THE ASSOCIATION OF SELF-PERCEPTION

OF EFFECTIVE TEACHING WITH EFFECTIVE LEADERSHIP

BY ACADEMIC FAMILY PHYSICIANS

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BY

Francis J. Martin

A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of

MASTER OF EDUCATION

Division of Post-Secondary Studies
University of Manitoba
Winnipeg, Manitoba

(c) January, 1996

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THE ASSOCIATION OF SELF-PERCEPTION OF EFFECTIVE TEACHING WITH EFFECTIVE LEADERSHIP BY ACADEMIC FAMILY PHYSICIANS

BY

FRANCIS J. MARTIN

A Thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

MASTER OF EDUCATION

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Abstract

Faculty members in universities have challenging roles. In medicine, the academic medical centres consisting of a medical school, teaching hospital, and semiautonomous institutes, further complicate these roles. The purpose of this study was 1) to determine if self-perception of two of these roles, leadership and teaching, were associated, and 2) to identify other factors associated with self-perception of effective leadership. A survey was mailed to 199 academic family physicians across Canada and resulted in a 59.3% participation rate. Approximately 80% of academic family physicians in the study were moderately effective leaders but fewer than 13% of these physicians had served in higher university positions outside of their academic departments. Although an association between the self-perceptions of teaching and of leadership was not supported, an association was supported between moderately effective leadership and perceived social support from family, friends or colleagues. University affiliation also was a factor associated with effective leadership, whereas demographic, educational, personal attributes, and prior administrative experience were not. Based on these results, several recommendations are made for further research, changes in the practices of selection committees, applicants for leadership positions, and faculty development programs.

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Acknowledgements

I would like to thank Dr. Jackie Stalker, my thesis advisor and program coordinator, for her knowledge and expertise, guidance, continued support and encouragement which ensured that each step of my program was completed. I am particularly grateful to her for her understanding of my many life roles which placed various demands upon me during the course of my studies. I thank Drs. Madak and Gregor, the members of my thesis committee, who provided encouragement and offered valuable advice and expertise. I also thank the Department of Family Medicine, Faculty of Medicine, University of Manitoba which granted me a sabbatical to pursue these studies.

My heartfelt appreciation is extended to the family physicians across Canada who were asked and participated in this study. They are a celebration of the spirit for the future of family medicine research in Canada.

I thank my wife, Terry, my sons, Chris, Andrew, and Daniel, and my daughter, Edythe, for the growth of spirit which they constantly provide to me. By confronting me with my shortcomings, they enable me to reconstruct new understandings of myself.

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Introduction

Faculty members in universities and colleges have challenging roles with respect to their academic duties. The three elements of these academic duties are teaching, research, and community service. As stated by Milton and Shoben (1968) "College teaching is probably the only profession in the world for which no specific training is required. The profession of scholarship is rich in prerequisites for entry, but not that of instruction" (p.xvii). More recently, Bland, Schmitz, Stritter, Henry, and Aluise (1990), in the preface of their book Successful Faculty in Academic Medicine, wrote "...surprisingly little has been written about the essential skills required to accomplish the distinct tasks of this profession [academicians in higher education]..." (p.xv). In the last 15 years the development and evaluation of faculty roles have grown considerably in universities and colleges, and have resulted in an increasing body of literature and research on the subject.

In medicine, academic medical centres complicate an understanding of the roles served by medical faculty. Academic medical centres are organizational complexes consisting of a medical school, one or more teaching hospitals, and semiautonomous institutes or centres providing formal education to physicians. These complex organizational relationships with multiple constituents, such as accrediting

bodies, demand high levels of teaching and leadership skills from their faculty members, in order to span the multiple boundaries. These complex relationships have no comparable counterpart in other sociotechnical systems (Wilson & McLaughlin, 1984) and make academic programs in the health professions distinct from other educational programs (Holcomb, Thomson, Evans, Buckner, & Ponder, 1987; Tortolani, Risucci, & Rosati, 1990). Furthermore, the majority of other academic disciplines do not perform as large a part in the direct delivery of services to the public during their teaching roles (Wilson & McLaughlin, 1984). In spite of all these complexities, the majority of academic medical faculty continue to be autonomous, self-employed professionals within the university environment.

