33	-11.74	*
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
Conflict Resolution: (Constructive)***	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
Participative Environment: (Positive)****	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
Supervisor relations: (Positive)***	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
Credible relationships: (Positive)****	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
Helping others develop: (Positive)***	2.51	0.76	-17.77	*	2.40	0.91	-2.55	*
T & D:	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	

Passive- Defensive Cultures

Table 15 - Approval Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
V. Approval:	3.29	0.34	23.51	*	3.40	0.46	3.37	*
Conflict resolution: (Unconstructive)****	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Agree with people: (Positive)****	3.02	0.69	0.80		3.31	0.98	1.23	
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
Supervisor relations: (Poor)**	2.74	0.42	-17.07	*	2.55	1.02	-1.71	
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Helping others develop: (Negative)	3.43	0.76	15.60	*	3.50	0.91	2.13	
T & D: (Negative)	3.49	1.02	13.24	*	3.60	1.06	2.19	*
Supporting Innovation: (Negative)	3.30	0.92	8.99	*	3.40	0.93	1.67	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 16 - Conventional Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
VI. Conventional:	3.42	0.39	29.69	*	3.56	0.38	5.71	*
Participative environment: (Negative)****	3.66	0.63	28.88	*	4.04	0.72	5.59	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
Empowerment: (Negative)****	3.43	0.76	15.60	*	3.45	1.08	1.61	
Conforming to rules: (Agree)****	3.26	0.58	12.36	*	3.53	0.88	2.33	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Innovation: (Negative)*****	3.34	0.53	17.69	*	3.61	0.95	2.49	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 17 - Dependent Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
VII. Dependence:	3.36	0.36	27.57	*	3.49	0.37	5.13	*
Participative environment: (Negative)****	3.66	0.63	28.88	*	4.04	0.72	5.59	*
Empowerment: (Negative)****	3.43	0.76	15.60	*	3.45	1.08	1.61	
Conforming to rules: (Agree)****	3.26	0.58	12.36	*	3.53	0.88	2.33	*
Innovation: (Negative)*****	3.34	0.53	17.69	*	3.61	0.95	2.49	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 18 - Avoidance Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
VIII. Avoidance Culture:	3.43	0.37	32.04	*	3.49	0.38	4.99	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Avoidance of responsibility: ****	3.94	0.62	41.80	*	4.10	0.88	4.84	*
Innovation: (Negative)*****	3.34	0.53	17.69	*	3.61	0.95	2.49	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Aggressive-Defensive Cultures

Table 19 - Oppositional Cultural Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
IX. Oppositional	3.43	0.36	32.93	*	3.49	0.36	5.27	*
Employee antagonism: (Agree)****	3.76	0.63	33.26	*	3.87	0.68	4.96	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Innovation: (Negative)**	3.34	0.53	17.69	*	3.61	0.95	2.49	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 20 - Power Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
X. Power:	3.20	0.31	17.79	*	3.23	0.24	3.71	*
Control: (high)****	3.06	0.47	3.52	*	3.07	0.88	0.31	
Lack of trust: (Agree)***	3.26	1.04	6.89	*	3.66	0.82	3.12	*
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 21 - Competitive Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
XI. Competitive:	3.52	0.38	37.72	*	3.45	0.33	5.28	*
Poor teamwork: ****	3.84	0.86	26.93	*	4.00	0.93	4.16	*
Negative competition: ****	3.32	1.02	8.65	*	3.38	0.78	1.89	
Unrealistic goal setting: (Agree)****	3.49	0.81	16.68	*	3.93	0.90	4.00	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	3.08	1.02	0.30	
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 22 - Perfectionist Culture Summary

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
XII. Perfectionist:	3.16	0.42	10.50	*	3.32	0.23	5.39	*
Lack of trust: (Agree)***	3.26	1.04	6.89	*	3.66	0.82	3.12	*
Unrealistic goal setting: (Agree)****	3.49	0.81	16.68	*	3.93	0.90	4.00	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
Workaholic environment: (Agree)****	2.69	0.72	-11.87	*	2.88	0.85	-0.55	
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	

Table 23 - Summary of Cultures

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Constructive Cultures								
I. Achievement:	2.42	0.45	-35.53	*	2.39	0.49	-4.82	*
II. Self-actualisation:	2.49	0.43	-32.70	*	2.42	0.44	-5.11	*
III. Humanistic Encouraging	2.52	0.41	-32.27	*	2.43	0.46	-4.80	*
IV. Affiliative:	2.44	0.43	-35.90	*	2.34	0.46	-5.56	*
Passive-Defensive Cultures								
V. Approval:	3.29	0.34	23.51	*	3.40	0.46	3.37	*
VI. Conventional:	3.42	0.39	29.69	*	3.56	0.38	5.71	*
VII. Dependence:	3.36	0.36	27.57	*	3.49	0.37	5.13	*
VIII. Avoidance Culture:	3.43	0.37	32.04	*	3.49	0.38	4.99	*
Aggressive-Defensive Cultures								
IX. Oppositional	3.43	0.36	32.93	*	3.49	0.36	5.27	*
X. Power:	3.20	0.31	17.79	*	3.23	0.24	3.71	*
XI. Competitive:	3.52	0.38	37.72	*	3.45	0.33	5.28	*
XII. Perfectionist:	3.16	0.42	10.50	*	3.32	0.23	5.39	*

Table 24- All Factors Table

All Factors	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Accomplishing realistic but challenging goals: Agree)***	1.87	0.57	-54.65	*	1.73	0.49	-10.04	*
Agree with people: (Positive)****	3.02	0.69	0.80		3.31	0.98	1.23	
Avoidance of responsibility: ****	3.94	0.62	41.80	*	4.10	0.88	4.84	*
Conflict Resolution: (Constructive)***	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
Conforming to rules: (Agree)****	3.26	0.58	12.36	*	3.53	0.88	2.33	*
Control: (high)****	3.06	0.47	3.52	*	3.07	0.88	0.31	
Credible relationships: (Positive)****	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
Customer Orientation: Internal staff support	2.77	1.07	-5.93	*	2.80	0.93	-0.83	
Customer Orientation: Patient Care	2.41	0.97	-16.77	*	2.75	1.11	-0.87	
Employee antagonism: (Agree)****	3.76	0.63	33.26	*	3.87	0.68	4.96	*
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
Friendliness: (Positive)****	1.99	0.64	-43.51	*	2.00	0.33	-11.74	*
Growth and T & D: (Positive)****	2.37	0.83	-20.93	*	2.27	0.93	-3.04	*
Helping others develop: (Positive)****	2.57	0.50	-23.71	*	2.51	0.99	-1.92	
Innovation: (Positive)****	2.60	0.53	-20.81	*	2.55	0.95	-1.83	
Lack of trust: (Agree)***	3.26	1.04	6.89	*	3.66	0.82	3.12	*
Monitoring realistic but challenging goals: (Agree)***	2.32	0.88	-21.30	*	2.63	0.86	-1.67	
Negative competition: ****	3.32	1.02	8.65	*	3.38	0.78	1.89	
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Participative Environment: (Positive)****	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
Planning realistic but challenging goals: (Agree)****	2.09	0.69	-36.36	*	2.04	0.91	-4.09	*
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
Poor teamwork: ****	3.84	0.86	26.93	*	4.00	0.93	4.16	*
Quality over Quantity: (Positive)****	2.36	1.08	-16.34	*	2.00	0.75	-5.16	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	
Supervisor relations: (Positive)***	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
Supporting Innovation: (Positive)****	2.69	0.92	-9.29	*	2.63	0.93	-1.54	
T & D:	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
Teamwork: (Positive) ***	2.16	0.86	-26.93	*	2.00	0.93	-4.16	*
Unrealistic goal setting: (Agree)****	3.49	0.81	16.68	*	3.93	0.90	4.00	*
Workaholic environment: (Agree)****	2.69	0.72	-11.87	*	2.88	0.85	-0.55	

This section established the basis for analysis. The empirical data will be useful to answer the research questions posed earlier. In the following section, these issues will be addressed. It would be useful at this time to restate what these issues are:

Research issue # 1:

Is the structure of the HCC one that facilitates or hinders a TQM environment?

Research issue # 2:

Is there evidence that a positive culture exists at HCC?

Research Issue # 3

Do the factors necessary for the implementation of TQM exist?

The following section will now examine and attempt to interpret the information to answer these questions in detail.

7 ANALYSIS

This section analyses the research questions posed earlier and discusses the results based on the data gathered through the questionnaire and interviews.

7.1 RESEARCH ISSUE # 1:

Is the structure of HCC one that facilitates or hinders a TQM environment?

As discussed earlier, an organization is affected by many factors that exist in the external environment, and its own internal setting. The literature suggests that organizational structure may influence the culture of the organization (Leatt, 1994; Thompson & Strickland, 1996), and that a quality culture may be facilitated through the existence of a supportive organizational structure. A supportive structure would be one where policies and objectives would be communicated and team based activities would be encouraged to meet these objectives. This would entail a structure that would foster open and honest communication, decentralized decision-making, and employee empowerment.

A typical organization consists of different functions that come together in a meaningful way to achieve objectives required to keep customers satisfied and the organization viable. Some organizations have created departments that correspond to the various functions and use hierarchical decision-making and problem solving procedures to coordinate these departments. The number of departments depends on the number of

functions. Organizations that create a hierarchical decision-making model tend to create resistance to a TQM philosophy. HCC's corporate activity is functional in form with centralized decision making and the medical operations structured by departments such as, Medicine, Surgery, Paediatrics, and Obstetrics (refer to Appendix 4 for the organizational chart). Usually, a functional design is better suited to smaller health care organizations, which have limited goals and that function in a relatively simple environment. Examples of such organizations include nursing homes, long term care facilities, and small community institutions (Leatt, 1994).

However it has been found that in larger organizations found in complex urban environments, when the functional design is combined with centralized decision making systems becomes unsuitable especially in an environment that is in the midst of change, or when more goal-oriented results are desired. As stated earlier, the weaknesses that can arise from such a structure are; slow response to the rapid changes in the health care system due to the centralized decisions, a restricted or narrow view of organizational goals, a low level of innovation, poor horizontal coordination or communication, and hierarchy overload (Leatt, 1994).

However, HCC is a medium sized community based health care institute. It is located in a complex urban environment. At HCC, departments were created according to the type of service they delivered. For example, Geriatrics is separate from Neurology since the DRG's (Diagnosis Related Groupings) were implemented. The medical departments manage the activities of health care personnel and provide a structure for grouping

patients with similar illness. These departments do not integrate with the corporate support services - human resources, finance, nursing, and patient services. Therefore, there has traditionally been a low desire for horizontal coordination. From information gathered during a meeting with the director of Organizational Development[18] (refer to Appendix 6), HCC was perceived to have a hierarchical structure, and that decision-making powers were centralized in the hand of senior management executives. The following are excerpts of the interview:

What kind of structure exists at the hospital, and how many levels of hierarchy exist?

- HCC has a traditional organizational structure currently consisting of three levels.
- HCC will further flatten the organization to two levels with the introduction of program management.

This structural characteristic leaves HCC vulnerable to the dramatic impact of exogenous factors such as demographic changes, technological change, and government demands for hospitals to downsize, reduce the number of beds, reduce health care delivery cost, and make significant changes to its delivery system (Régie Regional, 1995). A functional form with centralized decision-making leaves an organization ill equipped to deal with the situation where they are confronted with crisis situations. Given the situation at the time, HCC needed an organizational structure and culture that is flexible with few levels of formal hierarchy and with greater communication between departments and units. This would ensure increased efficiency. Furthermore, it would make management more responsiveness and sensitivity to employee concerns and needs.

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[18] Name withheld to preserve anonymity.

The research found that the structure of the organization was not of the type that was associated with the quality environment (Deming, 1986). In addition, certain attitudes, behaviours, and values at the hospital were found to be potential barriers to change. During meetings and interviews with members of the hospital, it was found that a traditional approach is manifest in HCC's formal organization as well as in the attitudes of its managers and employees. The following references substantiate this observation; the Organization Chart (Appendix 4), the Interview Transcripts (Appendix 6), and the Environmental Scan (Appendix 7). At the management level, many managers still practice the traditional "command-and-control" style of management. This aspect was part of the questionnaire, and it was found to be an area that management would need to address (refer to section 7.3.1.2 for further details). While in the past this style of management produced enviable results, at this point in HCC's development, managers should have strived to "lead" and "coach" more than "control" since there was an increased need for more creativity and flexibility in the organization, especially at the lower levels of operations. This authoritarian managerial approach tended to stifle initiative and did not meet its potential. (Evans & Lindsay, 1996; Crosby, 1979; Deming, 1986). However, based on discussions with HCC personnel, there is a perception that change is occurring among HCC's managers, due partially to a heightened sensitivity to environmental threats, and partially to specific and direct attempts to "re-educate" them on alternative approaches to management, as part of the shift to previous quality programs.

The preceding analysis shows that certain aspects of the structure and the managerial styles at the time of the study acted as barriers to TQM, and did not facilitate decentralized decision-making. Support for this analysis was found through the reported behaviours and the perceptions of the organization members and that the structure does not facilitate cross-functional problem solving and cross-functional decision-making. Therefore, it may be concluded that the current functional form of HCC does not adequately support the presence of strong evidence of a TQM structure that is able to address the issues related to a complex, unstable internal and external environment.

Now, the question is whether a culture exists that is consistent with the structure, or whether it is independent of it. There is also a question as to whether HCC's culture is strong enough to overcome the barriers presented by the structure in the implementation of a TQM environment.

7.2 RESEARCH ISSUE # 2:

Is there evidence that a positive culture exists at HCC?

Earlier discussions defined organizational culture as a set of common meanings, values and beliefs shared by the members of an organization, which then effected the group's interpretation of these occurrences (see section 4 for a more comprehensive examination of culture definitions). The collective theme is the notion that culture is composed of cognitions shared by members of a social unit. These values and behaviours are learned by members of an organization as they learn to adapt to external changes, and set

acceptable behaviour standards on how to respond to these changes internally (David, 1995). Since these interpretations then form the basis for actions and reactions, the values and beliefs are important to managers who would like to encourage behaviours that support organizational objectives. Research has found that organizations that have successfully implemented TQM typically have positive cultures that have characteristics present such as information sharing, teamwork, and continuous learning (Master, 1996; Deming, 1986). The association with TQM and positive culture made measuring organizational culture very relevant to understanding HCC's situation. As discussed in the methodology section, a questionnaire based on the OCI model (Rousseau, 1990) was used to measure the culture at HCC. The OCI questionnaire was based on the perspective of normative beliefs and shared expectations (Cooke & Szumal, 1993; Cooke & Rousseau, 1988). The behaviour, based on the collectively held norms and shared expectations, is considered an outcome of the organizational culture. The OCI model is focused on 12 sets of thinking and behavioural styles that may be the expected conduct for members of the organization (Cooke & Rousseau, 1988)(see section 5.6). These 12 sets of normative beliefs and behavioural expectations can be divided into three major types of organizational cultures (Cooke & Szumal, 1993):

- *Constructive cultures*, where employees are encouraged to deal with each other and work in ways that will help achieve their higher order needs
- *Passive defensive cultures* which are present where members behave and believe they must interact in ways that help preserve their security needs
- *Aggressive defensive cultures* in which employees are expected to aggressively and openly protect their status and security needs in the organization.

The results of the survey were presented in the results section 6. This section will assess the culture at HCC. The questionnaire data will be summarized into two diagrams. The scores are taken from the tables that described the cultures (Table 11,Table 12, Table 13,Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21, Table 22, Table 23) and summarized by two graphs, a bar chart and a spider chart.

Figure 3 presents a chart with horizontal bars representing the 12 cultures. These cultures form into three groups; the Aggressive Defensive cultures; the Passive Defensive cultures; and the Constructive cultures. The X-axis identifies the level of agreement that HCC had with each of the cultures using the five point Likert scale. A typical graph locates the X, Y origins at 0,0 while the Likert scale is from 1 to 5. While the graph goes from 0 to 4.5, it should be from between 1-5. Therefore, the areas between 0 and 1 are for graphical purposes only, and will not present any responses. The graph terminates at 4.5 , since there are no responses between 4.5 and 5. The neutral mid-point (3.00) is denoted by a dotted vertical line. Scores less than this line can be interpreted as in agreement with the culture while scores exceeding this line may be considered as in disagreement with the culture (Cooke & Rousseau, 1988).

7.2.1.1 Interpretation

In order to interpret the positive scores, Table 25 will be used.

Table 25 - Positive Culture interpretation

Scale interval	Description	Action
1 –2	Strong to Strongly Agree	Needs no improvement
2-3	Neutral to Agree	Needs some improvement
3-4	Neutral to Disagree	Needs improvement
4-5	Disagree to Strongly Disagree	Needs much improvement

For example, scores that fall into the 1-2 range represent strong to strongly agree with the statement. When the statement represents a positive aspect, this score will indicate that the respondents are in agreement with the statement, and the related action will be "needs no improvement". This method will be used for all the positive statement scores.

The negative cultures will be interpreted using the following Table 26

Table 26 - Negative Culture Interpretation

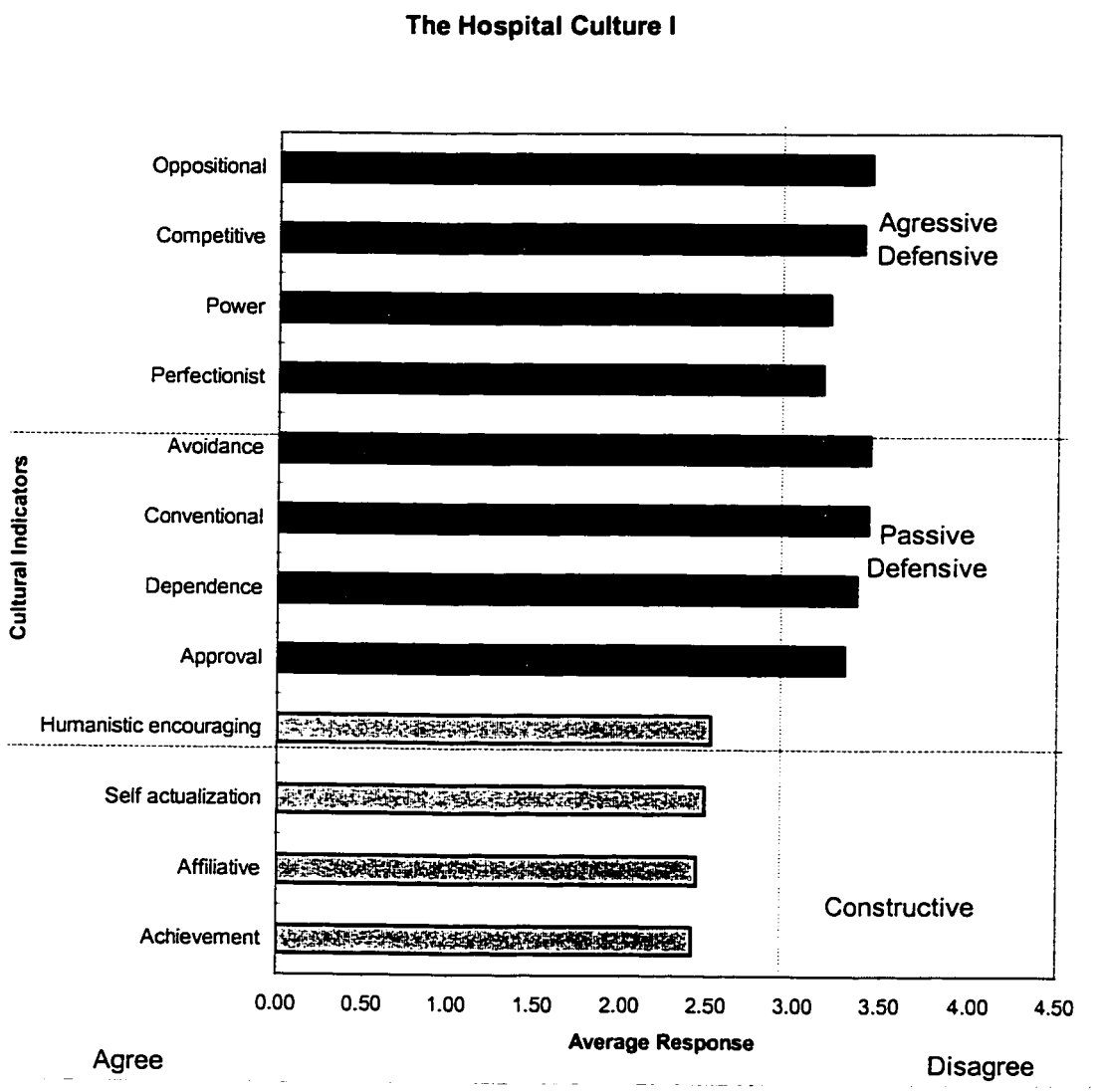
Scale interval	Description	Action
1 –2	Strong to Strongly Agree	Needs much improvement
2-3	Neutral to Agree	Needs improvement
3-4	Neutral to Disagree	Needs some improvement
4-5	Disagree to Strongly Disagree	Needs no improvement

In this case, when a score for a negative culture falls between 1-2 on the Likert scale, the description of that will be "Strong to Strongly Agree", and the recommended action will be "Needs much improvement" as this score will indicate agreement with a negative aspect. Certain items that constituted the culture were presented in a negative fashion. Such as "I am not expected to take risks". Strong agreement with this statement would indicate this response to be negative.

The results were found by taking an average of the question items that made up the factors and then by averaging all the factors that constituted the culture (Table 11 - Achievement Culture Summary). Figure 3 illustrates the type of culture that was indicated by the questionnaire responses at the hospital. This graph interprets the results for the culture with the most support. The x-axis represents the level of agreement, with

1 being "Strongly Agree" and 5 being "Strongly Disagree". Therefore, a lower score would represent a stronger support for the culture.

Figure 3 - The Hospital Culture

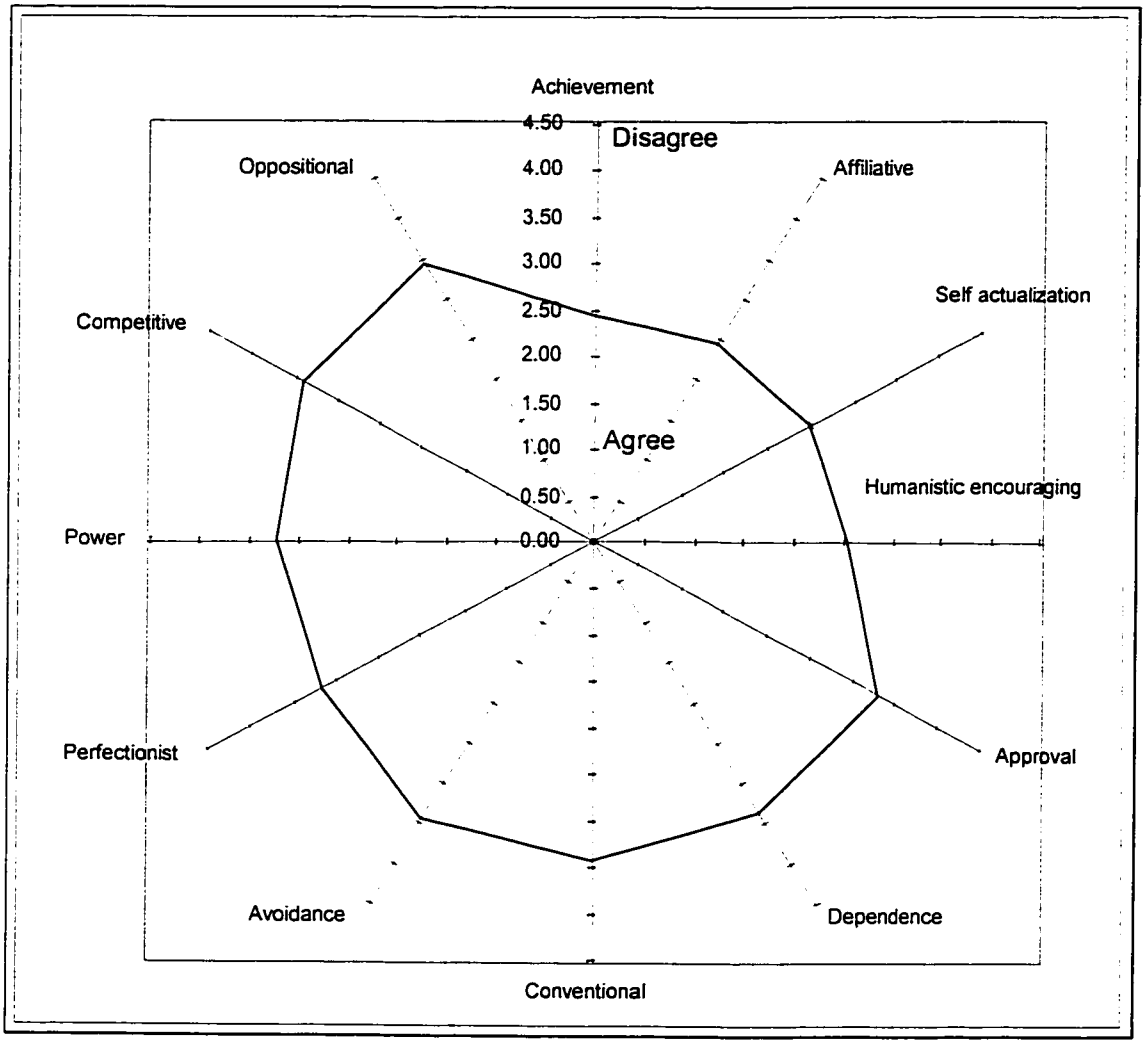


On careful observation, it appears that the set of constructive cultures were predominantly supported by the hospital. However, results from some of the negative cultures (the Aggressive Defensive, and the Passive Defensive) do not seem to be that

strongly rejected by the respondents as would be desired for the implementation of a TQM environment.

