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LEADERSHIP DEVELOPMENT: A comparative evaluation of short-term and long-term programmes in Swedish health care

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ABSTRACT

Health care systems in Sweden and many other industrialised countries have undergone major technological, organisational, and financial changes during the last decades. Health care leaders and doctors are all key persons in the development of a good work environment and a well-functioning health care organisation.

The overall aim of this thesis was to evaluate interventions aimed at developing health care managers', doctors', and medical students' leadership. All four studies were conducted at Södersjukhuset, one of the main hospitals in Stockholm, Sweden, which serves 600 000 inhabitants. Studies I and II assessed the impact of eight long-term dialogue groups, which involved 60 doctors at the children's clinic. Psychosocial work environment measures were collected through a validated instrument sent to all doctors (n=68) in 1999, 2001 and 2003. Follow-up data was collected in 2004 and five focus group interviews were performed after the termination of the dialogue groups. In Study III, two questionnaires were sent to 160 medical students, before and after their participation in a short-term intensive leadership course. In Study IV, 53 managers participated in two different leadership programmes, one short-term and one long-term. The Wheel Questionnaire was used for evaluation both immediately prior to and six months after the end of their respective leadership programmes. Eight focus group interviews were conducted after the programmes to explore the managers' experiences from their participation in the programmes.

It seems useful to offer a short-term leadership course based on experiential learning to medical students on a compulsory basis in order to change participants' attitudes towards more openness in their role, support learning about group dynamics, and facilitate further leadership development. Those participants, who would be least likely to voluntarily attend such a course, are the ones who appear to learn the most. A short-term leadership course for managers supports learning about group dynamics, group development, communication, and enhances self-awareness and strengthens participants in their leadership role. However, our findings indicate that the effects of a short-term course for managers are limited in time.

Hierarchy among doctors seems to influence many aspects of the doctors' role, the health care organisation, and the work environment. Long-term leadership development groups can support leadership development in context, decrease hierarchy, visualize gender inequities, facilitate building of a learning organisation and improve the work environment.

This evaluation of two different approaches to leadership development used in Swedish health care indicates that both short-term intensive courses and long-term leadership development groups are useful methods for leadership development in health care. Although the content and methods used in the programmes differ significantly, the interventions seem to complement each other. A practical implication of this thesis is to initially offer short-term leadership orientation courses to present and future health care leaders followed by long-term leadership development groups in order to further develop participants' leadership competencies.

LIST OF PUBLICATIONS

I. **Bergman D**, Arnetz B, Wahlström R, Sandahl C. Effects of dialogue groups on physicians' work environment. Journal of Health Organization and Management 2007; 21:1, 27-38

II. **Bergman D**, Stotzer E, Wahlström R, Sandahl C. Learning from dialogue groups – physicians' perceptions of role. Accepted for publication in Journal of Health Organization and Management 2008.

III. **Bergman D**, Savage C, Wahlström R, Sandahl C. Teaching group dynamics – do we know what we are doing? An approach to evaluation. Medical Teacher 2008; 30:1, 55-61

IV. **Bergman D**, Fransson Sellgren S, Wahlström R, Sandahl C. Healthcare Leadership – impact of short-term intensive and long-term less intensive training programmes. Accepted for publication in Leadership in Health Services 2008.

The papers are referred to in the text as "studies" with the corresponding Roman numeral.

CONTENTS

LIST OF ABBREVIATIONS

ANOVA	Analysis Of Variance
AOG	Questionnaire “Attitudes to Openness and Group dynamics”
CEO	Chief Executive Officer
CLKQ	“Conceptions of Learning Knowledge Questionnaire”
CS	Christer Sandahl
DB	David Bergman
DGL	One-week course: “Development of Group and Leader”
ES	Emelie Stotzer
FGI	Focus Group Interview
FSEI	Focus Score Enhancement Index
HRM	Human Resource Manager
KI	Karolinska Institutet
M	Mean
MMC	Medical Management Centre
LIME	Department of Learning, Informatics, Management and Ethics
LT	Long-Term
LT-SG	Long-Term Support Groups
OPR	Index: “Openness in Professional Role”
OW	One-Week
OW-DGL	One-Week course “Development of Group and Leader”
P	p-value
P&L	One-week course: “Professional Development and Leadership”
preOW-DGL+ LT-SG	Group participating first in a One-Week course “Development of Group and Leader” and thereafter in Long-Term Support Groups
QWC	Questionnaire: “Quality Work Competence”
RW	Rolf Wahlström
SFS	Stina Fransson Sellgren
SD	Standard Deviation
SG	Support Groups
SPSS	Statistical Package for the Social Sciences
WQ	Wheel Questionnaire

1 PROLOGUE

We have all have experiences of leadership, whether it be in a leadership role or experiencing someone else's leadership competence (or lack thereof). Leadership is something we run across day in and day out; yet we still seem to have difficulty describing what it actually is. Perhaps it is as Jackson and Parry wrote, "Leadership is like a beauty – it is difficult to describe, but we certainly know it when we experience it." (Jackson and Parry, 2008)

Leadership is not only of great importance for health care organizations and employee working conditions, but also impacts the very quality of care that these organizations strive to deliver. For this reason and given my background as a medical doctor, I have found it important, as well as inspiring, to evaluate some of the programmes for leadership development that are used in Swedish health care.

The Department of Learning, Informatics, Management and Ethics (LIME) and the Medical Management Centre (MMC) were established at Karolinska Institutet (KI) in 2002. It has been exciting and challenging to be part of the first group of PhD-students. This has given me the opportunity to be involved in the forming of the academic culture at MMC. I believe that LIME and MMC have contributed to KI with (much needed) complementary views on human nature, ontology and methodology.

2 INTRODUCTION

2.1 BACKGROUND

The process that led to this thesis began during my first years as a doctor. At the time of my medical education at Karolinska Institutet (KI), there were no opportunities to participate in any course or programme concerning leadership or medical management. Nevertheless, as a doctor, I was expected to demonstrate leadership in the inter-professional team in the patient care process. I was afforded the opportunity to participate in one dialogue group session for male doctors during my first two years as an intern practitioner. These experiences led to my growing interest concerning the health care organization and leadership.

During my first clinical years as a resident doctor at the Sachs' Children's Hospital, I experienced a lack of support for the resident doctors at the workplace. My idea to offer dialogue groups to the doctors was implemented by the head of the hospital and I became curious to evaluate this intervention.

At the Medical Management Centre, Karolinska Institutet, I found a stimulating group of PhD students and researchers with whom I started to design this research. The following years, I participated in the short-term intensive course *Development of Group and Leader (DGL)* and became a supervisor for KI medical students during their course, *Professional Development and Leadership (P&L).* Even though the course seemed useful, I began to wonder to what extent the course had an impact on students' attitudes to the course topics. I also wondered if the course affected all students in the same way.

As I continued to further my understanding of leadership development, I became aware that while managers at my hospital were sent to different leadership programmes, the programmes were chosen without consideration of the specific needs of the manager or the organization. Furthermore, I was surprised to find that none of these programmes had been evaluated. This piqued my curiosity and led to this comparative evaluation of different approaches to leadership development in health care.

2.2 HEALTH CARE – INTERNATIONAL AND SWEDISH PERSPECTIVES

2.2.1 The international perspective

To understand leadership in health care it is important to understand the context in which it takes place. The goal of health services is to help maintain and enhance the health of the public. WHO estimates there to be a total of 59.2 million full-time paid health care workers worldwide (WHO, 2006). Health providers constitute about two thirds of all health care workers, while the remaining third is composed of health management and support workers. Europe has about 18.9 health care workers per 1000 inhabitants while Africa has 2.3. Sweden is number seven in the world regarding expenditure per capita on health care (WHO, 2006).

With an area of 450,000 sq. km, Sweden is one of the largest countries in Western Europe. However, its population density is relatively low with about 9 million inhabitants. Sweden has close links historically to its Nordic neighbours Denmark, Norway, Finland and Iceland. Sweden aims to provide extensive, high quality and equitable health care to its residents. The Swedish health care system is mainly a public responsibility and the system is supported by a national health insurance system and other social welfare services.

Health services organizations can be seen as unique or at least different from other types of organizations, particularly in comparison with industrial organizations. There are a number of distinctions: defining and measuring output are more difficult, more of the work is of an emergency and non-deferrable nature, the work permits little tolerance for ambiguity or error, and the work activities are highly interdependent, requiring a high degree of coordination among diverse professional groups (Shortell and Kaluzny, 2000). In health care, the professional relationship in combination with the professional competence can be seen as a "tool" by which the work is performed (Svedberg, 2007).

In my view, a central aspect in health care organizations is the ability to establish trusting relationships. The professional role includes understanding and coping with dilemmas by setting boundaries and by keeping a balance between private, personal and professional relationships. Further, the work involves a high degree of specialization. It has been argued that employees' loyalty belongs to the profession rather than to the organisation and that little effective managerial control exists regarding the doctors, who are the type of provider most responsible for generating work and expenditures (Shortell and Kaluzny, 2000). It is common in many health care organizations that these dual lines of authority exist and contribute to role confusion.

The role of the patient is essential. The patients are active partners in that they can hinder or facilitate care. Patients can not demand a certain treatment against the professionals' judgement, but they have the right to refuse a recommended treatment. Patients' desires and professionals' judgements do sometimes come in conflict. This makes evident that work in the health services involves professionals in moral, ethical, and existential issues that can give rise to feelings of inadequacy and anxiety. Miller describes how individuals and groups interact in order to find ways of giving meaning to their experience and develop defence mechanisms to deal with uncertainty and anxiety (Miller, 1990).

Thus, health care organisations can be seen as complex social systems where health care professionals and managers may feel that demands can be overwhelming. Indeed, in managing health care organisations, "there is a constant tension between the need for predictability, order and efficiency on the one hand and openness, adaptability and innovation on the other" (Shortell and Kaluzny, 2000). It is therefore important for health care professionals and managers to have access to support mechanisms and well-developed coping strategies.

2.2.2 The Swedish perspective

Health care systems in Sweden and many other industrialised countries have undergone major technological, organisational and financial changes during recent decades. The Swedish health care system has a complex organization which is differentiated into three main actors – politicians, administrators and professionals, all of whom view the organization from different perspectives (Tollgerdt-Andersson, 1995).

The health care expenditures' share of the gross domestic product (GDP) in Sweden decreased during the 1990s from 9.6 % to 7.6 %. One part of this decrease was a reorganization including a reduction of personnel. The reorganization involved a shift in responsibility for care of the elderly from county councils to the municipalities. These changes seem to have had a substantial effect on the work environment for employees, not the least for doctors (Axelsson, 2000, Arnetz, 1999, Arnetz, 2001). This can be one reason behind my own perceptions of the shortcomings of the work environment during my first clinical years in the late 1990s.

Financial productivity incentives have since been introduced to increase organisational efficiency. However, they appear to have complicated the doctors' working conditions (Forsberg et al., 2000). This is important because it has been suggested that a decrease in doctor's work environment could affect quality of patient care and that doctors impact on the overall work atmosphere (Arnetz, 1999, Gundersen, 2001, Thomsen, 2000, Arnetz, 2001, Arnetz, 1997).

Health care leaders, regardless of professional category, and doctors due to their leading position in the patient care process, are all key contributors to the development of a good working environment and for the development of a well-functioning health care organisation. It has been shown that health care managers' leadership behaviour affects the work environment among their subordinates (Fransson-Sellgren et al., 2007). Doctors have a key position in the patient care process due to their medical expertise and are often expected to act as leaders in inter-professional teams. It is therefore necessary to facilitate medical students' leadership development and support their understanding of teamwork if they are to be able to contribute to creating a good working environment with a high quality of care.

2.3 THE DOCTOR'S ROLE

Management in health care is increasingly being taken over by other groups and doctors' autonomy and power are decreasing, which implies changes in the doctor's role in health care (Forsberg et al., 2001, Bodenheimer et al., 2005).

Another reason can be the rapidly changing treatment and diagnostic therapies as well as changing information technologies in health care demand more complex, flexible organisations that can adapt to innovations (Shortell and Kaluzny, 2000). Additionally, the swiftly increasing scientific knowledge base in medicine, which forces doctors to specialise and become familiar with new technologies such as digital imaging and computer-based information systems, may be one reason to stress among doctors (Arnetz, 1997, Bonn and Bonn, 2000, Arnetz, 2001). With these changes follows a demand to collaborate closely with colleagues and other professionals.

Doctors must therefore develop competencies within teamwork, communication and inter-professionalism (Shine, 2002). Several reports have described the decreasing autonomy, influence and participation, loss of control and decreasing power of the doctor. High stress among doctors has been found to be associated with the perception of a less supportive atmosphere. (Akre et al., 1997, Burdi and Baker, 1999, Forsberg et al., 2001, Linzer et al., 2001, Arnetz, 1997).

Studies have suggested that leadership development programmes can be beneficial in increasing leaders' competence and mentoring seems to be one important part of the process (Kovner et al., 1996, Lutz, 1995, Peluchette and Jeanquart, 2000, Umiker, 1998, Collins and Holton, 2004). There are few prospective, intervention studies within this field in general. Moreover, there is a lack of studies about interventions specifically directed to improving the well-being of doctors (Jansson von Vultée, 2004).

2.4 THE FIRST- LINE NURSE MANAGER'S ROLE

The position as first-line nurse manager is one of the lower in the official management hierarchy in Swedish health care. Many of their subordinates are nurses who in Sweden have a rather autonomous position. This has led to nurse managers distributing leadership to subordinate nurses, thereby giving the subordinates greater responsibility and the opportunity to manage their own work. However, this distributed leadership means less control for the managers. This, in combination with the high psychological demands in health care make evident the need to support these managers in their role (Karasek and Theorell, 1990, Bonn and Bonn, 2000).

A recent study in Sweden suggested that subordinates preferred a more clearly expressed leadership behaviour from their nurse managers than the managers themselves preferred and demonstrated (Sellgren et al., 2006). It has been described that first-line nurse managers are expected to be able to handle both manager responsibilities as budget and quality control as well as leadership duties as a coach and mentor (McGuire and Kennerly, 2006). It is not surprising that it has been shown that nurse managers are exposed to stringent demands and expectations in their work and that their psychosocial support is insufficient to counterbalance the stress they experience (Lindholm, 2006).

2.5 GENDER ASPECTS

Traditionally, Swedish doctors have primarily been male, but in recent decades there has been a shift towards a female majority among younger doctors, and it has been argued that this change implies a new attitude regarding the role of the doctor (Hovelius and Johansson, 2004). As in most other countries, most nurses and nurse managers are women. A report concerning a Swedish health organisation described a hierarchy among the employees, with senior male doctors at the top and that women were perceived as subordinated to men (Lindgren, 1999). Even though women make up at least half of the medical students, female doctors are underrepresented in management positions (Kvaerner et al., 1999). This was the picture that I experienced as a young doctor and I think that this hierarchy affects both men and women and the way the doctor's role is formed.

One idea I had was if dialogue groups could be a way to manage some of these dilemmas. A previous study of three different management programmes for female doctors showed improvements in organizational well-being, however, it was suggested to combine these programmes with other incentives in order to increase the number of female doctors in management positions (von Vultee et al., 2004). Another study of Swedish male and female doctors, with and without management positions, showed that female doctors reported lower levels of participation in decisions at work place, as well as lower levels of influence and authority as compared to their male colleagues (Jansson von Vultée, 2004), which is in line with previous studies (Arnetz, 1997, McMurray et al., 2000). Female doctors also reported higher workload than male doctors did. Female doctors have been reported to have a 60 percent increased risk of developing burnout compared to male doctors (McMurray et al., 2000). In addition, health complaints have been found to be more frequent in female doctors (Aasland et al., 1997). Furthermore, Jansson von Vultée indicated that there were fewer differences between non-managers and managers, regardless of gender, than between female and male doctors. The managers reported higher goal clarity, participation, influence in their work and work-satisfaction than the non-managers did. Female managers reported less influence on their own work than male managers, and male managers reported higher work satisfaction (Jansson von Vultée, 2004).

It has been pointed out that most working-life research has not included the aspect of gender (Messing et al., 1998). Furthermore, it has been emphasized that there are clear similarities between social constructions of leadership and social constructions of masculinity (Wahl, 1992). A meta-analysis of different leadership styles found a small difference between female and male leaders. In general, female leaders were more relationship-oriented, democratic and participative compared to male leaders who were more task-oriented and directive (Eagly and Carli, 2003).

Among patients, it has been shown that women are treated and diagnosed differently than men (Pukk et al., 2003). Lessons learned from this research may be applicable to how health care in general views gender issues. Studies of gender equity in health care concluded that systematic strategies are necessary in order to promote changes in the attitudes toward more gender sensitivity and gender equity in the health care (Jonsson et al., 2006). Perhaps we also need systematic strategies for leadership development in health care which are equitable and gender sensitive?

2.6 LEADERSHIP AND MANAGEMENT

During my doctoral studies, I have come to realise how complex the concept of leadership actually is. Indeed, “there are almost as many definitions of leadership as there are persons who have attempted to define the concept” (Stogdill, 1974). Nevertheless, it is important for the understanding of this thesis to be acquainted with some of the different ways modern leadership researchers have viewed the concept.

First, it is important to distinguish between management and leadership. A manager has a formal position with multiple roles and leadership is one of these roles. Other roles such as information processing, decision making and visioning are converted into

tangible results through leadership (Shortell and Kaluzny, 2000). Yukl (2006) concludes that leaders appear to influence commitment, whereas managers merely carry out position responsibilities and exercise authority. A review identified some central aspects of managerial competencies, such as intrapersonal skills (regulating one's emotions and accommodating to authority), interpersonal skills (building and maintaining relationships), business skills (planning, budgeting, coordinating) and leadership skills (building and motivating a high-performing team) (Hogan and Kaiser, 2005).