Medical faculty usually begin their teaching careers as clinicians and subsequently assume academic positions (Doughty, Williams, & Seashore, 1991; Magill, McClure, & Commerford, 1986). Similarly, administrators and leaders are chosen on their clinical, research, and teaching skills without further training for their roles in administration and leadership (Cooper, 1984; Doughty et al., 1991). Bland et al. (1990) recognized that the process skills, or non-clinical skills, of academe are also critical for medical faculty. Some of these non-clinical skills enable physicians to be effective teachers, administrators, and leaders. Academic faculty are assumed to possess these non-clinical skills; yet the best

academic students are conditioned to avoid leadership responsibilities, by a single-minded determination to be first class scholars, researchers, or professionals (Simon, 1985). Their academic programs often overlook the development of broad interests necessary for producing leadership within society. Leadership skills in clinical teaching require creative strategies aimed at the development of leadership, institutional policies and procedures, and faculty development (Irby, 1986). The need for creative leadership to solve the problems encountered in today's academic medical centres is critical (Burg, McMichael, & Stemmler, 1986; Cooper, 1984; Swartz & Gottheil, 1991). Directly affecting academic medical centres are dramatically changing health care environments (Atchison, 1990). Seizing these opportunities to transform visions into the realities of a rapidly changing global community is one of the roles of academic medical leaders (Cooper, 1984; Phelan, Kirkland, & Freed, 1991).

Both teaching and leadership are thought by some people to be traits which are inherent at birth or are developed naturally. Other authors (Claus & Zullo, 1987; Grow, 1991; Hersey & Blanchard, 1988; Lawrence & Lawrence, 1984; Swartz & Gottheil, 1991; World Health Organization Expert Committee, 1984) hold the belief that teaching and leadership can be learned. Unfortunately, few people in academic medicine are taught these roles. Consequently, faculty members may be well trained as physicians but essentially untrained in their roles

as teachers, researchers, scholarly writers, or administrators (Bland et al., 1990; Doughty, Williams, & Seashore, 1991; Magill, McClure, & Commerford, 1986; Pristach, Donaghue, Sarkin, Wargula, Doerr, Opila, Stern, & Single, 1991; Rous, Bamford, Gromisch, Rich, Rubin, & Sall, 1972; Stritter, Hain, & Grimes, 1975; Swartz & Gottheil, 1991).

Research in these academic areas has not entirely provided the answers. Lorsch & Mathias (1987) stressed the similarities between managing interactions within organizations and managing interactions with clients, both of which are undertaken but not well recognized by a variety of professionals (National Association of Elementary School Principals, 1991). If this assumption is true, is there any evidence which associates academic duties with each other? Neither research (Centra, 1981) nor publication (Dressel, 1976) have been associated with teaching excellence. Although Roueche (1990) has stated that excellent teaching parallels excellent leadership and that leadership is a process similar to teaching, little research has been done to study whether good teaching does result in effective leadership; however, a consensus prevails in the education literature that effective leadership of school principals is vital for effective teaching in schools (Martin, 1990).

Leadership is confused frequently with management but each of them is a distinct domain and requires entirely separate skills (Covey, 1989; Detmer & Finney, 1993; Hersey &

Blanchard, 1988). Leadership is a broader domain. Leaders influence individuals' or groups' behaviours in given situations regardless whether the situations are at work, school, or home. The individuals or groups may attain their own or others goals. In management the attainment of organizational goals is foremost (Hersey & Blanchard, 1988).

The Report of the <u>Commission of Inquiry on Canadian University Education</u> (Smith, 1991) recommended more extensive evaluation procedures for faculty members and better preparation for teaching in universities, but sadly avoided any recommendations about academic training for leadership within these same institutions. Leadership roles for university committee work generally require greater recognition within academic institutions rather than minimization or elimination, as suggested by the Report of the University Education Review Committee (Roblin, Gordon, Kavanaugh & Richardson, 1993), <u>Post-Secondary Education in Manitoba: Doing Things Differently</u>. The lack of training for leadership skills is not unique to medicine but applies to the university as a whole. Indeed, professionals, in general, face this dilemma (Davis, 1992; Lawrence & Lawrence, 1984; Lorsch & Mathias, 1987; World Health Organization Expert Committee, 1984; Zimpher, 1988).