The graph in Figure 4, provides a geometric representation of the cultures. Each culture is presented as a ray that passes the point of origin. Each ray is plotted according to the 5-point Likert scale (1=Strongly Agree, 5= Strongly Disagree) on the X and Y coordinates. On the graph, the region from the origin (0,0) up to, but not including 1, has no meaning. A plotting at 1,1 would represent strong agreement with the culture. The outer most part of the array could correspond to (5,5) on the X, Y dimension. A plotting here would represent strong disagreement. The culture scores for each of the twelve cultures are plotted in order of the level of agreement. From this representation, it is again clear that the Constructive cultures' scores are closer to the point of origin, thus representing agreement with these cultures. As the line moves towards the negative Aggressive defensive, and the Passive Defensive cultures, there is a visible trend towards disagreement that these culture sets have a strong presence.

Figure 4 - Cultures Graphed II



The cultures with the highest scores were the negative cultures, which indicated disagreement with these cultures. However, all the scores for the negative cultures were between 3-4, which suggests that the analysis does not absolutely refute the existence of negative culture characteristics. On the other hand, the evidence for the existence of a positive culture is stronger. All the scores for the positive cultures were low; indicating that there was support for the existence of positive cultures. The culture with the lowest

scores (indicating agreement with this culture) was the Achievement culture. This culture is defined as follows:

> "An Achievement culture characterizes organizations that do things well, and value members who set and accomplish their own goals. Members are expected to set challenging but realistic goals, establish plans to reach these goals, and pursue them with enthusiasm (pursuing a standard of excellence)" (Cooke & Szumal, 1993, pp. 1329)

This culture had the lowest score, 2.42. This result indicates that overall at HCC, positive cultures are predominant, however the scores for all the positive cultures were between 2 and 3, meaning that there is some room for improvement by management. Secondly, the existence of certain aspects of the negative cultures also indicated the need for management intervention.

A central theme in this paper has been the need for an organization to adjust to change, with the ability to introduce strategies and organizational practices that would help it to adapt to the new situation (Thompson & Strickland, 1996). As viewed in the literature, this situation requires an organization to maintain and promote a positive culture that helps it to adapt quickly to the demands of the external environment. The current environment affecting the health care sector is motivating hospitals to adapt quickly and find ways of meeting the challenges of external change. In response to the question of whether a positive culture exists at HCC, the result although overall positive, has certain

elements of negativity that may hinder its capability to face an ever-changing environment.

This section examined the cultural results at HCC. The cultures are an aggregate of several factors. In order to get a better understanding of the elements that constitute the culture at HCC, the next research question will determine in greater detail the factors that make up the cultures.

7.3 RESEARCH ISSUE # 3

Do the factors necessary for the implementation of TQM exist?

The purpose of this section is to determine which factors in the negative cultures are active, and what aspects of the positive cultures are present and supportive of change in the hospital.

The following table was derived from reviewing the TQM and Culture literature. It provides a summary of the TQM dimensions as validated by the literature.

Table 27 - Summary of TQM Dimensions

TQM Dimensions	Authors
Leadership presence and support.	(Anderson, et al, 1994; Berry, 1991; Crosby, 1979; Deming, 1986; Dean & Bowen, 1994; Grandzol 1996; Hackman & Wageman 1995; Hunt 1992; Juran & Gryna 1988; Juran 1995; Saraph, et al, 1989; Spencer, 1994; Cole, 1999; Ahire et al., 1996, Rao et al., 1999)
Commitment to make quality philosophy everyone's objective, getting people involved in the process.	(Berry, 1991; Crosby, 1979; Deming, 1986; Hackman & Wageman 1995; Hunt 1992; Juran & Gryna 1988; Juran 1995; Saraph, et al, 1989; Sholtes 1988; Spencer, 1994; Cole, 1999; Rao et al., 1999)
Continuous improvement.	(Anderson, et al, 1994; Berry, 1991; Crosby, 1979; Dean & Bowen, 1994; Deming, 1986; Grandzol, 1996; Hackman & Wageman 1995; Hunt 1992; Imai, 1986; Juran & Gryna 1988; Juran 1995; Sholtes 1988, Cole, 1999)
Encouraging teamwork among and between groups.	(Anderson, et al, 1994; Berry, 1991; Crosby, 1979; Dean & Bowen, 1994; Deming, 1986; Grandzol, 1996; Hackman & Wageman 1995; Hunt 1992; Imai, 1986; Juran & Gryna 1988; Juran 1995; Sholtes 1988; Lawler 1995, Cole, 1999)
Encouraging training and development.	(Berry, 1991; Dean & Bowen, 1994; Deming, 1986; Grandzol, 1996; Hackman & Wageman 1995; Hunt 1992; Juran & Gryna 1988; Juran 1995; Saraph et al. 1989; Sholtes 1988; Spencer, 1994; Cole, 1999; Ahire et al., 1996, Rao et al., 1999)
Integrating quality procedures in the entire process of the product or the service.	(Dean & Bowen, 1994; Deming, 1986; Grandzol, 1996; Hackman & Wageman 1995; Imai, 1986; Juran & Gryna 1988; Juran 1995; Sholtes 1988; Lawler 1995; Saraph et al. 1989; Spencer, 1994; Cole, 1999; Ahire et al., 1996, Rao et al., 1999)
Customer orientation, Including external customers, such as suppliers and customers in the quality process.	(Anderson, et al, 1994; Berry, 1991; Dean & Bowen, 1994; Deming, 1986; Grandzol, 1996; Hackman & Wageman 1995; Imai, 1986; Juran & Gryna 1988; Juran 1995; Sholtes 1988; Lawler et al.,1995; Sholtes 1988; Spencer, 1994; Cole, 1999; Ahire et al., 1996, Rao et al., 1999)
Monitoring TQM efforts by collecting data	(Anderson, et al, 1994; Berry, 1991;Crosby, 1979; Dean & Bowen, 1994; Deming, 1986; Hackman & Wageman 1995; Hunt, 1992; Imai, 1986; Juran & Gryna 1988; Juran 1995; Lawler et al.,1995; Sholtes 1988; Lawler et al.,1995; Saraph et al. 1989; Cole, 1999; Ahire et al., 1996, Rao et al., 1999)

TQM Dimensions	Authors
Recognizing the efforts of individuals and groups, participatory decision making.	(Deming, 1986; Imai, 1986; Juran, 1995; Cole, 1999; Ahire et al., 1996, Rao et al., 1999)

Based on the above, a set of cultural themes that supported these quality dimensions was developed. The table is presented here again in order to clarify the analysis in the following section:

Table 28 - Common themes in TQM and Organizational Culture

Common themes	Explanations
Communication	Effective communication between upper management and employees.
Empowerment	Enabling employees to take part in defining the way they do their work. This includes concepts such as participatory decision-making.
Trust	The establishment of trust between coworkers, and between managers and employees. Perception of equity and knowing that evaluations are fair.
Innovation	A culture where new ideas concerning work methods are supported.
Continuous improvement	An environment where innovation and improvement at the personal and job level. Learning is encouraged.
Social cohesion	The quality of the relationships between employees and their superiors, whether there is credibility within the relationships, or competition. This is fostered by teamwork, and effective conflict resolution.
Organizational goal Commitment	The extent to which employees identify with the organization. This can be considered the internalizing of quality efforts, which include the importance of customer focus to the organization.
Clear role expectations	Monitoring and accomplishing realistic job expectations.
Job Challenge	Accomplishing realistic but challenging goals.

This section will attempt to answer a number of questions in order to determine the key factors necessary for the implementation of a TQM strategy to exist.

The TQM literature is replete with the importance placed upon effective leadership for the success of any quality initiative (for references, review Table 1 - Total Quality Management Dimension and Authors). In fact, several of the themes within TQM and culture imply leadership sponsorship. Quality is a top down effort (Deming, 1986) and no quality initiative will be successful without the presence of effective leadership. Effective elements of leadership include, the ability to inspire, instil credibility, and fostering innovation. A leader must convince their employees of the need for change (Marselek-Gaucher, 1990). Therefore, the leader must be trusted. A good leader who is a strong leader will be able to encourage their employees to take risks and be innovative. The following sections review the perception of HCC's leadership:

7.3.1.1 Leadership

Strong cultures are usually characterized by a decentralized decision making process (Thompson & Strickland, 1996). While HCC's culture was found be a constructive culture, the score indicated that it was not a strong culture (Score = 2.42, refer to Table 25 - Positive Culture interpretation). In addition, the structure of the hospital did not seem to be a decentralized one and may have acted as a barrier to success in organizational change. There were several sources of data providing information on the factors that could act, either as barriers or as enablers of a strong positive culture. Evidence from an interview with a member of the hospital lead to the conclusion that decision-making was centralized at HCC. As typical in any organization of this size and structure, senior management executives were found to hold essential administrative positions at HCC,

and the authority and final decision-making is usually centralized. Not too long ago, senior managers used to be recruited based on seniority. However, this practice has been changing to reflect the manager's training and knowledge. The following excerpt from an interview with a member of HCC (Appendix 6) supports this.

Is authority knowledge or position based?

- Senior management positions are recruited based on a persons skills and knowledge, rather than seniority.
- Managers who were recruited recently have more open and progressive management styles. Nevertheless, there exist managers who still ascribe to old bureaucratic management styles.

Previously it was argued that the hospital did not appear to have a strong culture. One of the reasons for this may have been the fact that the hospital did not have a decentralized decision making structure and culture. This is not surprising, given that physicians did not appear to see themselves as employees of the hospital. Evidence of this was derived from the following sources.

Survey Response rate and related issues:

The survey was implemented to the entire hospital, and the overall response rate was 57%. However, out of a possible 200 physicians only 15 chose to complete the survey. Also, comments in the pre-test from physicians indicated they did not consider themselves employees of the hospital, and were not interested in "administrative" tasks. The implications here are that the concept of teamwork is not very strong.

Nurses - Physician Relations

During an interview session, an HCC member made the following observations:

- "Nurses perceive their relationship with physicians to be subservient"
- Management and administrative issues are given a very low priority by physicians, for example, the lack of participation by physicians was observed at the Leadership Conference on continuous learning.

These observations regarding the physicians are not surprising, considering the fact that physicians tend to see themselves as entrepreneurs and not answerable to anyone. They make all the important decisions regarding health care delivery; yet do not see themselves as employees of the hospital. This phenomenon may be related to the existence of several subcultures within the organization (Schein, 1997; Smith, et Al., 2000).

The survey questionnaire revealed perceptions related to the nature of leadership at the hospital. The following section focuses on a selective number of themes addressing leadership at HCC:

7.3.1.2 Please people with authority

This is a negative factor. A priori expectation about this factor was that in a positive culture, people are not expected to please people in authority. In other words, workers are not expected to perform simply to please their superiors. This type of a work environment would engender a low level of self-esteem and job satisfaction. This type of behaviour or culture contradict TQM, which expects leadership to encourage employees to do their jobs without fear (Deming, 1986), and to derive a personal satisfaction from doing good work that would reflect quality and a customer focus.

The questions asked in this factor were the following:

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
2. Agree with the ideas of your immediate Boss. (Agree)	2.93	0.99	-1.95		3.46	1.30	1.37	
3. Set goals that please your immediate boss. (Agree)	2.67	1.10	-8.27	*	2.66	1.10	-1.20	
5. Please people in authority. (Agree)	2.78	1.18	-5.14	*	2.90	1.10	-0.35	
6. Give my personal opinion to people with authority. (Agree)	2.67	1.16	-7.84	*	2.06	1.10	-3.31	*

Looking carefully at the responses that measure this factor it is clear that there is a need for improvement (refer to Table 26 - Negative Culture Interpretation). The overall mean score is 2.93. From the results, there is the perception that it is important to set goals that please superiors (2.67) and please individuals with authority (2.78). Since all of these questions and the overall score for the factor was between 2 and 3, it is clear that there is room for improvement. These issues should be addressed by the hospital, as they can be an impediment to empowerment and innovation, which are both, needed in change management.

The next factor deals with the issues of conformity and with the rules of the organization. The conformity factor assessed the employees' tendency to conform to the organizations rules. It was expected in an organization with a positive culture that this factor would not have support since it leads to a culture that stifles creativity and innovation (Rousseau, 1990). In addition, innovation is a desired feature within the quality literature (Deming, 1986) as it leads to fresh ways of handling new situations.

7.3.1.3 Conforming to rules

In general, employees disagreed with the notion that conforming to rules is a vital part of being a part of HCC. Although the results clearly do not support conformity to rules, a result of 3.26 indicates that the disagreement is weak and that there are areas that need to be addressed by HCC. The responses, although not supporting this factor, still implied the perception that fitting into the mould (3.42) and being a follower might have some impact upon the culture of the hospital (3.04). This perception may contribute to the perception that HCC is traditional and inflexible.

Cultural characteristics	**Actual Results**							
	Total Population n=760				**Physician group n=15**			
	mean	**stddev**	**z-test**	**sig**	**mean**	**stddev**	**t-test**	**sig**
Conforming to rules: (Agree)****	3.26	0.58	12.36	*	3.53	0.88	2.33	*
48. Strictly following policies and procedures for my major tasks. (Agree)	2.15	0.93	-25.20	*	2.60	0.83	-1.87	
52. Following orders even if they seem incorrect to me. (Agree)	3.61	1.21	13.90	*	3.93	1.00	3.60	*
93. You are expected to be a follower. (Agree)	3.04	1.10	1.00		3.20	1.10	0.70	
99. Rules are more important than people. (Agree)	3.99	0.95	28.73	*	4.53	0.52	11.40	*
100. Traditions are important. (Agree)	2.92	1.03	-2.14	*	2.60	0.98	-1.58	
101. It is important to fit into the mould. (Agree)	3.42	0.99	11.70	*	3.73	0.59	4.79	*
102. Rules are more important than ideas. (Agree)	3.73	0.93	21.64	*	4.13	0.99	4.42	*

7.3.1.4 Control

This is a negative culture. This factor measures the degree to which an individual is domineering within their position. Responses to questions within this factor suggested uncertainty by employees (3.06). Individuals tended to agree with certain statements like "Take charge of situations", (2.33), "Be Loyal to my department", (1.84), and "My boss

has total control in my department" (2.87). The responses show an inclination towards a Power culture, which is an aggressive-defensive culture.

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Control: (high)****	3.06	0.47	3.52	*	3.07	0.88	0.31	
11. Be loyal to my department. (Agree)	1.84	0.85	-37.62	*	1.93	0.59	-7.02	*
17. Take charge of situations. (Agree)	2.33	0.94	-19.65	*	2.13	1.10	-3.06	*
22. Act tough when relating with other staff members in the hospital. (Agree)	4.16	0.93	34.39	*	4.27	0.79	6.23	*
28. My boss has total control in my department. (Agree)	2.87	1.15	-3.12	*	2.66	1.20	-1.10	
41. It is important to use the authority of my position. (Agree)	2.97	1.05	-0.79		2.93	0.96	-0.28	
43. My job title is more important than my work. (Agree)	4.31	0.81	44.59	*	4.53	0.64	9.26	*

7.3.1.5 Innovation

This factor is associated with a positive culture. It deals with the creativity and risk taking behaviour of employees, which is a valued aspect of an adaptable organisational culture (Gilmartin, 1999). Average score for entire hospital was 2.60. Given the score, this area needs to be improved. In general, risk-taking is not an expected behaviour that the employees at a hospital emulate. A result of 3.15 on this statement may have been influenced by the context in which the employees operate. For example, nurses may have interpreted this statement to mean taking risks with a patient's health or well being which in this case would not be desired. Nevertheless, based on the responses in the nine questions that make up the innovation factor, there was a clear message that creative behaviour was not perceived to be an important characteristic of a HCC employee. Risk taking and being inventive are not strongly supported by most employees. The following questions were used in the survey to assess innovation.

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Innovation: (Positive)****	2.60	0.53	-20.81	*	2.55	0.95	-1.83	
91. Find new ways of doing my work. (Agree)	2.39	0.93	-18.08	*	2.47	1.10	-1.87	
92. Take risks. (Agree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Agree)	3.44	1.04	11.66	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Agree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Agree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Disagree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103.The usual way is the best way to do things. (Disagree)	3.76	0.63	33.26	*	4.06	0.88	4.67	*

Changes in the health care industries that arise out of the external environment, such as is the case for HCC, require the presence of innovation and creativity factors within the organization. One of today's primary management challenges is the development of organizational cultures that value innovation, change, and creativity. The adoption of innovation as an approach to service delivery allows the organization to benefit from the individual and collective contributions to knowledge, skills, and ability to meet complex consumer needs (Gilmartin, 1999).

7.3.1.6 Evaluation System

The questions within this factor identify the perceptions as to whether the evaluation system the employer uses to grade the employee's work is fair and equitable. This is a positive factor. In strong cultures, there is an agreement in the literature that the evaluation system must be fair. The average score for the entire hospital was 2.67 pointing to a requirement for improvement. Responses to specific questions indicated that there is dissatisfaction in certain areas, for example not being recognized for a job

well done (2.94), and good work being ignored (3.23). There is also a perception that performance appraisals are not necessarily fair and objective (2.80).

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
81. I am always recognized for a job well done. (Agree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Disagree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Disagree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Agree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Disagree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Disagree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*

In addition, as recorded in HCC interview transcripts, it was found that employees of the hospital have little faith in the reward system. The following reproduction of the interview underscores this point:

Do rewards offered to employees actually motivate them?

- There are no officially recognized rewards for employee's performance, except tenure pins are given for years of service.
- There is a slim opportunity for upward mobility within the organization.

A strong culture should encourage equity in the application of evaluations and rewards. These results indicate that improvements are required at HCC.

7.3.1.7 Empowerment

This characteristic factor is associated with a strong culture. The factor measures the extent of freedom a person has in deciding key areas that involve their work and is related to the innovation factor (Gilmartin, 1999). The score for this factor was at 2.57. The main problems were highlighted in areas limiting the amount of work performed (2.88) and making policies and procedures about how work is done (2.91). This indicates that the hospital is following a fairly rigid structure, and employees feel that they do not have much say in the quantity and ways of doing their tasks. This aspect can be very limiting. However, this type of inflexibility may be inherent in the nature of health care service delivery. Tasks are regulated and controlled; for example, lab-technicians and radiologists may have set protocols they must follow for safety or precision.

Cultural characteristics	**Actual Results**							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Empowerment: (Agree)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
49. Make policies & procedures about how my work is done. (Agree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
50.Determine how unusual work situations are to be handled. (Agree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Agree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*
67. Decide what tasks I will perform from day-to-day. (Agree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Agree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	

However, as reported in HCC interview transcripts, there was evidence that leadership within the hospital was aware of the importance of empowering its employees.

How does leadership view empowerment at HCC?

- Management has become aware that empowering employees and allowing them to go ahead with their proposals is worthwhile.

7.3.1.8 Participative environment

This factor determines whether employees are part of the participatory decision making process that affects their work. It determines whether leadership is receptive to employee opinions. Strong positive cultures are found to engage in participatory decision-making. The result for this factor was (2.34), indicating that there was agreement that HCC fosters a participatory atmosphere, however there is need for improvement in this area. In addition, the findings on whether an individual's input had any impact on actual decisions made by managers (2.77) and co-workers (2.61) indicated a general disagreement with the overall result. The perception that employees have no say in what actually occurs in the institution can negatively affect empowerment issues.

Cultural characteristics	**Actual Results**							
	Total Population n=760				**Physician group n=15**			
	mean	**stddev**	**z-test**	**sig**	**mean**	**stddev**	**t-test**	**sig**
Participative Environment: (Positive)****	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
1. Share your concerns freely with your immediate boss. (Agree)	2.27	1.06	-18.99	*	2.00	1.10	-3.52	*
8. Share my concerns freely with my co-workers. (Agree)	2.33	1.03	-17.93	*	2.20	0.78	-3.97	*
15. Show concern for others. (Agree)	1.77	0.78	-43.47	*	1.66	0.61	-8.51	*
59.My input has an effect on the decisions made by my boss. (Agree)	2.77	1.04	-6.10	*	2.06	0.59	-6.17	*
60.My input has an effect on the decisions made by my co-workers. (Agree)	2.61	0.91	-11.81	*	1.86	0.51	-8.66	*

7.3.1.9 Credible relationships

This factor assessed the level and credibility of communication in the hospital. A culture that is conducive to quality is one where communication is open and honest between employees and between leadership. Overall, the score was at 2.54, which certainly needs to improve. The problem seemed related to a perception of not being kept up to date on information about the development of the hospital through one's superiors, and at a lower extent with workers.

Cultural characteristics	**Actual Results**							
	Total Population n=760				**Physician group n=15**			
	mean	**stddev**	**z-test**	**sig**	**mean**	**stddev**	**t-test**	**sig**
Credible relationships: (Positive)****	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
27. My boss sends information that I can believe. (Agree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Agree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Agree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Agree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*

A culture that fosters trust amongst its staff is considered a strong culture. The following statements were recorded in HCC interview transcripts regarding communication at the hospital.

Is communication open and effective, within and between senior management, middle management, and front line staff?

- Within senior management, there is a lack of team building skills.
- Within middle management, there is a greater amount of participation and teamwork.
- Within front line staff, there is good interdepartmental communication. However, intradepartmental communication is not as strong.

Is formal or informal type of communication used at Health Care Centre, how effective is each type of communication?

- Formal communication is greatly utilized at Health Care Centre. Its effectiveness can improve as senior management can become more aware of the grassroots issues of the organization.
- Informal communication happens mostly through the grapevine, and it is not considered reliable.
- Generally, information is not freely exchanged horizontally or vertically between management and front line staff.
- Nurses perceive their relationship with physicians to be subservient.
- An unhealthy relationship exists between union and management.
- Level of literacy may be a barrier to communication.
- The grapevine is used widely.
- Compartmentalized philosophy exists.
- However, attempts have been recently made to improve communication between different levels within the organization, i.e., interdisciplinary teams and councils.

These responses indicated a need for improvement and formalization of communication at HCC.