In my review of the leadership literature, I found that leadership has been defined in terms of individual traits, leader behaviour, interaction patterns, role relationships, follower perceptions, influence over followers, influence on task goals and influence on organizational culture. As can be seen from this list, many definitions of leadership involve the concept of influence (Yukl, 2006). For example, leadership has been described as "a process of influencing the activities of an organised group in its efforts toward setting and achieving goals" (Stogdill, 1974).

2.6.1 Individual traits

During the first half of the 20th century, studies aiming at mapping personal traits among leaders dominated the research on leadership, but these early studies found no traits that were consistently related to leadership effectiveness or success.

2.6.2 Leader behaviour

A research programme on leadership at Ohio State University was started in 1945 which came to dominate the field of leadership studies for two decades. The focus was on the behaviour of the leaders rather than their personality traits. Two dimensions were identified to account for over 80% of the variation in followers ratings of their leaders, "initiating structure" and "consideration". Researchers at the University of Michigan specified two leadership behaviours which can be likened to "initiating structure" and "consideration": job-centred/task-oriented and employee-centred/relationship-oriented. Several studies have shown that task-orientated and relationship-orientated behaviours are both required for success as a leader (Jackson and Parry, 2008, Yukl, 2006), which I think is reasonable and convincing.

2.6.3 Contingency theory

In the early 1960s, attention turned to incorporating situational characteristics, of contingencies, into leadership models. Three well-known contingency models are leadership-match, path-goal, and leadership effectiveness and adaptability (LEAD). Central to the *leadership match* model (Fiedler, 1967) is that managers are unable to alter their style to any appreciable degree. Leadership effectiveness depends not on fitting one's style to the situation but rather on selecting a situation that is conducive to one's style. According to the *path-goal model* (Evans, 1970), the contingency most under the manager's control is his/her own leadership style. The manager may exercise influence to increase the motivation of a follower attempting to accomplish a specific goal, in a particular context, during a finite period of time. The *LEAD model* was developed by Hershey and Blanchard. They argued that a manager should select an

effective leadership style depending on the follower's task-relevant maturity (Hersey and Blanchard, 1977). However, while intuitively appealing, no research has confirmed the linkage between follower maturity, execution of "appropriate" style and leadership effectiveness. Wheelan argues that a leaders' actions and style should be adapted to the maturity of the group in order to develop the group into a high performing and effective team (Wheelan, 2005). From this follows that leaders need to develop an understanding of group processes and group dynamics.

2.6.4 Transformational and transactional leadership

The ideas of transformational and transactional leaderships were first introduced by Burns and later developed by Bass (Bass, 1985, Burns, 1978). Bass defined transformational supervision in terms of the leader's motivational effect on followers. He argued that they feel loyalty, trust, admiration and respect toward the transformational leader. The followers are motivated to serve and achieve more than they were originally expected to. Transactional leadership, in contrast, seeks to motivate followers by appealing to their own self-interest. Its principles are to motivate by the exchange process. For example, business owners exchange status and wages for the work effort of the employee. Transactional behaviours focus on the accomplishment of task and good worker relationships in exchange for desirable rewards. Bass (1985) sees the two leadership dimensions as complementary rather than contrary to one another. The critique of transformational leadership is that it is much focused on charisma, something which has been found to have a negative impact on organizational success (Collins, 2001).

2.6.5 Contemporary views of leadership

Follower-centric theories describe a process by which followers construct leadership. The assumption is that based on these constructions leaders are selected, supported and their influence is accepted. According to *shared leadership*, leadership is not seen as a role, but as a function or an activity that can be shared among members of a group or organization, or that can be rotated among its members depending on the demands of the situation. This kind of leadership seems applicable to modern organisations and researches have argued that traditional command-and-control, hierarchically-based organizations do not fit with the flat, laterally-integrated organizations of a rapidly changing competitive global economy (Jackson and Parry, 2008). In this kind of organizational milieu, one may see the principal task of management as producing an environment and a climate where followers can feel genuinely empowered to lead within and beyond the organization. A version of shared leadership which might fit well with the modern organisation is *distributed leadership* in which the leadership can move between people at different levels of the organization or social hierarchy (Gronn, 2002).

Authentic leaders have been described as low-profile but genuine leaders who lead by example in fostering healthy ethical climates characterised by transparency, trust, integrity, and high moral standards. These leaders are described as being not only "true to themselves, but lead others by helping them to likewise achieve authenticity" (Avolio and Gardner, 2005). Central to development of authentic leadership is the leader's self-awareness, self-regulation, social exchanges and positive modelling.

Authentic leaders are "those that are deeply aware of how they think and behave and are perceived by others as being aware of their own and others values/moral perspectives, knowledge, strengths and aware of the context in which they operate" (Avolio and Gardner, 2005).

Self-leadership is described as a process through which individuals control their own behaviour, influence and lead themselves through the use of specific sets of behavioural and cognitive strategies. Behaviour-focused strategies strive to heighten an individual's self-awareness and include self-observation. Constructive thought pattern strategies include identifying and replacing dysfunctional beliefs and assumptions, and mental imagery with positive internal dialogues (Neck and Houghton, 2006). A training-intervention based field study suggested that individuals who received the self-leadership training experienced increased mental performance, positive affect (enthusiasm), job satisfaction and decreased negative affect (nervousness) (Neck and Manz, 1996).

I believe that most definitions of leadership and different theories all have contributed to the building of knowledge about this complex concept. For instance, although early studies found no traits that were consistently related to leadership effectiveness or success, some personality traits have since been found to predict leadership performance, such as self-esteem, integrity and cognitive ability (Hogan and Kaiser, 2005). A successful leader needs to have a high degree of emotional maturity and stability (Goleman, 1995), but also needs to be able to improvise in their leadership role, which requires strategies for coping with everyday leadership challenges (Tyrstrup and Glover Frykman, 2006). Frequent change has become a common state in many organisations, and the ability to manage change in organisations has become an important issue for modern leaders (Yukl, 2006). A change oriented leader is primarily concerned with development, increasing flexibility and innovation, gaining commitment to the changes, and has a creative attitude and visionary qualities. Leadership can thus be described as a combination of three dimensions: change, production-orientation and relations-orientation (Ekvall and Arvonen, 1994, Yukl, 2006).

Batalden and Stoltz argue that continual quality improvement of health care requires *profound knowledge* which includes knowledge of the organisation as a system, knowledge of variation, knowledge of psychology, and the theory of knowledge (Batalden and Stoltz, 1993). Given the complex nature of work in the 21st century, more and more tasks require people to work in groups and teamwork is becoming necessary for organizational success (Wheelan, 2005). It has been argued that as organizations steadily progress into the knowledge economy, the notion of top-down, command-and-control leadership is insufficient and that alternative views on leadership are necessary, such as self-leadership, shared leadership and networking as well as more emphasis on social skills, creative thinking, interpersonal relationships and processes of leadership development (Pearce, 2007). I think that these changes seem to be and in line with the developmental changes in the Swedish society and I believe that there is a need to support the leaders that will be supposed to implement these changes.

2.6.6 Cultural aspects of leadership

Is the same leadership behaviour preferred in all cultures? A review of empirical studies in cross-cultural leadership concluded that cultural differences account for a significant amount of variance in preferred leader behaviour (House et al., 1997). However, some leader behaviours are universally or near universally accepted and effective, such as transformational leadership that has been found effective and acceptable in studies from a large number of different countries (Bass, 1997).

An analysis of leadership images in the Swedish media showed that different institutional contexts generated different implicit models of leadership, even within the same national framework. The conclusion was that "leadership is exercised and enacted as an expression of both socially constructed institutions and values grounded in the culture" (Holmberg and Åkerblom, 2001). A study included in the Global Leadership and Organizational Behaviour Effectiveness (GLOBE) Research Programme with data from more than 60 nations concluded that a "Swedish leadership style" was characterized by team-orientation, participation and autonomy. According to the norm, Swedish leaders should not be self-centred, status-conscious or non-participative. The charismatic and transformative aspects of the contemporary discourse on leadership could not be seen as typically Swedish, but rather as being shared with managers in other countries (Holmberg and Åkerblom, 2006).

A study of leaders' perceptions of their own leadership behaviour in Swedish health care described a leadership profile characterized by team-building, strategic leadership, open relationships with employees and trustworthiness. This profile was similar for different working places, leadership levels and gender which was interpreted as a uniform profile in Swedish health care (Kammerlind et al., 2004).

2.7 THE LEADER'S ROLE

In traditional role theory, it is common to define role in terms of the expectations of others (Reed and Bazalgette, 2006), for example expressed as a work description or simply as a formal position in the working hierarchy. However, such a definition is static, since it fails to reflect the fact that an individual must always make independent judgments and decisions about priority.

Apart from the formal roles, there are informal roles that depend on the relationships and the emotional qualities in a group (Svedberg, 2007). An informal role can be seen as an acceptable compromise, a necessary attempt of adaptation to other people. A role may be useful in order to create a feeling of trust and confidence in a group. The more unconscious processes that are going on in a group, the more stereotyped roles are created. When the relationships at work become stressful, people tend to take on the same roles and conflict strategies that they learned during childhood (Svedberg, 2007). Roles are thus a social construction and the structure of roles is crucial for an organisation's ability to achieve its main goals (Bass and Stogdill, 1990).

One way to analyse the role of leaders in health care is to regard it as a psychologically internalised process, that is, as a function of both the organisation which the leader is part of and his or her experiences within the profession. In addition, role can be viewed

as a function of personality and other personal attributes of the individual, which means that it is looked upon as an internal, regulating principle. This perspective indicates that, in order to be able to assume a role and to act as what is referred to as a "person in role", one must be well acquainted with the overall purpose of the organisation (i.e. not only the short-term goals and one's own tasks) and be able to relate that knowledge to one's own values, wishes, and desires (Reed and Bazalgette, 2006). In this sense, by adopting a role, a person becomes a member of the larger whole but at the same time assumes personal responsibility for his or her own actions and choices. Role is thus equivalent to an idea within oneself that reflects not only self-image, but also one's conception of the organisation and the external world that it is a part of. People sometimes take on a role without giving much consideration to the system to which they belong. Personal goals dominate; other people are used and manipulated as a means of promoting one's own private ambitions or the ambitions of a subgroup. According to this theory, such behaviour would be an example of exercising *power* as opposed to *authority,* the latter defined as an action that serves the purpose of the system as a whole, not the objective of the individual or a subgroup (Reed and Bazalgette, 2006).

A doctor in today's health care system must meet the challenge of finding a balance between medical knowledge on the one hand and, on the other hand, skills in relating to patients and colleagues in a flexible and adaptive way—and all this must be accomplished without losing sense of the complex system in which one belongs. The way in which a doctor adopts a role cannot be observed, but his/her behaviour and actions make it possible to draw conclusions about how the individual sees him-/herself in relation to his/her work group, employers, and the organisation in general (Svedberg, 2007). People tend to perceive things differently and to have different preconceptions about how they assume their roles, which can explain conflicts and misunderstandings that occur in the workplace (Sandberg, 2000). One way to tackle this human dilemma is for colleagues to talk among themselves about how to understand each other's roles.

2.8 LEADERSHIP DEVELOPMENT

Leader development may be defined as the expansion of a person's capacity to be effective in leadership roles and processes, such as setting direction, creating alignment and maintaining commitment in groups of people who share common work (Van Velsor et al., 2004). Most people must take on leadership roles and participate in leadership processes in order to carry out their commitments to larger social entities, i.e., the organisations in which they work, the social or volunteer groups of which they are a part, the neighbourhoods in which they live, and the professional groups with which they identify. These leadership roles may be formal positions infused with authority to take action and make decisions or they may be informal roles with little official authority. The process of personal development that improves leader effectiveness is what leadership development is about. It has been found that leadership capacity has its roots partly in genetics, partly in early childhood development, and partly in adult experiences (Van Velsor et al., 2004). Hogan and Kaiser argues that the leadership development process starts with development of intrapersonal skills, continues with interpersonal skills, business skills and ends with leadership skills such as building and motivating high-performance teams (Hogan and Kaiser, 2005).

The dimensions of experience and conceptualisation, reflection and action form the basis for the development of adult thought (Schön, 1991). Under favourable conditions, development from infancy to adulthood can move from a concrete phenomenal view of the world to an abstract constructionist view: from an active egocentric view to a reflective internalized mode of knowing (Piaget, 1977). The learning process whereby this development takes place is a cycle of interaction between the individual and the environment. Studies of learning and early development show that feedback is extremely important and those opportunities for feedback should occur continually (Bransford, 2000). Feedback mechanisms have also been found to be crucial for the development of groups (Wheelan, 2005). Although leaders learn primarily through their experiences, not all experiences are equally developmental. A training programme that encourages lots of practice and helps participants examine mistakes may probably be more developmental than one that provides information but no practice. According to Sandberg, the development of competence is more likely to proceed as a chain of changes in conceiving different work situations rather than as a single major change (Sandberg, 2000).

It has been argued that "situations that stretch an individual and provide both feedback and a sense of support are more likely to stimulate leader development than situations that leave out any of these elements". Any experience may be richer and more developmental by making sure the elements of assessment, challenge and support are present (Van Velsor et al., 2004). Assessment seems important because it gives people an understanding of where they are now: their current strengths, the level of their current performance or leader effectiveness, and what are seen as their primary development needs. Challenging experiences force people out of their comfort zone (Senge, 1994). They create disequilibrium, causing people to question the adequacy of their skills, frameworks, and approaches. It seems reasonable that such experiences may motivate people to develop new capacities or evolve their ways of understanding in order to be successful. Whereas the element of challenge provides the disequilibrium needed to motivate people to change, I believe that the support elements of an experience send the message that people will find safety and a new equilibrium on the other side of change. One important source of support is other people: bosses, co-workers, family, friends, professional colleagues, coaches and mentors – people who can listen to stories of struggle, identify with challenges, suggest strategies for coping, provide needed resources, reassure in times of doubt, inspire renewed effort, and celebrate even the smallest accomplishments. Support has been found to be a key factor in maintaining leaders' motivation to learn and grow. If people do not receive support for development, the challenge inherent in a developmental experience may overwhelm them rather than foster learning (Van Velsor et al., 2004).

The challenges that health care organisations are facing today, both internally and externally, are challenges that often overwhelm existing resources and defy known solutions. Shine argues that these complex challenges require new assumptions and methods to be developed that involves organizational learning and change (Shine, 2002). It is reasonable that they may also sometimes be too complex for individual leaders to fully understand alone. To face these complex challenges, organisations need to develop leadership capabilities of collectives, for example work groups, teams and

communities (ibid). One way to do this may be to use “dialogue in groups” to create a forum for reflection-on-action and learning in organisations (Bohm, 2004, De Maré et al., 1991, Isaacs, 1999, Olausson, 1996). The role of reflection is central for professional development. Reflection-on-action involves looking at experiences, connecting with feelings, and attending to theories (Schön, 1991). It entails building new understanding to inform our actions in the situation. People’s understanding of their role in an organisation determines their actions in the organisation (Reed and Bazalgette, 2006, Sandberg, 2000).

Senge described five “disciplines” that are vital in building a “learning organisation” (Senge, 1994): *1. Systems Thinking* is a conceptual framework to make the patterns in an organisation clearer, and to help us see how to change them effectively. *2. Personal Mastery* is the discipline of continually clarifying and deepening our personal vision and of seeing reality objectively. *3. Mental Models* are deeply ingrained assumptions, generalizations that influence how we understand the world and how we take action. *4. Building Shared Vision:* When there is a genuine vision, people learn not because they are told to, but because they want to. Shared visions foster genuine commitment and enrolment rather than compliance. *5. Team Learning* starts with dialogue and the capacity of members of a team to suspend assumptions and enter into a genuine “thinking together”. To the Greeks *dia-logos* meant a free-flowing of meaning through a group, allowing the group to discover insights not attainable individually. The practice of dialogue is being preserved in many “primitive” cultures, such as that of the American Indian, but it has been almost completely lost in modern society. Dialogue differs from the more common “discussion” which has its roots with “percussion”, literally a heaving of ideas back and forth in a winner-takes-all competition. Dialogue is aimed at the understanding of consciousness per se, as well as exploring the problematic nature of day-to-day relationship and communication. Key components of dialogue are: shared meaning, the nature of collective thought and undirected inquiry (Bohm, 2004).

In today’s organizational environment, a long-term systems approach to leadership development faces a real challenge since there is a sense of urgency to produce short-term results and hence short-term solutions. Traditionally, many organisations have emphasized classroom-based training (Bransford, 2000). Organisations are now viewing training as but one component in the development process. There is an ongoing shift to help people learn from their work instead of taking them away from their work to learn. Central to the development process seems to be to enhance the participants’ ability to learn from experiences and to provide an organisational context that supports learning and development (Van Velsor et al., 2004).

Learning and training in all forms are becoming increasingly important. On a national level to achieve growth and development, on a corporate level for international competition and success, and at an individual level training and learning seem crucial for surviving in the “knowledge society”. In a study of Swedish organisations, it was concluded that an important strategic shift is going on within the field of adult education and training (Kjellberg et al., 1998). This shift implies that an educational approach may be replaced by a learning approach and that focus has moved from the formal school system towards informal systems, mainly in terms of in-organisational

training and learning at work. It is argued that competence development needs to be related to changes in work content and work roles in a long-term perspective. Further, the informal learning that takes place on a daily basis becomes more and more important and it will be increasingly important for individuals to have access to life long learning environments (ibid).

Openness to experience has been found to be correlated with training proficiency (Barrick and Mount, 1991). A key component of success in training is the attitude of the individual going into the event, and people who score high on openness tend to have positive attitudes toward unfamiliar (learning) experiences. People who are more open to experience are generally more willing to try new behaviours or attitudes and to move into areas where their competency is not well established.

2.9 LEARNING AND UNDERSTANDING

Development and learning are two processes that are linked to each other. Early biological underpinnings enable certain types of interactions, and through various environmental supports from caregivers and other cultural and social supports, a child's experiences for learning are expanded. Learning is promoted and regulated both by children's biology and ecology, and learning produces development (Bransford, 2000).