Statement of purpose

The purpose of this study was to determine whether an association exists between effective teaching and effective leadership as measured by academic family physicians' self-perceptions of their own teaching and leadership. A second purpose was to determine the factors associated with perceptions of effective leadership by academic family medicine teachers.

Educational Significance

Frequently, educators assume leadership roles without receiving the necessary training. No research studies have examined an association between teaching and leadership. The research and publication role has been studied with respect to the teaching role and was shown to have no association (Centra, 1981; Dressel, 1976). Evidence suggests, however, that both the roles of teaching and leadership can be learned (Hersey & Blanchard, 1988). If no association is found in the self-perceptions of physicians' effectiveness in leadership and teaching, the reasons may be that 1) good clinical physicians have not identified explicitly the skills they currently possess with patient care and carried these skills into other settings or 2) good clinical physicians do not possess concurrently these skills. If this is the case, then faculty development could be organized to remedy either situation.

Limitations

The limitations in this study are the following:

1) the results will apply only to teachers of Family Medicine,

2) the study is limited to the perceptions of the study subjects and will not measure actual teaching or leadership performance, and

3) the results will be limited to the study subjects and will not be generalizable beyond this population.

Assumptions

The assumptions of this study are that:

1) faculty members will evaluate themselves honestly,

2) faculty members will possess the ability to complete the self-evaluation instruments,

3) teachers of Family Medicine are similar to other clinical teachers who have been evaluated using the instruments,

4) the majority of Family Medicine teachers in Canada are members of the Section of Teachers, College of Family Physicians of Canada, a national, voluntary organization of family physicians (P. Rainsberry, personal communication, June, 1992), and

5) the instruments chosen are the best methods currently available to measure teaching and leadership.

Definitions

The definitions for the study follow, in alphabetical order:

Academic family medicine is the body of knowledge which is taught by the Departments of Family Medicine in each of the sixteen Canadian medical schools (College of Family Physicians of Canada, 1992).

Academic family medicine teachers are individuals who have appointments in the Departments of Family Medicine and are charged with the responsibility for training students in the discipline at both the undergraduate and postgraduate levels. Their academic duties can include teaching, research, scholarly activities, institutional service and community service while they maintain direct responsibility of care for their patients. Academic family medicine teachers also may include other health professionals, such as nutritionists, nurses, and social workers.

Academic medical centres are organizational complexes consisting of a medical school, one or more teaching hospitals, and semiautonomous institutes or centres providing formal education to physicians (Wilson & Mclaughlin, 1984).

Leader effectiveness is the ability of individuals to assess situations and use the appropriate leadership style which will result in better action. The Lead-Self instrument developed by Hersey and Blanchard (1988) measures these abilities.

Other health professionals are individuals whose primary training and education was in a discipline other than family medicine, such as social work, nursing, or human ecology.

Primary care is the medical care available directly to an individual and does not require a referral to another health care professional.

Teacher effectiveness is the ability of individuals to evaluate their teaching performance and initiate actions which will correct any performance deficiencies. The Self-assessment Inventory for Clinical Teaching in Medicine by Irby (1978a) includes these criteria which have been used to evaluate teaching performance in formative evaluations.

The College of Family Physicians of Canada is a national voluntary organization of physicians who are committed to mandatory continuing medical education and high quality medical care to Canadians. The College of Family Physicians of Canada is the accrediting body for family medicine training programs in Canada and establishes national program standards for academic departments.

Literature Review

Faculty perform various roles in universities: teaching, research, scholarship, and college service (Gaff, 1975; Seldin, 1984; Bland et al., 1990; Donald & Saroyan, 1991). A popular misconception is that "teachers are born, not made" (Bland et al., 1990, p.46). This adage appears to apply for leaders also (Hersey & Blanchard, 1988; Lawrence & Lawrence, 1984; World Health Organization Expert Committee, 1984).