7.3.1.10 Supervisory relations

This factor relates to the relationship between employees and their leaders. Positive Quality cultures have positive scores in this factor. At HCC, relations with managers and superiors are perceived to be relatively cordial (friendly 2.14, easy to talk to 2.32), and are considered satisfactory by most respondents. However, responses to specific questions in this factor (overall factor result, 2.36) indicated that there was a consensus among the employees that managers always tend to follow the rules (2.39). Interpreting these results, most employees perceive their superiors as being inflexible.

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Supervisor relations: (Positive)* **	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Agree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Disagree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*

7.3.1.11 Helping others to develop

This factor relates to the aspects of mentoring, constructive criticism, and helping behaviours. HCC's score is 2.51, which shows that HCC needs to improve in this area if it plans to change. The relative disagreement with constructive criticism (2.83) and the coaching and mentoring others (2.65) seem to suggest that that the hospital must improve in this area. This response clearly indicates the need for employee training in these areas.

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Helping others develop: (Positive)***	2.51	0.76	-17.77	*	2.40	0.91	-2.55	*
T & D:	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
10. Help people in my department improve their job skills. (Agree)	2.04	0.89	-29.74	*	2.13	0.99	-3.40	
19. Criticize others constructively in my department to improve their job performance. (Agree)	2.83	1.10	-4.26	*	2.40	0.99	-2.35	*
46. Act as a mentor or coach for people in my department. (Agree)	2.65	1.08	-8.93	*	2.66	0.12	-10.97	*

7.3.1.12 Staff Satisfaction

This factor is an indicator of employees' perceptions towards a job and organization. Overall, employee satisfaction is at 2.38, which indicates that improvements could be introduced. On the positive side, employees responded that HCC is one of the best places to work (2.31), and that they were proud to tell others that they were part of HCC (2.01). Furthermore, the employees feel that the organization on the whole "is taking action to stay open" (2.19).

Indicators of areas for improvement where identified with such statements as "You are very satisfied with your current situation at the hospital" (2.74), and "If I were to choose a new job, it would be similar to my current one" (2.68). This suggests that as far as it comes to employee's beliefs about their personal situation, they are far from being satisfied.

Cultural characteristics	**Actual Results**							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	Sig	mean	stddev	t-test	sig
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*

7.3.1.13 Customer orientation

Customer orientation is an integral part of the successful quality organization. The questions attempted to determine whether there was a strong focus on customer satisfaction, and whether this was being measured. On the question "There is a formal process for obtaining information about the patient's satisfaction with my department's services", a response of 2.85 indicated the perception that there was a lack of formal process. Other questions, such as those reflecting on patient needs and expectations (2.41) and the use of patient feedback (2.42), indicated that there could be improvements made on achieving true customer focus. The following table identifies questions and the related scores.

Cultural characteristics	**Actual Results**							
	Total Population n=760				**Physician group n=15**			
	mean	**stddev**	**z-test**	**sig**	**mean**	**stddev**	**t-test**	**sig**
Customer Orientation: Patient Care	2.41	0.97	-16.77	*	2.75	1.11	-0.87	
107. There is a formal process for obtaining information about the patient's satisfaction with my department's services.	2.85	1.12	-3.69	*	3.20	1.05	0.74	
108. Information about patient needs and expectations is used as the basis for determining patient care standards.	2.41	0.98	-16.60	*	3.14	1.17	0.46	
109. Feedback information from patients is used to improve the quality of my department's services.	2.42	1.01	-15.83	*	3.00	1.24	0.00	
110. The employees in my work unit are totally committed to meeting all of the patients' needs and expectations.	2.11	0.81	-30.29	*	2.29	1.07	-2.57	*
111. There is a process for effectively responding to patient complaints or problems.	2.25	0.91	-22.72	*	2.14	1.03	-3.23	*

Evolving patient and environmental factors complicate the delivery of quality patient care. This was substantiated by statements reported during an interview with a member of HCC:

- Increased number of patient who are educated and more apt to question the delivery of health care.
- Increased number of interest groups, (e.g., AIDS and environmental groups), who have influenced public awareness, and everyday operations of hospitals.
- Increased media attention about health care issues (for, e.g., accountability regarding the use of public funds) has also increased public awareness.
- Increased links with the community, including CLSC, industry, university, and schools allows the hospital to find resources (e.g., DIA. Internships) and create awareness of their services.

In addition, the following statements that were made during the interviews suggest an awareness of internal and external customer orientation, but that more needs to be done on a continual basis:

Is information gathered to measure recent performance?

- The hospital conducts statistical analysis on each of their programs.
- For employees, performance reviews are conducted once a year.
- In general, employees perceive a lack of feedback for their day-to-day work.

7.3.1.14 Continuous improvement

This factor relates to the efforts to train oneself for current and future positions. The COLT team was aware of the concept of continuous learning (Senge, 1990), and was attempting to initiate programs that would encourage this factor.

How is education addressed at the hospital?

- The amount of formal learning available depends on the structure and philosophy of the departments e.g., nursing has more opportunities than the rest of the hospital (union representation, hospital organization), vs. maxillofacial surgery.
- In general, formal learning does not translate to everyday work situations, and the new information learned is rarely communicated to others.

In general, the medical profession encourages its members to improve themselves and expects them to be up-to-date in their area of expertise. However, these results indicates that the hospital, although apparently aware of the need for providing education to its members, is not approaching this uniformly, nor is very effective at providing programs that are relevant to the individuals' jobs. Improvement is warranted in this area.

This section provided an in-depth analysis of the research questions posed earlier in this paper. This analysis was conducted via different sources of information to improve upon convergent validity and which provided information from various angles, as was stipulated in the methodology section. Concluding this section is a table summarising the research questions that were posed during the study, and the resulting analysis. This summary will then provide the basis for the discussion in the following section.

Table 29 - Research questions and Analysis Summary.

Research issues	Context	Analysis
# 1	Is the structure of the HCC one that facilitates or hinders a TQM environment?	The literature suggests that the existence of a quality culture may be facilitated with the existence of a supportive organizational structure. In addition, structure may influence the culture of the organization (Leatt, 1994; Thompson & Strickland, 1996). Research states that a functional design is better suited to smaller health care organizations (Leatt. 1994), where communication, decentralized decision-making and employee empowerment is encouraged. The evidence does not show strong support for a structure that facilitates a TQM environment. The observations indicated that the structure at HCC is hierarchical. This finding was supported by the nature of the existing structure, which was a function of the DRG related groupings of departments.
# 2	Is there evidence that a positive culture exists at HCC?	The presence of a constructive culture is believed to support behaviours and actions that are aligned with an organization's goals and strategies (Dennison, 1990). In addition, the literature indicates that a positive culture fosters the successful implementation of a TQM based management philosophy by promoting behaviours such as teamwork, innovation, and information sharing (Deming, 1986; Master, 1996). The results of the organizational culture measurement tool indicated that overall, the culture at HCC was found to be positive, however elements of negative cultures exist. The predominant culture with the highest support was found to be the Achievement culture. The achievement culture is characterized by goal directed behaviour and high expectations for excellence (Cooke & Szumal, 1993. These characteristics are supportive of TQM objectives (Deming, 1986).
# 3	Do the factors necessary for the implementation of TQM exist?	This question assessed whether the elements associated with TQM existed at HCC. As reviewed in the quality literature, there are certain factors whose presence facilitates the implementation of TQM. The culture literature also outlines certain elements that are characteristic of a positive culture. These quality and culture themes are similar in nature. These shared

Research issues	Context	Analysis
		themes were investigated to determine whether the factors associated with the successful implementation of TQM exists at HCC: ▪ *Shared values and organizational commitment.* The presence of effective leadership is a prerequisite for success (Deming, 1986). In order to gain employee buy in to any effort, a leader must communicate the organizational goals and values to the employees (Marselek-Gaucher, 1990). The observations at HCC indicate that there is a tendency to please people in authority. This characteristic indicates that the bureaucratic nature of the organization might be encouraging employees to engage in behaviours to please their superiors. This implies that such an environment might foster a low level of job satisfaction. This result goes against quality objectives. ▪ *Empowering employees* allows them to make time sensitive critical decisions that enhance the human potential of the organization (Crosby, 1979). Empowered employees are included in decision-making and have input in how they perform their jobs. The findings at HCC indicate that employees perceive that they have limited control over the number of hours they work, and control on how the work is completed. ▪ *Teamwork and social cohesion, credible relationships and constructive conflict resolution* are important elements related to strong cultures and work best with a decentralized corporate structure (Cooke & Rousseau, 1988). A decentralized decision making structure is one where decisions are made by members of the team (Cole, 1999). Evidence from the questionnaire results indicate that at HCC, decision-making does not seem to be decentralized. Individual results indicated that overall, employees did not have enough input when decisions were being made. ▪ *Credible relationships, open communication, the perceptions of equity, and fairness:* The element of

Research issues	Context	Analysis
		equity is important for organizations attempting to implement a TQM based approach (Deming, 1986; Imai, 1986; Crosby, 1979). Relationships with senior levels at HCC and communication were not perceived to be optimal. ▪ *Innovation and continuous improvement:* A quality environment encourages new ideas and approaches. It is an environment where continuous improvement and learning are fostered (Deming, 1986). This factor is associated with a positive level of creativity and risk taking behaviours of organizational members (Gilmartin, 1999). The reported results indicate that the innovation theme is not strongly supported at HCC. ▪ *Commitment to organizational goals, such as quality and customer focus:* According to the TQM literature, providing the customer with exceptional service and products is the reason for an organization to exist (Deming, 1986). Organizations that are close to their customers focus on customer service and satisfaction. The results indicated that although HCC was aware of the importance of the customer, formal processes to maintaining customer related information lacked.

The discussion section will now review and comment upon these findings.

8 DISCUSSION

8.1 THE RESEARCH QUESTIONS

The first research issue was to determine whether the structure at HCC was one that facilitated a quality management environment. Research in the organizational domain has clearly suggested that organizational structure and its area of influence can resulting outcomes can effect the organizational culture and the adoption of TQM (Leatt, 1994;). Flat structures, or structures that are associated with a functional design, such as those centred around patient care are considered supportive structures, since they reduce the amount of bureaucracy and red tape typically associated with tall, hierarchical structures (Leatt, 1994; Thompson & Strickland, 1996). Supportive structures, by virtue of their simplicity, encourage positive outcomes, such as ease of communication, the sharing of information, decentralized decision making, and employee empowerment (Leatt, 1994). HCC's structure was found to be hierarchical, as it was based on DRG (Diagnosis Related Groupings) related departmental groupings. The implications for HCC are that they may face difficulties in their attempt to implement a quality environment. Implications of this type of structure include; slow response to external changes, limited understanding of organizational goals by organizational members, low levels of innovation, poor horizontal coordination, and unnecessary bureaucracy (Leatt. 1994). In conclusion, the current structural form puts HCC at risk, in that it may be ill equipped to respond to demands for change and the increasing demands for health care efficiency (Régie Regional, 1995).

The second research question attempted to determine whether there was any evidence that a positive culture exists at HCC. This is important for HCC since the literature states that the existence of a constructive culture supports specific behaviours and actions that are allied with an organization's goals and strategies (Dennison, 1990). The implication here is that an organization would be more likely to be successful at implementing a quality based management philosophy if the existing culture has elements that would support the actions, behaviours, and outcomes inherent in TQM. If a culture supports TQM objectives, behaviours such as teamwork, innovation, learning, and information sharing are already accepted and promoted, making the implementation simpler (Deming, 1986). The results from the questionnaire indicated a positive culture overall at HCC. This culture was identified as the Achievement culture. Researchers define this culture as having goal-directed behaviour and high expectations for excellence (Cooke & Szumal, 1993). These characteristics are supportive of HCC's TQM objectives to improve efficiency and effectiveness in service delivery. Although the results indicate a clear, overall positive culture at HCC, there was concern because elements of negative aspects of the unconstructive cultures also existed. A plausible cause for these negative characteristics includes the findings of the first research question, which asked whether there was a presence of a traditional, hierarchical structure at HCC. This would support some of the negative findings, such as support for believing that pleasing people with authority is important. More detail of this negative factor is presented in the next research question, which reviews the factors present at HCC. An interpretation of this

belief may be that if a hierarchical structure exists, employees may feel compelled to engage in this counter-productive type of behaviour. They may feel compelled to please others to have access to information, derive desired results, simplify red tape, and maintain a positive image (Cooke & Rousseau, 1988).

The final research questions attempted to determine whether the necessary factors for the implementation of TQM existed at HCC. As reviewed in the literature, there are shared themes between TQM and characteristics of positive cultures. In summary, the shared themes were:

- *Shared values and organizational commitment.*

The presence of effective leadership is a prerequisite for success (Deming, 1986). The literature states that organizations are aware of the importance of values, seeks to align them with the overall strategy of the organization, and tries to reward those values to encourage them. Successful application of TQM includes shared values (Crosby, 1979; Dean & Evans, 1994; Hunt, 1992; McMillan 1989; Ross, 1993; Scholtes 1988; Ahire et al., 1996; Rao et al., 1999). However, in order to generate desired outcomes, a leader must communicate the organizational goals and values to the employees (Marselek-Gaucher, 1990). As discussed in the previous section as a possible negative outcome of structure, the finding that there is a belief that it is important to please people in authority undermines the leadership at HCC. This characteristic indicated that the bureaucratic nature of the organization that may have developed with the structure might be encouraging employees to engage in behaviours to please their superiors. In other words,

they may be complying with directives, but are only doing so to expedite their work and present themselves positively. Employees need to be personally committed to improving the organization (Deming, 1986). A quality culture cannot be adequately sustained only through a system of rewards and punishments. The risk here is that trust in leadership is low, and the values espoused by leaders are not considered credible. Another implication is that such an environment may foster a low level of job satisfaction. This finding goes against the quality objectives of creating a momentum for quality (Deming, 1986).

- *Teamwork and social cohesion, credible relationships and constructive conflict resolution*

The effective management of human resources is an important component for strategic success (Crosby, 1979). Organizational work styles are important elements related to strong cultures and work best with a decentralized corporate structure (Cooke & Roussseau, 1988). Decisions are made by all members of the team, who are empowered through access to timely information and supported by management (Cole, 1999). The benefits of this are evident; quicker action may be taken to resolve issues by front line staff that are directly dealing with customers, without wasting time with bureaucratic channelling. Empowered employees are included in decision-making and have input in how they perform their jobs. Evidence from the results indicate that at HCC, decision-making does not seem to be decentralized. Employees' perceptions were that they did not have enough input when decisions were made. Furthermore, the findings suggest that HCC employees perceive that they have limited control over the number of hours they work, and control on how the work is completed.

- *Credible relationships, open communication, the perceptions of equity, and fairness:* Equity issues in the workplace, developing open and honest lines of communication, encouraging learning and growth as part of the culture, and promoting teamwork are themes that support and enhance the human potential of the organization (Deming, 1986; Crosby, 1979; Block 1986; Imai, 1986). Reported findings regarding the evaluation system at HCC indicated that there was dissatisfaction with recognition, and questions regarding performance appraisals. The element of equity is important for organizations attempting to implement a TQM based approach (Deming, 1986; Imai, 1986; Crosby, 1979).

Relationships and communication with senior levels at HCC were not perceived to be optimal. Physicians perceived themselves as separate from the organization, and do not appear to share the vision management may have. The irony lies in that both stakeholders have the same objective, providing the best service possible to the patient. Physicians, however, perceive administration to be a hindrance to their work to provide patient care. Low participation in administrative activities such as the lack of medical physician participation is indicative of the separation physicians feel from the rest of the hospital. They may consider management as too far removed from the front line, or not educated in medical science to be able to make decisions that may effect in quality of care. In addition, relations between nurses and physicians is not optimal, nor geared towards maximizing synergies. As reported, nurses perceive themselves to be subservient to physicians. The implications here for HCC are that if an approach that

includes teamwork is to be implemented, and then this is an area that will require some planning.

Organizations that are successful at obtaining productivity from all their employees typically have a culture that supports and values the worth of the worker. The implications for HCC are those associated with firms lacking a supportive culture, and run a risk of failing to maximize their employees' productivity (Barney, 1986). The implications also raise the lack of credibility managers may have in communication and the ability to derive desired results from any policy efforts.

- *Innovation and continuous improvement:*

This factor is associated with a positive level of creativity and risk taking behaviours of organizational members (Gilmartin, 1999). Research has stressed the importance of a firm's innovative stance, which is especially important in today's ever-changing environment (Peters & Waterman, 1982). A quality environment encourages new ideas and approaches. It is an environment where continuous improvement and learning are fostered (Deming, 1986). Individuals should be encouraged to take risks, and do so without fear of repercussions or failure (Deming, 1986). Non-conformity and freedom from oppressive and limiting routines, procedures, and bureaucracy are also considered as hallmarks of the innovative culture within the organization. The reported results indicate that the innovation theme is not strongly supported at HCC. Although, this result may be interpreted as a characteristic of the health care profession, where risk associated

with patients' health is not acceptable, the majority of the responses regarding innovation and creativity were not strong. The implication for HCC is the need to foster and encourage innovative approaches that allow the organization to benefit from the individual contributions to existing knowledge and skills that may be reflective of the changing needs.

- *Commitment to organizational goals, such as quality and customer focus:*

The TQM literature clearly states that an organization's "raison d'être" is to serve its customers (Deming, 1986). Therefore, it is imperative that the organization be geared toward satisfying the needs and expectations of their customers in order to maintain their strategic edge (Peters & Waterman, 1982; Deming, 1986). Such an aligned culture normally identifies with a strong customer orientation. Within the health care context, this could translate into more appropriate care, greater efficiency, and improved service and health care delivery outcomes. Organizations that are close to their customers focus on customer service and satisfaction. HCC members reported that although HCC was aware of the importance of the customer, there were little formal processes for maintaining customer related information. The implication for HCC is the need for visible and clear customer service objectives and measures.

Given the presentation of the results, analysis and discussion of the three research issues, HCC now is better prepared to implement changes that will help it adapt to the recent environmental changes. The following commentary touches on aspects of culture and quality. Subsequently, the next sections will then discuss culture, quality, and recommendations for HCC.

8.2 Required Culture

Older literature on culture stated that managers are capable of directing culture to their desired end for improved performance (Deal & Kennedy, 1982; Peters & Waterman 1982). This view was met with criticism and questions (Ogbonna & Harris, 2002). It was stated that managers could only foster the environment for the adoption of a TQM culture, not direct the culture. The performance of the organization is dependent on whether the employee values are aligned to the organization's strategy, in other words, the organizational culture-performance link proposes that success is contingent on the organization's capability to adapt to the desired cultural traits (Dennison, 1990; Gordon & DiTomasso, 1992). For organizational culture to generate sustainable competitive advantage, strong adaptable cultural traits are required (Barney, 1986) and these traits need to be encouraged by management.

Overall, certain desirable traits were found in the culture at HCC, however, as the results and analysis indicated, there was evidence of negative elements within the organization. HCC's current tactic is to change its culture by changing its structure. This emphasis on substantial (as opposed to symbolic) actions, such as reducing the barriers in the decision-making process, is sure to generate tangible improvements in the organizational culture. However, lasting and reinforcing improvements cannot be achieved without accompanying symbolic actions. To date, HCC's has experimented with symbolic actions only minimally. For example, HCC has practiced (albeit on a limited scale)

MBWA (management by walking around) as a way of symbolically bringing decision-making power and authority out of the office and onto the work floor, and its recent challenges to the Régie (over purchasing options) reinforce the aggressive cost-cutting attitude needed at all levels of administration and service delivery. Nevertheless, more actions that are symbolic are needed if a better fit between strategy and culture is to be achieved.

8.3 HCC Today

To date, HCC has been fortunate in that it is one of the hospitals that survived the first round of government cuts and continues to provide health care services to the public (Régie Régional, 1995; 1997). As part of the ongoing efforts to improve health care delivery efficiency and effectiveness, a recent study sponsored (Hanes, 2002) by the provincial government surveyed 35,000 patients asking them for their evaluation of the hospitals in the province of Quebec. Although the complete report has not been released, the information here is based on preliminary findings (Hanes, 2002). Table 30 shows the results for HCC and compares them to the overall best and worst performers. Appendix 13 provides the results of the survey for all hospitals.

HCC finished in 3rd position overall, tied with two other hospitals, scoring 36 of a possible 40 points. Of the eight categories surveyed, they received full marks in five but failed to achieve top marks in continuity of care, emergency service, and financial performance related to compliance with the province's zero-deficit laws (Hanes, 2002).

Although this represents a significant achievement for HCC, there still lies considerable room for improvement, especially when considering that all hospitals are focusing on quality improvement strategies. Therefore, in the low rated categories, an investigation of the causes is warranted to identify quality issues. This should be followed by the development of a strategy to improve results by incorporating TQM principles.

Table 30 - Summary Evaluations of Quebec Health Care Hospitals

Hospitals	Accessibility	Quality of Service	Continuity	Dignity	Quality of information	Overall satisfaction	Emergency Service	Financial Performance
HCC	A	A	B	A	A	A	B	C
St. Joseph de la Malbaie (Best)	A	A	A	A	A	A	A	A
Santa Cabrini (Worst)	C	B	C	B	C	C	E	D

(A= excellent, B= very good, C=good, D= Acceptable, E= Unsatisfactory) From Hanes, (2002)

With the survey results showing that HCC is perceived to provide good services, challenges still exist considering the increasing calls for public scrutiny and accountability of health care institutions (Romanow, 2002; Hanes, 2002). HCC must proactively address the ever-increasing demands and engage in quality practices that seek to continuously improve its service delivery and performance.

The results of this government commissioned survey should be interpreted with caution. The study may have been biased to fulfill government-planned prophecies for political reasons. However, this comment should not discount HCC's performance, as this bias would then be evenly distributed for all the hospitals reviewed, amongst which HCC was highly placed. Another criticism of this study was that the patient information was

gathered from patients currently resident or using the services of the health care institutions under evaluation. This fact may have put doubts in the minds of the respondents concerning anonymity, and may have included fear of negative outcomes to their health care treatments if they would give the hospitals a negative review. However, these criticisms aside, these results still show HCC more positively as compared to the others, as these limitations are applicable for each institution under review, and if truly present as confounds, can be held as constants.

Thus far, the central theme in this paper is the assumption that a quality management philosophy will enable HCC to reach its goals of providing of high quality service to its consumers within the constraints placed by higher accountability and demands for more efficiency. The following paragraphs provide a critique of the quality literature.

8.4 Criticism and Limitations of Quality:

Despite the expectations and views espoused by the general quality literature, certain researchers believe that quality cannot be the only explanation for an organization's success (Kolesar, 1993). Quality has been associated with success by enabling an organization to maintain a high market share due to customer loyalty, and that quality will lead to decreasing costs (Belohlav, 1993). However, this implies that quality is impervious to the laws of diminishing returns with respect to both cost reduction and customer satisfaction (Dory & Schier, 2002). Porter (1980) argued that the more

profitable firms in an industry successfully followed one of the following general strategies:

1. Cost leadership (low cost production);
2. Differentiation (providing a product or service not available elsewhere); and
3. Market focus (developing a strategy based on customer needs).

If quality could defy the laws of diminishing returns, then an organization could use quality to simultaneously establish cost leadership and differentiation. Porter (1985) further reasoned that different generic strategies require significantly different organizational capabilities, arrangements, and characteristics. As such, the firms would not be able to pursue more than one strategy at the same time.

It appears that organizations that vigorously pursued quality improvement were attempting to achieve sufficient quality to survive in their industries, or were attempting to follow a differentiation strategy by providing the highest quality possible in the industry. The literature states that no differentiation is sustainable, including quality (D'Aveni, 1994). If several firms in an industry simultaneously pursue a strategy of quality differentiation, they will create a *quality war* situation not unlike the classic *price war* in the industry. This situation has two outcomes. First, not every organization has the ability to be a quality leader. If most organizations choose to compete on quality, no one will be able to achieve and maintain quality leadership. However, the minimal acceptable quality level for the industry may rise, causing all the competitors to produce higher quality or become non-competitive (Dory & Schier, 2002).