Students often have limited opportunities to understand or make sense of topics because many curricula have emphasized memory rather than understanding. Textbooks are filled with facts that students are expected to memorize, and many tests assess students' abilities to remember the facts. However, people construct new knowledge and understandings based on what they already know and believe (Piaget, 1977). Early theories of adult development were often connected to age or phase of life. In contrast, constructive-developmental theories are centred on the particular meaning making of each individual person rather than on age or phase of life (Kegan, 1994). As people develop, the content of their ideas may not necessarily change, but the *form* of their understanding is likely to change. From a developmental perspective, real growth requires some qualitative shift, not just in knowledge, but in perspective of way of thinking. Growing is when the form of our understanding changes, called "transformation" (Grant and Stober, 2006, Säljö, 1975). Learning might be about increasing our stores of knowledge of our thinking that already exists, called "information". Merriam describes that in "transformational learning", people's values, beliefs, and assumptions are central to the way people make sense of their experiences. The transformation process includes reflection, self-examination, and a reorientation that results in a revised action and deep learning (Merriam, 2004). It has been argued that the coaching has the potential to achieve perspective transformation by challenging beliefs through dialogue (Grant and Stober, 2006). Coaching and supervision are generally seen as having a lot in common. The difference lies in that coaching implies a somewhat more specific goal while supervision tends to be more sensitive to the goal of the individual.

Learning is enhanced when teachers pay attention to the knowledge and beliefs that learners bring to a learning task, use this knowledge as a starting point for new instruction, and monitor students' changing conceptions as instruction proceeds.

Bransford describes “active learning” which emphasizes the importance of helping people to take control of their own learning. “Metacognition” refers to people's abilities to predict their performances on various tasks and to monitor their current levels of understanding (Bransford, 2000). Teaching practices congruent with a metacognitive approach to learning include those that focus on sense-making, self-assessment, and reflection on what worked and what needs improving. These practices have been shown to increase the degree to which students transfer their learning to new settings and events (ibid). Experts' knowledge is connected and organized around important concepts that are specified to the contexts in which it is applicable; and this supports understanding and transfer to other contexts rather than only the ability to remember facts (ibid). Sandberg describes that “people’s ways of conceiving of their work create and shape the context from which the attributes acquire their specific meaning for competent work performance” (Sandberg, 2000). Research is needed that highlights how changes in conceptions take place and how such changes can be facilitated in organizations to enhance competence at work (ibid).

People approach learning in different ways. Some people prefer to learn from direct experience, where action-oriented experimentation strategies can be employed; others are more comfortable learning from reflection, reading, conversations with other people, or classroom training (Van Velsor et al., 2004). There is ample evidence that students utilize different learning styles in the acquisition of new knowledge (Lonka et al., 2004). These styles dictate how students approach and engage in learning activities and make them sensitive to the context in which the teaching and learning activities occur (Kolb, 1984, Lonka and LindblomYlanne, 1996, Meyer, 1991).

Kolb introduced the experiential learning model, building on the work of Lewin (Lewin and Cartwright, 1951). In the experiential learning model (Kolb, 1984), learning is seen as a four-stage repetitive process. Immediate concrete experience is the basis for observation and reflection. These observations are assimilated into a “theory” from which new implications for action can be deduced. These implications or hypotheses then serve as guides in acting to create new experiences. The emphasis is on here-and-now concrete experience to validate and test concepts. Immediate personal experience is the focal point for learning, giving meaning to abstract concepts and at the same time providing a concrete, publicly shared reference point for testing the implications and validity of ideas created during the learning process. It has been argued that in coaching, the Kolb learning cycle can be of help to guide the process facilitated by the coach (Grant and Stober, 2006).

Learner centred environments attempt to help students make connections between their previous knowledge and their current tasks (Bransford, 2000). Learning in organisations has been described to be composed of two different strategies (Argyris and Schön, 1978). Single-loop learning seems to be present when goals, values, frameworks and, to a significant extent, strategies are taken for granted. Double-loop learning occurs when errors are detected and corrected in ways that involve the modification of an organisation’s underlying norms, policies and objectives. Argyris and Schön suggested that many of the theories in use are implicit in what we do as practitioners and managers. The theories of single and double loop learning were later expanded by Schön, who argued that by becoming a “reflective practitioner” one can

bridge the gap between theory and practice (Schön, 1991). A practitioner may experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He may reflect on the phenomenon before him, and on the prior understanding which have been implicit in his behaviour. He may then carry out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation. Reflection-in-action involves looking to our experiences, connecting with our feelings, and attending to our theories in use to constantly develop and learn from our experiences. It entails building new understanding to inform our actions in the situation.

Reflection-on-action is done later, after the encounter, alone or with help from a supervisor. The act of reflection-on-action enables us to spend time exploring why we acted as we did, what happened in a group and so on. In so doing we develop sets of questions and ideas about our activities and practice. People do not have a full understanding of things before they act. Hopefully we can avoid major problems by looking at a situation we are influenced by, and use what has gone before, what might come, our repertoire and our frame of reference. Schön argues that people are able to draw upon certain routines and as they work they can bring fragments of memories into play and begin to build theories and responses that fit the new situation. When time is extremely short, decisions have to be rapid and the scope for reflection is extremely limited. One has to fall back on routines in which previous thought has been sedimented. As we think and act, questions arise that cannot be answered immediately. In my experience, the space afforded by supervision and conversation with our peers allows us to approach such questions. Thus, reflection requires space in the present. I find it reasonable that, by reflection and dialogue it may be possible to understand some of the "tacit knowledge" (Polanyi, 1967) that is created and developed among professionals from assumptions, mental models and experiences in context. "Tacit" means that which is unspoken, which may be difficult to describe – like the knowledge required for riding a bicycle. Bohm argues that thought is actually a subtle tacit process and that the concrete process of thinking is very tacit. "Thought is emerging from the tacit ground and any fundamental change in thought will come from the tacit ground" (Bohm, 2004). Tacit knowledge about our actions has been described to have similarities with the unconscious part of our mind as described by Freud (Gustavsson, 1996). From this follows that tacit knowledge might not be easily accessible as conscious descriptions but may play a central role in one's actions.

Schön argues that "technical-rationality" has been the dominant paradigm as the grounding of professional knowledge, but that this model is incomplete in that it fails to account for practical competence in "divergent" situations. Accordingly, the process of reflection-in-action is central to the "art" by which practitioners sometimes deal well with situations of uncertainty, instability, uniqueness and value conflict (Schön, 1991). My impression is that practitioners and leaders in health care need support in this process.

2.10 INTERVENTIONS FOR LEADERSHIP DEVELOPMENT IN SWEDISH HEALTH CARE

Leadership is widely seen as both the problem and solution to all types of contemporary issues: from ending world poverty to addressing global warming. There has been a dramatic growth of the leadership development field into a multibillion-dollar global industry. It has been estimated that $36 to $60 billion US dollars are expended annually on management and leadership development throughout the world (Jackson and Parry, 2008). Managerial leadership development is an emerging field for which little is reported in the literature regarding its effectiveness (Collins and Holton, 2004). How can health care leaders (e.g., nurse managers, doctors) be supported in their leadership roles? It has been suggested that a full range of leadership development experiences is required including mentoring, job assignments, feedback systems, on-the-job experiences, developmental relationships, exposure to senior executives, leader-follower relationships, and formal training (Van Velsor et al., 2004). Coaching, mentoring, and feedback are commonly used in managerial leadership development, but few empirical studies are available concerning these interventions (Collins and Holton, 2004). Ollila suggested that supervision for managers as a support system of management clarifies strategic competence-based management, gives support to leadership know-how, and enhances well-being for managers (Ollila, 2008). A Canadian Delphi study (Loo and Thorpe, 2003) forecasting management training and development for first-line nurse managers emphasized the importance of the nurse manager context, for example, the need for nurse managers to see the big picture such as the health care system within the political context. It was concluded that nurse education would have to be clearly linked to the context of the changing health care system and job demands, and balance the teaching of clinical and people skills. In terms of recommendations for leadership development it was recommended that organizations need to develop “a supportive organizational culture” for leadership development by support from senior management. “Team building skills” training was specifically noted. It was also recommended that graduate education should be more flexible by recognising work experience and the need for mentoring and coaching programmes stood out too (Loo and Thorpe, 2003). A British study of leadership development in health care concluded that both work-based and programme-based leadership development have much to offer (Edmonstone and Western, 2002). An evaluation of a leadership development programme for frontline health care leaders indicated that the intervention enhanced the leadership capabilities of participants and in addition, participants reported increased levels of job satisfaction at three months follow up. However, it was emphasized that a long-term success of a leadership development initiative requires an organizational culture that considers developing future leaders as a long-term strategic priority (Block and Manning, 2007).

This thesis focuses on two different approaches for leadership development used in Swedish health care; short-term intensive courses (i.e. Development of Group and Leader (DGL) and Professional development and leadership (P&L)) and long-term “leadership development groups” (i.e. dialogue groups and support groups).

2.10.1 Long-term programmes - Leadership Development Groups

Michael Balint initiated around 1950 regular group sessions over a longer time with a group of doctors focusing on their experiences and emotional reactions in managing patients with various types of difficult medical problems. In what are known as “Balint groups” (Kjeldmand, 2006), doctors have conducted discussions aimed at enhancing the understanding of doctor-patient relationships. Within the area of organisational psychology, it has been suggested that “dialogue groups” can be used to improve communication and team performance (Bohm, 2004, De Maré et al., 1991, Isaacs, 1999, Olausson, 1996). Notably, such an approach has been suggested to be employed not only to upgrade organisations, enhance communication, engender consensus, and solve problems, but also to provide the opportunity for people to think and learn together by creating a collective sensitivity in which thoughts, feelings, and actions do not belong to one particular person but rather to all members of a group (Senge, 1994). Such methods of organising learning experiences have not yet been applied to any great extent within health care.

The *dialogue groups* in this thesis consisted of ten doctors and two consultants. The groups met with the same pair of external consultants in three-hour sessions conducted once a month for a total of ten occasions each year. The consultants facilitated the group process. Their role was to observe, to give structure to the meetings, and to encourage the participating doctors to discuss problems that arose in their everyday work. The version of dialogue groups that was used was originally developed by Fleck (Olausson, 1996). A key point in the method is to base the process on the participants own questions about every issue. Each participant chose his or her own theme. Participants were encouraged to learn from each other and to reflect over different aspects of the matters they brought up. The aim was to obtain new common knowledge and an understanding of the organisation in which they worked as well as their own role within that system. The instructions they received were to air dilemmas they experienced in their everyday work, among others their role as a leader of other staff. Examples of areas that the doctors were able to bring up in the dialogue groups were: mental energy, social climate, workload, feedback from managers, feeling of participation, work-related exhaustion, goal clarity at workplace, organisational efficacy, and leadership at workplace.

Support groups have been suggested to support managers in their leadership role (Sandahl and Edenius, 2004). A support group consists of about 8 managers who meet for three hours once a month for one to two years. The group is led by a trained counsellor, often an experienced management consultant. The group leader’s task is to facilitate the group process, give structure to the sessions, contribute with leadership theories, give emotional support, and encourage the managers to discuss problems that arise in their everyday work. Examples of areas that managers are able to bring up in the support groups are personnel problems and organizational matters. The method has its roots in systems thinking and family and group therapy (Senge, 1994).

In this thesis, I refer to both dialogue groups and support groups as two *“leadership development groups”* as the methods used in them are similar although only one consultant participated in the support groups compared to two in the dialogue groups.

Another difference was that a central aspect of the method in the dialogue groups was to structure the sessions in order to give all participants the same amount of time and the same opportunity to speak and contribute to the discussions.

2.10.2 Short-term programmes - Intensive Leadership Courses

Development of Group and Leader (DGL) is a one-week intensive leadership course developed in Sweden in 1981 and first used by the Swedish military in their officer training. It is widely used throughout the corporate and public sectors (Ydén and Alvesson, 2000). The course focuses on participants' learning of group dynamics, communication, and leadership. Two supervisors guide a group of 8-12 participants through different modules designed to explore the leader's role, conflict management, group dynamics, and teamwork. Each module is based on the idea of experience-based learning (Kolb, 1984). The supervisors help the group of participants through a process of reflection and meta-reflection, which results in generalisations supported by a theoretical framework provided by the supervisors. The issues used in the modules do not emanate from the participants' personal experiences from their own organizational context but are designed to meet common issues in the role of a leader or member of a team. The assumption is that the course will lead the participants to experiment with new behaviours.

Professional development and leadership (P&L), is an undergraduate course (5 days) taught in semester ten of the eleven-semester medical school curriculum at Karolinska Institutet in Stockholm, Sweden. A two day introduction to the course is given in semester one. The main course in semester ten has its origin in the DGL course that has been modified for medical students and focuses on learning group dynamics, communication and leadership. The course has three aims: to improve the participants' ability to communicate, to collaborate and to lead. The goal is to provide future doctors with the tools and models necessary to enhance the ability of reflecting, comprehending, identifying patterns and learning from and improving their daily work as well as to contribute to a general professional development. The course was established in 1999 at Karolinska Institutet and was revised in 2002 to more specifically meet the needs of doctors. The educational approach used in the P&L course is the same as in the DGL course (Kolb, 1984).

3 STUDY RATIONALE

Compared to European standards, Swedish organizations invest heavily in employee training and development. One Swedish study found that more than four percent of an organization's salary costs were used for personnel development and training in a third of the organizations (Kjellberg, 1998).

In terms of my own leadership development as a doctor, I felt that the dialogue groups I had partaken in had been useful. I wondered if a dialogue group intervention might have an impact on the role of doctors in general and their working environment. Looking into this, I found that dialogue groups for doctors had never been systematically evaluated against these outcomes. I also found that research into the efficacy of experiential learning programmes of leadership and group dynamics in undergraduate medical education was sparse (O'Connell and Pascoe, 2004).

In general, there is a lack of intervention studies regarding the efficacy of leadership development programmes in health care (Collins and Holton, 2004, Jansson von Vultée, 2004, Tollgerdt-Andersson, 1995). Considering the scarcity of resources within health care, it is important to evaluate these interventions so as to identify where the highest return on investment is. Within medicine, new treatments are supposed to be evidence-based. Shouldn't leadership development programmes be evaluated using similar strategies? Do the interventions, for instance, have any impact on leadership development for participants?

To our knowledge, neither the short-term intensive leadership courses nor the leadership development groups in this thesis have previously been studied in a health care setting. The financial costs and total time used for each participant during a one-week intensive leadership course is comparable to one and a half years of leadership development group sessions (13 sessions). The favoured approach to health care leaders' leadership development is to use short-term leadership courses. But are short-term leadership courses enough? Do short-term intensive leadership courses and long-term leadership development groups result in similar outcomes? What kinds of experiences do participants have from the different leadership programmes?

If any of the leadership programmes evaluated in this thesis can develop the leadership of the participants, there might be many health care leaders who would benefit from participating in these programmes. So, what are the effects of today's leadership programmes on health care leaders' leadership?

4 AIMS AND OBJECTIVES

The overall aim of the thesis was to evaluate interventions aimed at developing health care managers', doctors', and medical students' leadership.

4.1 SPECIFIC OBJECTIVES

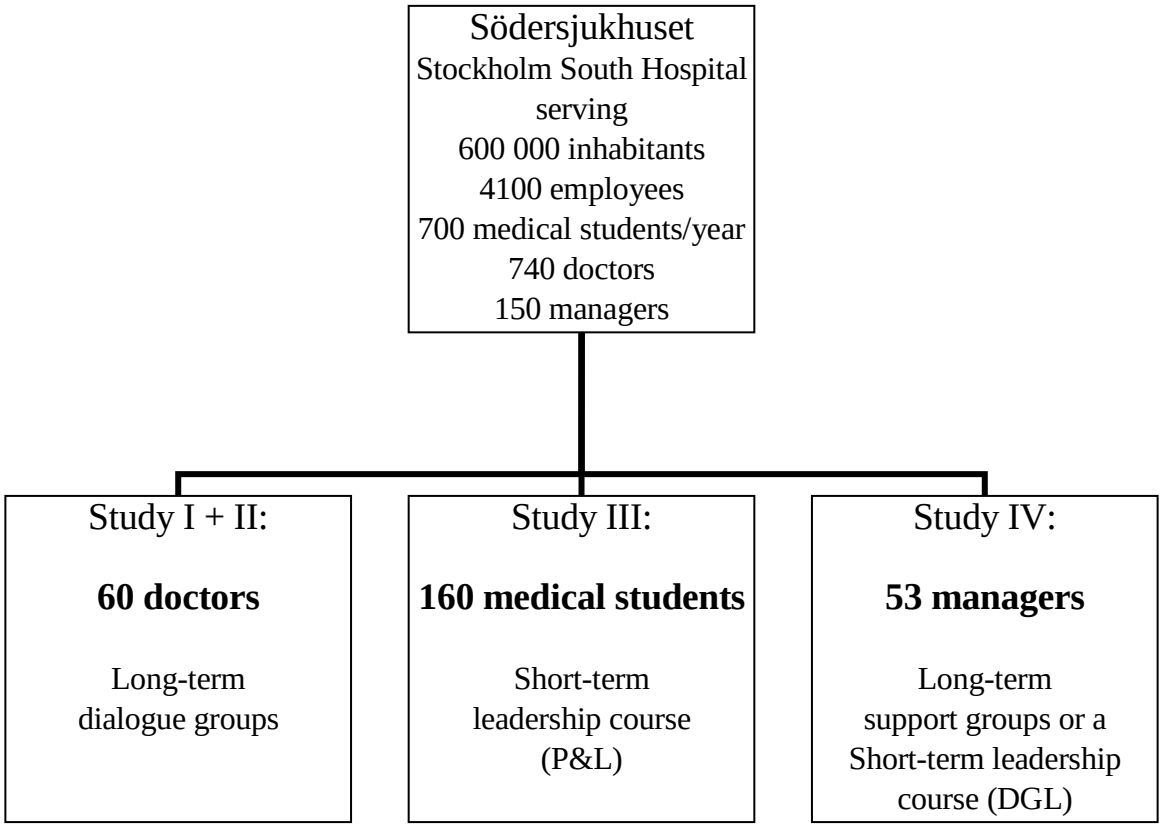
1. The aim of Study I was to evaluate if long-term dialogue groups for doctors can improve their psychosocial work environment, in terms of a better social climate, participation, workload and leadership.