Certain skills of teaching and leadership are required beyond content expertise. Stritter's (1983) definition of a teacher includes engaging in interactive behaviour with students for the purpose of effecting change in those students (Stritter, 1983; Rippey, 1981). Some leaders share with teachers this opinion that interaction, cooperation and networking with others is integral to their effectiveness (Kouzes & Posner, 1990; Lawrence & Lawrence, 1984; March & Crisci, 1991; National Association for Elementary School Principals, 1991). Like teachers, leaders are learning constantly and looking for ways to improve themselves and their organizations (Kouzes & Posner, 1990; Roueche, 1990). Faculty members want to be effective as clinical teachers and leaders in universities and academic medical centres.

Research in medical education is still considered a relatively new area of study and the literature in research for the evaluation of clinical teaching faculty has been

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sparse since the early 1970's. Research in medical leadership
is much more recent, appearing in the literature only in the
mid-1980's, but is done infrequently and competes for medical
funding with clinical care studies. In this chapter the
concepts of effectiveness, teaching, leadership and issues in
measurement will be reviewed.

Effectiveness

Success and effectiveness often are used interchangeably.
Consequently, these words frequently are misused. Hersey and
Blanchard (1988) helped to distinguish between success and
effectiveness in educational and business settings. The
distinction is important because the literature on teaching
and leadership bridges business and educational settings.

Success is related to how the individual or group
behaves, whereas effectiveness is related to an internal
attitudinal state of the individual or group. Furthermore,
performance, human resource conditions, short-term goals, and
long-range goals, are considered functions of effectiveness
which are dependent on personal power and control. These
functions of effectiveness are realized through a process.

Processes are defined as actions of persons and
organizations which bring actual situations closer to those
which are desired. According to Heller (1982), individuals
derive these actions from internalized rules which, when made
explicit, produce more effective actions. Two kinds of

problems appear to interfere with effective actions: the problems which make change necessary and the problems which are created by the actions to change the situation. Effective principles of problem-solving can result in effective actions.

These actions, in turn, can reinforce the skills required by individuals to identify and solve problems by themselves (Heller, 1982). Subsequently, the processes are expected to produce self-reflective professionals who individually are responsible for reading the environment, determining what is needed, and then performing in an appropriate manner (Scholl, 1987; Rippey, 1981).

Both effective teaching and effective leadership have been referred to as processes. Stritter et al. (1975) supported this approach when they recommended the development of a process to improve their students' learning by assisting clinical teachers to analyze their own teaching behaviours. "Process", as applied to academic administration, was proposed by Walker (1979). Both Bland et al. (1990) and Fogel (1989) support leadership as a process over which individual members have some direct control.

In summary, effective teaching and leadership can be considered processes of interaction among individuals, based on internal rules. These internal rules result in effective actions which are developed over time from individuals' own problem-solving skills. The individuals' evaluations and perceptions of themselves affect the development of these

problem-solving skills which can be demonstrated in leadership and teaching.

Teaching

Faculty members in universities have challenging roles in fulfilling their academic duties of teaching, research, and community service. Among the duties, teaching has remained the most important factor for assessing faculty performance (Donald and Saroyan, 1991; Seldin, 1984), although research, publication, public service, activity in professional societies, and campus committee work continue to increase in importance (Seldin, 1984). If teaching is the most important criterion for measuring faculty performance, an understanding of teaching is required. Arreola (1984) defined teaching as encompassing the following three areas: content expertise, instructional design, and instructional delivery. Content expertise includes those specific skills, competencies, and knowledge obtained through advanced training and education. Instructional design skills are the competencies needed to present properly sequenced experiences. These properly sequenced experiences should induce learning which subsequently can be measured and confirmed in the student. Instructional delivery skills are the facilitative skills that create a learning environment through human interaction. Both of these latter two areas are the two most important factors for defining good teaching, according to a Canadian survey

conducted by Donald and Saroyan (1991) for the Commission of Inquiry on Canadian University Teaching.

When they are evaluated, teachers have both strong and weak points in these three teaching areas. Teachers are able to identify their strengths and weaknesses in these areas, but some teachers have difficulty using the information received during evaluations of their performance to improve their teaching (Seldin, 1984; Sheets & Henry, 1984). The reason for this difficulty is not clear but may be due to a deficiency in their training which results in their inability to correct identified weaknesses. Some professors may argue that the ability to identify tenets of good teaching is not possible; however, Seldin (1984) and Donald and Saroyan (1991) are not among them. Donald and Saroyan (1991) identified the four areas for teaching - scholarly activities, instructional qualities, interaction with students, and management skills - from their survey of sixty-one university representatives at Canadian institutions. The dimensions for assessing quality of teaching were shared by Seldin (1984) who included being well prepared for class, possessing comprehensive subject knowledge, motivating students, being fair and reasonable in managing the details of learning, and being interested in the subject matter and in teaching itself. The dimensions of clinical teaching, however, are more extensive.