Secondly, given the law of diminishing returns, as organizations in an industry continue to improve quality, there will eventually be little value derived by customers. Therefore, customers will no longer select among competing products or services on quality differentials. When this occurs, quality improvement would no longer be a viable competitive strategy of differentiation (Dory & Schier, 2002).

The healthcare industry itself is a more likely adopter of quality (Leatt, 1994). The medical profession inherently has aspects, which make the adoption of quality easier as compared to other industries. Any level of error is not accepted within medicine. Quality in health care saves lives. These attitudes are inherent within the entire medical profession. This characteristic gives HCC an advantage in implementing quality within. Nonetheless, it also raises the spectre that HCC's competitive advantage may be only effective for a limited time, since other hospitals would have that advantage as well. However, the argument here is that there are substantial barriers to entry such as the organizational culture, the change effort involved, leadership commitment, and external factors, which vary across organizations. In addition, clear demands from the public and government for better service delivery provides a strong argument for the adoption of quality. Given this discussion, the implications here for HCC's quality strategy are twofold; they are facing a crisis, and the risks of doing nothing are just too high.

Although specific TQM interventions to improve care have met with some success, researchers of quality in health care argue that most of the implementations were limited

to single sites and only had a narrow set of outcomes. A study conducted by Shortell et Al., (2000) found little evidence of the direct effects of quality efforts or the presence of a quality culture on the improvement outcomes at health care institutions. There is criticism of quality improvement programs in that they typically are only used to improve administrative procedures or customer service activities; its impact on clinical processes and outcomes has so far been limited (Chassin, et al, 1998).

Based on the outcomes of the study, and the review of the environment, the following section will review the recommendations arising from this discussion.

9 RECOMMENDATIONS

Arising from the commentary in the Discussion section, this section will describe the various recommendations for HCC going forward.

9.1 STRATEGY

Given the research questions posed at the outset of the study, it has been found that HCC's current strategy for decentralization and focus as mandated by a quality environment calls for a culture which encourages employees to be bold, creative, and flexible. HCC's current organizational culture was found to be relatively too traditional and too conservative for the change strategy. As discussed earlier, HCC's management must also place an increased emphasis on the role of easily understood and learned symbolic actions to change the culture, since managerial actions targeted to change behaviour specifically are not enough to effect the required changes (Thompson & Strickland, 1996). If these changes to the organizational culture do not take place, it is unlikely that HCC's strategy will be implemented as thoroughly as was hoped.

At the time of the study, HCC's leaders were attempting to support TQM strategies using a variety of techniques such as championing and regular information meetings. However, to succeed, these attempts must be built upon a foundation of organizational flexibility and employee empowerment. As this foundation did not appear to have been adequately laid at HCC, there is the risk that the strategy would be implemented in a limited, haphazard, and potentially biased fashion. HCC's managers must lay the proper

foundation by not only promoting the new ethos to their subordinates, but also by living it themselves.

9.1.1 Managing Change

To properly implement strategies, leaders must often make many institution-wide changes to the organization and its practices. As resistance to change in organizations can be high, especially in conservative institutions, managers must take care to overcome the objections of employees as they arise, and keep the pace of change at a rate that is consistent with the culture to minimize the build-up of future resistance. Keeping motivation high is also a good way to build and solidify employee commitment. Due to the short time frames in which institutions must effect changes to their organizations, maintaining high motivation is especially important in today's public health care industry. Fortunately, HCC had recognized the value of motivation and was holding intensive meetings at all levels on a regular basis to maintain employee enthusiasm. However, employee attitudes are only one part of the initiative for change as managers must also pay attention to the pace of actual changes in the organization and ensure it does not exceed the threshold of resistance at any moment in time (Marsalek-Gaucher, 1991). While HCC was somewhat constrained in this area by governmental regulation and collective agreements, its managers could not dismiss the importance of making "change" a constant, common occurrence by continuously making modifications, even if they are only incremental or symbolic. However, the creation of such constantly changing environment often only exacerbates previously existing employee fears concerning layoffs and other organizational changes.

Implementing successful change requires an effort from employees at all levels. While it is relatively easy for managers to determine whether they are undertaking the proper activities called for by the strategy since they were the ones who designed the strategy in the first place, at the lower levels there is often more confusion over the strategy-activity link. In order to affirm and encourage proper employee activity, direct recognition from the management personnel is often required. One way in which this can be done is known as "championing," and involves selecting high-performance employees and celebrating their achievements for all to see (Marsalek-Gaucher, 1991). To its credit, HCC had identified potential champion employees between both its medical and administrative staffs. For this technique to work, however, potential champions must first be empowered and placed in a culture where bold action is encouraged. However, it is unclear whether HCC's management has created this kind of environment. Until it does, its attempts at championing model employees will enjoy only moderate success.

Easily understood and learned symbolic actions lead by HCC's management will enable the change to the desired culture (Thompson & Strickland, 1996). If these changes to the organizational culture do not take place, it is unlikely that HCC's strategy will be implemented as thoroughly as was hoped.

9.2 CULTURE

Given that an organization's performance is related to its culture, success was determined to be contingent upon the alignment of its employee values to organizational strategy (Dennison, 1990; Gordon & DiTomasso, 1992). HCC should strive to promote a culture that encourages its employees to perform strategy critical activities. Thus, the goal to achieve a structure may potentially result in fostering the desired culture that would enable achieving outcomes related to quality management principles. Patient centred care will clearly be a change in the existing norms and greater flexibility and coordination among the various team members will be encouraged. Such a structure is expected to encourage decentralized decision-making and a teamwork approach to patient focused care (Leatt et al., 1994). Thus, the efforts HCC is expending will enable the adoption of a suitable organizational structure, however, areas of special focus will be to find ways to reduce inflexibility and promote fluidity in this new structure.

The quality literature has documented that TQM will only be successful if the entire organization participates in the process (Garvin, 1991). TQM implies the coordinated efforts within organizations between different functions (Leonard, 1988; Deming, 1986). Within organizations, universal participation and cooperation amongst different business units is often inhibited by differences in structural formality, and interpersonal style, which must be understood and addressed before implementing any TQM change effort (Dory & Schier, 2002). According to the literature, the TQM implementation can be more successful if the top management of the organization has a sustained commitment

to it, and becomes directly involved in its implementation (see Table 1 on page 28 for appropriate references).

The adoption of TQM requires considerable behavioural change on the part of the employee (Leonard, 1988). It requires them to take initiatives, do analysis, make decisions, and coordinate with other departments. These behaviours may be considered new to employees accustomed to a hierarchical structure (Nadler, 1992). In a sense, the philosophy of TQM may be counter-intuitive to the experience of many employees in a hierarchical environment (Nadler, 1992; Leonard, 1988; Hauser & Clausing, 1988). As examined in the results and analysis section, HCC has the challenge of overcoming its formal hierarchical structure when formulating a plan for change. When identified and managed properly in a change strategy, these characteristics of HCC are not insurmountable. Typically, the effort to successfully implement TQM cannot be approached as a quick fix. TQM adoption is a long-term process (Cole, 1998). This is because of the implied commitment to extensive organizational change. These are all realities that HCC will have to face.

9.3 QUALITY

The critique, that quality may not be the panacea for all organizational woes has implications for HCC. HCC must avoid the trap of merely setting the stage for TQM. Simply improving administration or tasks will not lead to the expected desired outcomes of quality (Chassin, et al, 1998). This leads to the following recommendation; it is

important to understand that medical care is a highly complex, interdependent process influenced by multiple variables. The recommendation is to examine the relationships between and among individual professional skills and motivation, group and micro system team processes, and specifically tailored interventions, along with organization-wide issues involving culture, leadership, decision support systems, and incentives.

10 CONCLUSION AND FUTURE DIRECTIONS

In summary, the purpose of this paper was to document and analyse the experience of HCC while it was initiating organization-wide change to implement a culture that is supportive of TQM. It is clear that HCC had concluded that it needed to transform itself by implementing TQM and improve performance and customer service. The literature supports the view that in order to implement TQM successfully, and lower resistance to such a change, a supportive culture would be required.

The paper began with a review of the existing background of the hospital and followed this with a review of the literature in the areas of TQM, organizational change, and organizational culture. After a discussion of the research design, and methodological choices, the findings of the cultural survey and interviews were presented and analysed. The various sources of data provided an in-depth understanding of the organization under study. These results suggested a number of implications for both general management and health care theorists and practitioners.

The major outcome of this study centred on the three research issues identified, observed, and analyzed. The outcome of the first research issue indicated that there was a need for a TQM supportive structure at HCC. This followed the reasoning that an accommodating structure would support and encourage acceptance and success of a TQM system (Leatt, 1994; Thompson & Strickland, 1996). The second research issue studied was the finding that overall a potentially positive culture existed at HCC. The literature suggests that a culture that would support aspects of TQM would help the organization successfully

adapt to the quality philosophy (Zeitz et Al, 1997, Huq & Martin, 2000). However, upon further analysis of the culture, the presence of negative aspects were found to exist at HCC. The implication was that there might have been differences due to the existence subcultures (Schein, 1997) at the organizational position, and the existing professional vocations (Operator, Engineer, Administrator).

The third research issue asked whether cultural factors necessary for the implementation of TQM existed or not (Deming, 1986). The factor outcomes included the reported perceptions of leadership, decision-making, empowerment, teamwork, innovation, participatory leadership, communication, customer focus, and continuous learning. The observation was that there was room for improvement in all of these areas.

10.1 THE IMPLICATIONS

As part of budget cuts mandated by the government (3rd party payer), it is not uncommon for employees to have multiple portfolios and roles. Implications of this study include implied changes in workers roles (such as polyvalent workers), which translates to greater responsibilities and job scope. This implies the importance for individuals to be ready to accept and be able to adapt to these changes. Changes involving employee empowerment implies increased expectations regarding responsibilities and accountability. While empowerment makes the employee stronger and more effective, it may also generate anxiety for them within their new roles.

Another finding was related the concept of teamwork. In order to have effective teams, the members may be required to change their existing negative perceptions of other team members. At HCC, a disjoint was observed between the relationships of doctors and nurses. Considering these two groups work together providing patient care, improvements in the relationships are needed. Creativity and innovation are areas key to an effective TQM practice and lead to motivation, a continuous learning environment, increased knowledge, and an increase in the ability to meet complex consumer needs (Gilmartin, 1999). These are just some of the examples of the challenges and issues that were found in the study. Management should begin by addressing these areas before proceeding with wide-scale change.

10.1.1 Study Benefits

In terms of the benefits brought to the institution, the investigation provided HCC with an informative snapshot of its culture. It also helped identify areas that would require improvement, thereby providing a starting point for the organization to develop strategies that would help HCC successfully implement a quality structure

The academic benefit of this study included the ability to observe closely a unique situation of an institution facing a crisis. The investigation was a case study conducted in the field, with no control over the parameters. The approach used was robust, in that it included various sources of information as was recommended by the research methodology literature (Yin, 1994). The rare opportunity to study this organization made possible access to information that was not normally available to the public. This

research, based on a case study, served to add to the body of existing knowledge for several subjects including health care and TQM.

10.1.2 Limitat ions

However, as elaborated earlier in the literature review, culture is not a tangible concept, which makes it difficult to measure. Culture aspects are attributes, not physical items. Measuring theses attributes, let alone accurately, is a difficult task in itself. The basis for cultural research is that behaviours are based on values, and beliefs, which are inferred. Therefore, at best, a cultural survey is used to infer the existence and type of culture, although there is no direct measurement of culture (Cooke & Rousseau, 1988). The criticisms are that the measuring tool cannot be 100% accurate and is not able to discriminate between the cultures. Inaccuracies can arise by not asking the correct questions, or by developing a tool based on a pre-defined expectation of what can be found, rather than an impartial investigation (Druckman, et Al., 1997). However, integrity was pursued by reviewing the existing culture literature and benefiting from other researchers' experiences and by validating the questionnaire via statistical and content review with members of the hospital.

Another potential weakness of the study could be that the data collection occurred a few years before the submission of this document. It should be noted, however, that a review of the literature and environment has maintained the relevance of the subject of this study.

10.1.3 Future directions

Going forward, improvements to this study can be made by further investigation. Enhancements, such as conducting a conclusive factor analysis should be completed to further establish the reliability and validity of the cultural survey instrument used. Replicating the study at other organization would help in determining the generalizability of the research findings (Yin, 1994). A significant contribution to the health care body of knowledge would be to observe the outcomes of TQM related change at one organization, and compare the results to other institutions that have undergone, or are in the process of transformation. Going forward, a comparison study at a single institution can be conducted, where the benchmark results taken before the implementation of organizational change, and measurements made subsequent to the intervention can determine whether the change effort is achieving its desired results. The questionnaire could also be enhanced by including segments that dealt with subcultures at the organization. This would help to identify the differences within the organization and to understand and develop strategies to effectively manage these nuances.

10.2 CONCLUDING REMARKS

The awareness of a supportive organizational structure, culture and desired elements is increasingly relevant to organizations attempting to implement TQM and its importance is being accepted as a major determinant of the success, and in some cases the survival, of organizations in this ever-changing environment. Downsizing, and mergers used to be the major motivators for organizational culture assessments in private organizations,

however, increasingly, public and para-public institutions have to deal with change in an unprecedented manner. Today's political and economic environment is pressuring government institutions and organizations that were considered impervious to change. These typically large, bureaucratic organizations are now being expected to be increasingly efficient, effective, accountable, and in some cases, they have to undergo tremendous change. Hospital closures, mergers, and the re-organization of institutions that were believed to be sacrosanct have created much tension and uncertainty within health care employees and the community.

The impetus for this study was that management at HCC was clearly aware of the need for a culture that would support a TQM philosophy. The resulting study then enabled the organization to determine areas where they need to focus on as part of HCC's strategy to reach its desired goals of becoming a health care organization that provides superior services in the most cost-effective way. HCC's culture was found to be a positive one, which the literature stated could potentially enable the successful implementation of TQM. The implications for HCC of the other findings of this study such as the need to change the structure to one that is more aligned with their envisioned objectives, and the identification of supportive factors that are prerequisite for TQM, provide HCC with specific goals that it can now address as part of its ongoing strategy plan.

11 REFERENCES

Ahire, S., Golhar, D., (1996) Quality management in large vs small firms, Journal of Small Business Management. 34 (2), pp. 1-13

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

Anthony, P.D. (1990) The paradox of the management of culture, or "he who leads is lost". *Personnel Review*, 19 (4, 3-8)

Arrow, K.J., (1963) Uncertainty, and the welfare economics of health care. *American Economic Review.* 53, pp. 941-73.

D'Aveni, R., (1994) *Hypercompetition: Managing the dynamics of strategic manoeuvring,* Free press, NY.

Barney, J.B., (1986) "Organizational Culture: Can it be a source of sustained competitive advantage?" *Academy of Management Review.* 11, 30, pp.656-665.

Banks, D., (1993) Is Industrial Statistics out of Control? *Statistical Science*, 8(4), November, pp. 356-409

Becker, H.S. & Geer, B. (1970) Participant observation and interviewing: A comparison. In W. Filstead (Ed.), *Qualitative Methodology.* pp. 133-142. Chicago. Rand McNally.

Belohav, J.A. (1993) Quality, strategy and competitiveness, California Management Review, 35 (3), pp. 55-67.

Berry, T.H. (1991) *Managing the total quality transformation*. New York: McGraw-Hill.

Block, P. (1986) *The empowered manager.* San Francisco: Jossey Bass.

Broedling, L.A. (1990) *Beyond the TQM mystique: real world perspectives on total quality management.* Foreword in T. Varian: Washington DC. American Defense Preparedness Association with Organizational Dynamics, pp. 1-3.

Brooks, A., Zeitz, G., (1996) *The effects of Total quality management and perceived justice on organizational commitment of hospital nurses.* Unpublished manuscript, Temple University, Philadelphia, PA. In, Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Burda, D. (1990) "R.I. hospital group acts as quality catalyst." *Modern Healthcare*, 42.

Burke, W.W., Litwin, G. (1989) A causal model of organizational performance, in ed. Pfeiffer, J.W., *The 1989 Annual: Developing Human Resources*. San Diego: University Associates. pp.277.

Bushe, G.R. (1988) Cultural contradictions of statistical process control in American Manufacturing organization. Journal of Management. 14, pp. 19-31.

Canadian Health care act, http://laws.justice.gc.ca/en/C-6/16506.html, Accessed August 09, 2002.

Canadian Institute of Actuaries (2001) *Health Care In Canada: The Impact Of Population Aging.* Submission by the Canadian Institute Of Actuaries to the Standing Senate Committee on Social Affairs, Science and Technology

CIHC (2002) *Health Care in Canada*, Canadian Institute for Health Information http://secure/cihi.ca/cihiweb/products/HR2002eng.pdf, Accessed October 3, 2002

CIHI (2001), National Health Expenditure Trends, 1975-2001, Canadian Institute of Health Information, http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=reports_ar_search_e&cw_topic=174&cw_rel=AR_31_E, Accessed October 3, 2002

Carr, D.K., & Littman, I.D. (1990) *Excellence in government.* Arlington, Virginia: Coopers and Lybrand.

Chassin, M.R., Galvin R.W. and the IOM National Roundtable on health care quality (1998) The urgent need to improve health care quality. Journal of the Americal Medical Association. 280(11), pp, 1000-1005.

Cole, R.E., (1999) Managing quality fads: How American business learned to pay the quality game. Oxford University Press, New York.

Cole, R.E., (1998) Learning from the quality movement: what did and didn't happen and why, *California Management Review,* 4 (1) pp. 43-73.

Cooke. R. A., Lafferty, J.C. (1989) *Organizational Culture inventory.* Plymouth, MI: Human Synergistics.

Cooke. R. A., Rousseau, D., (1988) "Behavioural Norms and Expectations: A Qualitative Approach to the Assessment of Organizational Culture", *Group and Organizational Studies*, 13,3, pp. 245-273.

Cooke, R. A., J. L. Szumal, (1993) "Measuring Normative Beliefs and Shared Behavioural Expectations in Organizations: The Reliability and Validity of the Organizational Cultural Inventory", *Psychological Reports*, pp.72, 1300.

Crane, J.S., Crane, N.K. (2000) A multi-level performance appraisal tool: transition from a traditional to a CQI approach. Health Care Management Review. 25 (2), pp. 64-73.

Crosby, P.B. (1979) *Quality is Free: The act of making quality certain.* New York: McGraw Hill.

Culyer, A.J., (1971) The nature of the commodity of Health care and its efficient allocation. *Oxford Economic Papers,* 23, pp. 189-211.

David, Fred R. 1995, *Concepts of strategic management*, 5th ed., New Jersey: Prentice Hall Inc, pp.159.

Deal, T.E., Kennedy, A.A., (1982) *Corporate cultures: The rites and rituals of corporate life.* Reading, MA: Addison-Wesley

Dean, J. W., Bowen, D.E. (1994) Management theory and total quality: Improving research and practice through theory development. *Academy of Management Review.* 19 (3), 392-418.

Deming, W.E. (1986) *Out of the Crisis.* Cambridge, Massachusetts Institute of Technology, Centre for Advanced Engineering.

Denison, D.R., (1996) "What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars." *Academy of Management Review*. 21, 3, pp. 619-654.

Denison, D.R., (1990) *Corporate culture and organizational effectiveness*. New York: John Wiley.

Department of Health, Nova Scotia (1999) *Future direction of the health care system, establishing District Health Authorities*. pp. 2-16

Dobyns, L., & Crawford-Mason, C. (1991) *Quality or else: The revolution in world business*. Houghton-Mifflin: Boston.

Dory, J., Schier, L. (2002) Perspectives on the American quality movement. Business Process Management. 8, (2) pp. 117-139.

Druckman, D., Singer, J.E., Cott, H.V. (1997) *Enhancing Organizational Performance*. National Academy: Washington.

Evans, J. R., Lindsay, W., (1996*) The Management and Control of Quality*. Third ed., West publishers; pp.16

Feldstein, P.J. (1993) *Health Care Economics* 4th ed. Nelson, Canada, pp.75-80.

Flood, R.L. (1993) *Beyond TQM*. Chichester, UK: Wiley

Fuchs, V.R. (1990) The health care sector's share of the Gross National Product. *Science* 247, pp 534-538

Fuchs, V.R. (1966) The output of the health industry: the contribution of health services to the economy. *Milbank Memorial Fund Quarterly* 44, in Cooper, H. & Culyer A. (ed.)(1973) *Health Economics*. Penguin, pp.135-166.

Gagliardi, P. (1990). *Symbols and artifacts: Views of the corporate landscape*. Berlin, pp. 26-55.

Garvin, D.A. (1991) How the Baldridge award really works. Harvard Business Review, 61 (5), pp. 64-75.

Geertz, C. (1973) The interpretation of cultures. New York: Basic Books.

Gilmartin, M.J. (1999) Creativity: The fuel of innovation. *Nursing Administration Quarterly*. Aspen. 23 (2), pp. 1-8.

Glaser, R., (1983) The Corporate culture survey. *Organizational Design and Development*, PA: Bryn Mawr

Gordon, G.G., DiTomasso (1992) Predicting corporate performance from organizational culture. *Journal of Management Studies*.29,6, pp.0022-2380.

Grandzol, J. (1996) Implementing Total Quality: Critical relationships. *Unpublished doctoral dissertation*, Temple University, Philadelphia, PA.

Grant, R.M., Shani, R. and Krishnan, R. (1994) TQM's challenge to management theory and practice, *Sloan Management Review*, 35 (2), pp 25-36.

Griffith, J.R., Sahney, V.K., Mohr, R.A. (1995) *Reengineering Health Care: Building on CQI*. American College of HealthCare Executives, Health Administration Press. Michigan, pp.5-200.

Hackman, J.R., & Wageman, R. (1995) Total Quality management: Empirical, conceptual and practical issues. *Administrative Science Quarterly*. 40, pp. 309-342.

Hall, P., Norburn, D. (1989) *Corporate Culture: A framework for its measurement and comparison.* Cranfield School of Management Working Paper. Bedford, pp. 5-14.

Hanes, A. (2002) Hospitals get passing grades, lauded for patient care; flayed on budgets, ER's. http: //www.canada.com/components/printstory/printstory.asp?id =8864AD92-3885-4C86, accessed September 18th, 2002.

Hansson, J. (2001) Quality in health care: Medical or managerial? *Measuring Business Excellence.* 5 (2) Pp. 60-62.

Hauser J., & Clausing, D. (1988) The house of quality. *Harvard Business Review*, 66 (3), pp. 63-73.

Hayduk L. (1988) *Structural Equation Modeling With Lisrel: Essentials and Advances.* Johns Hopkins University Press.

Hofstede, G. (1984). *Culture's consequences.* Beverly Hills, CA: Sage.

Hunt, V.D. (1992) *Quality in America.* Homewood, IL: Irwin.

Huq, Z., Martin, T.N. (2000) Workforce cultural factors in TQM/CQI implementation in hospitals. *Health Care Management Review.* 25 (3) Pp. 80-93.

Imai, M.(1986) *Kaizen.* New York: Random House.

Ingbar,M.L. & Taylor L.D.(1968) *Hospital costs in Massachusetts.* Harvard Univ. Press. In Mann J.K. & Yett D.E. (1968) The analysis of hospital costs: A review article. *Journal of Business.* 41, pp 191-202.

James, L.R., & Sells, S.B. (1981) Psychological Climate: Theoretical perspectives and empirical research. In D. Magnusson (Ed.), Toward a psychology of situations; An interactional perspective. Hillsdale, NJ: Lawrence Erlbaum. In Cooke. R. A., Rousseau, D., (1988) "Behavioural Norms and Expectations: A Qualitative Approach to the Assessment of Organizational Culture", *Group and Organizational Studies*, 13,3, pp. 245-273.