2. The aim of Study II was to thoroughly explore the experiences that the doctors in the dialogue groups had discussed in their sessions, and to explore the way the participants perceived their role as doctors.

3. The aim of Study III was to evaluate a short-term leadership programme for medical students using two measures, one related to attitudes to openness in the professional role and to group dynamics, and the other related to conceptions of learning and knowledge.

4. The aim of Study IV was to evaluate the impact of two different leadership programmes, one long-term and one short-term, on the views and attitudes on leadership of health care managers as well as to explore participants' experiences from the two programmes.

4.2 FIGURE 1: OVERVIEW OF THE THESIS



5 METHODOLOGY

Given the wide range of disciplines that contribute to the field of health service delivery and organizational research, it is inevitable that certain methodological tensions will arise. One of the key challenges within this research is that the phenomena under study are complex and difficult to define.

Context is an important factor in the study of health service organizations. One way to take context into account is to use a *naturalistic approach* whereby groups and social relationships are studied in their natural settings. This is based on the idea that when studying social change, "causation can only be understood as part of social relationships and organisational structures in which it is embedded" (Fulop, 2001). Thus, the researcher does not create experimental groups or interventions. This approach is applicable to organizations, such as health systems, where it can be difficult to design controlled experiments (ibid).

Different disciplines argue for different methods. In our research, we have not focused specifically on these methodological issues but have chosen a pragmatic approach to evaluation. Accordingly, we have chosen to use both quantitative and qualitative methods as they may be used to complement each other. However, we are aware that these methods reflect different world views, different grounds for knowledge and different assumptions regarding human nature.

Extreme objectivists view the world as a concrete structure. Knowledge of the social world from this viewpoint implies the epistemology of positivism including analysis of concrete relationships in an external world (Morgan and Smircich, 1980). Positivism has traditionally been the dominating epistemology within medical research. It encourages an objective form of knowledge that specifies the precise nature of laws and relationships among phenomena measured in terms of "facts". The quantitative methods draw principally on the methods of the natural sciences and are appropriate for capturing a view of the world as a concrete structure.

One can argue that quantitative methods have limitations since it may be difficult to interpret results from questionnaires that are designed to measure respondents' perceptions, especially when it comes to perceptions of psychological aspects. One limitation is the use of closed-ended questions which dictate the possible answers, potentially guiding participants into predetermined perceptions and interpretations. Another difficulty is that one does not know if respondents have understood the questions as the researcher intended.

One way to validate questionnaires is to compare findings with interview data. Once validated, an advantage with questionnaires is the ability to quantify differences of groups of participants and to follow trends at different time points. Using several questionnaires makes it possible to find correlations between different aspects.

Another advantage is that there is less of a risk for the researcher to influence the data analysis compared to qualitative analysis (keeping in mind, of course, that an

interpretivist would argue that researchers always influence the process of analysis). Questionnaires also feasibly allow for the collection of data from a large number of participants allowing for generalizations.

At the other end of the continuum, an extreme subjectivist views the world as a projection of individual imagination and emphasizes the importance of understanding the processes “through which human beings concretize their relationship to their world” (Morgan and Smircich, 1980). This perspective challenges the idea/illusion that there can be any form of objective knowledge at all. In contrast, there is an emphasis on processes through which human beings engage and create their reality. This view implies that the scientist can no longer remain an external observer, but must investigate from within the subject. Reality can be interpreted in various ways and the understanding that is developed is dependent on subjective interpretation. Qualitative research requires an understanding and co-operation between the researcher and the participants because texts based on interviews and observations are contextually and value bound. Thus, the researchers need to always be aware of this when gathering and interpreting their data.

A main strength of qualitative methods is the possibility to explore and analyse participants’ experiences, attitudes, and beliefs on a deeper level. This can lead to a deeper understanding and insight into the meaning which participants attribute to their experiences. Interviews which use open-ended questions create the space for unexpected answers. Follow-up questions can be used to further penetrate and clarify points. These all can improve the quality of the data.

Research findings should be as trustworthy as possible and must be evaluated in relation to the procedures used to generate the findings. Trustworthiness of interpretations deals with establishing arguments for the most probable interpretations. In qualitative research the concepts of credibility, dependability and transferability have been used to describe various aspects of trustworthiness (Graneheim and Lundman, 2004). It has been argued that these concepts are related to the concepts of validity, reliability and generalisability that are used within the quantitative tradition and that they have “the same essential meaning” irrespective of research tradition (ibid).

Credibility refers to confidence in how well data and the analysis process address the intended focus. Important aspects for credibility are the selection of context and participants, and the data gathering approach. Credibility also deals with how well categories and themes cover data so that no relevant data has systematically been excluded or irrelevant data included.

Dependability refers to the degree to which data changes over time. On the one hand, it is important to question the same areas for all the participants. On the other hand, interviewing is an evolving process during which interviewers acquire new insights that can subsequently influence follow-up questions.

A general aspect of qualitative research is that it is not possible to generalize the findings based on a particular study. However, a qualitative analysis may result in a

theory that can be applicable in other settings. This is referred to as transferability – the extent to which the findings can be transferred to other settings or groups. The authors can give suggestions about transferability but it is up to the reader's interpretation whether or not the findings are transferable to another context.

We have chosen to analyse interview texts through qualitative content analysis (Morse and Field, 1996). Qualitative content analysis is a balancing act. It is impossible and undesirable for the researcher not to add a particular perspective to the phenomena under study. On the other hand, the researcher must "let the data talk" and not impute meanings that are not there.

Historically, researchers concentrated on the visible and obvious components in a text (*manifest content*). There is now a greater appreciation for looking at the underlying meaning of the text, the *latent content*. The *unit of analysis* in a content analysis can refer to a great variety of objects, such as a person, a programme or an organization. A *meaning unit* refers to words and sentences which contain aspects that are related to each other. The label for a meaning unit is a *code*.

Creating categories is the core of qualitative content analysis (Graneheim and Lundman, 2004). A *category* is a group of coded content that shares commonality. Creating *themes* is a way to link the underlying meanings in categories together. A theme can be seen as an expression of the latent content in the text. A content analysis always involves a back and forth movement between the whole and parts of the text. Qualitative research thus focuses on the subject and context, and emphasises the differences and similarities between and within codes and categories.

Although quantitative and qualitative methods reflect different epistemologies, we found that the approaches were complementary in terms of achieving our overall study aims. *Triangulation* refers to the use of multiple methods in research. With a triangulation design, one can simultaneously collect both quantitative and qualitative data, compare the results, and use the different findings to see whether they validate each other (Fulop, 2001). The point with triangulation is not to demonstrate that the different data sources yield the same result, but to test for consistency. We found this design useful in Study IV as well as for the overall thesis.

Evaluations of interventions may be divided into impact evaluations and process evaluations (Rossi et al., 2004). An *impact evaluation* gauges the extent to which a programme produces the intended improvements in the social conditions it addresses. The major difficulty in assessing the impact of a programme is that usually the desired outcomes can also be caused by factors unrelated to the programme. Thus, impact assessment involves producing an estimate of the net effects of a programme. These can be the changes brought about by the intervention above and beyond those resulting from other processes and events affecting the targeted social conditions. One way to conduct an impact evaluation is with questionnaires in order to estimate outcomes and to compare measures before and after an intervention.

Process evaluations investigate how well the programme is operating, such as how well it is organized and uses resources. The focus is on describing and exploring the

content of the programme. It assesses the extent to which a programme is implemented as intended. Process evaluation is the most frequent form of programme evaluation (ibid). One way to conduct a process evaluation is by the use of focus group interviews (Krueger and Casey, 2000).

Process evaluation is used both as a freestanding evaluation and in conjunction with impact evaluations as part of a more comprehensive evaluation. In this thesis, we have been interested both in the impact of the leadership programmes and in exploring the content of the programmes. However, we have mainly focused on the impact evaluation design as a first step. The information about programme outcomes that evaluations of impact provide can be complemented with knowledge of the programme activities that produced those outcomes through process evaluations. When programme effects are found, process evaluation helps confirm that they resulted from programme activities rather than other sources. We have therefore chosen both approaches depending on the aims of our studies. As both approaches to evaluation have their limitations, we have found the two different designs to be complementary to each other.

6 METHODS

6.1 STUDY I AND II

Study I and II were conducted at a children's clinic, Sachs' Children's Hospital, at one of the main hospitals in Stockholm, Södersjukhuset, which serves a catchment area of 600,000 inhabitants. Baseline measures of the psychosocial work environment were collected 1999 and 2001. Two dialogue groups for resident doctors met ten times from late 2001 until the end of 2002. In the beginning of 2003 the same psychosocial measurement instrument was distributed to all doctors at the clinic. Thereafter six new dialogue groups were started and met ten times during one year. These groups were open for all doctors at the clinic. From 2001 to 2003 the group of resident doctors at the clinic increased from 22 to 33 doctors thus eleven new resident doctors were invited to the dialogue groups that started in 2003. Follow-up data were collected after the termination of the groups in 2004 (See figure 2).

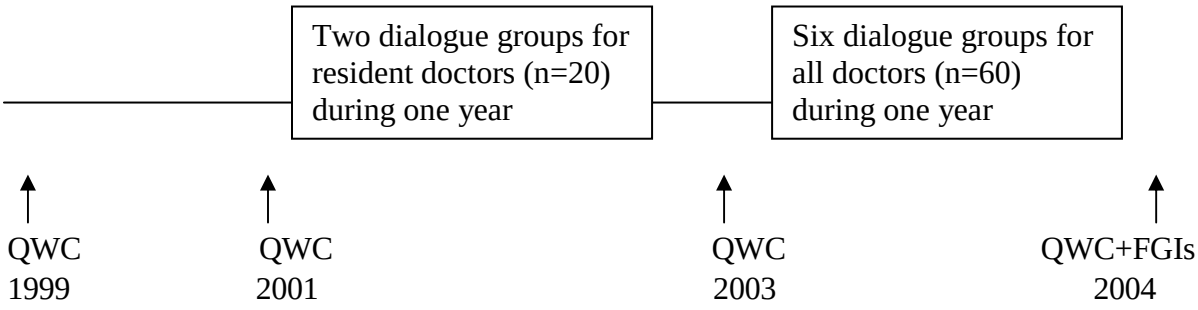


Figure 2. Study design. Two dialogue groups for resident doctors (n=20) started in October 2001 and in January 2002. Six new dialogue groups for all doctors (n=60) started in March 2003. All dialogue groups met in total 10 times during one year. The Quality Work Competence (QWC) - questionnaire was sent to all doctors in February 1999, 2001, 2003 and in 2004. Focus group Interviews (FGIs) were conducted in March 2004.

6.1.1 Participants

During the time for the main intervention, in 2003, Sachs' Children's Hospital had a total of 350 employees of which 76 were doctors. Fifty-six of the doctors were employed at the inpatient clinic and 20 were employed at four different outpatient clinics in the southern area of Stockholm. Each outpatient clinic had a doctor as a manager who reported to the head of the hospital. Eight of the 76 doctors at the clinic were excluded from the study due to various reasons, among others that they were not active as clinical doctors even if they were still on the employment list.

Both in 2003 and 2004 the same 53 doctors of the 68 who received the questionnaire responded (78%) of whom 47 participated in the dialogue groups. Of the 53

respondents a slight majority, 30 (57%), were women, 39 were doctors working at the inpatient clinic of the hospital and 14 were doctors working at the outpatient clinics in southern Stockholm. Thirty-one (58%) of the respondents were specialist doctors and 22 (42%) were resident doctors. The distributions of mean age, gender, number of doctors and professional group identity among the respondents were representative for the group of doctors at the Sachs' Children's Hospital during the time period of this study from 1999 to 2004.

6.1.2 Procedure

Two dialogue groups with ten resident doctors per group started in October 2001 and in January 2002, respectively. Each group consisted of six female and four male resident doctors at the Sachs' Children's Hospital. The two groups met with the same pair of supervisors, three hours once a month, in total ten times during the first project year.

Six new dialogue groups started in March 2003 with ten doctors per group, in all 60 doctors. All 68 doctors at the Sachs' Children's Hospital were invited to participate. Fourteen of the resident doctors from the two previous groups participated during the second project year. They were randomly assigned to the six new groups. All six groups were similar in distribution of age, sex and medical experience as doctors. They met with the same two professional supervisors per group, three hours once a month, in total ten times during a 12-month period.

In February 2003 the Quality Work Competence (QWC) questionnaire was sent to all 68 doctors at the Sachs' Children's Hospital. At this time, both dialogue groups with resident doctors had finished. The same questionnaire was sent again to the same study participants after the second intervention, in March 2004. The QWC questionnaire had also been used in 1999 and 2001 to evaluate the work environment for all employees at Sachs' Children's Hospital.

In March 2004, after conclusion of the final dialogue group session, all 60 of the participating doctors were invited to also take part in focus group interviews.

6.1.3 Data collection

6.1.3.1 Questionnaire

The quality work competence (QWC) questionnaire has been frequently used in Sweden and has been validated in the Swedish health care system (Arnetz, 1999). The published version of the questionnaire has been designed for the assessment of organizational and staff well-being using staff ratings of the following eleven key enhancement areas: mental energy, social climate, workload, feedback, participation, work-related exhaustion, skills development, quality of the internal communication process, goal clarity, organizational efficacy, and leadership. An index is calculated for each enhancement area comprising the summarised score of three to seven multi-point questions with standard Likert check-off scales. In addition, a focus score enhancement index (FSEI) for the overall score of organizational and staff well-being is calculated based on the sum of the weighted scores on each of the listed eleven indices, with the exception of quality of the internal communication process and work-related

exhaustion. Higher scores indicate more well-being for all indices except for the indices work-related exhaustion and workload where lower scores indicate more well-being for the employees. To reduce the number of questions in our study, two of the eleven indices were excluded, namely "skills development" and "quality of the internal communication process" (referring only to communication with the manager) as it was assessed that the dialogue groups would not affect these indices. The total number of questions in the QWC-questionnaire was thereby reduced to 40 questions (See table I in paper I). The percentage scores on the enhancement indices range from a possible low of 0% to a high of 100%.

6.1.3.2 Focus group interviews

Focus group interviews were chosen as the method for collecting research data in Study II. This process evaluation design was chosen as it fit well with the aim of the study: to thoroughly explore the experiences that doctors had discussed in the dialogue groups and to explore the way the participants perceived their role as doctors. Twenty of the 60 doctors from the dialogue groups were willing to participate in the five focus group interviews. This resulted in a total of three to five participants in each focus group. The distributions of age, gender and professional group identity among the interviewed doctors were representative of all doctors at Sachs' Children's Hospital during the study period 2001–2004.

One of the authors (CS) and an external researcher from the Medical Management Centre of Karolinska Institutet conducted the open-ended, interactive, semi-structured focus group interviews (Krueger and Casey, 2000). In the interviews, the informants were asked about their experiences from the dialogue group sessions, and the queries focused on how they perceived their professional role. All interviews were carried out in the same room at the hospital, and they lasted about one and a half hours each and were audio-taped and subsequently transcribed by an external secretary. The managing director of Sachs' Children's Hospital and one of the consultants in the dialogue groups were also interviewed after the final dialogue group session.

6.1.4 Analyses

6.1.4.1 Statistical Analyses

Statistical analyses of the data from the four different data collection occasions (1999, 2001, 2003, 2004) were performed using SPSS statistical software 13.0 for Windows 2000 Professional. Differences between groups of different doctors were analysed using General Linear Model, ANOVA, for differences of means over time. Two-sample independent t-tests were used to assess the differences in means between time points from 1999 to 2003. Paired t-tests were used to assess differences in means from 2003 to 2004 since the data were paired for these time points. $P < 0.05$ was considered a significant result. Since the majority of the respondents were the same from 1999 to 2003 the use of an independent t-test for this period may have caused bias for this period. This potential bias is not possible to measure.

6.1.4.2 Analysis of the focus group interviews

The first two authors in Study II (DB, ES) subjected the transcribed data to qualitative content analysis (Morse and Field, 1996), according to the theory perspective on the "professional role" (Reed and Bazalgette, 2006), as described in the introduction, and used QSR Nvivo software 2.0 to store, organise and retrieve data. Each interview transcript was read several times, and memos were written to capture the thoughts and ideas that arose during the first thorough reading of the transcripts. Thereafter, the data were analysed to obtain all segments relating to "the professional role". This process was followed by coding, which involved discerning expressions of significant phenomena in the interviews. This resulted in almost 50 preliminary categories. The coding was continued until nine major categories had emerged to which most of the phenomena in the data could be linked. No new phenomena were discovered in the analysis of the last interview. An external researcher and I independently categorised the text from one interview into the nine major categories, and our coding results were compared. The kappa value of this test of inter-assessment reliability was 0.54. The findings were verified by the interviews conducted with the head of the clinic and one of the consultants, as well as by several consensus discussions with the two senior authors (CS, RW).

6.2 STUDY III

Professional development and leadership (P&L) is an undergraduate course (5 days) offered near the end of the medical curricula at Karolinska Institutet in Stockholm, Sweden.

6.2.1 Participants

Two anonymous and coded questionnaires were sent to all medical students in their 10th semester at Karolinska Institutet, in total 160 students, two weeks before they participated in the course *Professional development and leadership*, during the period from September 2004 to March 2005. Twelve courses were given during this time period with 12-16 participants in each course. The same questionnaires were sent to each student two months after the course. One hundred forty-four students (90%) answered the pre-course questionnaires and 125 (78%) answered the post-course questionnaires. A total of 116 students (73%) answered the questionnaires both before and after the course, whereof 63% were women. Sixty-nine percent of the responding students were under 30 years old, 28% were from 30 to 39 years old and 3% were from 40 to 49 years old. These figures are representative for the medical students at Karolinska Institutet. A dropout analysis of the 28 students, who responded only before the course, showed that they had about the same distribution in sex and age and about the same pre-course values (See table 1 in paper III) in the measure of the dependent variable, the AOG questionnaire (See Box 1 in paper III).