Clinical teaching. Clinical teaching in the health professions is instruction which is not confined to the large classroom setting, but occurs in individual or small-group settings, such as at patients' bedsides (Stritter et al., 1975), and more recently in the community and the ambulatory setting (Woolliscroft & Schwenk, 1989). In spite of the diversity of settings, a clinical teacher in the health professions applies many principles of teaching found in educational classroom settings (Bland et al., 1991; Irby, 1978b; Rabada-Rice & Scott, 1986; Schare, 1984; Winter & Kestner, 1990). In addition, the clinical teacher serves the three roles of role model, clinical supervisor, and instructional leader (Irby, 1986), which are similar to teaching roles in general (Arreola, 1984).

As with other academic disciplines, most medical clinical faculty have little preparation for these multiple professional roles (Pristach et al., 1991; Stritter et al., 1975). Most of their knowledge about teaching comes from observing their own teachers. The non-clinical skills of academe, such as the ability to explain, demonstrate, listen, assess, and give feedback are critical for medical faculty who teach (Bland et al., 1990). These skills contribute to a work pattern distinctly different from other academic disciplines (Clark, 1987).

The division of work by faculty in the health professions may be more complex than some other academic disciplines

because they render an additional role, service to patients during their teaching (Irby, 1986). This difference may surface in contradictory findings when the evaluation of clinical teaching is compared with classroom teaching. Different evaluators may choose different criteria for rating individuals in various settings or may not be able to differentiate between the multiple professional roles served by the clinical teacher. For example, in a study of surgical residents, the residents tended to rate educators equally high on the three areas of patient care, teaching, and research. The residents may not be able to separate characteristics which result in quality patient care from characteristics which are required for effective medical teaching (Tortolani et al., 1990). Clinical teaching differs from classroom teaching because of the multiple educational settings, the multiple roles served by clinical teachers, and the lack of specific training for teaching in these varied sites.

The need to possess academic non-clinical skills is even greater for primary care medical faculty who spend almost thirty per cent of their time in clinical teaching and consider it the most important aspect of their jobs (Bland et al., 1990). Primary care or family medicine medical faculty were not hired until 1968, the year residency post-graduate training programs were established in Canada (Hennen, 1993). By 1974 all medical schools in Canada had residency post-graduate training programs which required teachers (Hennen,

1993); but not until 1977 did all medical schools have established Departments of Family Medicine. Certification in Family Medicine is granted for an examination written either after completion of these two year family medicine training programs or after establishing a medical practice if eligibility criteria have been met. The majority of teachers in Family Medicine received Certification in Family Medicine during these early years by the practice-eligible route; that is, they sat the clinical specialty examinations after they were established in practice. Certification in Family Medicine acknowledges an achieved level of competence in the discipline and is now a requirement for full-time teaching in Departments of Family Medicine. This accomplishment attests to the commitment of early faculty who were striving for academic credibility among other well established departments within Faculties of Medicine (Hennen, 1993).

Assessment of teaching. The differences in clinical teaching can be assessed from three forms of faculty performance ratings which have been identified to assess or evaluate teaching: 1) perceptions, 2) processes, and 3) products (McGuire, 1974). Each of these forms of faculty performance evaluation has limitations. When perceptions are used for evaluations, they often are influenced by the "eyes of the beholders" who bring their own values of teaching to the evaluation. Processes are influenced by currently popular

methods which tend to create change without improving results. Products often are related to concurrence rather than cause and tend to assume that relationships exist when they do not necessarily. Despite these limitations, the assessment or evaluation of the faculty member's performance consists of the collection and interpretation of information from these forms (Stritter, 1983; Irby, 1986).