Juran, J.N. (1989) *Juran on leadership for quality: an executive handbook.* Wilson, CT: Juran Institute, Inc.

Juran, J.N. (1995) The history of managing for quality in the United States. In Juran, J.M. (Ed.) *A history of managing for quality* (pp. 553-601). Milwaukee, WI: ASQC Quality Press.

Juran J.N., Gryna, F.M. (1988) *Juran's quality control handbook.* (Eds) 4th edition, New York: McGraw-Hill.

Kanji, G.K. (1990) Total quality management myth, or miracle? *Total Quality Management,* 1 (2), pp. 63-67.

Kearns D. T., Nadler, D., (1992) *Prophets in the Dark; How Xerox Reinvented Itself and Beat Back the Japanese*, Harper Business.

Kertesz, L. (1990) At long last, doctors finds health care's prince." *Business Insurance*, 17-18.

Killman, R.H., Saxton, M.J., Serpa, R. (1985) *Gaining control of the corporate culture.* Jossey-Bass, San Francisco, pp. 125-200.

Killman, R.H., Saxton, M.J., (1983) *The Kilman-Saxton Culture Gap Survey.* Organizational Design Consultants, Pittsburgh.

Kolesar, P.J. (1993) Vision, values, milestones: Paul O'Neill starts total quality at Alcoa, California Management Review, 35 (3), pp. 33-65.

Kotter, J.P., (1996) *Leading Change.* Harvard Business School. Cambridge, Ma.

Kotter, J.P., Heskett, J.L. (1992) *Corporate culture and performance.* Free Press.

Kroeber, A.I. & Kluckhon C. (1952) *Culture: A critical review of concepts and definitions.* New York. Vintage Books.

Laabs, Jennifer J. (1996) "Expert advice on How To Move Forward With Change", *Personnel Journal*, July, 55.

Lawler, E.E., Mohrman, S.A., Ledford, G.E. (1995) *Creating high performance organizations.* San Francisco, CA: Jossey-Bass.

Leatt P. (1994) Program management: introduction and overview. In *Program management and beyond: management innovations in Ontario hospitals*, Ottawa: Canadian College of Health Service Executive.

Leatt, P., Shortell, S., Kimberly, J., (1994) Organizational Design. In Chapter 10 in Shortell, S., Kaluzny, A., (eds.) *Health care management: Organizational Design and Behaviour*, 3rd ed., New York: Delmar Publishers Inc.

Leonard, F.S. (1988) The case of the quality crusader, *Harvard Business Review*, 66 (3), pp., 2-20.

Lewin, K. (1947) Quasi-stationary social equilibria and the problem of permanent change. In Bennis et Al., (1961) *The Planning of Change*, (ed) Holt, Rinehart, and Winston.

Likert, R. (1932) *A Technique for the Measurement of Attitudes*, New York: McGraw-Hill, in Hinton, J.C., 2001 *Biographical Dictionary of Management*, Thoemmes Press. http://www.thoemmes.com/404.asp?404; http://www.thoemmes.com/encyclopedia/likert.htm, accessed October 29, 2002.

Lim, P.C., Tang, N.K.H. (2000) The development of a model for total quality healthcare. *Managing Service Quality.* 10 (20), pp. 103-111.

Litwin, G. H., & Stringer, R. A. Jr. (1968) *Motivation and organizational climate.* Boston: Harvard University. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Louis, M.R.(1983) Organizations as culture bearing milieux. In L.R. Pondy, P. J. Frost, G. Morgan & T.C. Dandridge (Eds), *Organizational Symbolism*, Greenwich CT: JAI Press.

Mann J.K. & Yett D.E. (1968) The analysis of hospital costs: A review article. *Journal of Business.* 41, pp. 191-202.

Marsalek-Gaucher, Ellen and Coffey, Richard, J. (1991) *Transforming Health Care Organizations-How to Achieve and Attain Organizational Excellence*, San Francisco: Jossey-Bass, 78.

Martin, J. (2002) *Organizational culture: Mapping the terrain.* Thousand Oaks, Sage.

Martin, J. & Siehl, C. (1983) Organizational Culture and counterculture: An uneasy symbiosis. *Organizational Dynamics*, 12 (2) 52-64.

Masters, R.J. (1996) "Overcoming the barriers to TQM's success." *Quality Progress.* May, pp.53-55.

McLaughlin, C.P., Kaluzny, A.D. (1990) "Total quality management in health: Making it work. *Health Care Management Review*, 15,3, pp. 7-14.

McLean, M.B. & Mix P. (1991) "Measuring hospital productivity and outputs: The omission of outpatient services." *Health Report,* 3, pp 229-243.

McMillan, C. (1989). *The Japanese industrial system.* Berlin Germany: deGruyter. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Migue, J.L. (1974) *The price of health.* Toronto, Macmillan of Canada

Monroe, J., (1999) Hewlett-Packard's QMS 3.0, supporting changing priorities of HP's businesses in a dynamic competitive marketplace. *Centre of Quality Management Journal*, Vol. 8, No. 1, Spring 1999. pp. 42-50.

Nadler, D. (1992) Organizational Architecture, Jossey Bass, San Francisco, CA.

O'Reilly, C. A. III, Catman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparision approach to assessing person-organization fit. *Academy of Management Journal, 34,* 487-516. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Ogbonna, E., Harris, L.C. (2002) Organizational Culture: A ten-year, two-phase study of change in the UK food-retailing sector. *Journal of Management Studies,* 39, (5)pp. 673-706.

Olian, J.D., Lynes, S.L. (1991) "Making total quality work: Aligning organizations, performance measures and stakeholders." *Human Resource Management*, 30, pp.303-330.

Ouchi, W.G. (1981) *Theory Z: How American business can meet the Japanese Challenge.* Reading MA: Addison-Wesley.

Payne, R. L., & Mansfield, R. (1973). Relationships of perceptions of organizational climate to organizational structure, context, and hierarchical position. *Administrative Science Quarterly, 18,* 515-526. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Peters, T.J., Waterman, R.H., (1982) *In search of excellence.* NY. Harper & Row, pp.69-72.

Pfeffer, J. (1981) Power in Organizations. Marshfield, MA: Pitman.

Porter, M.E. (1980) *Competitive strategy; techniques for analysing industries and competitors.* Free Press, NY.

Porter, M.E. (1985) *Competitive advantage: creating and sustaining superior performance.* Free Press, NY.

Price, M.J., Chen, E.E. (1993) Total quality management in small, high-technology company, *California Management Review*, 35 (3). Pp. 96-117

Pritchett, P. (1997) "Overcome resistance." *Executive Excellence*, 14, 2, pp. 13

Quazi, H., & Padibjo, S., (1998) A journey toward total quality management through ISO 9000 certification, a study on small and medium-sized enterprises in Singapore, International Journal of Quality and Reliability Management. 15 (5) pp., 489-508.

Rao, S., Solis, L., Raghunathan, T., (1999) A framework for international quality management research: development and validation of a measurement instrument, *Total Quality Management.* 10 (7), pp., 1047-75.

Radin, B.A., & Coffee, J.N. (1993) "A critique of TQM: Problems of implementation in the public sector." *PAQ.* Spring, pp. 42-54.

Razvi, S, Etezadi J., Bayne C., Gopalakrishan M., (1997) "Organisational Culture Assessment: An element of Quality Management in Health Care" 27th Annual Atlantic Schools of Business Conference. Fredericton, New Brunswick.

Reger, R.K., Gustafson, L.T., Demarie, S.M., Mullane, J.V. (1994) Reframing the organization: Why implementing total quality is easier said than done. Academy of Management Review. 19, 3, pp. 565-584.

Régie Régional de la santé, et des services sociaux de Montreal-Centre, (1995) Recommendations*: the organization of health and social services on the Island of Montreal; Achieving a new balance,* pp.8-79

Régie Régional de la santé, et des services sociaux de Montreal-Centre, (1997) *"Accent on access: Choosing solutions for the future to improve our services."* Consultation Paper. The organization of health and social services on the island of Montreal, 1998-2001, pp. 1-42.

Reiss, Geoff (2002) Program Management Definitions, http://www.e-programme.com/articles/proj_def.htm, Accessed August 28, 2002.

Romanow, R. (2002) *Shape the future of Health care*, Interim Report, February, 2002. Commission on the future of health care in Canada. National Library of Canada cataloguing in publication. http://www.healthcarecommission.ca/Suite247/Common/GetMedia_WO.asp?MediaID=401&Filename=Commission_Interim_Report.pdf pp. 13-82, Accessed August 2002

Ross, J. E. (1993). *Total quality management: Text, cases and readings.* Delray Beach, FL: St. Lucie Press. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Saraph, J.P., Benson, G., Schroeder, R. (1989) An instrument for measuring the critical factors of quality management. *Decision Sciences*, 20 (4), 810-829.

Sashkin, M., (1984) *Pillars of excellence: Organizational Beliefs Questionnaire.* Seabrook, Organizational Design and Development. PA: Bryn Mawr.

Sashkin, M., & Kiser, K.J., (1991) *Total Quality Management.* Seabrook, MD: Ducochon Press.

Sandrick, Karen, (1996) "How to Succeed With Doctors", *Hospitals and Health Network,* Feb. 6. pp 23-28.

Schein, E.H., (1985) *Organizational Culture and Leadership: A dynamic view.* San Francisco: Jossey- Bass. pp. 9.

Schein, E.H., (1992) *Organizational Culture and Leadership: A dynamic view.* 2nd Edition San Francisco: Jossey- Bass. pp. 17.

Schein, E.H., (1996) Culture: The missing concept in organizational studies, *Administrative Science Quarterly*, 41 (2) pp. 229-240.

Schein, E.H., (1997) Three cultures of management: the key to organizational learning in the 21st century. http://fl_learning.mit.edu/res/wp/10012.html, In Smith, C.S., Francowich, C., Gieselman, J., (2000) Pilot test of an organizational culture model in a medical setting, *The Health Care Manager*, Gaithersburg: Aspen

Schmidt, W. H., & Finnegan, J. P. (1992). *The race without a finish line.* San Francisco: Hossey-Bass. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Schneider, B. (1980) The service organization: climate is critical. *Organizational Dynamics*, 9 (4), pp. 52-65.

Scholtes, P.R. (1988) *The team handbook: How to use teams to improve quality.* Madison, WI: Joiner Associates.

Senge, P. (1990) *The Fifth Discipline: The Art and Practice of the Learning Organization*

Shrader, D., (1995) What TQM is not: TQM and the selfless nature of quality. *Program Manager*, March/April, 1995, pp. 26-29.

Shortell, D., Jones, R.H., Rademaker, A.W. (2000) Assessing the impact of total quality management and organizational culture on multiple outcomes of care for coronary artery bypass graft surgery patients. Medical Care, 38 (2), pp. 207-217.

Smirich, L. (1983) Concepts of culture and organizational analysis. *Administrative Science Quarterly*, 28, pp. 339-358.

Smith, C.S., Francowich, C., Gieselman, J., (2000) Pilot test of an organizational culture model in a medical setting, *The Health Care Manager*, Gaithersburg: Aspen

Spencer, B. (1994) Models of organization and total quality management: A comparison and critical evaluation. *Academy of Management Review*, 19(3), 446-471.

Stevens, D.P. (1993) "Avoiding failure with total quality", *Quality*. December, pp. 18-22

Streiner, D. L. & Norman, G.R. (1995) *Health measurement scales: a practical guide to their development and use.* 2nd ed., New York: Oxford Press.

Swartz M., & Jordan D. (1980) *Culture: An anthropological perspective.* New York: Wiley.

Thompson, A. A., Strickland, A. J. (1996), *Strategic Management: Concept and Cases*, 9th ed. Chicago: Irwin Publishers, pp. 295-301

Trice, H. M., Beyer, J.M. (1993) *The cultures of work organizations.* Englewood Cliffs, NJ: Prentice Hall. pp.33.

Uttal, B. (1983) The corporate culture vultures. *Fortune,* Oct. 17.

Wallace, A.f.c. (1970) *Culture and personality.* New York, Random House

Ware M.E., Leak G.K., Perry, N. W (1985) Life Styles Inventory: Evidence for its Factorial Validity. *Psychological Reports.* Pp. 963-968.

Weatherly, K. A., & Beach, I. R. (1994). *Organizational culture and decision making: A theory, and instrument, and preliminary research* (Tech. Rep. No. 94-4). Tucson, AZ: University of Arizona, Department of Management and Policy. In Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

Whalen, M.J., & Rahim, M.A. (1994) Common barriers to implementation and development of a TQM program."*Total Quality Management*, March/April, pp. 19-21.

Whitley, B.E., (1996) *Principles of research in behavioural design.* CA:, Mayfield Pp. 320-322.

Wilmott, H., (1993) "Strength is ignorance: slavery is freedom": Managing culture in modern organizations. *Journal of Management studies.* 30, 4, pp. 515-51.

Yin R.K., (1944) *Case study research: Design and Methods, 2nd Ed.* Beverly Hills, Sage Publications :CA pp. 17-53.

Yin R.K., (1984) *Case study research.* Beverly Hills, Sage Publications :CA

Zeitz, G., Johannesson, R., Ritchie, J.J. (1997) An employee survey measuring total quality management practices and culture; development and validation. *Group and Organizational Management.* 22, (4), Sage, pp. 414-444.

12 APPENDIX 1 - HCC MISSION

1996 Mission Statement
HCC

"caring through excellence"

OUR MISSION

HCC is a university affiliated, community hospital which serves a multicultural population. We seek to provide the highest level of patient and family focused care.

OUR VISION

Inspired by our traditions and guided by our values, we are committed to caring through excellence and innovation.

OUR VALUES

We believe in:

- Respect for the dignity of life
- Support and development of our people
- Integrity and Compassion

We strive for:

- Collaborative teamwork
- Effective communication
- Continuous quality improvement
- Effectiveness and efficiency
- Continuous Learning

13 APPENDIX 2 - TABLE OF INDICATORS (5 POINT CRITERIA)

The following is a table of indicators selected by the Provincial Government (Régie Régional, 1995) to evaluate resource use in each hospital in the city of Montreal.

EVALUATION OF RESOURCES USE, BY HOSPITAL

To guide the decision regarding the choice of hospitals that could be closed, we develop criteria to apply to each hospital. These criteria are:

- Maintaining client access to acute care;
- Optimal management of available resources;
- The hospital's ability to adapt its practices to current recognized practices such as ambulatory shift and acute-care geriatrics;
- The Institution's designation for the regional and out-of-region ultra specialized-care programs, such as neonatology, oncological radiology, and so on;
- The capacity to recruit and retain medical staff for emergency room, operating room, and intensive care services.

Methodology

Indicators drawn from the Méd-Echo data bank for 1991-1992, 1992-1993, and 1993-1994 helped us quantify several of these criteria. The indicators chosen allow, among other things, for an examination of the hospital's clientele management and change in its medical practices over the past three years. It should be noted that each hospital was compared to itself over the three years, thereby showing the change in its activities during the period for which Méd-Echo data was available. Each indicator chosen was assigned a value according to observed variations or measurements. The five indicators chosen and their weighting are presented below:

Indicator A

Acute physical-care bed occupancy by the acute physical-care clientele for 1991/1992, 1992/1993, and 1993/1994, by hospital:

Occupancy rate greater than or equal to 76% (for two out of three years)	= 1
Occupancy rate greater than or equal to 66% and lower than 76% (for two out of three years)	= 0
Occupancy rate lower than 66% (for two out of three years)	= -1

Indicator B

The evolution in the volume of admissions to acute physical care from 1991/1992 to 1993/1994, by hospital:

Increase of over 2% in admissions in 1993/1994, as compared to 1991/1992; and whether this decrease is or is not compensated by the volume of 1-day care:	
Increase present	= 0
No increase	= 1

Indicator C

The evolution in the average length of acute physical-care stay from 1991/1992 to 1993/1994, by hospital:

Increase in average length of stay of over 5% for 1993/1994 compared with 1991/1992:	
Increase present	= 0
No increase	= 1

Indicator D

The evolution in the ratio of 1-day care to total volume of admissions and the one-day care from 1991/1992 to 1993/19994, by hospital:

Ratio increased or maintained from 1991/1992 to 1993/1994 or simulation of beds under indicator E equal to 0 beds.	= 1
Ratio reduced from 1991/1992 to 1993/1994	= 0
Ratio equal to 0% in 1993/1994	= -1

Indicator E

The proportion of acute physical-care beds used in 1992/1993 whose clientele could have been served with ambulatory care, by hospital:

Proportion of the number of beds identified through simulation study for the hospital's clientele 1992/1993, in relation to the number of beds used in that hospital during the same year:	
If higher than or equal to 10%	= 0
If lower than 10%	= 1

All of the region's specialized and general hospitals except rehabilitation hospitals were evaluated under this set of indicators.

ANALYSIS AND RESULTS

The following pages present tables of the data drawn from the Méd-Echo bank on each of the hospitals and each hospital's evaluation results.

Evaluation totals vary between 0 and 5; the lowest possible score was –2, and the highest 5.

Score	Hospital	Score	Hospital
0	Gouin-Rosemont Hospital	3	Sacré-Coeur Hospital Lachine General Hospital Santa Cabrini Hospital Shriners' Hospital Fleury Hospital
1	Bellechasse Hospital Guy Laporte Hospital Reddy Memorial Hospital Saint Michel Hospital	4	Hotel-Dieu de Montreal Montreal Children's Hospital Montreal Neurological Institute Saint-Luc Hospital Sainte-Justine Hospital Verdun Hospital
2	Queen Elizabeth Hospital Saint Laurent Hospital Sainte-Jeanne d'Arc Hospital Lachine General Hospital Jean-Talon Hospital	5	Institute de Cardiologie Montreal General Hospital Sir Mortimer B. Davis Jewish General Hospital Maisonneuve-Rosemont Hospital Notre-Dame Hospital Royal Victoria Hospital and Chest Hospital Lasalle General Hospital Lakeshore General Hospital Saint Mary's Hospital

Hospitals that scored 0, 1, and 2 are those where we recommended closure of acute physical-care activities.

Besides evaluating the criteria by hospital, we also took into account the place of residence of clienteles by hospital grouping and performing analysis of the distribution of acute physical-care facilities. This approach was combined with simulation of hospital closings enabling us to determine the viability of the scenarios. Our chief objective was to maintain access to acute-care facilities for people residing in the region of a given hospital grouping. It was found that the North-East was unable to absorb closing of

certain hospitals identified under these criteria; we accordingly re-evaluated the closing of Jean-Talon Hospital.

Conclusion

We therefore recommend closing acute physical-care in the following institutions:

Gouin-Rosemont Hospital	Queen Elizabeth Hospital
Bellechasse Hospital	Saint Laurent Hospital
Guy Laporte Hospital	Sainte-Jeanne d'Arc Hospital
Reddy Memorial Hospital	Lachine General Hospital
Saint Michel Hospital	

14 APPENDIX 3 - ADMINISTRATION / ORGANIZATION

Mission

The mission of HCC is to provide all patients with holistic health care by striving to affect each patient physically, psychologically, socially, and spiritually. As a specialized teaching hospital affiliated with McGill University, HCC, a Catholic hospital, is responsible for dispensing health care according to ethical principles based on healing tradition.

HCC will provide primary health care and regional referral (secondary), as well as some specialized medical care. Medical, Nursing, and support services will be provided in accordance with accepted standards, and to the extent that human and financial resources allow.

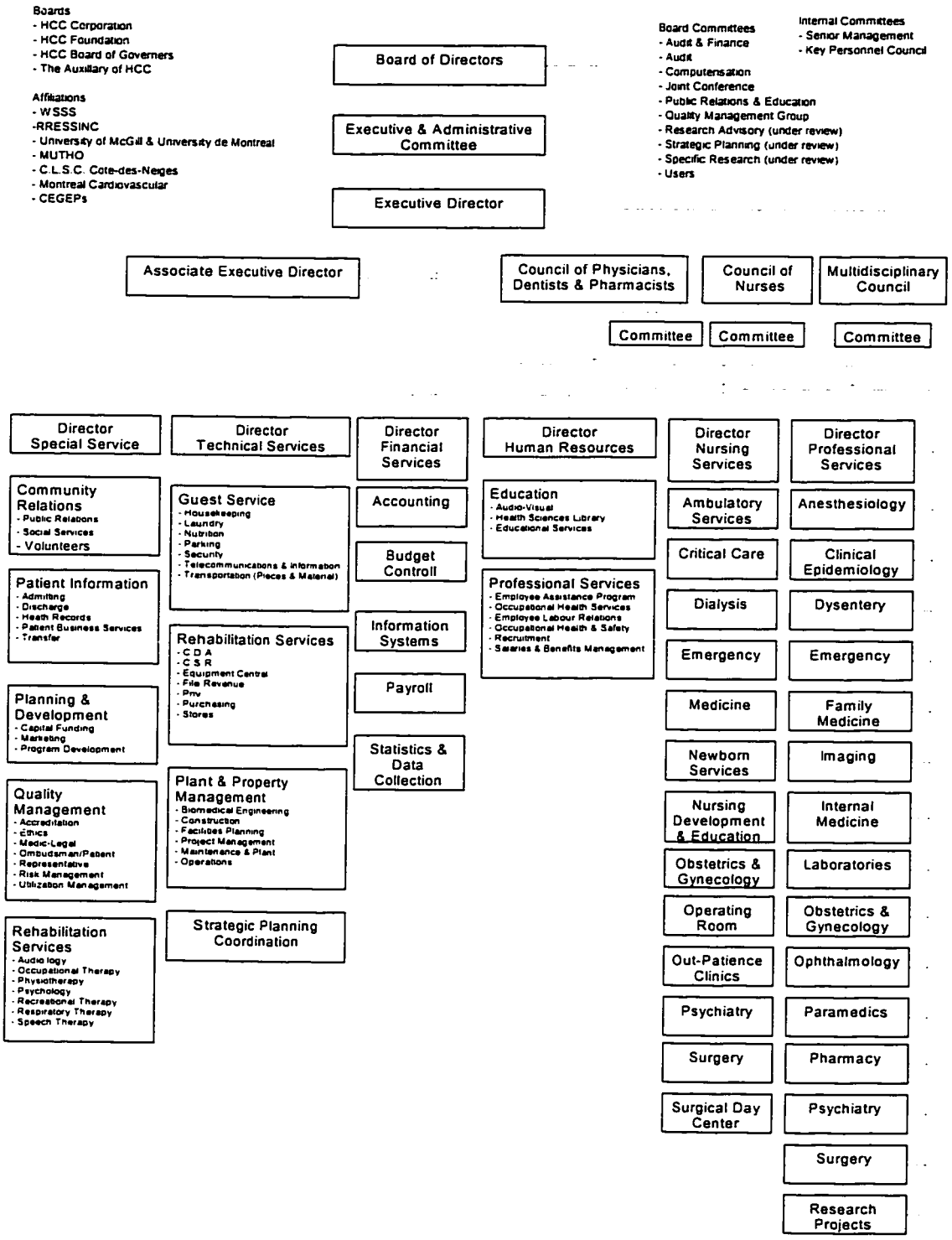
HCC will provide the following medical services:

- Anaesthesia
- Cardiology
- Dermatology
- Dentistry
- Diagnostic Radiology
- Family Medicine
- Gastroenterology
- General Medicine
- General Surgery
- Gynaecology
- Geriatrics
- Head & Neck Surgery
- Internal Medicine
- Laboratory Services
- Maxillary Atrophy
- Neurology
- Nuclear Medicine
- Obstetrics
- Palliative Care
- Oncology
- Ophthalmology
- Oral Surgery
- Orthopaedic Surgery
- Otorhinolaryngology
- Paediatrics
- Psychiatry
- Rehabilitation Services
- Respirology
- Renal Dialysis
- Thoracic Surgery
- Vascular Surgery

HCC will not provide the following services:

- Cardiac Surgery
- Neurosurgery
- Organ Transplantation

15 APPENDIX 4 - ORGANIZATION CHART



16 APPENDIX 5 - CLASSIFICATION OF CULTURES

This appendix deals with the cultures and the factors that were associated to each one. Each factor is followed by a statement in brackets. This statement indicated the expected results for that factor should that culture be present at the surveyed organization.