6.2.2 Questionnaires

A new questionnaire, AOG – Attitudes to Openness and Group dynamics, was developed for this project. In a pilot study, the AOG questionnaire was distributed to 120 medical students in their 10th semester before they attended a P&L course. Eighty students responded (67%). The original questionnaire consisted of 21 questions

developed to measure the aims expressed in the course plan. Psychometric analyses including factor analysis and reliability tests of the responses resulted in the final version of the AOG questionnaire with score range from 12 to 72 for the total questionnaire. There were 12 questions in the final questionnaire, all with Likert check-off six point scales. End points were “I do not agree at all” and “I agree very much”. Two indices were calculated. The first one, “Openness in the Professional Role” (score range 5-30), consists of a summarised score of five questions regarding openness about deficiencies within medical knowledge, openness to speak about the working situation and openness to reflect over the role in a working group. The other index, “Group Dynamics” (score range 6-36), consists of a summarised score of six questions regarding group dynamics, the role of a leader in a group and communication within working teams (See Box 1 in paper III). The two indices were confirmed in factor analyses of the responses before the course (n=144).

In the item analysis, one question reflecting the attitude to leadership styles was kept in the final version of the questionnaire, although not as an index. Cronbachs alpha for the total AOG questionnaire was 0.81, 0.69 for the index “Openness in the Professional Role” and 0.81 for the index “Group Dynamics”. Higher scores indicate attitudes of more “openness in the professional role” and towards the belief “that skills in group dynamics is of great value in the professional role as a doctor.”

Another instrument, Conceptions of Learning and Knowledge Questionnaire (CLKQ) has been developed by Lonka and co-workers to measure students’ conceptions of learning, knowledge and study practices (Lonka et al., 2004). The original version of this questionnaire consisted of 19 questions. Their principal component analysis based on orthogonal rotation (varimax) confirmed three scales:

a) Students who seek “Certain knowledge” and have an externally regulated conception to learning. The main conception of these students is to learn definite knowledge from textbooks and theories taught by a teacher.
b) Students with a “Collaborative-Constructivist” conception to learning, based on shared construction of explanations. The main conception of these students is to build knowledge together with others, teachers as well as other students.
c) Students who seek knowledge that is of “Practical value” in their future professional role. These students have a pragmatic orientation and look for applications of knowledge in practical and concrete situations.

The scale ”Certain knowledge” consists of a summarised score of seven questions and the scales “Collaborative-Constructivist” and ”Practical value” consist of a summarised score of six questions each. All questions are Likert-type questions. The range for the scale ”Certain knowledge” varies from 7 to 42 and for the scales “Collaborative-Constructivist” and “Practical Value” from 6 to 36. In the development of the CLKQ, Cronbachs alpha for the scale “Certain knowledge” was 0.81, for the scale “Collaborative-Constructivist” 0.79 and for the scale “Practical value” 0.71 (Lonka et al., 2001).

As an additional task the students were asked to describe in writing their perceptions of problems in relation to three areas; teamwork, conflict management and communication. One hundred forty-one of the students responded. For the purpose of being able to give a more personal account of the students’ situations during their

clinical training, the results were analysed qualitatively. The 141 students' answers were analysed carefully and categorised. The analysis included also consensus discussions among all authors and resulted in one main category correlated to each of the three areas.

6.2.3 Statistical analysis

The underlying structure of the 21 items in the AOG questionnaire was investigated using an explanatory factor analysis with orthogonal rotation (varimax) using the LISREL software, version 8.7 (Scientific Software International, Inc., Lincolnwood). Due to the ordinal scale of the items, polychoric correlations were used for the correlation matrix (Olsson, 1979). Weighted least squares were used to estimate the factor loadings. The purpose of the factor analysis was to minimise the number of items to a few clusters accounting for most of the variation in the data. The latent factors were then labelled in a meaningful way. To test the internal consistency of the items within a factor, Cronbachs alpha was used. The indices were not correlated to each other.

A total sum of the item-scores within each latent factor was calculated for the data before and after the course. The data was normally distributed. To examine the number of students who changed in total score between the time points, data was analysed using the Sign-test. In a second analysis the magnitude of the changes in total score were examined using paired t-tests to assess differences in means for data before and after the course.

The scales in the CLKQ were classified into four classes corresponding to the quartiles of the responses in these indices before the course. Paired t-tests were used to analyse the association between the classified independent scales of the CLKQ "Certain knowledge" ,"Collaborative-Constructivist" and "Practical value" and the dependent indices of the AOG questionnaire "Openness in the Professional Role" and "Group Dynamics". A p-value less than 0.05 was considered to indicate a statistically significant result. Statistical analyses of the data from the two different data collection occasions (before and after the twelve courses) were performed using SPSS statistical software 13.0 for Windows 2000 Professional.

6.3 STUDY IV

Data were collected in Study IV from September 2003 to September 2007. Four long-term support groups (LT-SG) had been running since 1998 at Södersjukhuset. As managers moved on and left they were always replaced by another manager, so the number of participants in each group always remained eight. Each group met with one of three external consultants in three-hour sessions conducted on a total of nine occasions each year. The groups were similar with regard to distribution of age, sex, and managerial experience, except for one group that comprised only of women. The support groups continued for several years, and the managers chose to participate in the groups for an average of 17 months. In total 34 managers participating in support groups were included in this study. Four managers quit after 4 months, due to pregnancy or a change in work tasks, while the other 30 participated between 9 and 45 months.

The one-week (OW) intensive leadership course *Development of Group and Leader (DGL)* was offered to first-line managers at Södersjukhuset during the study period. Each manager participated in a separate OW-DGL course held by external supervisors outside the hospital, that is, only one participant in each external course came from Södersjukhuset. The participants in these courses were managers from both the public and the private sectors. Nineteen managers participated in OW-DGL only in this study.

6.3.1 Participants

In total 53 managers, of which 33 were nurses, 9 were doctors and 11 were other health personnel, were divided into three groups based on their participation in the training. A reference group was included as a fourth group.

1. LT-SG: Long-Term Support Group participants: 11 nurse managers and 5 other first-line managers (female=15 male=1)
2. preOW-DGL + LT-SG: One-Week DGL course 1 to 29 years before start in the Long-Term Support Groups: 12 nurse managers and 6 other first-line managers (female=15 male=3)
3. OW-DGL: One-Week DGL course participants: 10 nurse managers and 9 other first-line managers (female=15 male=4)
4. Reference group: 56 participants in a management course at Karolinska Institute; 31 first-line managers and 25 other health personnel (female=50 male=6).

There was no difference among the four groups of participants concerning age or number of subordinates. However, the average number of months as manager was higher for the preOW-DGL+LT-SG group (see Table 1 in paper IV).

6.3.2 Data collection

All 53 participants in the three study groups were invited to respond to the Wheel Questionnaire at two different points in time: prior to and six months after the end of their respective leadership programmes. Thirty-nine managers (74%) responded both before and after their programmes. A dropout analysis of the 14 managers who responded only before their programmes showed that they had about the same distribution in age, managerial experience, number of subordinates, and pre-programme values measured by the Wheel Questionnaire. The 56 participants in the reference group responded to the questionnaire at one time point, before the start of their management course in 2006.

6.3.2.1 Questionnaire

The Wheel Questionnaire (WQ) is an instrument especially designed to assess and map how a situation is appraised by the individual. Lazarus and Folkmans model for stress, appraisal, and coping pointed out that psychological stress is the result of the relationship between the person and the environment that is appraised as taxing or exceeding his or her resources (Lazarus and Folkman, 1984). Appraisal can be described in cognitive, affective, and instrumental terms. The WQ was initially used to predict soldiers' ability to withstand severe stress (Shalit and Carlstedt, 1984, Shalit,

1982). The questionnaire is open-ended and consists of a circle with 12 equal-sized segments (see Figure 1 in paper IV). The participants in this study were asked to write down the factors that they perceived as most characteristic for a response to the key phrase "My role as a leader." Three indices were calculated using the WQ: discrimination, attitude and control.

Discrimination is related to clarity, structure of perception, and level of ambiguity. A higher discrimination value indicates a less ambiguous and more differentiated appraisal. Structure is viewed as the effectiveness of differentiation, that is, the degree to which the elements are distinct and unique in terms of their relative importance. (Range 0 – 0.92)

Attitude has to do with the net judgement of emotional involvement based on the sum of positive and negative evaluations. Is the final picture perceived as negative, positive, or neutral? (Range 1 – 5)

Control is the extent to which the individual feels he or she can control the factors mapped in the WQ. (Range 1 – 3)

The psychometrics of the WQ have frequently been evaluated and found satisfactory when used in the Swedish Army to assess coping abilities in stressful situations (Shalit, 1982). The WQ can be regarded as a "one-item test." To establish reliability, one needs either to perform a retest analysis or to regard the assessment of several key words as parallel tests. This was done in a study of 250 participants who completed the WQ with three key phrases (Mardberg, 1996). The reliability estimates in Mardbergs study were 0.89 for discrimination, 0.67 for attitude, and 0.62 for control. The key phrases used were "my life", "my work" and "others' perceptions of me." It is not surprising that the correlation for control was somewhat lower than for discrimination. One would not expect people to feel the same degree of control over such diverse factors (Sandahl et al., 2004).

6.3.2.2 Focus group interviews

Focus group interviews were chosen as a second method to explore the managers experiences related to their participation in the leadership programmes. All 53 managers were invited to focus group interviews after their leadership programmes from 2004 to 2007. Five group interviews were held for managers from support groups and three group interviews for managers from one-week DGL courses. Three to five managers participated in each focus group interview; in total there were 11 managers from DGL courses and 19 managers from long-term support groups. Age, gender, and professional group identity among the interviewed managers were similar to those of all managers participating in the leadership programmes at Södersjukhuset during the study period 2003–2007.

Two of the authors (DB and CS) conducted the open-ended, interactive, semi-structured focus group interviews (Krueger and Casey, 2000). In the interviews, the informants were asked about their experiences during their leadership programmes. The queries focused on the participants' perceptions of their leadership and their perceptions

of the effects of the leadership programmes. The moderator (CS) posed follow-up questions and attempted to include all participants in an interactive discussion. At the end of the discussion, the observer (DB) made a short summary and gave an opportunity for the participants to add comments and correct misunderstandings. The interviews lasted about one and a half hours each, were audio taped, and were subsequently transcribed by an external secretary. The consultants in the support groups were individually interviewed about the method used in the support groups.

6.3.3 Analyses of the focus group interviews

The second author in Study IV (SFS) subjected the transcribed text material from the focus group interviews to qualitative content analysis (Morse and Field, 1996). Initially, the material was read through several times for an overall idea about the content. Statements and concepts were then coded and labelled with possible theme headings. The codes were then grouped into categories. The material from those who had participated in the OW-DGL and LT-SG respectively were compared according to content, impact, and benefit on leadership behaviour. Finally, all four authors took part in a consensus process to validate the findings and to finally describe the categories. Statements were chosen to illustrate the categories. All quotations were labelled to identify the specific focus group interview (FG).

6.3.4 Statistical analyses

Statistical analyses of the data from the two different data collection occasions (soon before and six months after respective programme) were performed using SPSS statistical software 16.0 for Windows XP. Due to some missing values at the second time point, comparisons between groups of participants were analysed using Mixed Linear Models for means of differences in the Wheel Questionnaire (WQ) indices over time. Managerial experience, age and number of subordinates were controlled for in all estimated models. $P<0.05$ was considered a level of significance.

6.4 ETHICAL CONSIDERATIONS

Confidentiality and anonymity was guaranteed. Participation was voluntary and informed consent was obtained. All participants received written information about the study before their participation and agreed to participate by answering anonymous questionnaires or by participating in focus group interviews. The anonymity and the confidentiality were particularly important as the author of the thesis was working at Södersjukhuset (Stockholm South Hospital) at the time of the studies. The ethics committee of the county council approved the projects.

7 KEY RESULTS

7.1 EFFECTS OF DIALOGUE GROUPS ON PHYSICIANS' WORK ENVIRONMENT (STUDY I)

The responses from the questionnaire of 2003 were compared with the ones from the questionnaire that was distributed in 2004 after the dialogue group intervention. Data of the overall focus score enhancement index (FSEI) from the surveys of 1999 and 2001 was also compared with the data from 2003 and 2004.

For all doctors at the clinic there was a deterioration (p=0.008) in the general index for the work environment (FSEI) from 1999 (Mean= 66, SD=11.5), to 2001 (Mean=62, SD=15.3) until 2003 (Mean=58, SD=13.0) and then an improvement (p=0.037) to 2004 (Mean=61, SD=12.0) (See figure 3).

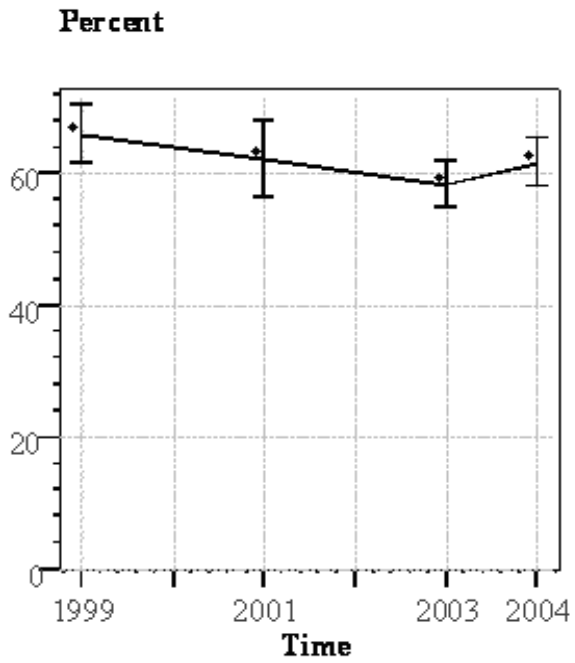


Figure 3. Focus Score Enhancement Index (FSEI) for all responding doctors (n=53) at the Sachs'Children's Hospital 1999 – 2004. Error bars show 95 % CI of mean. Lines show means.

For the resident doctors at the clinic the FSEI deteriorated (p=0.007) from 1999 (Mean=63, SD=13.5) to 2001 (Mean=49, SD=3.2), stayed at the same level until 2003 (Mean=52, SD=12.3) and then improved (p=0.016) until 2004 (Mean=56, SD=14.1). However, for the specialist doctors there were no significant changes in the FSEI for the work environment from 1999 to 2004 (See figure 4).

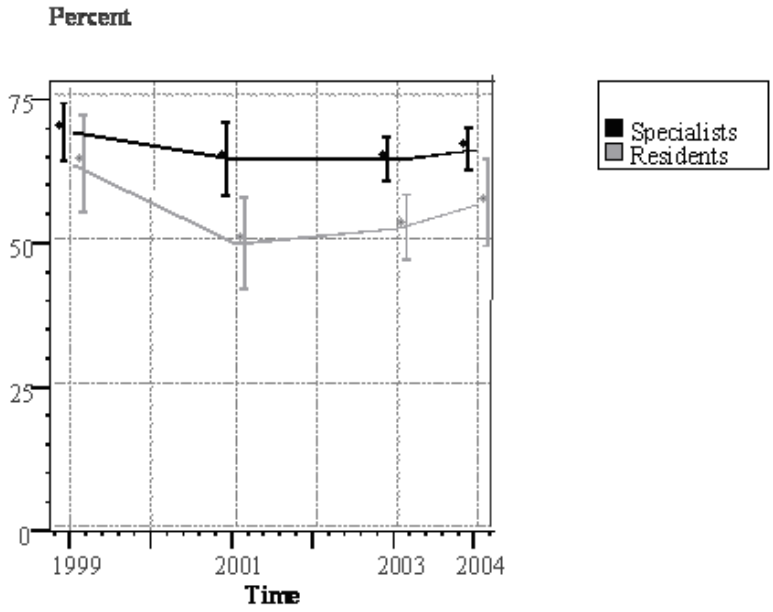


Figure 4. Focus score enhancement index (FSEI) for responding resident doctors (grey line, n=22) and responding specialist doctors (black line, n= 31) at the Sachs'Children's Hospital 1999 – 2004. Error bars show 95 % Cl of mean. Lines show means.

For the period from 1999 to 2003 the indices goal clarity, organizational efficacy and FSEI deteriorated (p<0.01) for all doctors. For the period 2003 to 2004 there were improvements (p<0.05) for the indices feedback, leadership, FSEI and a nearly significant improvement (p=0.051) for the index work-related exhaustion for all doctors at the clinic (See table 1).

TABLE 1. QUALITY WORK COMPETENCE (QWC) MEAN VALUES FOR ALL RESPONDING DOCTORS AT THE SACHS´ CHILDREN'S HOSPITAL (*N* = 53) *P < 0.05

Index	Mean (M) 2003	SD	Mean (M) 2004	SD	*T*	*P*
Mental energy	**70.5**	17.8	**73.2**	20.4	*-0.968*	*0.338*
Social climate	**72.2**	13.8	**75.6**	17.9	*-1.298*	*0.201*
Work-related exhaustion	**43.8**	19.2	**38.5**	17.3	*2.006*	*0.051*
Feedback	**46.9**	23.7	**58.0**	20.6	*-4.406*	*0.000**
Participation	**73.5**	21.5	**75.0**	17.8	*-0.638*	*0.527*
Goal Clarity	**34.0**	23.1	**39.1**	20.6	*-1.394*	*0.170*
Leadership	**57.8**	19.3	**64.3**	17.8	*-2.847*	*0.007**
Workload	**44.7**	20.1	**41.0**	18.8	*1.517*	*0.136*
Organizational efficacy	**54.1**	13.5	**54.2**	14.9	*0.098*	*0.922*
Focus score enhancement index (FSEI)	**57.9**	13.0	**61.0**	12.0	*-2.173*	*0.037**

For the group of resident doctors the indices goal clarity, organizational efficacy, feedback and the overall FSEI deteriorated ($p<0.05$) during the period from 1999 to 2003. For the period from 2003 to 2004 there were improvements ($p< 0.02$) for the indices feedback (from M=33, SD=23 to M=47, SD=21), goal clarity (from M=22, SD=22 to M=39, SD=22) and the overall FSEI (from M= 49, SD=12 to M= 55, SD=14).