Teaching judgments currently are based on multiple sources, which include deans, chairs, students, colleagues, committees, and oneself. Deans and chairs have neither increased nor decreased in importance as sources of evaluations over the years because personnel decisions always have been required. In comparison, self-evaluation and student ratings have increased appreciably in significance in the last fifteen years (Seldin, 1984; Donald & Saroyan, 1991). Ratings by self, peers, and students have become the most common sources of teaching performance evaluations.

Self-evaluation of teaching performance is a process by which individuals evaluate themselves against pre-determined criteria and identify the strengths and weaknesses in their teaching. Although self-ratings may not correlate with the evaluations of others, when they are used in conjunction with other sources of evaluation, they have stimulated improvement in clinical teaching for physicians (Irby, 1978; Donald & Saroyan, 1991; Gil, Heins, & Jones, 1984; Rippey, 1981;

Seldin, 1984) and for dentists (Milgrom, Chapko, Milgrom, & Weinstein, 1985).

Self-evaluation is considered by some authors as the only effective way for individuals to improve (Stritter, 1983). Methodological problems, such as low reliability, have been used by others to criticize the use of self-evaluation. These problems can be overcome by selecting the most observable behaviours and by training the evaluators (Rippey, 1981). Self-evaluation is deemed a credible method, if the objective of the evaluation is intention to change behaviour (Rippey, 1981).

A second source of teaching performance evaluation is peers. Although peer evaluations are commonly employed, their validity and reliability are weak (Stritter, 1983; Rippey, 1981) and sometimes are undermined by professional courtesy, or, in other words, the need to make professionals appear better than they actually might be (Fogel, 1989; Rabada-Rice & Scott, 1986). Peer evaluation has been criticized for ignoring sample bias, lacking operational definitions, being influenced by politics and emotions, measuring a simple halo effect, and permitting observer-teacher interactions (Rippey, 1981). Some of these criticisms could be advantages if qualitative measures, rather than quantitative measures, were used. As an example, qualitative methods could identify emotions which influence evaluations and, subsequently,

discussions with faculty about these emotions might reduce their effects on the peer evaluations.

The third source of teacher evaluation is students. Student ratings, in comparison to self and peer ratings, are valid and reliable but not generalizable depending upon the context (Rippey, 1981). Another limitation which restricts the use of student ratings is the dependence of the ratings on the teaching criteria being evaluated. Students are quite able to evaluate the criteria of curiosity and interest in the subject stimulated by the teacher, but are poor judges for evaluating the teacher's mastery of the subject, currency of course materials, and course objectives. These criteria are best evaluated quantitatively by the faculty members' peers (Seldin, 1984). Lastly, some research has suggested that teaching improvement is more likely to occur if the poor rating comes from the student rather than oneself (Centra, 1973); while studies in the health professions have produced conflicting results showing the opposite effect (Rous et al., 1972; Stritter, 1983).

All three evaluation sources improve teaching behaviours when faculty members interpret the evaluation results with other sources (Cohen, 1991; Irby, 1986; Rippey, 1981; Skeff, 1983; Stritter, 1983). Downing, English, and Dean (1983) were encouraging when they concluded from their study of surgeons that the least effective faculty teachers improved the most from evaluative feedback.

Outcome measures of teacher evaluation, such as student achievement, grade distribution, long term follow-up of students, teacher competency testing, teacher interviews, classroom observation, and alumni opinions for information of faculty performance, are rarely employed (Dubravcic, Chinean, & Pratzner, 1986; Nelson, McCaffrey, Nobrega, Schultz, Campion, Naessens, & Palumbo, 1990). Some of these outcome methods have been used in the public schools to study an association with instructional leadership by school principals (March & Crisci, 1991), but they have been used rarely as evaluation methods of teachers in medical schools (Anderson, Harris, Allen, Sataran, Bland, & Davis-Fickert, 1991).

In clinical teaching, outcome measures showing the effect of teaching on programs are difficult to assess (Anderson et al., 1991), if not impossible to design, because of the complexity and diversity of academic medical centres (Doughty et al., 1991). If these measures are impossible to design, what dimensions or items necessary for clinical teaching have been identified by authors? Processes and perceptions would appear to be assessed more easily since they have been studied and reported more frequently in the literature.