Constructive Cultures

Culture	Factors
Achievement: An achievement culture characterizes that to do things well and value members who set and accomplish their own goals. Members are expected to set challenging but realistic goals, plan to reach these goals, and pursue them with enthusiasm	- Planning realistic, but challenging goals (high) - Monitoring realistic, but challenging goals (high) - Accomplishing realistic, but challenging goals (high) - Empowerment (high) - Evaluation System (fair) - Conflict resolution (constructive) - Supervisor Relations (high) - Credible Relationship (high)
Self-actualization: A self-actualizing culture characterizes organizations that value creativity, quality over quantity, and both task accomplishment and individual growth. Members are encouraged to gain enjoyment from their work, develop themselves, and take on new and interesting activities.	- Growth T & D (high) - Innovation (high) - Accomplishing realistic, but challenging goals (high) - Empowerment (high) - Evaluation System (fair) - Conflict Resolution (constructive) - Supervisor Relations (high) - Credible relationship (high)
Humanistic-Encouraging: A humanistic-encouraging culture characterizes organizations that are managed in a participative and person-centred way Members are expected to be supportive, constructive, and open to influence in their dealing with one another. Helping others develop (high)	- T & D - Innovation - Participative environment (high) - Empowerment (high) - Evaluation System (fair) - Conflict Resolution (constructive) - Supervisor Relations (high) - Credible Relationship (high)

Affiliative: An affiliative culture characterizes organizations that place a high priority on constructive interpersonal relationships. Members are expected to be friendly, open, and sensitive to the satisfaction of their work group.	- Friendliness (high) - Participative environment (high) - Empowerment (high) - Evaluation System (fair) - Conflict Resolution (constructive) - Supervisor Relationship (high)

Passive-Defensive Cultures

Culture	Factors
Approval: An approval culture describes organizations in which conflicts are avoided and interpersonal relationships are pleasant--at least superficially. Members feel that they should agree with, gain approval of, and be liked by others.	- Conflict Resolution (unconstructive) - Agree with people (high) - Please people in authority (high) - Supervisor relation (low) - Credible relationships (low) - Evaluation system (unfair)
Conventional: A conventional culture is descriptive of organizations that are conservative, traditional, and bureaucratically controlled. Members are expected to conform, follow rules and make a good impression.	- Conforming to rules (high) - Participative environment(low) - Innovation (low) - Supervisor relations (low) - Evaluation system (unfair) - Empowerment (low) - Conflict Resolution (unconstructive)
Dependent: A dependent culture is descriptive of organizations that are hierarchically controlled and nonparticipative. Centralized decision making in such organizations leads members to do only what they are told and to clear all decisions with superiors.	- Conforming to rules (high) - Participative environment (low) - Innovation (low) - Supervisor relations (low) - Credible relationships (low) - Evaluation system (unfair) - Empowerment (low) - Please people in authority (high) - Conflict Resolution (unconstructive)
Avoidance: An avoidance culture characterizes organizations that fail to reward success but nevertheless punish mistakes. The negative reward system leads members to shift responsibilities to others and avoid any possibility of being blamed for mistake.	- Evaluation system (unfair) - Conflict Resolution (unconstructive) - Innovation (low) - Supervisor relations (low) - Credible relationships (low) - Avoidance of responsibility (high)

Aggressive-Defensive Cultures

Culture	Factors
Oppositional: An oppositional culture describes organizations in which confrontation and negativism are rewarded. Members gain status and influences by being critical and thus are reinforced to oppose the ideas of others.	- Employee antagonism (high) - Innovation (low) - Supervisor Relations (low) - Credible relationships (low) - Evaluation system (unfair) - Conflict Resolution (unconstructive)
Power: A power culture is descriptive of non-participative organizations structured on the basis of the authority inherent in members' positions. Members believe they will be rewarded for taking charge, controlling subordinates and, at the same time, being responsive to the demands of superiors.	- Control (high) - Please people in authority (high) - Credible relationship (low) - Supervisor relationships (low) - Conflict resolution (unconstructive) - Evaluation system (unfair)
Competitive: A competitive culture is one in which winning is valued and members are rewarded for outperforming one another. Members operate in a "win-lose" framework and believe they must work against their peers to be noticed.	- Competition (high) - Unrealistic goal-setting (high) - Credible relationships (low) - Supervisor relationships (low) - Conflict resolution (unconstructive) - Evaluation system (unfair fair)
Perfectionist: a Perfectionist culture characterizes organizations in which perfectionism, persistence, and hard work are valued. Members feel they must avoid any mistake, keep track of everything, and work long hours to attain narrowly defined objectives.	- Workaholic environment (high) - Unrealistic goal-setting (high) - Credible relationships (low) - Supervisor relationships (low) - Conflict resolution (unconstructive) - Evaluation system (unfair)

17 APPENDIX 6 - INTERVIEW TRANSCRIPTS

The following is a transcript of an interview with Coordinator of the COLT team. This person did not fill out the questionnaire, so this information is more of that of a participant observer.

Vertical division of labour

Freedom and control.

Q1. What is the ratio of administrative staff to front line staff (high-low)?	
	• The ratio varies, e.g., 1:1 in senior management, all the way to 1:40 in housekeeping and geriatrics. • The number of senior manager = 8. • The number of middle managers =45. • The number of employees=1700. • There has been a 40% reduction in the number of managers in the last couple of years.

Q2. How many levels of hierarchy for a department (on average)?	
	• HCC has a traditional organizational structure consisting of three levels. • HCC is perceived to be less hierarchical than other hospitals in Quebec. • HCC will further flatten the organization to two levels with the introduction of program management.

Q3. What is the span of control for (on the average)?	
	• Upper management = 1:10. • Middle management = 1:15. • Supervisory level =1:15.

Q4. Is authority knowledge or position based?	
	Senior management positions are recruited on the basis of a persons skills and knowledge, rather than seniority. Managers who were recruited recently have more open and progressive management styles. Nevertheless, there exist managers who still ascribe to old bureaucratic management styles.

Communication.

Q1. Is communication open and effective, within and between senior management, middle management, and front line staff?	
	• Within senior management there is a lack of team building skills.

	• Within middle management, there is a greater amount of participation and teamwork. • Within front line staff, there is good interdepartmental communication. However, intradepartmental communication is not as strong.

Q2. Is formal or informal type of communication used at HCC, how effective is each type of communication?	
	• Formal communication is greatly utilized at HCC. Its effectiveness can improve as senior management can become more aware of the grassroots issues of the organization. • Informal communication happens mostly through the grapevine, and it is not considered reliable.

Horizontal division of labour

Coordination between departments.

Q1. How well are departments coordinated, e.g., duplication of services, and time efficiency?	
	• There is a high degree of effectiveness in the coordination of departments, it is perceived that HCC has less duplication when compared to other hospitals.

Q2. What types of coordination methods are used within the hospital?	
	• Liaison= yes. • Task forces= yes. • Integrators= yes.

Q3. What is the degree to which persons in one unit have the opportunity to interact with persons in the other departments (high-low)?	
	• Clinical departments = very high. • Support service = very low. • 70% of hospital staff have an opportunity to interact with persons in other departments.

Formalization.

Q1. The degree to which roles and procedures are formalized?	
	• Roles and procedures are highly formalized. This is a result of unions, and past accreditation criteria. • However there is a trend to provide care that is patient centred, meaning more flexibility in roles and procedures.

Centralization.

Q1. The degree of centralization in decision-making and planning (low-high)?	
	• Both are considered to be highly centralized. • Certain decision-making and planning aspects have to be decentralized

	for day-to-day operations.

Planning Aspect.

Q1. Are organizational plans linked to organizational goals?	
	There are problems in terms of prioritizing the hospital's goals due to the uncertain future of the McGill Super Hospital.

Q2. Are plans developed for both the short and long term?	
	Short-term plans are formulated, but strategic planning is difficult due to the uncertainty of the government's plans.

Organizing Aspect.

Q1. Do organizing efforts put plans into action?	
	Usually plans are put into action. However there are situations in which clinical and middle management teams have problems due the lack of commitment by the physicians.

Q2. Are tasks appropriately assigned to either individuals or groups?	
	Typically, tasks are appropriately assigned, but sometimes individuals are given jobs for which they are not qualified, and they are chosen solely on their seniority (collective agreements).

Influencing Aspects.

Q1. Do rewards offered to employees actually motivate them?	
	• There are no officially recognized rewards for employee's performance, except tenure pins are given for years of service. • There is a slim opportunity for upward mobility within the organization.

Q2. Are organizational members encouraged to do work that contributes to organizational goals?	
	Effective work is encouraged, although individual motivation is compromised by the lack of job security.

Controlling Aspects.

Q1. Is information gathered to measure recent performance?	
	• The hospital conducts statistical analysis on each of their programs. • For employees, performance reviews are conducted once a year. • In general employees perceive a lack of feedback for their day-to-day work.

Q2. Is bench marking used in the hospital?	
	• On a hospital basis, HCC compares itself to other hospitals, (i.e., the SOFI report). • On a departmental basis, bench marking is not conducted.

18 APPENDIX 7 - ENVIRONMENTAL SCAN

Results from environmental scan conducted at HCC

a)Customer Component	• Increased number of patient who are educated and more apt to question the delivery of health care. • Increased number of interest groups, (e.g., AIDS and environmental groups), who have influenced public awareness, and everyday operations of hospitals. • Increased media attention about health care issues (for, e.g., accountability regarding the use of public funds) has also increased public awareness. • Increased links with the community, including CLSC, industry, university and schools allows the hospital to find resources (e.g., DIA. internships) and create awareness of their services
b) Market Position Component.	• According to the latest government evaluation of hospitals in the Montreal region, HCC was rated in the top twenty percent. • HCC has found its place as one of the best community hospitals on the island of Montreal. • HCC has one of the most efficient Geriatric programs in Montreal, e.g., it has one of the lowest lengths of stays. • The Obstetrics program is one of the leaders in the region.
c) Labour Component.	• Unions are finding a stronger position within the hospital, especially with the insecurities created by the latest budget cuts. This has increased the need for the hospital to take them into consideration when making management decisions.

Internal Environment

a) Communication	• Generally information is not freely exchanged horizontally or vertically between management and front line staff. • Nurses perceive their relationship with physicians to be subservient. • An unhealthy relationship exists between union and management. • Level of literacy may be a barrier to communication. • The grapevine is used widely. • Compartmentalized philosophy exists.

	• However attempts have been recently made to improve communication between different levels within the organization, i.e., interdisciplinary teams and councils.
b) Employee development.	Education. • The amount of formal learning available depends on the structure and philosophy of the departments e.g., nursing has more opportunities than the rest of the hospital (union representation, hospital organization), vs. maxillofacial surgery . • In general, formal learning does not translate to everyday work situations, and the new information learned is rarely communicated to others. Empowerment. • A perception exists that senior management is now listening to front line staff. • Management has become aware that empowering employees and allowing them to go ahead with their proposals is worthwhile.
c) Organizational Change.	• With the proposed restructuring, the employees are having to face changes now more than ever. • The COLT (Continuous Organizational Learning Team) has been developed to lead organizational development initiatives, and also educate employees to reduce resistance and anxiety caused by change.
d) Physician Commitment.	• Management and administrative issues are given a very low priority by physicians, for example, the lack of participation by physicians was observed at the Leadership Conference on continuous learning.

19 APPENDIX 8 - SURVEY INSTRUMENT (ENGLISH)

Instructions: Read each statement. Please answer how much you agree or disagree with each statement by writing the number associated with your opinion in the space provided at the right of each statement.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
1	2	3	4	5

SECTION 1: RELATIONSHIPS

As an employee of Health Care Centre, I am expected to ...

1. Share my concerns freely with my boss.
2. Agree with the ideas of my boss.
3. Set goals that please my boss.
4. Deal with problems by getting my boss involved.
5. Please people in authority.
6. Give my personal opinions to people with authority.
7. Point out my co-worker's personal flaws.
8. Share my concerns freely with my co-workers.
9. Be friendly with my co-workers.
10. Help people in my department improve their jobs skills.
11. Be loyal to my department.
12. Interact with people outside of my department.
13. Motivate people in my department by being friendly with them.
14. Solve problems constructively with the people involved.
15. Show concern for others.
16. Look for mistakes in other people's work.
17. Take charge of situations.
18. Oppose things indirectly.
19. Criticise others constructively to improve their job performance.
20. Deal with disagreements and problems by avoiding the issues.
21. Give people a "tough time" when they have an idea.
22. Act tough when relating to other staff members in the hospital
23. "Go along" with others.

Please give your opinion on the following statements.

24. My boss is friendly.
25. My boss is easy to talk to.
26. My boss follows the rules.
27. My boss sends information that I can believe.
28. My boss has total control in my department.
29. My boss keeps me well informed about developments in the hospital.
30. My co-workers keep me well informed about developments in the hospital.
31. My co-workers send information that I can believe.
32. My co-workers get in the way of my work.
33. It is important for me to outperform my co-workers.
34. It is important for me to be liked by everyone.
35. It is important to be accepted by others in the hospital.
36. It is important for me to always be correct.
37. It is important to be seen and noticed in my department.
38. It is important to show that I have never lost.
39. It is important for me to make a very good impression at work.
40. It is important to appear competent and independent.
41. It is important to use the authority of my position.
42. My job is a contest.
43. My job title is more important than my work.
44. My department has unreasonably high goals.

SECTION 2: WORK ATMOSPHERE.

As an employee of HCC am expected to ...

45. Help others in my department to find different ways to do their jobs.
46. Act as a mentor or coach for people in my department.
47. Keep an "open mind" about the new ideas of others.
48. Strictly follow policies and procedures for my major tasks.
49. Make policies & procedures about how my work is done.
50. Decide how unexpected work situations are to be handled.
51. Not question surprising facts.
52. Follow orders even if they seem incorrect to me.

Please give your opinion on the following statements.

53. As compared to other hospitals, HCC is one of the best places to work.
54. I am proud to tell others that I am part of HCC.
55. I am very satisfied with my present situation at the hospital.
56. I take responsibility for major decisions related to my work.
57. I take responsibility when I have made an incorrect decision.

58. I pass my responsibilities to others in unknown situations.
59. My input has an effect on the decisions made by my boss.
60. My input has an effect on the decisions made by my co-workers.
61. If I were to choose a new job, it would be similar to my current job.

SECTION 3: ACHIEVEMENT AT WORK

As an employee of Health Care Centre, I am expected to...

62. Do excellent work.
63. Seek feedback from my boss.
64. Seek feedback from my co-workers.
65. Accomplish challenging work.
66. Set the pace of my work.
67. Decide what tasks I will perform day to day.
68. Set limits on how much work I have to complete.
69. Be precise about every little detail of my job.
70. Never make a mistake in my job.
71. Put in long hours at work.
72. Always do a perfect job.
73. Make my work the most important thing over everything else.
74. Take care of everything personally.
75. Be more concerned with the amount of work done than the quality of my work.
76. Have overly ambitious goals for my job.
77. Show enthusiasm for my work.
78. Develop challenging goals for my job.
79. Think ahead and plan.
80. Explore alternatives before I take any action.

SECTION 4: PERFORMANCE EVALUATION

Please give your opinion on the following statements.

81. I am always recognized for a job well done.
82. My good work is ignored.
83. Poor performance is always punished in my department.
84. Performance appraisals are fair and objective.
85. My performance appraisal emphasizes my mistakes rather than my achievements.
86. My performance appraisal is based on my relationship with my boss and not my actual performance.

SECTION 5: COPING WITH CHANGE.

As an employee of Health Care Centre, I am expected to ...

87. Take part in programs to improve my "people" skills.
88. Learn new knowledge and skills, to do my present job better.
89. Read to stay up to date within my field of expertise.
90. Learn new knowledge and skills, to prepare myself for other responsibilities in the hospital.
91. Find new ways of doing my work.
92. Take risks.
93. Be a good follower.
94. Resist conformity.
95. Come up with original ideas at meetings.
96. Oppose ideas of others in my department.
97. Generate and implement new ideas in my department.

Please give your opinion on the following statements.

98. I wait for others before taking action in a new situation.
99. Rules are more important than people.
100. Traditions are important.
101. It is important to fit into the mold.
102. Rules are more important than ideas.
103. The usual way is the best way to do things.
104. HCC is taking action to stay open for the next three years.
105. I wouldn't mind moving from job to job.
106. I adjust quickly to changes at HCC.

PLEASE READ EACH OF THE FOLLOWING THREE STATEMENTS BEFORE GOING ON WITH THE SURVEY:

- If your primary job equally involves ***both*** **patient care and supporting the hospital staff**, then fill out both **Section 6 and Section 7**.
- If your primary job **only** involves **direct patient care**, then fill **Section 6**.
- If your primary job **only** involves **supporting the hospital staff** then go to **Section 7**.

SECTION 6 :PATIENT SATISFACTION

107. There is a formal process for obtaining information about the patient's satisfaction with my department's services.
108. Information about patient needs and expectations is used as the basis for determining patient care standards.
109. Feedback from patients is used to improve the quality of my departments services. My co-workers are committed to meeting the patients needs and expectations.
111. There is a process for effectively responding to patient complaints or problems.

IF YOU ARE NOT FILLING SECTION 7, THEN PLEASE GO TO SECTION 8.

SECTION 7: HOSPITAL STAFF SATISFACTION.

112. There is a formal process for obtaining information about the hospital staff's satisfaction with your department's services.
113. Information about the needs and expectations of the hospital staff is used as a basis for determining the goals of my department.
114. Feedback from hospital staff is used to improve the quality of my department's services.
115. The employees in my department are committed to meeting the needs and expectations of the hospital staff.
116. There is a process for effectively responding to the complaints or problems with my department's services.

Instructions: Read each question carefully. Then indicate your answer by shading in only one box in the column to the left of the statements.

SECTION 8: DEMOGRAPHICS

117. Please indicate your age.
   1. Under20
   2. 20-40
   3. 41-60
   4. 61+

118. Please indicate your gender.
   1. Female
   2. Male

119. What is the highest level of schooling you have completed?
   1. High School
   2. CEGEP (DEC)
   3. Undergraduate Degree
   4. Graduate degree
   5. Other

120. Please indicate your position.
   1. Non-Management
   2. Supervisory
   3. Middle Management
   4. Senior Management

121. What is your current employment status?
   1. Availability
   2. Part-time
   3. Full-time
   4. Contract

122. Of the following categories, which best describes your current profession or occupation? (Please read the entire list, and then mark only one answer)
   1. Administration
   2. Allied Health/Para-Medical (e.g. Physiotherapist, occupational therapist, social worker)
   3. Clerical/Secretarial
   4. Nursing

5. Technologist/ Technician
6. Service worker (e.g. housekeeping, nutrition, laundry, maintenance)
7. Other, Please specify. _____

123. How long have you worked in this organisation?
1. Less than1 year
2. More than1 year up to5 years
3. More than5 up to10 years
4. More than10 up to15 years
5. More than15 up to20 years
6. More than 20 years

124. Please indicate your income level.
1. Less than $30,000
2. $30,000 to $50,000
3. More than $50,000

125. Please indicate your shift.
1. Days
2. Evening
3. Nights
4. Rotating

Thank you very much for taking the time to complete this questionnaire. The information you have provided will help the hospital to identify areas where necessary improvements need to be made to keep pace with the changing health care environment. If you have any comments or questions, do not hesitate to call...

20 APPENDIX 9 - SURVEY INSTRUMENT (FRENCH)

Directives: Lisez chaque énoncé. S'il vous plaît veuillez indiquer jusqu'à quel point vous êtes d'accord ou en désaccord avec chacun des énoncés en inscrivant le numéro qui correspond à votre opinion dans l'espace prévue à la droite de chaque énoncé.

Entièrement d'accord	D'accord	Ni d'accord ni en désaccord	En désaccord	Fortement en désaccord
1	2	3	4	5

SECTION 1: RELATIONS

En tant qu'employé de l'hôpital HCC, on s'attend a ce que...

1. Je partage librement mes inquiétudes avec mon directeur.
2. Je sois d'accord avec les idées de mon directeur.
3. Je me fixe des objectifs qui plaisent à mon directeur.
4. J'implique mon directeur lorsque j'essaie de régler des problèmes.
5. J'essaie de plaire aux personnes en charge.
6. Je donne mes opinions personnelles aux personnes en charge.
7. J'attire l'attention sur les manques personnelles de mes collègues.
8. Je partage mes préoccupations avec mes collègues.
9. Je sois aimable avec mes collègues.
10. J'aide les gens de mon département à améliorer leur compétence.
11. Je sois loyal à mon département.
12. Je me mêle aux personnes en dehors de mon département.
13. Je motive les personnes de mon département en étant amical avec elles.
14. Je résoudre les problèmes d'une façon constructive avec les gens impliqués.
15. Je démontre de l'intérêt pour les autres.
16. Je cherche des erreurs dans le travail des autres.
17. Je prenne charge de situations qui se présentent.
18. Je m'oppose indirectement à certaines choses.
19. Je critique les autres d'une façon constructive pour améliorer leur performance.
20. Je traite les problèmes et les disputes en évitant la question.
21. Je donne "du fil à tordre" lorsque quelqu'un a une idée.
22. Je me montre dur dans mes relations avec les autres membres du personnel à l'hôpital.
23. Je "me plie" aux autres.

Veuillez, s'il vous plaît, donner votre opinion sur les énoncés suivants.

24. Mon directeur est amical.
25. C'est facile de parler avec mon directeur.
26. Mon directeur est fidèle aux règlements.
27. Mon directeur envoie des informations qui sont crédibles.
28. Mon directeur a le contrôle absolu dans mon département
29. Mon directeur me tient bien au courant des développements à l'hôpital.
30. Mes collègues me tiennent bien au courant des développements à l'hôpital.
31. Mes collègues m'envoient des informations qui sont crédibles.
32. Mes collègues me nuisent dans mon travail.
33. Surpasser mes collègues de travail est très important pour moi.
34. Être aimé de tous est très important pour moi..
35. Être accepté de ceux qui m'entourent à l'hôpital est très important pour moi.
36. C'est très important pour moi de toujours être correct (de ne jamais me tromper).
37. Être vu et remarqué dans mon département est très important pour moi.
38. C'est important de toujours me montrer gagnant.
39. Faire bonne impression au travail est très important pour moi.
40. Paraître compétent et indépendant est très important.
41. Exercer le pouvoir de ma position est très important pour moi.
42. Je perçois mon travail comme une compétition.
43. Mon titre est plus important que mon travail.
44. Mon département a des objectifs beaucoup trop élevés.

SECTION 2: L'ATMOSPHÈRE AU TRAVAIL

En tant qu'employé de l'HCC, on s'attend à ce que ...

45. J'aide les collègues de mon département à trouver différents moyens de faire leur travail.
46. J'agisse comme conseiller ou meneur pour les personnes dans mon département.
47. Je garde un "esprit ouvert" lorsque quelqu'un a des idées nouvelles.
48. Je suive strictement les politiques et procédures dans l'accomplissement de tâches majeures.
49. J'établisse des politiques et des procédures sur la manière dont mon travail est accompli.
50. Je décide comment les situations inattendues devraient être rencontrées.
51. Je ne questionne pas les faits surprenants.
52. Je suive des ordres même s'il me paraissent inexacts.

Veuillez, s'il vous plaît, donner votre opinion sur les énoncés suivants.

53. Comparé à d'autres hôpitaux, SMHC est un des meilleurs endroits pour travailler.
54. Je suis fier de dire que je fais partie de SMHC.

55. Je suis très satisfait de ma situation présente à l'hôpital.
56. Je me tiens responsable pour des décisions majeures reliées à mon travail.
57. Je me tiens responsable lorsque j'ai pris une mauvaise décision.
58. Dans des situations inconnues, je transfert mes responsabilités à d'autres.
50. Mes remarques ont une portée sur les décisions prises par mon directeur.
60. Mes remarques ont une portée sur les décisions prises par mes collègues.
61. Je choisirais un emploi similaire à mon travail actuel, si j'avais à choisir un nouvel emploi.