For the group of all specialist doctors at the clinic the indices goal clarity and organizational efficacy deteriorated but the index for participation improved from 1999 to 2003 ($p<0.05$). For the period 2003 to 2004 there were improvements ($p<0.05$) for the indices feedback (from M=57, SD=19 to M=66, SD=17) and leadership (from M=65, SD=16 to M=71, SD=15). The indices for mental energy (from M= 72, SD=18 to M=79, SD=19; $p=0.078$) and workload (from M=40, SD=19 to M=35, SD=17; $p=0.077$) had nearly improved significantly. For the specialist doctors working at the inpatient clinic of the hospital (n=26) there was an improvement ($p=0.028$) for the index work-related exhaustion from 2003 to 2004.

When the dialogue groups ended in 2004, 89% of the resident doctors and 56% of the specialist doctors stated that they wanted to continue with supervised group discussions in some form.

7.2 LEARNING FROM DIALOGUE GROUPS—PHYSICIANS' PERCEPTIONS OF ROLE (STUDY II)

The discussions in the focus groups concentrated on issues of hierarchy, which were linked to the doctors' abilities to influence their work and the organisation in which they were employed. In particular, the doctors pointed to that part of the hierarchy, which they considered to be associated with gender aspects. They also emphasised the things that they had learned in the dialogue groups about their professional role and the way they looked upon learning in general. In the focus groups, they described their role expectations, as well as their need for support in their role. Notably, even though the doctors were asked to choose topics themselves, they allotted little time in the dialogue groups to discussing interactions and relationships with patients and their relatives. The analysis of the transcribed material from the focus group interviews resulted in nine major categories:

1 Hierarchies and subgroups

The doctors seemed to have had a keen ear for the hierarchy among their fellow professionals, and they were also aware of how they were viewed by others in that context. Their role as doctors and their actions and thoughts were to a great extent influenced by their internalised views of themselves in their ranking compared to other professionals at the clinic. They described various subgroups and the perspective of "us and them" influenced how they talked about and acted in relation to different colleagues. The focus group interviews indicated that the doctors suppressed their personal behaviour and adapted their actions to fit the professional role displayed by the doctors at the top of the hierarchy. The method used in the dialogue groups challenged this prominent ranking, which created uncertainty among the participating doctors and opened the way for new views on other groups of colleagues. The dialogue groups

created a more personal atmosphere and allowed the doctors to express their feelings. Older and younger, more and less senior doctors discovered how they could share their impressions and experiences. In daily life, most conflicts were avoided or ignored by the staff, which was explained as a matter of being polite to each other. The hidden conflicts became visible in the dialogue groups.

1a Influence

The doctors felt that their experiences in the dialogue groups had given them new perspectives on their ability to affect decision-making processes at the clinic. They had also gained new insights into their capacity to influence their own work, for example with regard to being able to prioritise and to be more realistic about managing their time. A novel way to distribute the time was used in the dialogue group sessions, which ensured that all participants had the opportunity to speak. That strategy differed from the way things were usually run at the clinic, where only a few doctors at the top of the informal hierarchy dominated. Hence the doctors in the study felt that they had learned to communicate better through their participation in the dialogue groups, and they also discussed the possibility of different subgroups of doctors in the hierarchy having an impact on decision-making processes, and they considered how they could more efficiently structure their own work and handle their roles as leaders at the clinic. The younger doctors that participated during the first year of the study used the dialogue groups to unify their standpoints, and in that way they started acting collectively to influence the organisation.

1b Time management

The appointments and professional boundaries of colleagues were not respected, and, in relation to these problems, common themes emerged in the dialogue groups, such as feeling unable to meet demands, handle stress, and manage time both at work and in private life. The doctors used the dialogue groups to discuss their schedules, workloads, planning of their work, and organisational changes. The unrealistic view of time had contributed to creating an organisation in which they were under stress and dissatisfied with their work environment. A major difference after the dialogue group intervention was that two doctors, instead of only one, worked night shifts. The participants stated that this organisational change was more easily implemented than they had expected, presumably because all colleagues at the clinic had had the opportunity to talk about the altered scheduling during dialogue group sessions. In the dialogue groups, the doctors had come to realise that if they made more conscious choices and decisions, they could influence others and thereby also affect their own work environment at the clinic.

1c Gender perspective

It seemed that the male and the female participants in the dialogue groups, representing all levels in the hierarchy, experienced different prerequisites with regard to how they were treated by other health care professionals. All doctors expressed a desire for greater gender equity in the future, and they indicated that, as early as during undergraduate education, male and female medical students are treated differently by other categories of health care personnel. As part of the informal organisation, it seemed that the female doctors had been made subordinate to the male doctors on all levels in the hierarchy.

1d Role expectations
In the context of their professional role, the doctors described being burdened by considerable expectations that they themselves and their colleagues should be infallible, capable, ambitious, powerful, strong, loyal, and obedient, and that they should not question superiors. However, after some deliberation, the participants in the dialogue groups seemed to have come to the conclusion that these expectations were unrealistic and impossible to fulfil. The higher up in the hierarchy, the stronger were the assumptions that individual doctors and their colleagues should be able to manage difficult clinical situations.

2 Understanding of learning and knowledge
With respect to learning, some of the doctors said that they had anticipated that the consultants in the dialogue groups would teach them about specific aspects and give them fact-based knowledge and hypotheses, such as explicit leadership theories. These expectations and views in some cases led to disappointment. The older doctors expressed a more expectant approach to learning about new facets and perspectives of their professional role than the younger ones. However, since they still had extensive influence over younger doctors, the younger doctors in the dialogue groups felt that that situation had a negative impact on their possibility to learn.

2a Reflection and emotional support
The doctors indicated the need of a forum for reflection and emotional support and confirmation from colleagues. This was fulfilled in the dialogue groups, partly because the sessions entailed reserved time and an undisturbed environment, and partly because they allowed the doctors to express their feelings and opinions by recognising themselves in others. The pace in everyday life at the clinic made it difficult to satisfy the prerequisites for reflection, and there was also a lack of emotional support. To contemplate things together gave the doctors an opportunity of learning in a novel way, from each other and from themselves in cooperation with the consultants. Some of the participants said that they began to reflect more on everyday life and were therefore able to recognise emotions and reactions on their own, and this new understanding helped them to better manage upcoming situations.

2b Reactions to dialogue groups
The participants expressed different views on what they had learned in the dialogue groups and from the group consultants. Most of the doctors were positive about the group interactions, although some did mention negative experiences. In general, younger doctors in the lower part of the hierarchy were more positive than older doctors with higher ranking. It took time to create an atmosphere of trust in the dialogue groups so that the participants could feel confident, and this took even longer in the heterogeneous groups. Thus, the conditions were not as optimal for the collective learning processes during the second year of the project.

3 Clinical work—relationships with patients and their relatives
The doctors used very little time in the dialogue group sessions to talk about relationships with patients and their relatives.

7.3 TEACHING GROUP DYNAMICS – DO WE KNOW WHAT WE ARE DOING? AN APPROACH TO EVALUATION (STUDY III)

While there was a small change in attitudes towards openness in their professional role and to group dynamics, there was a major change in two subgroups of students to these topics. A correlation was found between the students' conceptions of learning and knowledge and their changes of attitudes to openness and group dynamics.

The level of the scale *"Collaborative-Constructivist"* before the course had impact on the dependent variables. The greatest change was for the group of students (n=32) with answers in *the lowest quartile* of this scale. These 32 students changed (p=0.001) their attitude in the entire questionnaire "Attitudes to Openness and Group dynamics" from a mean of 49.3 (SD=8.5) to a mean of 52.7 (SD=7.8). These 32 students also changed (p=0.001) their attitude in the index "Openness in the Professional Role" from a mean of 21.4 (SD=3.5) to a mean of 23.3 (SD=3.3) and changed their attitude, although not statistically significant (p=0.066), in the index "Group Dynamics" from a mean of 22.8 (SD=5.7) to a mean of 23.9 (SD=5.4).

Also the pre-course attitude to *"Practical value"* in the CLKQ had an impact on the dependent variables. The greatest change was for the group of students (n=23) who scored in *the highest quartile* in this scale. These 23 students changed (p=0.001) their attitude in the total questionnaire "Attitudes to Openness and Group dynamics" from a mean of 56.7 (SD=7.2) to a mean of 60.1 (SD=6.2). These 23 students also changed (p=0.001) their attitude in the index "Openness in the Professional Role" from a mean of 23.4 (SD=3.4) to a mean of 25.7 (SD=2.4) (See table 2 and 3). The conception of learning *"Certain knowledge"* had no relation to the results of the AOG indices. There were no major changes for the students as a whole for the entire questionnaire "Attitudes to Openness and Group dynamics". Sex had no significant influence in any of the analyses.

The students' descriptions of problems within teamwork, conflict management and communication in the health care setting were analyzed. In relation to *teamwork,* uncertainty of roles seemed to be the common denominator. For example, one student wrote: *"Leadership can be a problem. Am I as a doctor always the leader of the team? Which is my role in the team? How will it be interpreted if I ask other professionals about advice? Will it be a sign of weakness and poor knowledge?"*

In relation to *conflict management,* the students described their experiences of not being able to talk openly. For example: *"Instead of talking with each other in a conflict, there are many professionals that keep quiet and talk behind others back." "People do not dare to give each other constructive criticism."*

Communication problems were described in terms of ambiguity of language and authority. For example: *"People have different ways to discuss, we often understand things in different ways, but we are not aware of this." "Authority is improperly used; some do not listen to others who are lower in the hierarchy." "People do not dare to say what they honestly think, not even on direct questions, but it comes up later in rumours."*

TABLE 2. "ATTITUDES TO OPENNESS AND GROUP DYNAMICS" (AOG) BEFORE AND AFTER THE COURSE PROFESSIONAL DEVELOPMENT AND LEADERSHIP

Index	AOG mean **BEFORE** (SD)	AOG mean **AFTER** (SD)	Mean of diff.	CI Lower; Upper	*T-test T-value*	*T-test p-value*
All students (n=112)	**56.1** (8.33)	**57.4** (8.23)	1.32	0.30; 2.34	*2.57*	*0.012**
CC[1] quartile 1 (n=32)	**49.3** (8.47)	**52.7** (7.81)	3.38	1.55; 5.20	*3.79*	*0.001**
CC quartile 2 (n=37)	**56.5** (6.81)	**56.5** (7.80)	-0.05	-1.99; 1.88	*0.06*	*0.96*
CC quartile 3 (n=23)	**59.0** (5.88)	**60.7** (6.47)	1.70	0.53; 3.93	*1.58*	*0.13*
CC quartile 4 (n=18)	**63.3** (4.56)	**63.4** (6.87)	0.17	-2.46; 2.79	*0.13*	*0.90*
PV[2] quartile 1 (n=29)	**54.8** (9.80)	**55.9** (8.89)	1.14	-1.31; 3.59	*0.95*	*0.35*
PV quartile 2 (n=23)	**56.5** (9.67)	**56.8** (9.70)	0.30	-2.30; 2.91	*0.24*	*0.81*
PV quartile 3 (n=30)	**57.2** (7.07)	**57.8** (7.84)	0.67	-1.04; 2.38	*0.80*	*0.43*
PV quartile 4 (n=23)	**56.7** (7.18)	**60.1** (6.20)	3.39	1.52; 5.26	*3.76*	*0.001**

1. CC="Collaborative-Constructivist" 2. PV="Practical Value" * $p < 0.05$

TABLE 3. "OPENNESS IN PROFESSIONAL ROLE" (OPR) BEFORE AND AFTER THE COURSE PROFESSIONAL DEVELOPMENT AND LEADERSHIP

Index	OPR mean **BEFORE** (SD)	OPR mean **AFTER** (SD)	Mean of diff.	CI Lower; Upper	*T-test T-value*	*T-test p-value*
All students (n=113)	**24.0** (3.74)	**24.5** (3.43)	0.44	-0.15; 1.04	*1.48*	*0.14*
56 students	**22.3** (3.39)	**25.3** (2.84)	2.95	2.45; 3.44	*11.90*	*0.001**
CC[1] quartile 1 (n=32)	**21.4** (3.46)	**23.3** (3.31)	1.91	0.83; 2.99	*3.60*	*0.001**
CC quartile 2 (n=37)	**24.4** (3.59)	**24.2** (3.46)	-0.24	-1.40; 0.92	*- 0.43*	*0.67*
CC quartile 3 (n=23)	**25.0** (3.19)	**25.4** (3.45)	0.43	-0.92; 1.79	*0.67*	*0.51*
CC quartile 4 (n=23)	**26.5** (2.46)	**25.7** (3.05)	-0.83	-1.97; 0.30	*1.56*	*0.14*
PV[2] quartile 1 (n=29)	**23.2** (4.25)	**23.2** (3.70)	0.00	-1.33; 1.33	*0.00*	*1.00*
PV quartile 2 (n=23)	**24.5** (3.64)	**24.6** (4.00)	0.09	-1.16; 1.34	*0.14*	*0.89*
PV quartile 3 (n=30)	**24.7** (3.41)	**24.7** (3.03)	0.07	-0.99; 1.12	*0.13*	*0.90*
PV quartile 4 (n=23)	**23.4** (3.45)	**25.7** (2.43)	2.30	1.06; 3.54	*3.85*	*0.001**

1. CC="Collaborative-Constructivist" 2. PV="Practical Value" * $p < 0.01$

7.4 HEALTH CARE LEADERSHIP – IMPACT OF SHORT-TERM INTENSIVE AND LONG-TERM LESS INTENSIVE TRAINING PROGRAMMES (STUDY IV)

7.4.1 Wheel Questionnaire

Before their respective programmes, the three groups of managers did not differ significantly from the reference group in any of the Wheel indices. The managers in the group who had participated in a One Week DGL before their start in Long-Term Support Groups (preOW-DGL+LT-SG) had a lower value regarding *discrimination* before their start in support groups than the managers in the OW-DGL group.

As a group, all 34 managers participating in support groups changed their *discrimination* in their role as a leader from a mean of 0.49 to a mean of 0.61 six months after the programme (p=0.028). There was an interaction effect between the 34 participants in long-term support groups (LT-SG) and the 19 participants in a one-week (OW) DGL course (test for group by time interaction, p=0.017). The 18 managers who participated in support groups after their OW-DGL course changed their discrimination in their role as a leader from a mean of 0.42 to a mean of 0.58 six months after the programme (p=0.019). There was no statistically significant change concerning discrimination for the 16 managers participating only in support groups or for the 19 managers participating only in an OW-DGL course. (See table 4).

The 19 managers participating only in an OW-DGL course changed their *attitude* toward their role as a leader from a mean of 3.6 to 4.0 (p= 0.045). For the 34 managers participating in long-term support groups (LT-SG) there was no significant change after their programme. As a group, all 53 managers changed their *attitude* from a mean of 3.6 before their respective leadership programmes to a mean of 3.9 six months after their programmes (p = 0.023). There were no statistically significant differences between the groups at any time point regarding attitude and no interaction effects (test for group by time interaction, p=0.59). This includes that the 18 managers who had previously participated in an OW-DGL course had about the same pre-course values as the other managers. This was also valid for those managers (n=9) who had participated in an OW-DGL course within five years of their start in support groups.

None of the three groups of managers participating in an OW-DGL course or a support group (LT-SG) had changed their scoring of *control* in their role as a leader after their respective programmes. Influence of managerial experience, age, sex or number of subordinates was not significant in any of the analyses.

TABLE 4. EFFECTS OF THE INTERVENTIONS ON THE WHEEL QUESTIONNAIRE (WQ) INDICES, ESTIMATED USING MIXED LINEAR MODELS

Comparison	**WQ mean (SD)**	**WQ mean (SD)**	**Effect (SE)**	**95% CI Lower; Upper**	***P***
DISCRIMINATION					
1. LT-SG[1] (n=16)	**0.56**	**0.65**	**0.091**	-0.054;	*0.21*
Time 1 vs time 2	(0.22)	(0.18)	(0.072)	0.24	
2. preOW-DGL[2] **+ LT-SG** (n=18)	**0.42**	**0.58**	**0.16**	0.028;	*0.019**
Time 1 vs time 2	(0.19)	(0.24)	(0.066)	0.30	
1+2. All in LT-SG (n=34)	**0.49**	**0.61**	**0.13**	0.015;	*0.028**
Time 1 vs time 2	(0.21)	(0.21)	(0.055)	0.24	
3. OW-DGL[3] (n=19)	**0.61**	**0.55**	**-0.061**	-0.18;	*0.31*
Time 1 vs time 2	(0.20)	(0.20)	(0.058)	0.057	
All in LT-SG vs OW-DGL	**0.49**	**0.61**	**0.13**	0.012;	*0.031**
Time 1	(0.21)	(0.20)	(0.059)	0.25	
All in LT-SG vs OW-DGL	**0.61**	**0.55**	**0.060**	-0.072;	*0.37*
Time 2	(0.21)	(0.20)	(0.066)	0.19	
*Model with interaction: group (ns), time (ns), group by time (p=0.017 *)*					
ATTITUDE					
1. LT-SG[1] (n=16)	**3.7**	**4.0**	**0.26**	-0.19;	*0.24*
Time 1 vs time 2	(0.43)	(0.53)	(0.22)	0.71	
2. preOW-DGL[2] **+ LT-SG** (n=18)	**3.5**	**3.6**	**0.093**	-0.32;	*0.65*
Time 1 vs time 2	(0.77)	(0.49)	(0.21)	0.51	
1+2. All in LT-SG (n=34)	**3.6**	**3.8**	**0.18**	-0.14;	*0.26*
Time 1 vs time 2	(0.63)	(0.53)	(0.16)	0.50	
3. OW-DGL[3] (n=19)	**3.6**	**4.0**	**0.38**	0.009;	*0.045**
Time 1 vs time 2	(0.71)	(0.42)	(0.18)	0.75	
All managers (n=53)	**3.6**	**3.9**	**0.27**	0.039;	*0.023**
Time 1 vs time 2	(0.66)	(0.49)	(0.12)	0.51	
*Model with interaction: group (ns), time (p=0.023 *), group by time (ns)*					

1. LT-SG = Long-Term Support Group only

2. preOW-DGL + LT-SG = Participated first in One-Week DGL and thereafter in Long-Term Support Groups

3. OW-DGL= One-Week Development of Group and Leader (DGL) only

* $p < 0.05$

7.4.2 Focus group interviews of participants in One-Week DGL courses

The dominant perception of what the managers had learned during the OW-DGL course was *self–awareness.* They also learned about their strengths and weaknesses in order to improve their leadership behaviour. The participants had positive experiences while exploring different *personality patterns* among their staff members and the impact of gender and profession. They had experienced stages in a group process and learned about group development. The managers said they had learned about the importance of being *direct and clear* in their communication with subordinates.