Dimensions and items for clinical teaching. A chronological comparison of dimensions for clinical teaching (Table 1) by five authors (Bland et al., 1990; Irby, 1986; Rippey, 1981; Rous et al., 1972; Stritter et al., 1975)

Table 1

Chronological comparison of clinical teaching dimensions

Rous et al. (1972)	Stritter et al. (1975)	Rippey et al. (1981)	Irby (1986)	Bland et al. (1990)
Organization/ Clarity			Organization/ Clarity	Program planning
Instructional methods	Active student participation/ Applied problem-solving	Pedagogic skill	Clinical supervision	Instructional design/ Clinical supervision
Teaching attitude	Preceptor attitude towards teaching	Effort/ Seriousness Judgment	Enthusiasm/ Stimulation	
Motivation	Humanistic orientation	Empathy	Role modelling	
Teaching approach	Student centred instructional strategy	Charisma/ Stimulation/ Popularity/ Civility	Group instructional skill	Instructional skill with different size groups
	Emphasis on research and references	Subject expertise	Instructor knowledge	
			Clinical competence	Evaluative skills

displays similarities in several dimensions. Irby's listing of seven dimensions appears to be the most comprehensive for clinical teaching and encompasses the dimensions categorized by the other four authors. To arrive at his seven dimensions, Irby reviewed sixteen factor analysis studies of instructor ratings. The specific items listed for these dimensions (Table 2) are not remarkably different from those identified for clinical teaching in dentistry (Winter & Kestner, 1984) or nursing (Bell, Miller, & Bell, 1984). Apart from the specific items and dimensions identified for clinical teaching, demographic factors, personal attributes, and professional traits also have influenced teaching effectiveness. Age and gender are two demographic factors which have been shown to affect teaching. Younger faculty, rather than older faculty, initially react more positively to change within different kinds of institutions (Heller, 1982). The reasons for this difference are not known entirely. One reason may be that younger faculty have higher energy levels to adapt to the changes. McKeachie & Lin (1971, cited in Rippey, 1981) have reported an association between faculty gender and effective teaching. In their study, female students of male teachers, who displayed components of empathy, achieved higher academic standings compared with both female and male students of female instructors, who displayed similar empathic characteristics. The gender of the teacher influenced the outcomes when similar personality attributes

Table 2

Summary of items for seven clinical teaching dimensions

I. Role modelling

Accepts professional responsibility	Irby (1978a)
Accepts self-criticism	Irby (1978a)
Is honest about own limitations	Irby (1978a)
Is self-confident	Donnely & Wolliscroft (1989) Irby (1978a)
Demonstrates skills, attitudes, and values to be acquired by students	Bland et al. (1990) Irby (1978a) Magill et al. (1986)

II. Clinical competence

Objectively identifies and analyzes patient problems	Irby (1978a)
Performs procedures well	Bland et al. (1990) Irby (1978a)
Establishes patient rapport	Irby (1978a)
Works effectively with others	Bland et al. (1990) Irby (1978a)

III. Clinical supervision

Is accessible	Irby (1978a) Magill et al. (1986)
Observes, evaluates, and gives feedback to students	Bland et al. (1990) Donnely & Wolliscroft (1989) Irby (1978a)
Guides students	Bland et al. (1990) Irby (1978a)
Provides practice opportunities	Bland et al. (1990) Irby (1978a)
Promotes problem-solving skill development	Bland et al. (1990) Irby (1978a)
Gives case-specific comments	Bland et al. (1990) Irby (1978a)
Offers professional support and encouragement	Irby (1978a) Magill et al. (1986)

Table 2 (cont'd)

Summary of items for seven clinical teaching dimensions

IV. Group instructional skills

Relates well to students	Donnely & Wolliscroft (1989)
	Irby (1978a)
Stimulates active involvement in learning	Bland et al. (1990)
	Irby (1978a)
Creates relaxed atmosphere	Irby (1978a)
Makes learning enjoyable	Irby (1978a)
Encourages individuality and creativity	Irby (1978a)

V. Instructor knowledge

Discusses current developments in the field	Irby (1978a)
	Magill et al. (1986)
Directs students to the appropriate literature	Bland et al. (1990)
	Irby (1978a)
Discusses alternate points of view other than own	Irby (1978a)