SECTION 3: ACCOMPLISSEMENT AU TRAVAIL

En tant qu'employé de l'HCC, on s'attend à ce que ...

62. Je fasse de l'excellent travail.
63. Je recherche des réactions de mon directeur.
64. Je recherche des réactions des mes collègues.
65. J'accomplisse du travail stimulant.
66. J'établisse le rythme de mon travail.
67. Je décide quelles tâches je dois accomplir d'une journée à l'autre.
68. Je mette des limites sur la quantité de travail que je dois compléter.
69. Je sois minutieuse dans les moindres détails de mon travail.
70. Je ne fasse jamais d'erreur dans l'exécution de mon travail.
71. Je sois à l'ouvrage pendant de longues heures.
72. Je fasse toujours de l'ouvrage impeccable.
73. Je donne à mon travail une importance plus grande que tout autre chose.
74. Je vois à tout personnellement.
75. J'accorde plus d'importance à la quantité du travail accompli qu'à la qualité.
76. Je vise des objectifs beaucoup trop élevés pour ma position.
77. Je démontre de l'enthousiasme pour mon travail.
78. Je développe des objectifs à défi dans mon travail.
79. Je prévois d'avance et que je planifie.
80. J'étudie plusieurs alternatives avant de prendre une décision et d'agir.

SECTION 4: ÉVALUATION DE PERFORMANCE

Veuillez, s'il vous plaît, donner votre opinion sur les énoncés suivants.

81. On reconnaît toujours mon travail bien fait.
82 Mon travail bien accompli passe toujours inaperçu.
83. Une performance inadéquate est toujours susceptible de représailles dans mon département.
84. Toute évaluation de performance est juste et objective.
85. Mon évaluation accentue mes erreurs plutôt que mes réalisations.

86. Mon évaluation est basée sur la relation que j'ai avec mon directeur et non sur l'accomplissement de mon travail.

SECTION 5: FAIRE FACE AUX CHANGEMENTS

En tant qu'employé de l'HCC, on s'attend à ce que ...

87. Je participe à des programmes pour améliorer mes aptitudes "avec les gens".
88. J'approfondisse mes connaissances et que j'apprenne de nouvelles techniques pour améliorer mon travail actuel.
89. Je me tienne à date dans mon domaine d'expertise par des lectures.
90. J'approfondisse mes connaissances et que j'apprenne de nouvelles techniques, pour me préparer à prendre d'autres responsabilités à l'intérieur de l'hôpital.
91. Je trouve des moyens nouveaux dans l'accomplissement de mon travail.
92. Je prenne des risques.
93. Je sois un bon supporteur.
94. Je résiste à la conformité.
95. J'apporte des idées originales aux réunions.
96. Je m'oppose aux idées des autres dans mon département.
97. Je génère et que j'introduise des idées nouvelles dans mon département.

Veuillez, s'il vous plaît, donner votre opinion sur les énoncés suivants.

98. J'attends que les autres se prononcent avant de prendre action dans une situation nouvelle.
99. Les règlements sont plus importants que les gens.
100. La tradition est importante.
101. Il est important de suivre les autres.
102. Les règlements sont plus importants que les idées.
103. La manière habituelle est le meilleur moyen de faire les choses.
104. SMHC prend les moyens pour rester en opération pour les trois prochaines années.
105. Je ne serais pas opposé à me déplacer d'un poste à l'autre.
106. Je m'ajuste rapidement aux changements de l'HCC.

* Si votre travail principal implique que vous accomplissiez également **les deux fonctions soit- <u>les soins aux patients et le support du personnel hospitalier, alors répondez aux questions des deux sections, c'est à dire aux questions des Sections 6 et 7- respectivement.</u>**

* Si votre travail principal implique seulement **<u>les soins aux patients</u>** directement, alors répondez aux questions de la Section 6.

* Si votre travail principal implique seulement **<u>le support du personnel hospitalier</u>** alors répondez aux questions de la Section 7.

SECTION 6 : SATISFACTION DES PATIENTS

107. Il y a une procédure officielle pour obtenir des informations au sujet de la satisfaction d'un patient qui a affaire avec les services de mon département.
108. L'information sur les besoins et les attentes d'un patient est la base qui sert à déterminer les normes des soins prodigués au patient.
109. Les commentaires des patients servent à améliorer la qualité des services de mon département.
110. Mes collègues s'engagent à rencontrer les besoins et les attentes des patients.
111. Pour répondre efficacement aux plaintes ou aux problèmes des patients, il y a une procédure à suivre.

SI VOUS NE RÉPONDEZ PAS AUX QUESTIONS DE LA SECTION 7, ALORS ALLEZ DIRECTEMENT À LA SECTION 8.

SECTION 7: SATISFACTION DU PERSONNEL HOSPITALIER

112. Il y a une procédure officielle pour obtenir des informations au sujet de la satisfaction du personnel hospitalier qui fait affaire avec les services dans mon département.
113. L'information sur les besoins et les attentes du personnel hospitalier est la base qui
sert à déterminer les objectifs dans mon département.
114. Les commentaires du personnel hospitalier servent à améliorer la qualité des services dans mon département.
115. Les employés de mon département s'engagent à rencontrer les besoins et les attentes du personnel hospitalier.

116. Pour répondre efficacement aux plaintes ou aux problèmes qui sont apportés au sujet des services donnés dans mon département, il y a une procédure à suivre.

S'IL VOUS PLAÎT CONTINUEZ À LA PAGE SUIVANTE.

SECTION 8: STATISTIQUES DÉMOGRAPHIQUES

117. Veuillez , s'il vous plaît, indiquer votre âge.
   1. Moins de 20 ans
   2. 20-40
   3. 41-60
   4. 60+

118. Veuillez, s'il vous plaît, indiquer le sexe.
   1. Féminin
   2. Masculin

119. Quel est le plus haut degré d'étude que vous avez complété?
   1. École Secondaire
   2. CEGEP (DEC)
   3. Diplôme de Premier Cycle
   4. Diplôme de Deuxième Cycle
   5. Autre

120. Veuillez, s'il vous paît, indiquer votre titre.
   1. Non-Câdre
   2. Superviseur
   3. Câdre Moyen
   4. Câdre Supérieur

121. Quel est votre statut présent ?
   1. En disponibilité
   2. À temps partiel
   3. Àtemps plein
   4. Sous contrat

122. Des catégories suivantes, laquelle décrit le mieux votre profession or votre occupation actuelle? (Veuillez, s'il vous plaît, lire la liste au complet, et ensuite ne donner qu'une seule réponse)
   1. Administration
   2. Services Connexesde Santé/Para Médical , ex. (Physiiothérapiste, thérapiste occupationnel, travailleur social)
   3. Travail de Bureau/ Secrétariat

4. Infirmier(ère)
5. Technologue/Technicien(ienne)
6. Travailleur(euse) Social(e) (ex. services domestiques, en nutrition, services de buanderie, entretien)
7. Autre, S'il vous plaît,spécifiez.

123. Depuis combien de temps êtes-vous à l'emploi de cette organisme?
1. Moins d'un an
2. Plus d'un an jusqu' 5 ans
3. Plus de 5 ans jusqu'à 10 ans
4. Plus de 10 ans jusqu'à 15 ans
5. Plus de 15 ans jusqu'à 20 ans
6. Plus de 20 ans

124. Veuillez , s'il vous plaît, indiquer le niveau de votre revenu.
1. Moins de $30,000.
2. $30,000. jusqu'à $50,000.
3. Plus de $50,000.

125. Veuillez, s'il vous plaît, indiquer si vous travaillez
1. De jour
2. En soirée
3. De nuit
4. Sur rotation

Nous vous remercions beaucoup d'avoir pris le temps de compléter ce questionnaire.Les informations que vous nous avez données vont permettre à l'hôpital d'identifier les secteurs dans lesquels il est nécessaire d'apporter des modifications pour rester à date avec les changements dans les institutions de services de santé.

21 APPENDIX 10 - COVER LETTER (ENGLISH)

June 1, 1996

To All HCC Employees:

As indicated in our letter to you on May 22, 1996, we are asking each employee to complete the HCC Cultural Inventory. This is your copy. Please take the time to answer the question within the survey. Your honest and frank responses are important. If there are questions/statements you do not understand, please indicate this. If there are questions you prefer not to answer, leave the question blank. When you complete the survey, place it in the envelope provided and seal the envelope. The envelopes will be collected by a member of the Quality Improvement Team, placed in a sealed box and given directly to our partners at Concordia University. A sealed box will also be place in the Main Lobby, Security Desk, and in the Emergency Room, Registration Desk, for your convenience.

Remember: Your responses are confidential. They are NOT available to any member of HCC. Analysis of the HCC Cultural Inventory will be completed by our partners at Concordia University. Only the results of all responses will be shared with the Quality Improvement Team.

Charlotte Wertheimer
Quality Improvement Coordinator

22 APPENDIX 11 - COVER LETTER (FRENCH)

Le 1[ier] juin 1996

A tout le personnel de l'HCC :

Tel qu'indiqué dans notre lettre du 22 mai dernier, nous demandons à chacun et chacune d'entre vous de remplir le questionnaire intitulé <<Inventaire culturel de l'HCC>>. Voici la copie qui vous est destinée. Veuillez prendre le temps de répondre avec honnêteté et franchise aux questions de ce sondage. C'est important! Si vous ne comprenez pas certaines des questions ou certains énoncés, veuillez l'indiquer. S'il y a des questions auxquelles vous préférez ne pas répondre, veuillez laisser un blanc.

Lorsque vous aurez répondu au questionnaire, veuillez le placer dans l'enveloppe prévue à cette fin et la cacheter. Les enveloppes seront ramassées par un membre de l'équipe responsable de l'amélioration de la qualité, placées dans un boite scellée et remises ensuite directement à nos partenaires de l'Université Concordia, qui seront responsables de la compilation des données de l'inventaire culturel. Deux autres boîtes scellées seront également placées aux endroits suivants : la premières, à l'entrée principale, au comptoir de la sécurité et l'autre, à l'urgence, au bureau d'inscription.

À noter : vos réponses seront confidentielles et ne seront PAS dévoilées à qui que ce soit de l'HCC. Seuls les résultats de l'inventaire seront transmis à l'équipe responsable de l'amélioration de la qualité.

Merci de votre collaboration.

La coordonnatrice de l'amélioration de la qualité.