7.4.2.1 Influence of OW-DGL course on leadership behaviour

Nearly all participants felt that they *dared* to be clearer, that they dared to believe in their own leadership ability, and that they felt more secure in their leadership role after the OW-DGL course. Several participants began to use techniques, that they had learned in the OW-DGL course, such as feedback and the ability to handle crises.

7.4.3 Focus group interviews of participants in Long-Term Support Groups (LT-SG)

The participants in the support groups raised problems that they experienced in their managerial roles. Together with the other group members, they *reflected, analysed, and structured the components of the problem* in order to understand mechanisms and influencing factors. The managers emphasised the importance of the group as a confidential and non-competitive forum where they had the opportunity to set aside their managerial roles. Although any issue was welcomed as a topic to be explored by the group, most of the problems raised concerned issues related to personnel. The participants supported each other to develop more personal strength in their relationships with subordinates as well as superiors. The discussions concerned such issues as group processes, leadership, and conflict management. A perceived dominant issue was that many participants had received *feedback from other group members* on how they had handled problems in their managerial role. The sporadic attendance in the groups by some participants was perceived as problematic and resulted in lower confidence in the group.

7.4.3.1 Influence of Long-Term Support Groups (LT-SG) on leadership behaviour

There was a consensus among the interviewed that the support groups had focused on specific problems that managers needed to solve in their daily work. The managers had learned how to *define their boundaries* as managers, which had been useful. Some managers felt more *secure* and more *self-confident* in their roles as manager and leader. In the discussions, they became aware that the managerial role includes loneliness and that there is a lack of support functions for managers.

8 DISCUSSION

8.1 LONG-TERM PROGRAMMES - LEADERSHIP DEVELOPMENT GROUPS

Our findings indicate that "leadership development groups" (dialogue groups and support groups) are useful for developing several of the components of learning organisations (Senge, 1994) and for improving participants' understanding of their role in the organisation (Study II and IV). The leadership development groups offered an arena for reflection-on-action that ought to be useful when participants take action as health care leaders, to improve their authority and competence (Sandberg, 2000, Reed and Bazalgette, 2006), and to cope with everyday leadership challenges (Tyrstrup and Glover Frykman, 2006).

A key aspect of the leadership development groups was that they mediated participants' learning by reflecting on their experiences which came from their own context. This approach is supported by research which has found that it is central to a development process to enhance participants' ability to learn from experience and to provide an organisational context that supports learning and development (Van Velsor et al., 2004).

The leadership development groups also illustrate a shift in the way adult learning is viewed. There is currently a shift from class-room based teaching towards work place-based life long learning (Kjellberg et al., 1998) and the creation of learner centred environments that help people make connections between their previous knowledge and their current tasks (Bransford, 2000).

The dialogue group intervention (Study II) helped doctors to see their role from a fresh perspective, supported learning of others' perspectives, and helped develop an understanding of the overall purpose of the organisation. For some of the participants, this resulted in a novel way of acting in their professional role, which, for example, led to a different way of organising their work and a more realistic view of time limits and what could reasonably be expected from others. After some deliberation, the participants in the dialogue groups seemed to have come to the conclusion that their expectations and assumptions of their role were unrealistic and impossible to fulfil. An interpretation may be that the participants had learned some new aspects of the tacit knowledge in their context (Bohm, 2004). The new perceptions of their role and of the organisation might have facilitated adoption of changes in their role towards a more reflective view of their practice (Schön, 1991). This is indicated by the observation that the participants seemed to have become more conscious of their own responsibilities and the possibilities of acting in a way that influenced the organisation, while at the same time being able to meet their own personal needs. This has been described as being "person in role" (Reed and Bazalgette, 2006).

The method used in the leadership development groups is congruent with a meta-cognitive approach to learning with a focus on sense-making, self-assessment,

reflection, and reorientation. These all support transformational learning and a revised behaviour (Merriam, 2004). This is supported by other researchers who have argued that coaching have the potential to achieve perspective transformation by challenging beliefs through dialogue (Grant and Stober, 2006). The leadership development groups may have facilitated development of professional competence (Sandberg, 2000) and development of expert knowledge as metacognitive practices have been shown to increase the degree to which learners transfer their learning to new settings and events (Bransford, 2000).

The participating managers in the support groups (Study IV) received feedback on how they had handled problems in their role as managers within their own context, which is an important aspect of reflection-on–action and learning in organisations (Sandberg, 2000, Schön, 1991, Senge, 1994). These qualitative findings correspond to our quantitative findings from Study I of improvements in feedback at the work place after the intervention. The leadership development groups methodology is in congruence with research on leadership development that emphasises mentoring, feedback systems, and developmental relationships (Van Velsor et al., 2004). The managers in Study IV felt that they got help in the support groups to structure everyday leadership situations, and these experiences corresponded to their improved discrimination in their leadership roles. Participants in the dialogue groups felt that they had learned to communicate better, got help to structure their time and their work, and started to collectively act to influence the organisation. An interpretation is that these statements are expressions of emerging "shared leadership" and "self-leadership" which involve an increased self-awareness and self-observation (Neck and Houghton, 2006).

The managers in Study IV complained of loneliness in their role and the support groups were perceived to fulfil a need for support and to improve managers' self-confidence in their leadership role. The participating doctors in Study II described a need for a forum in which they could discuss and reflect on emotional aspects of their role and receive emotional support from colleagues. The dialogue groups met these requirements and the relationships between different groups of doctors in the hierarchy improved during the course of the project.

Our findings indicate that leadership development groups can support the development of "authentic leadership" qualities that emphasize self-awareness, awareness of context and universal values, such as social justice, equality and broadmindedness as well as honesty, loyalty and concern for others (Avolio and Gardner, 2005). Support is a key factor in maintaining leaders motivation to learn and grow and if people do not receive support for development, the challenge inherent in a developmental experience may overwhelm them rather than foster learning (Van Velsor et al., 2004). Our findings indicate that leadership development groups are a supportive method for leadership development.

The results from Study I indicate that dialogue groups can be one way to improve doctors' psychosocial work environment. During the period for the dialogue groups from 2003 to 2004, none of the ten work environment indices declined, but four of the ten indices improved for all doctors. These indices were feedback, leadership, work related exhaustion, and the overall Focus Score Enhancement Index (FSEI). One

explanation for this could be that these areas corresponded with the aims of the intervention and the method used. The results from Study I corroborate the results from Study II as participants described an improved work environment, valuable feedback from colleagues in the dialogue groups and new insights into their capacity to influence their own work and decision making processes at the work place. These findings are similar as well to the statements from participants in support groups (Study IV). The doctors stated (Study II) that it took time to create an atmosphere of trust in the dialogue groups which may be one explanation for why the improvements on the work environment indices (Study I) were greater for those who had participated for two years compared to those participating for only one year. This is also in line with participants' statements from Study IV about a need for long-term support in their leadership role and as well as with results from a study of three different management programmes for Swedish doctors which indicated a need for a programme duration of more than one year in order to influence individual well-being (von Vultee et al., 2004).

The doctors described a major organisational change that was implemented at the work place after the study period. This was accomplished with much more ease than had been expected. They presumed that this was due to the dialogue group intervention. A similar learning strategy (Senge, 1994) has been found to enhance an organisational change and as well correlated to an improved quality of working life and economic output (Ingelgard and Norrgren, 2001). Leadership development groups thus seem to support leadership based on both relation-orientation and change-orientation (Ekvall and Arvonen, 1994).

Our results are similar to research on supervision for managers in health services as a useful support system of management that clarifies strategic competence-based management, gives support to leadership know-how, and contributes to well-being among managers (Ollila, 2008). Another study of the effects of a similar moderately intensive, long-term management programme for Swedish managers in the corporate sector showed that managers increased their authority over decisions and that it was possible to improve the work environment in general for their employees (Theorell et al., 2001).

Notably, the doctors spent very little time in the dialogue groups (Study II) discussing clinical work, concerning problems associated with patients or their families, which might be expected to be the core of the doctor's role. Instead, when the participants were given the opportunity to bring up any issue that entered their minds, organisational matters came to the fore, in particular the question of hierarchical relations between physicians. An interpretation of our findings may be that the dialogue groups fulfilled a need of a forum for reflection on interpersonal relations and on organizational matters that was difficult to satisfy in everyday life at the clinic.

The hierarchy seemed to influence many aspects of their professional role, the organisation in which they were employed, and their work environment. It appeared that the doctors' positions in the hierarchy had a great impact on their actions, thoughts, and self-image. Older and more experienced doctors were viewed as being of superior rank, and it also became evident that male doctors were perceived as superior to their female counterparts, regardless of their positions in the hierarchy. Other investigators

have described this phenomenon as an example of gender-based vertical segregation, in which women doctors are underrepresented at higher levels of the profession (Hovelius and Johansson, 2004).

In our study (II), hierarchical position seemed to determine the amount of influence the doctors had had on their own work, on the work of others, and on organisational change. Previous studies have indicated that hierarchical systems are self-generating among both men and women, even in institutions such as health care, where women predominate. However, in less authoritarian organisations, women have greater opportunities to develop and advance to leading positions (Sebrant, 1999). According to Menzies (1960) and De Board (1978), a hierarchical way of organising the work in health care may help protect the staff from the existential anxiety associated with completing tasks that involve medical treatment, care, and nursing. However, it has been argued that creativity and learning are inhibited in hierarchical organisations (Hovelius and Johansson, 2004).

The prevailing hierarchical structures were challenged by the method that was applied in the dialogue groups (Study II). The relationships between different groups of doctors in the hierarchy seemed to improve during the project and the impression was that they had begun to treat each other with greater tolerance and respect. Thus, dialogue groups may be one way to facilitate the development of Jackson and Parry's (2008) flatter, latterly-integrated organisations which better fit today's rapidly changing complex global economy. Accordingly, it seems reasonable that a dialogue intervention might support more gender equity at management positions. Previous studies has pointed to the need for a systematic strategy in order to promote changes in the attitudes toward more gender sensitivity and gender equity in health care (Jonsson et al., 2006). Our findings indicate that dialogue groups might be such a strategy in order to meet this need.

Preliminary findings from our quantitative study of dialogue groups show that female doctors scored significantly lower on seven of the ten indices concerning their work environment, including the overall Focus Score Enhancement Index (FSEI) before the intervention. In addition, woman's improvements on these indices were more evident than for men, although there were evident improvements for both men and women for the index "leadership". There were no significant differences between men and women for the other three indices before or after the intervention.

As dialogue groups seem to improve work environment, this intervention seem especially applicable in health care, where women predominate, both based on the data presented in this thesis as well as research that has shown that female doctors have reported higher workload than male doctors in other health organisations. Furthermore, female managers have reported less influence than male managers, and male managers reported higher work satisfaction (Jansson von Vultée, 2004). Our findings are in line with previous research that has found that self-leadership training may increase job satisfaction (Neck and Manz, 1996).

The method used in the leadership development groups seem to support development of contemporary views of leadership that encourage teamwork, collaboration and

emphasize the ability to empower, support and engage workers (Eagly and Carli, 2003, Jackson and Parry, 2008). It has been found that women in general, more than men, manifest these interpersonally oriented and democratic leadership styles (Eagly and Carli, 2003). It is reasonable to think that leadership development groups support women in their leadership style and may enhance their influence and authority. On the other hand, leadership development groups might be especially useful for men in order to develop a leadership style that better fits with modern, more complex, and less hierarchical organizations (Shortell and Kaluzny, 2000). This hypothesis is supported by a report of a previous dialogue group intervention for Swedish male doctors that concluded that male doctors developed their view of their leadership role and learned about gender aspects in health care (Lehto and Norlin-Mistander, 2001).

In summary, leadership development groups seem to be applicable in the health care context, able to support leadership development for both men and women, decrease the degree of hierarchy, support gender equity, enhance organisational learning, and improve the work environment.

8.2 SHORT-TERM PROGRAMMES - LEADERSHIP COURSES

Managers react differently to training and for programmes to be effective they must accommodate individual managers' abilities, learning styles, and preferences (Collins and Holton, 2004). The same should hold true for health care leaders such as doctors and on medical students nearing the end of their education.

We found that the effects of a one-week experiential learning based course for medical students in group dynamics, communication and leadership were correlated to the students' learning styles (Study III). The students who were least interested in collaborative constructivist learning and those students who mainly looked for practical value were the students who changed their attitudes most towards openness in their professional role. It appears that those students, who would be least likely to voluntarily attend such a course, are the ones who learn the most.

A change in attitudes towards more openness in the professional role is a necessary condition for further learning about these topics as well as performing well in the health care system. Openness to experience has been found to be correlated with training proficiency (Barrick and Mount, 1991). People who are more open to experience are generally more willing to try new behaviours or attitudes and to move into areas where their competency is not well established. Thus, the studied type of course can be one contribution to medical students' development of their professional role and leadership, and based on our findings it may be motivated to make such a course compulsory in medical curricula.

The course *Development of Group and Leader (DGL)* supported managers in their learning about group processes and about themselves in relation to others in a group (Study IV). These findings are similar to our findings among medical students in Study III. The managers felt that they became more aware of their own strengths and weaknesses and learned to be more direct and clear in their communication. All of these were perceived as useful in handling crises and conflicts as managers. These

statements correspond to our findings of changed attitudes toward more openness in Study III. The participants in the DGL course seem to have become more aware of their relationship-orientated behaviours, an important area required for success as a leader (Yukl, 2006).

Since the effects of the course *Professional Development and Leadership (P&L*) (Study III) seem to be related to the students' conceptions of learning and knowledge, one might argue that the course in practice did not deliver adequately on all four parts of the experiential learning method of pedagogy according to Kolb's theory (Kolb, 1984). It has been argued that in models for coaching, the Kolb learning cycle can be of help to guide the process facilitated by the coach (Grant and Stober, 2006). Based on our four studies, the long-term leadership development groups may be more applicable to all four parts of Kolb's experiential learning method than the studied short-term intensive courses. This seems reasonable as the short-term courses leave the last of the four stages, active experimentation, to the participants to do on their own when returning to their organisation after the course. In contrast, the long-term leadership development groups enable participants' active experimentation in their context which creates new experiences that can be reflected on at the next group session.

8.3 COMPARING SHORT-TERM AND LONG-TERM LEADERSHIP PROGRAMMES

Based on our findings, the two approaches focus on different parts of leadership development and both approaches seem to facilitate such development. They also deal with different requirements of a leader's role in a modern organisation, concerning leadership and relationships with staff members and subordinates (Yukl, 2006). Compared to the short-term intensive leadership courses, the long-term leadership development groups were much more focused on participants' reflection on daily problems and giving them support for specific issues in their context. Both interventions seem applicable for development of self-leadership, shared leadership and networking, all important skills for leaders in modern organisations (Pearce, 2007). These competencies ought to be useful for health care leaders in order to meet the demands of complex, flexible, rapidly changing organisations in the 21st century (Shortell and Kaluzny, 2000) requiring skills in teamwork, communication and inter-professionalism (Shine, 2002).

The two different approaches both see leadership as a two-way influence of social exchange relationship between leaders and followers (Hollander, 1958) and foster the development of "authentic leadership" through self-awareness, self-regulation, social exchanges, awareness of context, and organisational climates characterised by transparency, openness and trust (Avolio and Gardner, 2005). Both approaches were perceived to have strengthened the participants in their leadership role and to have supported understanding of group processes, conflict management and communication. These competencies ought to be useful for leaders in modern health care organizations as they often are expected to demonstrate a "distributed leadership", in which leadership in an organisation is dispersed among some, many or maybe all of the members in an organisation (Gronn, 2002).

Both the short-term and long-term approaches put emphasis on feedback to participants. Studies of learning and development show that feedback is extremely important and those opportunities for feedback should occur continually (Bransford, 2000), which seems to be facilitated by the long-term approach.

The interventions both seem to promote different aspects of continuous improvement and the construction of *profound knowledge*, such as knowledge of organisations and psychology (Batalden and Stoltz, 1993). The programmes fit well with the "Swedish leadership style" which is characterized by team-building, participation, and openness in relationships with employees. The programmes also support the development of transformational leadership qualities. These have been found to be effective and acceptable in studies from a large number of countries (Holmberg and Åkerblom, 2006, Kammerlind et al., 2004, Bass, 1997).