Charlotte Werheimer

23 APPENDIX 12 - CULTURAL INVENTORY RESULTS

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
1	2	3	4	5

** = important, *** very important, **** extremely important

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
I. Achievement:	2.42	0.45	-35.53	*	2.39	0.49	-4.82	*
Planning realistic but challenging goals: (Agree)****	2.09	0.69	-36.36	*	2.04	0.91	-4.09	*
78. Develop challenging goals form my job. (Agree)	2.17	0.83	-27.57	*	2.20	0.94	-3.30	*
79. Think ahead and plan. (Agree)	1.99	0.81	-34.38	*	2.00	1.00	-3.87	*
80. Explore alternatives before I take any action. (Agree)	2.12	0.83	-29.23	*	1.93	0.79	-5.25	*
Monitoring realistic but challenging goals: (Agree)***	2.32	0.88	-21.30	*	2.63	0.86	-1.67	
63. Seek job feedback from my boss. (Agree)	2.30	0.99	-19.49	*	2.60	0.91	-1.70	
64. Seek job feedback from my co-workers. (Agree)	2.35	0.95	-18.86	*	2.66	0.82	-1.61	
Accomplishing realistic but challenging goals: (Agree)***	1.87	0.57	-54.65	*	1.73	0.49	-10.04	*
62. Do excellent work. (Agree)	1.65	0.65	-57.26	*	1.46	0.51	-11.69	*
65. Accomplish challenging work. (Agree)	1.99	0.86	-32.38	*	1.86	0.51	-8.66	*
77. Show enthusiasm for my work. (Agree)	1.96	0.68	-42.16	*	1.93	0.46	-9.01	*
Empowerment: (Agree)******	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
49. Make policies & procedures about how my work is done. (Agree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
50.Determine how unusual work situations are to be handled. (Agree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Agree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*
67. Decide what tasks I will perform from day-to-day. (Agree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Agree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	
Evaluation System: (Fair)******	**2.67**	**0.71**	-12.81	*	2.54	0.51	-3.49	*
81. I am always recognized for a job well done. (Agree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Disagree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Disagree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
84. Performance appraisals are fair and objective. (Agree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Disagree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Disagree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Conflict Resolution: (Fair)	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
14. Solve problems constructively with the people involved. (Agree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Disagree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Supervisor relations: (Agree)****	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Agree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Disagree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Agree)****	2.54	0.87	-14.58	*	2.70	0.70	-1.66	
27. My boss sends information that I can believe. (Agree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Agree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Agree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Agree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Agree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies.	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
II. Self-actualisation:	2.49	0.43	-32.70	*	2.42	0.44	-5.11	*
Growth and T & D: (Positive)****	2.37	0.83	-20.93	*	2.27	0.93	-3.04	*
9. Read to stay up to date within my field of expertise. (Agree)	2.25	1.00	-20.68	*	1.66	0.61	-8.51	*
87. Take part programs to improve my people skills. (Agree)	2.60	1.08	-10.21	*	3.11	1.20	0.36	
88. Learn new knowledge and skills, to do my present job better. (Agree)	2.15	0.93	-25.20	*	1.93	0.70	-5.92	*
90. Learn new knowledge and skills, to prepare myself for other responsibilities in the hospital. (Agree)	2.50	1.04	-13.25	*	2.40	1.20	-1.94	
Innovation: (Positive)****	2.60	0.53	-20.81	*	2.55	0.95	-1.83	
91. Find new ways of doing my work. (Agree)	2.39	0.93	-18.08	*	2.47	1.10	-1.87	
92. Take risks. (Agree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Agree)	3.44	1.04	11.66	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Agree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Agree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Disagree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103.The usual way is the best way to do things. (Disagree)	3.76	0.63	33.26	*	4.06	0.88	4.67	*
Quality over Quantity: (Positive)****	2.36	1.08	-16.34	*	2.00	0.75	-5.16	*
75. Be more concerned with the amount of work done than the quality of my work. (Disagree)	3.64	1.08	16.34	*	4.00	0.75	5.16	*
Accomplishing realistic but challenging goals: (Agree)***	**1.87**	0.57	-54.65	*	1.73	0.49	-10.04	*
62. Do excellent work. (Agree)	1.65	0.65	-57.26	*	1.46	0.51	-11.69	*
65. Accomplish challenging work. (Agree)	1.99	0.86	-32.38	*	1.86	0.51	-8.66	*
77. Show enthusiasm for my work. (Agree)	1.96	0.68	-42.16	*	1.93	0.46	-9.01	*
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
49.Make policies & procedures about how my work is done. (Agree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
50.Determine how unusual work situations are to be handled. (Agree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Agree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*
67. Decide what tasks I will perform from day to day. (Agree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Agree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
81. I am always recognized for a job well done. (Agree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Disagree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Disagree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Agree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Disagree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Disagree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Conflict Resolution: (Constructive)****	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
14. Solve problems constructively with the people involved. (Agree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Disagree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Supervisor relations: (Agree)****	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Agree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Disagree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Agree)****	2.54	0.87	-14.58	*	2.70	0.70	-1.66	
27. My boss sends information that I can believe. (Agree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Agree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Agree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Agree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Agree)***	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Agree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies.	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
III. Humanistic Encouraging	2.52	0.41	-32.27	*	2.43	0.46	-4.80	*
Helping others develop: (Positive)****	2.57	0.50	-23.71	*	2.51	0.99	-1.92	
T & D:****	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
10. Help people in my department improve their job skills. (Agree)	2.04	0.89	-29.74	*	2.13	0.99	-3.40	*
19. Criticize others constructively in my department to improve their job performance. (Agree)	2.83	1.10	-4.26	*	2.40	0.99	-2.35	*
46. Act as a mentor or coach for people in my department. (Agree)	2.65	1.08	-8.93	*	2.66	1.20	-1.10	
Supporting Innovation: (Positive)****	2.69	0.92	-9.29	*	2.63	0.93	-1.54	
45. Help others in my department to find different ways to do their jobs. (Agree)	2.58	1.03	-11.24	*	2.46	1.10	-1.90	
47.Keep an "open mind" about the new ideas of others. (Agree)	1.81	0.68	-48.24	*	1.80	0.56	-8.30	*
91. Find new ways of doing my work. (Agree)	2.39	0.93	-18.08	*	2.46	1.10	-1.90	
92. Take risks. (Agree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Agree)	3.44	0.86	14.10	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Agree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Agree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Disagree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103. The usual way is the best way to do things. (Disagree)	3.76	0.95	22.05	*	4.06	0.88	4.67	*
Participative Environment: (Positive)****	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
1. Share your concerns freely with your immediate boss. (Agree)	2.27	1.06	-18.99	*	2.00	1.10	-3.52	*
8. Share my concerns freely with my co-workers. (Agree)	2.33	1.03	-17.93	*	2.20	0.78	-3.97	*
15. Show concern for others. (Agree)	1.77	0.78	-43.47	*	1.66	0.61	-8.51	*
59.My input has an effect on the decisions made by my boss. (Agree)	2.77	1.04	-6.10	*	2.06	0.59	-6.17	*
60.My input has an effect on the decisions made by my co-workers. (Agree)	2.61	0.91	-11.81	*	1.86	0.51	-8.66	*
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
49.Make policies & procedures about how my work is done. (Agree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
50. Determine how unusual work situations are to be handled. (Agree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Agree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
67. Decide what tasks I will perform from day-to-day. (Agree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Agree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	
Conflict Resolution: (Constructive)* **	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
14. Solve problems constructively with the people involved. (Agree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Disagree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Evaluation System: (Fair)**	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
81. I am always recognized for a job well done. (Agree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Disagree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Disagree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Agree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Disagree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Disagree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Teamwork: (Positive) * **	2.16	0.86	-26.93	*	2.00	0.93	-4.16	*
32. My co-workers get in the way of my work. (Disagree)	3.84	0.86	26.93	*	4.00	0.93	4.16	*
Supervisor relations: (Positive)* **	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Agree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Disagree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Positive)**	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
27. My boss sends information that I can believe. (Agree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Agree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Agree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Agree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Agree)* **	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Agree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies.	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
IV. Affiliative:	2.44	0.43	-35.90	*	2.34	0.46	-5.56	*
Teamwork: (Positive)****	2.16	0.86	-26.93	*	2.00	0.93	-4.16	*
32. Your colleagues interfere in your work. (Disagree)	3.84	0.86	26.93	*	4.00	0.93	4.16	*
Friendliness: (Positive)****	1.99	0.64	-43.51	*	2.00	0.33	-11.74	*
9. Be friendly with my co-workers. (Agree)	1.77	0.66	-51.38	*	1.93	0.70	-5.92	*
12. Interact with people outside of my department. (Agree)	2.06	0.90	-28.79	*	1.93	0.45	-9.21	*
13. Motivate people in my department by being friendly with them. (Agree)	2.17	0.90	-25.42	*	2.13	0.64	-5.26	*
Evaluation System: (Fair)****	2.67	0.71	-12.81	*	2.54	0.51	-3.49	*
81. I am always recognized for a job well done. (Agree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Disagree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Disagree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Agree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Disagree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Disagree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Conflict Resolution: (Constructive)***	2.03	0.74	-36.14	*	1.87	0.95	-4.61	*
14. Solve problems constructively with the people involved. (Agree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Disagree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Participative Environment: (Positive)****	2.34	0.63	-28.88	*	1.96	0.45	-8.95	*
1. Share your concerns freely with your immediate boss. (Agree)	2.27	1.06	-18.99	*	2.00	1.10	-3.52	*
8. Share my concerns freely with my co-workers. (Agree)	2.33	1.03	-17.93	*	2.20	0.78	-3.97	*
15. Show concern for others. (Agree)	1.77	0.78	-43.47	*	1.66	0.61	-8.51	*
59.My input has an effect on the decisions made by my boss. (Agree)	2.77	1.04	-6.10	*	2.06	0.59	-6.17	*
60.My input has an effect on the decisions made by my co-workers. (Agree)	2.61	0.91	-11.81	*	1.86	0.51	-8.66	*
Empowerment: (Positive)****	2.57	0.76	-15.60	*	2.47	0.85	-2.41	*
49.Make policies & procedures about how my work is done. (Agree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
50. Determine how unusual work situations are to be handled. (Agree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Agree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*
67. Decide what tasks I will perform from day-to-day. (Agree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Agree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	
Supervisor relations: (Positive)* **	2.36	0.60	-14.70	*	2.58	1.02	-0.34	
24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Agree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Disagree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Positive)**	2.54	0.72	-17.61	*	2.70	0.70	-1.66	
27. My boss sends information that I can believe. (Agree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Agree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Agree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Agree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Helping others develop: (Positive)* **	2.51	0.76	-17.77	*	2.40	0.91	-2.55	*
T & D:	2.50	1.02	-13.51	*	2.39	1.06	-2.23	*
10. Help people in my department improve their job skills. (Agree)	2.04	0.89	-29.74	*	2.13	0.99	-3.40	*
19. Criticise others constructively in my department to improve their job performance. (Agree)	2.83	1.10	-4.26	*	2.40	0.99	-2.35	*
46. Act as a mentor or coach for people in my department. (Agree)	2.65	1.08	-8.93	*	2.66	0.12	-10.97	*
Outcomes: (Agree)* **	2.56	1.06	-11.44	*	2.59	0.76	-2.09	
Employee Satisfaction:	2.38	1.05	-16.28	*	2.16	0.71	-4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Agree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Agree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. I am very satisfied with my current situation at the hospital. (Agree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current one. (Agree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open. (Agree)	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Readiness for change:	3.02	1.09	0.51		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Agree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies.	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
V. Approval:	3.29	0.34	23.51	*	3.40	0.46	3.37	*
Conflict resolution: (Unconstructive)****	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Agree with people: (Positive)****	3.02	0.69	0.80		3.31	0.98	1.23	
23. "Go along" with others. (Agree)	3.39	1.11	9.69	*	3.26	1.10	0.92	
34. It is important for me to be liked by everyone. (Agree)	2.86	1.10	-3.51	*	3.66	0.90	2.84	*
35. It is important to be accepted by others in the hospital. (Agree)	2.39	0.96	-17.52	*	2.60	0.83	-1.87	
51. Not question surprising facts. (Agree)	3.46	1.03	12.31	*	3.73	1.10	2.57	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
2. Agree with the ideas of your immediate boss. (Agree)	2.93	0.99	-1.95		3.46	1.30	1.37	
3. Set goals that please your immediate boss. (Agree)	2.67	1.10	-8.27	*	2.66	1.10	-1.20	
5. Please people in authority. (Agree)	2.78	1.18	-5.14	*	2.90	1.10	-0.35	
6. Give my personal opinion to people with authority. (Disagree)	2.67	1.16	-7.84	*	2.06	1.10	-3.31	*
Supervisor relations: (Poor)**	2.74	0.42	-17.07	*	2.55	1.02	-1.71	
24. My boss is friendly. (Agree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to (Disagree).	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss follows the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe.	2.41	1.04	-15.64	*	2.47	1.10	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
(Disagree)								
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Helping others develop: (Negative)	3.43	0.76	15.60	*	3.50	0.91	2.13	
T & D: (Negative)	3.49	1.02	13.24	*	3.60	1.06	2.19	*
10. Help people in my department improve their job skills. (Disagree)	2.04	0.89	-29.74	*	2.13	0.99	-3.40	*
19. Criticize others constructively in my department to improve their job performance. (Disagree)	2.83	1.10	-4.26	*	2.40	0.99	-2.35	*
46. Act as a mentor or coach for people in my department. (Disagree)	2.65	1.08	-8.93	*	2.66	1.20	-1.10	
Supporting Innovation: (Negative)	3.30	0.92	8.99	*	3.40	0.93	1.67	
45. Help others in my department to find different ways to do their jobs. (Disagree)	2.58	1.03	-11.24	*	2.46	1.10	-1.90	
47. Keep an open mind about the new ideas of others. (Disagree)	1.81	0.68	-48.24	*	1.80	0.56	-8.30	*
91. Find new ways of doing my work. (Disagree)	2.39	0.93	-18.08	*	2.46	1.10	-1.90	
92. Take risks. (Disagree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Disagree)	3.44	0.86	14.10	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Disagree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Disagree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Agree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103. The usual way is the best way to do things. (Disagree)	3.76	0.95	22.05	*	4.06	0.88	4.67	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)* **	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
VI. Conventional:	3.42	0.39	29.69	*	3.56	0.38	5.71	*
Participative environment: (Negative)****	3.66	0.63	28.88	*	4.04	0.72	5.59	*
1. Share your concerns freely with your immediate boss. (Disagree)	2.27	1.06	-18.99	*	2.00	1.10	-3.52	*
8. Share my concerns freely with my co-workers. (Disagree)	2.33	1.03	-17.93	*	2.20	0.78	-3.97	*
15. Show concern for others. (Disagree)	1.77	0.78	-43.47	*	1.66	0.61	-8.51	*
59. My input has an effect on the decisions made by my boss. (Disagree)	2.77	1.04	-6.10	*	2.06	0.59	-6.17	*
60. My input has an effect on the decisions made by my co-workers. (Disagree)	2.61	0.91	-11.81	*	1.86	0.51	-8.66	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Empowerment: (Negative)****	3.43	0.76	15.60	*	3.45	1.08	1.61	
49. Make policies & procedures about how my work is done. (Disagree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
50. Determine how unusual work situations are to be handled. (Disagree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Disagree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*
67. Decide what tasks I will perform from day to day. (Disagree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Disagree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	
Conforming to rules: (Agree)****	3.26	0.58	12.36	*	3.53	0.88	2.33	*
48. Strictly following policies and procedures for my major tasks. (Agree)	2.15	0.93	-25.20	*	2.60	0.83	-1.87	
52. Following orders even if they seem incorrect to me. (Agree)	3.61	1.21	13.90	*	3.93	1.00	3.60	*
93. You are expected to be a follower. (Agree)	3.04	1.10	1.00		3.20	1.10	0.70	
99. Rules are more important than people. (Agree)	3.99	0.95	28.73	*	4.53	0.52	11.40	*
100. Traditions are important. (Agree)	2.92	1.03	-2.14	*	2.60	0.98	-1.58	
101. It is important to fit into the mould. (Agree)	3.42	0.99	11.70	*	3.73	0.59	4.79	*
102. Rules are more important than ideas. (Agree)	3.73	0.93	21.64	*	4.13	0.99	4.42	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Innovation: (Negative)***	3.34	0.53	17.69	*	3.61	0.95	2.49	*
91. Find new ways of doing my work. (Disagree)	2.39	0.93	-18.08	*	2.47	1.10	-1.87	
92. Take risks. (Disagree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Disagree)	3.44	1.04	11.66	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Disagree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Disagree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Agree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103. The usual way is the best way to do things. (Agree)	3.76	0.63	33.26	*	4.06	0.88	4.67	*
Evaluation system: (Unfair)**	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe. (Disagree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)* **	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
VII. Dependence:	3.36	0.36	27.57	*	3.49	0.37	5.13	*
Participative environment: (Negative)****	3.66	0.63	28.88	*	4.04	0.72	5.59	*
1. Share your concerns freely with your immediate boss. (Disagree)	2.27	1.06	-18.99	*	2.00	1.10	-3.52	*
8. Share my concerns freely with my co-workers. (Disagree)	2.33	1.03	-17.93	*	2.20	0.78	-3.97	*
15. Show concern for others. (Disagree)	1.77	0.78	-43.47	*	1.66	0.61	-8.51	*
59. My input has an effect on the decisions made by my boss. (Disagree)	2.77	1.04	-6.10	*	2.06	0.59	-6.17	*
60. My input has an effect on the decisions made by my co-workers. (Disagree)	2.61	0.91	-11.81	*	1.86	0.51	-8.66	*
Empowerment: (Negative)****	3.43	0.76	15.60	*	3.45	1.08	1.61	
49. Make policies & procedures about how my work is done. (Disagree)	2.91	1.07	-2.32	*	2.73	1.00	-1.05	
50. Determine how unusual work situations are to be handled. (Disagree)	2.46	0.98	-15.19	*	2.46	1.20	-1.74	
66. Set the pace of my work. (Disagree)	2.10	0.99	-25.06	*	2.20	1.00	-3.10	*
67. Decide what tasks I will perform from day to day. (Disagree)	2.50	1.17	-11.78	*	2.67	1.10	-1.16	
68. Set limits on how much work I have to complete. (Disagree)	2.88	1.25	-2.65	*	2.66	1.10	-1.20	
Conforming to rules: (Agree)****	3.26	0.58	12.36	*	3.53	0.88	2.33	*
48. Strictly following policies and procedures for my major tasks. (Agree)	2.15	0.93	-25.20	*	2.60	0.83	-1.87	
52. Following orders even if they seem incorrect to me. (Agree)	3.61	1.21	13.90	*	3.93	1.00	3.60	*
93. You are expected to be a follower. (Agree)	3.04	1.10	1.00		3.20	1.10	0.70	
99. Rules are more important than people. (Agree)	3.99	0.95	28.73	*	4.53	0.52	11.40	*
100. Traditions are important. (Agree)	2.92	1.03	-2.14	*	2.60	0.98	-1.58	
101. It is important to fit into the mould. (Agree)	3.42	0.99	11.70	*	3.73	0.59	4.79	*
102. Rules are more important than ideas. (Agree)	3.73	0.93	21.64	*	4.13	0.99	4.42	*
Innovation: (Negative)*****	3.34	0.53	17.69	*	3.61	0.95	2.49	*
91. Find new ways of doing my work. (Disagree)	2.39	0.93	-18.08	*	2.47	1.10	-1.87	
92. Take risks. (Disagree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Disagree)	3.44	1.04	11.66	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Disagree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Disagree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Agree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
103. The usual way is the best way to do things. (Agree)	3.76	0.63	33.26	*	4.06	0.88	4.67	*
Conflict resolution: (Unconstructive)* **	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Evaluation system: (Unfair)** **	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Please people in authority: (Agree)** **	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
2. Agree with the ideas of your immediate Boss. (Agree)	2.93	0.99	-1.95		3.46	1.30	1.37	
3. Set goals that please your immediate boss. (Agree)	2.67	1.10	-8.27	*	2.66	1.10	-1.20	
5. Please people in authority. (Agree)	2.78	1.18	-5.14	*	2.90	1.10	-0.35	
6. Give my personal opinion to people with authority. (Agree)	2.67	1.16	-7.84	*	2.06	1.10	-3.31	*
Supervisor relations: (Poor)* **	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe. (Disagree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)* **	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
VIII. Avoidance Culture:	3.43	0.37	32.04	*	3.49	0.38	4.99	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Avoidance of responsibility: ****	3.94	0.62	41.80	*	4.10	0.88	4.84	*
56. I take responsibility for major decisions related to my work. (Disagree)	2.14	0.99	-23.95	*	1.87	0.94	-4.66	*
57. I take full responsibility when I have made an incorrect decision. (Disagree)	1.71	0.66	-53.88	*	1.60	0.51	-10.63	*
58. It is best to shift responsibilities to others in unknown situations. (Agree)	3.66	1.03	17.66	*	3.78	1.20	2.52	*
Innovation: (Negative)*****	3.34	0.53	17.69	*	3.61	0.95	2.49	*
91. Find new ways of doing my work. (Disagree)	2.39	0.93	-18.08	*	2.47	1.10	-1.87	
92. Take risks. (Disagree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Disagree)	3.44	1.04	11.66	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Disagree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Disagree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Agree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103. The usual way is the best way to do things. (Agree)	3.76	0.63	33.26	*	4.06	0.88	4.67	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe. (Disagree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
IX. Oppositional	3.43	0.36	32.93	*	3.49	0.36	5.27	*
Employee antagonism: (Agree)****	3.76	0.63	33.26	*	3.87	0.68	4.96	*
7. Point out my co-workers personal flaws. (Agree)	3.61	1.07	15.72	*	4.00	0.65	5.96	*
16. Look for mistakes in other people's work. (Agree)	3.82	0.98	23.07	*	3.86	0.83	4.01	*
18. Oppose things indirectly. (Agree)	3.46	0.95	13.35	*	3.35	0.74	1.83	
21. Give people a "tough time" when they have an idea. (Agree)	4.19	0.88	37.28	*	4.33	0.62	8.31	*
96. Oppose the ideas of others in my department . (Agree)	3.74	0.80	25.50	*	3.80	0.56	5.53	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Innovation: (Negative)**	3.34	0.53	17.69	*	3.61	0.95	2.49	*
91. Find new ways of doing my work. (Disagree)	2.39	0.93	-18.08	*	2.47	1.10	-1.87	
92. Take risks. (Disagree)	3.15	1.12	3.69	*	3.00	1.10	0.00	
94. Resist conformity. (Disagree)	3.44	1.04	11.66	*	3.40	0.99	1.56	
95. Come up with original ideas at meetings. (Disagree)	2.56	0.92	-13.18	*	2.66	0.90	-1.46	
97. Generate and implement new ideas in my department. (Disagree)	2.44	0.92	-16.78	*	2.33	1.00	-2.59	*
98. I wait for others before taking actions in a new situation. (Agree)	3.56	0.90	17.15	*	3.93	0.70	5.15	*
103. The usual way is the best way to do things. (Agree)	3.76	0.63	33.26	*	4.06	0.88	4.67	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe. (Disagree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
X. Power:	3.20	0.31	17.79	*	3.23	0.24	3.71	*
Control: (high)****	3.06	0.47	3.52	*	3.07	0.88	0.31	
11. Be loyal to my department. (Agree)	1.84	0.85	-37.62	*	1.93	0.59	-7.02	*
17. Take charge of situations. (Agree)	2.33	0.94	-19.65	*	2.13	1.10	-3.06	*
22. Act tough when relating with other staff members in the hospital. (Agree)	4.16	0.93	34.39	*	4.27	0.79	6.23	*
28. My boss has total control in my department. (Agree)	2.87	1.15	-3.12	*	2.66	1.20	-1.10	
41. It is important to use the authority of my position. (Agree)	2.97	1.05	-0.79		2.93	0.96	-0.28	
43. My job title is more important than my work. (Agree)	4.31	0.81	44.59	*	4.53	0.64	9.26	*
Lack of trust: (Agree)***	3.26	1.04	6.89	*	3.66	0.82	3.12	*
74. Take care of everything personally. (Agree)	3.26	1.04	6.89	*	3.66	0.82	3.12	*
Please people in authority: (Agree)****	2.93	0.76	-2.54	*	2.77	1.15	-0.77	
2. Agree with the ideas of your immediate Boss. (Agree)	2.93	0.99	-1.95		3.46	1.30	1.37	
3. Set goals that please your immediate boss. (Agree)	2.67	1.10	-8.27	*	2.66	1.10	-1.20	
5. Please people in authority. (Agree)	2.78	1.18	-5.14	*	2.90	1.10	-0.35	
6. Give my personal opinion to people with authority. (Agree)	2.67	1.16	-7.84	*	2.06	1.10	-3.31	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe. (Disagree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)***	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
XI. Competitive:	3.52	0.38	37.72	*	3.45	0.33	5.28	*
Poor teamwork: ****	3.84	0.86	26.93	*	4.00	0.93	4.16	*
32. Your colleagues interfere in your work. (Agree)	3.84	0.86	26.93	*	4.00	0.93	4.16	*
Negative competition: ****	3.32	1.02	8.65	*	3.38	0.78	1.89	
33. It is important to outperform my co-workers. (Agree)	3.90	0.95	26.12	*	3.87	0.74	4.55	*
36. It is important to always be correct. (Agree)	3.07	1.19	1.62		3.20	1.00	0.77	
37. It is important to be seen and noticed in my department. (Agree)	3.09	1.04	2.39	*	2.73	0.88	-1.19	
38. It is important to never show that I have lost. (Agree)	3.72	0.98	20.25	*	4.00	0.88	4.40	*
39. It is important for me to make a very good impression at work. (Agree)	2.16	0.96	-24.12	*	2.13	0.35	-9.63	*
42. My job is a contest. (Agree)	4.02	1.02	27.57	*	4.40	0.50	10.84	*
Unrealistic goal setting: (Agree)****	3.49	0.81	16.68	*	3.93	0.90	4.00	*
44. My department has unreasonable goals. (Agree)	3.55	1.04	14.58	*	3.93	1.00	3.60	*
76. Have overly ambitions goals for my job. (Agree)	3.43	0.98	12.10	*	3.93	0.79	4.56	*
Evaluation system: (Unfair)****	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Supervisor relations: (Poor)***	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Conflict resolution: (Unconstructive)***	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Credible relationships: (Negative)**	3.46	0.72	17.61	*	3.29	1.04	1.08	
27. My boss sends information that I can believe. (Disagree)	2.41	1.04	-15.64	*	2.47	1.10	-1.87	
29. My boss keeps me well informed about developments in the hospital. (Disagree)	2.71	1.17	-6.83	*	2.87	1.20	-0.42	
30. My co-workers keep me well informed about developments in the hospital. (Disagree)	2.49	0.96	-14.65	*	3.00	1.10	0.00	
31. My co-workers send information that I can believe. (Disagree)	2.53	0.87	-14.89	*	2.47	0.74	-2.77	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)* **	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
XII. Perfectionist:	3.16	0.42	10.50	*	3.32	0.23	5.39	*
Lack of trust: (Agree)* **	3.26	1.04	6.89	*	3.66	0.82	3.12	*
74. Take care of everything personally. (Agree)	3.26	1.04	6.89	*	3.66	0.82	3.12	*
Unrealistic goal setting: (Agree)** **	3.49	0.81	16.68	*	3.93	0.90	4.00	*
44. My department has unreasonable goals. (Agree)	3.55	1.04	14.58	*	3.93	1.00	3.60	*
76. Have overly ambitions goals for my job. (Agree)	3.43	0.98	12.10	*	3.93	0.79	4.56	*
Evaluation system: (Unfair)** **	3.33	0.71	12.81	*	3.44	0.78	2.18	*
81. I am always recognized for a job well done. (Disagree)	2.94	1.15	-1.44		2.87	1.10	-0.46	
82. My good work is ignored. (Agree)	3.27	1.03	7.23	*	3.60	0.51	4.56	*
83. Poor performance is always punished in my organisation. (Agree)	3.49	1.00	13.51	*	4.06	0.70	5.86	*
84. Performance appraisals are fair and objective. (Disagree)	2.80	0.98	-5.63	*	2.80	0.67	-1.16	
85. My performance appraisal centres on my mistakes rather than achievements. (Agree)	3.36	1.05	9.45	*	3.57	0.76	2.90	*
86. My performance appraisal is based on my relationship with my immediate boss and not my actual performance. (Agree)	3.63	1.07	16.23	*	3.71	0.91	3.02	*
Workaholic environment: (Agree)** **	2.69	0.72	-11.87	*	2.88	0.85	-0.55	
69. Be precise for every little detail of my job. (Agree)	2.35	1.04	-17.23	*	2.66	0.83	-1.59	
70. Never make a mistake in my job. (Agree)	3.06	1.12	1.48		3.33	0.90	1.42	
71. Put in long hours at work. (Agree)	3.12	1.15	2.88	*	2.46	0.92	-2.27	*
72. Always do a perfect job. (Agree)	2.70	1.10	-7.52	*	3.20	0.86	0.90	
73. Make my work the most important thing over everything else. (Agree)	3.07	1.18	1.64		3.53	0.74	2.77	*
Supervisor relations: (Poor)* **	2.64	0.60	14.70	*	2.42	1.02	0.30	
24. My boss is friendly. (Disagree)	2.14	1.03	-23.02	*	2.20	0.77	-4.02	*
25. My boss is easy to talk to. (Disagree)	2.32	1.17	-16.02	*	2.67	1.30	-0.98	
26. My boss following the rules. (Agree)	2.39	1.08	-15.57	*	2.13	0.99	-3.40	*
Conflict resolution: (Unconstructive)* **	3.97	0.74	36.14	*	4.13	0.99	4.42	*
14. Solve problems constructively with the people involved. (Disagree)	1.86	0.77	-40.82	*	1.87	0.99	-4.42	*
20. Deal with disagreements and problems by avoiding the issues. (Agree)	3.80	1.04	21.21	*	4.13	0.99	4.42	*
Outcomes: (Negative)	3.44	1.06	11.44	*	3.59	0.81	2.82	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Employee Satisfaction: (Poor)	3.61	1.05	16.02	*	3.84	0.71	4.58	*
53. As compared to other hospitals, HCC is one of the best places to work. (Disagree)	2.31	0.95	-20.02	*	2.07	0.59	-6.10	*
54. I am proud to tell others that I am part of HCC . (Disagree)	2.01	0.86	-31.74	*	2.00	0.54	-7.17	*
55. You are very satisfied with your current situation at the hospital. (Disagree)	2.74	1.20	-5.97	*	2.47	0.92	-2.23	*
61. If I were to choose a new job, it would be similar to my current job. (Disagree)	2.68	1.27	-6.95	*	2.40	0.97	-2.40	*
104. HCC is taking action to stay open.	2.19	0.98	-22.79	*	1.86	0.53	-8.33	*
Readiness for change: (Negative)* **	2.98	1.07	-0.52		3.03	0.90	0.13	
105. I don't mind moving from job to job. (Disagree)	3.58	1.19	13.44	*	3.46	0.97	1.84	
106. I adjust quickly to changes to changes in organisational policies. (Disagree)	2.46	0.94	-15.84	*	2.60	0.83	-1.87	

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Customer Orientation: Patient Care	2.41	0.97	-16.77	*	2.75	1.11	-0.87	
107. There is a formal process for obtaining information about the patient's satisfaction with my department's services.	2.85	1.12	-3.69	*	3.20	1.05	0.74	
108. Information about patient needs and expectations is used as the basis for determining patient care standards.	2.41	0.98	-16.60	*	3.14	1.17	0.46	
109. Feedback information from patients is used to improve the quality of my departments services.	2.42	1.01	-15.83	*	3.00	1.24	0.00	
110. The employees in my work unit are totally committed to meeting all of the patients' needs and expectations.	2.11	0.81	-30.29	*	2.29	1.07	-2.57	*
111. There is a process for effectively responding to patient complaints or problems.	2.25	0.91	-22.72	*	2.14	1.03	-3.23	*

Cultural characteristics	Actual Results							
	Total Population n=760				Physician group n=15			
	mean	stddev	z-test	sig	mean	stddev	t-test	sig
Customer Orientation: Internal staff support	2.77	1.07	-5.93	*	2.80	0.93	-0.83	
112. There is a formal process for obtaining information about the hospital staff's satisfaction with my department's services.	3.32	1.11	7.95	*	3.90	0.74	4.72	*
113. Information about hospital staff's needs and expectations are used as a basis for determining the standards of my department.	2.86	1.09	-3.54	*	2.90	0.99	-0.39	
114. Feedback from hospital staff is used to improve the quality of my department's services.	2.58	1.04	-11.13	*	2.60	0.72	-2.15	*
115. The employees in my department are totally committed to meeting all of the hospital staff's needs and expectations.	2.36	0.98	-18.00	*	2.20	0.92	-3.37	*
116. There is a process for effectively responding to the hospital staff's complaints or problems with my department's services.	2.72	1.11	-6.95	*	2.40	1.08	-2.15	*

	Total Population n=760		Physician group n=15	
	ξ		ξ	
Section: Demographics				
117. Please indicate your age. 1. Under20 2. 20-40 3. 41-60 4. 61+	2.50		2.67	
118. Please indicate your gender. 1. Female 2. Male	1.22		1.73	
119. What is the Highest level of schooling you have completed? 1. High School 2. CEGEP (DEC) 3. Undergraduate Degree 4. Graduate degree 5. Other	2.63		4.20	
120. Please indicate your position. 1. Non-Management 2. Supervisory 3. Middle Management 4. Senior Management	1.23		1.75	
121. What is your current employment status? 1. Availability 2. Part-time 3. Full-time 4. Contract	2.66		3.00	
122. Of the following categories, which best describes your current profession or occupation? 1. Administration 2. Allied Health/Para-Medical (e.g. Physiotherapist, occupational therapist, social worker) 3. Clerical/Secretarial 4. Nursing 5. Technologist/ Technician 6. Service worker (e.g. housekeeping, nutrition, laundry, maintenance) 7. Other	4.13		6.60	
123. How long have you worked in this organization? 1. Less than1 year 2. More than1 year up to5 years 3. More than5 up to10 years 4. More than10 up to15 years 5. More than15 up to20 years 6. More than 20 years	3.84		3.73	

	Total Population n=760		Physician group n=15	
	ξ		ξ	
124. Please indicate your income level. 1. Less than $30,000 2. $30,000 to $50,000 3. More than $50,000	1.65		3.00	
125. Please indicate your shift. 1. Days 2. Evenings 3. Nights 4. Rotating	1.74		1.21	

24 APPENDIX 13 – EVALUATION OF QUEBEC HOSPITALS

Code	Score	Meaning
A	5	Excellent
B	4	Very Good
C	3	Good
D	2	Acceptable
E	1	Unsatisfactory
-	0	Not Applicable

Hospitals	Accessibility	Quality of Service	Continuity	Dignity	Quality of Information	Overall Satisfaction	Emergency Service	Financial Performance	Score
St. Joseph de la Malbaie	A	A	A	A	A	A	A	A	40
Barrie Memorial	A	A	A	A	A	A	A	C	38
HCC	A	A	B	A	A	A	B	C	36
Jewish General	A	A	B	A	A	B	A	C	36
Brome Missisquoi Perkins	A	A	A	A	A	A	C	C	36
Centre Anna Laberge	A	A	B	A	B	B	C	A	35
Montreal Children's	A	A	B	A	A	A	A	-	34
Cardiology Institute	A	A	B	A	A	A	D	C	34
Honoré Mercier et St. Charles	B	A	B	A	B	B	C	A	34
Ste. Justine	B	A	B	A	A	A	A	-	33
Centre de Granby	B	A	B	A	B	B	B	D	32
Centre Regional de Suroît	B	A	B	A	B	B	D	C	31
Haût Richelieu	B	B	C	A	C	B	B	B	31
Montreal Chest	A	A	A	A	A	A	-	-	30
Montreal General	B	A	B	A	B	B	B	-	30
Maisonneuve Rosemont	B	B	B	A	B	B	D	C	30
Angrignon (LaSalle)	A	A	B	A	B	B	D	-	29
Lachine	B	B	C	A	B	B	C	D	29
Royal Victoria	B	A	B	A	B	B	C	-	29
Centre Pierre Boucher	B	B	C	A	B	B	D	C	29
Cité de la Santé de Laval	B	B	B	A	B	B	C	C	31
Angrignon (Verdun)	B	A	C	A	B	B	D	-	27
Montreal Neurological	B	A	B	A	B	A	-	-	27
Sacré Coeur	B	B	B	A	B	B	D	D	29
Jean Talon	B	B	C	A	C	B	D	D	27
Charles LeMoyne	B	B	B	A	C	B	E	D	27

Fleury	B	B	C	B	C	C	E	B	26
Hôtel Dieu	B	B	B	A	B	B	E	-	26
St. Luc	B	A	B	A	C	B	E	-	26
Notre Dame	B	B	B	A	C	B	E	-	25
Lakeshore General	C	B	C	B	C	C	D	C	25
Santa Cabrini	C	B	C	B	C	C	E	D	23
Hôtel Dieu de Sorel	C	B	C	A	C	C	E	-	22