It has been argued that "technical-rationality" has been the dominant paradigm as the grounding of professional knowledge, but that this model is incomplete in that it fails to account for practical competence in "divergent" situations (Schön, 1991). In my view, there has been a successive shift in Swedish health care over the last decades towards focusing on technical-rationality, medical knowledge and short-term financial goals. This shift may be due to the fast expansion of medical knowledge and contemporary societal and cultural development. However, humanistic values are of central importance to the delivery of high quality patient care, such as professionals' ability to establish and develop professional relations, understanding of teamwork and collaboration, coping with external and internal conflicts and dilemmas, not to mention the need to find a balance between private, personal and professional relations (Shortell and Kaluzny, 2000, Svedberg, 2007, Reed and Bazalgette, 2006). Our findings indicate that a combination of short and long-term leadership programmes are useful to support participants to develop these competencies.

Organizations need to develop a supportive organizational culture for leadership development and "both coaching programmes and team building skills training" are recommended (Loo and Thorpe, 2003). A British study of leadership development in health care concluded that both work-based and programme-based leadership development have much to offer, but "how to move beyond the current either/or fashion and to ensure that careful and judicious use of both approaches contributes to leadership development is a major problem" (Edmonstone and Western, 2002). Based on our findings, a combination of short and long-term approaches seems useful to address these questions. Table 5 illustrates comparisons between short-term and long-term leadership development programmes.

Both approaches strengthened the managers in their leadership role, which correlated with an improved attitude to the leadership role after their respective programmes (Study IV). This effect was most evident among the participants of the DGL course, who were less experienced managers. It corresponded to their perception to dare more in their leadership role after the course.

Based on the results of Study IV, it is reasonable to question the duration of the effect from such a short-term intensive leadership course, as previously noted by Ydén and

Alvesson (2000). The managers in Study IV who had previously participated in a DGL course had about the same pre-course values as those without any training, regarding their attitude to their leadership role, and lower pre-course values regarding discrimination. This fit with the managers' statements regarding a need for long-term support as a manager.

Ydén and Alvesson mentioned that it was uncertain whether participants in a DGL course would be able to apply skills from the DGL course in their own context (Ydén and Alvesson, 2000), which might be one explanation for our findings. McDonald showed that there may be difficulties for participants to apply new skills from short-term training experiences in their context after a course (McDonald, 1991). One way to facilitate this might be to offer long-term leadership development groups after a short-term course.

TABLE 5. COMPARISON BETWEEN SHORT-TERM AND LONG-TERM LEADERSHIP DEVELOPMENT PROGRAMMES

Short-term leadership programmes	**Long-term leadership programmes**
Develop attitudes towards more openness and learning in one's role	Leadership development through learning in one's role in one's organisational context
Learn about group dynamics and group processes in an unknown group and context	Structures daily leadership dilemmas in context, e.g. conflict management
Strengthen attitudes to one's leadership role	Strengthen self-confidence in one's role
Enhance self-awareness	Enhance awareness of oneself in context
Learn about aspects of communication	Enable feedback and emotional support from colleagues
Further leadership development	Support organisational learning, collective learning and organisational change
Time-limited effects that need follow up	Improve work environment
Participants need support to be able to apply skills from the course in context	Decrease hierarchy and improve relationships between subgroups
May support visualisation of gender aspects in the course group	Visualise gender aspects in the organization

8.4 METHODOLOGICAL CONSIDERATIONS

By choosing to use the quality work competence (QWC) questionnaire (Study I), we were able to follow the trends of how the work environment was perceived by the employees of the Sachs' Children's Hospital, since the same questionnaire had been used in 1999 and 2001. Another strength of this impact evaluation was that the QWC questionnaire has frequently been used in Sweden and is validated for the Swedish health care system (Arnetz, 1999).

We were unfortunately not able to find a relevant control group, nor were we able to measure the work environment among all employees at the Sachs' Children's

Hospital at the time of the intervention, which would have been desirable (despite our naturalistic approach). It therefore became difficult to eliminate other possible causes beyond the dialogue groups for the improved work environment during this period. Thus, given the available data, the strong and broad intervention of offering the entire doctor group three hours per month to discuss problems at work seems the most plausible explanation. In addition, the quantitative results from Study I are corroborated by the qualitative results from Study II.

Results and conclusions are more or less influenced by the researcher and his or her own experiences and personality. During the time of the studies, I was employed at the Sachs' Children's Hospital which is the children's clinic at Södersjukhuset (Stockholm South Hospital). This means that I was an insider and part of the context. One may question in what way this may have affected the results in this thesis. In order to avoid as much bias as possible, questionnaires were distributed by, and the answers sent to a research assistant at the Karolinska Institutet. In addition, I was not involved in managing the project at the work place, which was organized by the head of the clinic. However, there are advantages to being an insider. I was able to use my understanding of the context in the design of the studies, including which questionnaires to use and the formulation of questions for the focus group interviews.

In order to diminish the researcher bias we chose a triangulation approach which included the use of multiple data sources and methods (Fulop, 2001). As part of triangulation, other researchers from outside the context were included with different disciplines (medical doctor, nurse manager, medical student, social- and behaviour scientist, and public health researcher), genders and ages. It has been argued that this approach of using "multiple researchers might strengthen the design of a study – not for the purpose of consensus or identical readings, but to supplement and contest each others statements" (Malterud, 2001).

Focus group interviews (FGIs) were chosen as the method for collecting research data in Study II. This study was part of a process evaluation as the study purpose was to thoroughly explore the experiences that the doctors had discussed during their dialogue group sessions and to explore the way those doctors perceived their role as medical doctors. In focus group interviews it is not possible to be anonymous and it was therefore necessary that I should not be present when conducting FGIs. To avoid bias, one of the authors (CS) and an external researcher from Karolinska Institutet conducted the FGIs in Study II. The interview text was transcribed by an external secretary in order to maintain the anonymity of the participants. We believe that the structured analysis provided a reasonable degree of credibility. The credibility was furthered through a dual approach involving categorisation by two researchers concluding with a negotiated consensus (Fulop, 2001). The emerging categories and themes were frequently discussed in the research team, thus recognizing different perspectives and views. The co-authors role was to supplement and to audit to ensure that the analysis was logical and clearly documented. The inter-assessment reliability of the results was tested, as another external researcher and I categorised the text from one interview and our coding results were compared. The findings were validated by the interviews conducted with the head of the clinic and one of the consultants, as well as by several consensus discussions with the two senior authors in Study II (CS, RW).

In order to measure students' attitudes to openness in the professional role and to group dynamics, a new questionnaire, AOG – Attitudes to Openness and Group dynamics, was developed for Study III. Through the use of another instrument, Conceptions of Learning and Knowledge Questionnaire (CLKQ), we were able to evaluate if potential changes of attitudes were correlated to the students' conceptions of learning and knowledge. While the dependent measure had a satisfactory consistency, the validity of the AOG questionnaire might be questioned since it has not been used before. However, our quantitative findings from Study III are similar to our qualitative findings in Study IV.

The Wheel Questionnaire (WQ) was chosen for data collection in Study IV whose aim was to assess the impact of two different leadership programmes on the attitudes and views on leadership of health care managers. Focus group interviews were chosen as a second method to explore the managers' experiences from their participation in the leadership programmes. Thus, we chose both an impact evaluation and a process evaluation design, which allowed us both to assess the effects as well as to explore the content of the two programmes. As there were no employees from the Sachs' Children's Hospital participating in Study IV during the time that I was employed at the Sachs' Children's Hospital, I was able to act as a participating observer in the FGIs. While the psychometrics of the Wheel Questionnaire (WQ) have been evaluated and found satisfactory (Mardberg, 1996, Shalit, 1982), the validity of the WQ used in this study might be questioned since it has not been used before to estimate appraisal in a leader's role. However, once again, our quantitative results correspond to our qualitative results.

An effort was made to include a control group of managers at Södersjukhuset. However, this group became too small as only a few managers did not participate in any leadership programme. Instead, participants in a number of management courses at Karolinska Institutet were used as a reference group. A limitation is the relatively low number of participants in each programme. This was due to our naturalistic study design (i.e. studying natural groups and interventions as they appear in their natural context), even though we collected data over five years.

The lack of control groups and the relatively small groups of participants in our studies should be seen as limitations. Naturalistic study designs do provide valuable insights into environments that are difficult to subject to controlled experimentation (Fulop, 2001). Part of the difficulty stemmed from organizational factors outside of our control. Nevertheless, it would have been of value to include control groups or at least reference groups in the studies. One way to strengthen our quasi-experimental design was to complement the impact evaluation in Study I with a process evaluation in Study II. As we chose an impact evaluation design in Study III, it would be interesting to complement this study in future work with a process evaluation to further explore and describe this programme. One interesting topic would be to explore participants' perceptions of possible barriers for further development of the programmes in this thesis.

This thesis focuses on the short-term effects of leadership development programmes. The changes in perception occurred during the period from immediately before the respective intervention to one, two or six months after the programmes. We do not know whether or not the changes are stable over a longer time period. This would be interesting to study in future work.

A majority of the study participants in this thesis were women. Our preliminary findings indicate that there were more pronounced effects for women participating in dialogue groups. We did not find that sex had any influence on our findings concerning the short-term course (P&L) for medical students. It would have been interesting to study if sex would have had any implication for our findings in Study IV. However, the group of men in this study was too small to enable such an analysis. A larger cohort is required to test whether gender has any implication for our conclusions.

Power calculations (Kirkwood and Sterne, 2003) would not have added any new information to our studies since the effect sizes were small, variations of the effects were relatively large, and the studied groups were small. One could argue that it is difficult to interpret our quantitative results since the effect sizes are small. It is difficult to estimate the meaning that respondents equate with their answers in questionnaires and there is not necessarily a correlation between the effect size and the meaning, so a small effect size could mean a lot for respondents and vice versa.

Qualitative methods are needed to support the interpretations of our quantitative findings. However, due to our use of quantitative methods we have been able to collect data from a larger number of individuals and to compare data from different time points and between several quantitative instruments. Furthermore, our quantitative results from Study I, III, and IV corresponded with our qualitative results in studies II and IV. Our instruments can also easily be used for future evaluations of adjustments of the interventions.

Whether our findings can be generalized to other hospital environments needs to be confirmed by, for instance, repeating the studies in other settings.

One may wonder why there are so few intervention studies concerning the effects of leadership programmes. Based on my experiences from this thesis, I can now humbly offer some thoughts about this. Intervention studies entail a number of difficulties: they involve a large number of participants in different interventions, long study periods are needed in order to collect enough data, it is hard for the researcher to have control over influencing factors, drop-outs are common, and it is hard to establish enough power in the study. Moreover, intervention studies require a lot of coordination and a well-functioning research team, both of which I gratefully have had.

9 CONCLUSIONS AND PRACTICAL IMPLICATIONS

This comparative evaluation of two different approaches to leadership development used in the Swedish health care indicates that both short-term intensive courses (i.e. DGL and P&L) and long-term leadership development groups (i.e. dialogue groups and support groups) are useful methods for leadership development in health care. Even though the content and the methods used in the studied leadership interventions differ, the interventions seem to complement each other.

Our findings indicate that leadership development groups are a useful model for building a learning organization and for contextualised long-term leadership development. Previous research has emphasized the importance of leadership development in context as well as workplace based intra-organisational life long learning.

Based on our findings, it can be argued that medical curricula should include a short-term experiential learning based leadership course on a compulsory basis as an "eye-opener" in order to change medical students' attitudes towards more openness in their role, to support learning about group dynamics and to facilitate further leadership development. It appears that those participants, who would be least likely to voluntarily attend such a course, are the ones who learn the most.

A short-term leadership course for managers supports learning about group dynamics, group development, communication, and enhances self-awareness and strengthens participants in their leadership role. However, the effect of a short-term course for managers seems to be time-limited. Therefore, a short-term leadership course ought to be followed by long-term leadership development groups in order to support participants' application of the skills acquired in the course to their organizational context and to offer a method for further leadership development and organizational learning.

When the doctors were given the opportunity to bring up any issue to discuss in the dialogue groups, they spent very little time to discuss clinical work, but organisational matters dominated. A practical implication is to offer long-term leadership development groups in order to support health care leaders' organisational competence.

A hierarchical structure was found among doctors. Such hierarchical systems might be necessary to protect both patients and staff in terms of providing the sense of security and trust that is vital for them to properly function in the health care system. This notwithstanding, authoritarian hierarchies can obstruct some aspects of interaction with patients, such as empathy and understanding, and they can even prevent learning and the development of profound knowledge. Dialogue groups challenged the prevailing hierarchy, visualized gender inequalities in the organization, and supported the participants learning and development in their role. Based on the findings presented in this thesis, dialogue groups can be one way to facilitate the development of organisations from traditional hierarchies into flatter organizations that better correspond to the modern context.

Another practical implication of our findings is to offer dialogue groups as a method to improve the psychosocial work environment in health care. Doctors' well-being could affect the quality of patient care and leadership behaviour, work climate and turn-over among employees are all correlated. This implies that there are economic savings linked to investments in leadership development groups. However, a long-term systems approach to development is often in conflict with the need for short-term results that prevail in many of today's organizations.

A third practical implication of this thesis is to combine the two approaches to leadership development by first offering short-term leadership orientation courses to present and future health care leaders followed by long-term leadership development groups in order to further develop participants' leadership competencies and to help facilitate the building of a learning organization. It is important to remember though, that isolated leadership development programmes, even in combination, are not enough to move an organization toward a 21st-century paradigm in which health care professionals understand teamwork and the systems of care in which they provide leadership. The combination of leadership development programmes with broader, organization-wide, evidence-based medical management approaches might be the way forward.

10 EPILOGUE

The role of the health care leader in today's rapidly changing complex organizations is demanding in a number of ways. Leaders need to develop "profound knowledge" which includes the ability to see and navigate systems and the psychology of change. Future leaders also need long-term support in order to fully develop their leadership.

I hope this thesis can contribute to the knowledge concerning leadership development in health care and I hope it will be useful as a guide for policy makers in the further development of health care organizations and in the design of future leadership development programmes.

It has been valuable for my development as a researcher to combine this research with the clinical experience. The learning and development process that I have gone through, both as a researcher and a medical practitioner has been incredibly rewarding, albeit stressful at times!

On a personal level, being a part of the multi-disciplinary group of PhD students and researchers has been very enriching and rewarding. As the on-going process of developing the department's combined methodological repertoire continues, I believe the creativity I have experienced as a member of the group bodes well for the future of Karolinska Institutet's Medical Management Centre.

11 SAMMANFATTNING PÅ SVENSKA

Hälso- och sjukvården har genomgått stora medicintekniska, organisatoriska och ekonomiska förändringar under de senaste decennierna vilket lett till en väsentlig förändring av arbetsförhållandena. Chefer, oavsett yrkeskategori och läkare i sin ledande roll i behandlingen, är nyckelpersoner för utvecklingen av en väl fungerande organisation och en god arbetsmiljö inom hälso- och sjukvården.

Det övergripande syftet med denna avhandling var att utvärdera interventioner som syftar till att utveckla chefers, läkares och läkarstudenters ledarskap.

Alla fyra studierna genomfördes på ett av Stockholms största sjukhus, Södersjukhuset, med 600 000 invånare i sitt upptagningsområde. Studie I och II utvärderade effekter av åtta dialoggrupper som pågick under två år och omfattade 60 läkare på barnkliniken. Data över den psykosociala arbetsmiljön insamlades med hjälp av ett validerat instrument som skickades till alla läkarna (n=68) åren 1999, 2001 och 2003. Uppföljande data insamlades 2004 och fem fokusgruppintervjuer genomfördes efter att dialoggrupperna avslutats. I studie III skickades två frågeformulär till 160 läkarstudenter, före och efter att de deltagit i en veckas intensivkurs i ledarskap. I studie IV deltog 53 chefer i två olika ledarskapsprogram: en intensivkursvecka och ett program pågående under 1-2 år. Instrumentet ”Hjulet” användes för att skatta olika aspekter av deltagarnas uppfattning om sin ledarroll både omedelbart före och sex månader efter avslut av respektive program. Åtta fokusgruppintervjuer genomfördes efter programmen för att utforska chefernas erfarenheter av sitt deltagande i programmen.

Resultaten tyder på att det är verksamt att erbjuda en upplevelsebaserad intensivkurs i ledarskap till läkarstudenter för att öka deltagarnas öppenhet i rollen, för att stödja lärande av gruppdynamik och för att underlätta fortsatt ledarskapsutveckling. En tentativ slutsats är att kursen bör vara obligatorisk i studieplanen, eftersom de studenter som kan förväntas vara minst intresserade av att frivilligt välja att delta i denna typ av kurs är de som lär sig mest.

En intensivkurs i ledarskap för chefer stödjer lärande om gruppdynamik, gruppers utveckling, kommunikation, och ökar självmedvetenheten och stärker deltagarna i deras ledarroll. Dock verkar effekten av en intensivkurs för chefer vara tidsbegränsad.

En hierarki var tydlig inom läkargruppen och denna påverkade många aspekter av läkarnas roll, sjukvårdsorganisationen och den psykosociala arbetsmiljön. Ledarskapsutvecklingsgrupper som pågår under längre tid kan stödja ledarskapsutveckling i deltagarnas kontext, minska betydelsen av den informella hierarkin, synliggöra genusaspekter i organisationen, underlätta uppbyggnaden av en lärande organisation och förbättra arbetsmiljön.

Denna utvärdering av två olika tillvägagångssätt för ledarskapsutveckling använda i den svenska hälso- och sjukvården visar att både intensivkurser och ledarskapsutvecklingsgrupper som pågår under längre tid kan vara verksamma metoder

för ledarskapsutveckling i sjukvården. Resultaten tyder på att de båda interventionerna kompletterar varandra, även om innehåll och metod skiljer sig avsevärt mellan tillvägagångssätten. En praktisk implikation är att erbjuda orienterande intensivkurser i ledarskap till nuvarande och framtida ledare i sjukvården som ett första steg i individuell ledarskapsutveckling. Detta bör följas av utvecklingsgrupper som pågår över längre tid för att understödja deltagarnas ledarkompetens i deras dagliga arbete.

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