VI. Enthusiasm/Stimulation

Enjoys teaching	Irby (1978a)

VII. Organization/Clarity

Makes self clear	Irby (1978a)
States objectives	Bland et al. (1990)
	Irby (1978a)
Summarizes major points	Irby (1978a)
Presents material in organized manner	Bland et al. (1990)
	Irby (1978a)
Provides emphasis	Irby (1978a)
	Magill et al. (1986)
Time management	Magill et al. (1986)

were measured. A gender difference also has been shown between students' ratings and sixteen perceived injustices dispensed by teachers, for example, ridiculing students. Female students rated the injustices more severely than did male students (Wolpert & Mikesell, 1978).

Personal attributes, on the other hand, appear to be of less importance. Examples of positive personal attributes describing teachers are: cheerful, sympathetic, morally virtuous, dynamic, pragmatic, intellectually competent, positive, introverted, and effective. Only abrasive behaviours were identified as a negative attribute. Spady (1973) considered trust as the most critical aspect in determining teacher effectiveness. Rippey (1981) found that empathy, defined as the awareness of and the ability to respond to student needs and feelings, could override charisma and expertise for mature students. Although charismatic leaders may possess the other characteristics, such as popularity and civility, the converse is not always true. Popularity soon diminishes in importance to subject expertise for students over time (Rippey, 1981).

Professional traits also have influenced teacher ratings. The number of years of teaching by faculty persons does appear to influence student ratings, with the lowest ratings to teachers in the first year (Calkins, Arnold, Willoughby, & Hamburger, 1986), followed by teachers with one to two years or more than twelve years' experience, and with the highest

ratings achieved by those teachers with three to twelve years'
teaching experience (Centra, 1979). Although Tortolani et al.
(1990) studied residents' ratings rather than faculty ratings,
they too found a difference related to the number of years of
training.   The more experienced teachers' self-evaluations
agree with peers' evaluations of their teaching (Stier,
1982).

Academic rank and the teaching methods of the faculty
member are two additional professional traits which could
influence teacher ratings but do not (Calkins et al., 1986;
Centra, 1979; Donnelly & Woolliscroft, 1989; Irby, 1987).
Surprisingly, teaching methods do not appear to affect how
much is learned by students as much as they appear to affect
how well students like learning (Rippey, 1981).

Research studies comparing academic roles.   Research
productivity (Arreola, 1984; Friedrich & Michalak, 1983;
Seldin, 1984) and publication (Dressel, 1976) often are used
by administrators as a measure of teaching performance and an
indicator of content competence. Neither has been related to
good classroom teaching; and the relationship to leadership
has not been studied.

Leadership is a new academic role responsibility expected
to be undertaken by health profession faculty, which can be
particularly critical for fulfilling both community and

institutional service (Seldin, 1984). Currently, no studies appear to have been conducted on the association between teaching and leadership in the academic setting.

Summary. Definitions for both teaching and clinical teaching have been developed. The various methods to evaluate teaching were reviewed and the dimensions and specific items which describe clinical teaching were listed. No studies appear to have shown an association between teaching and leadership. Leadership will now be reviewed.

Leadership

Leadership has been defined as "...the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation "(Hersey & Blanchard, 1988, p.86). Influence and leadership may be used interchangeably. Leadership occurs when individuals attempt to influence the behaviour of another person, regardless of whether the reason is for their own or another's goals (Hersey & Blanchard, 1988). Management, unlike leadership, places paramount the accomplishment of organizational goals (Hersey & Blanchard, 1988). Organizational and management development, as fields for study, began with the productivity studies of the 1920's and 1930's (Hersey & Blanchard, 1988) and have since spread to the study of professional organizations.

Dilemmas of leadership frequently develop for professionals in organizations. Professionally-dominated organizations are unique bureaucracies which rely on the skills and knowledge of their practising professionals to provide either their products or services (Fogel, 1989). The organization and the professionals' skills are interconnected in the symbiotic relationships associated with the professionals' intellectual capabilities and interpersonal effectiveness with clients (Lorsch & Mathias, 1987). When these persons are removed from their professional work situations and placed in management and leadership roles, they often find themselves in conflict with their professional values which are shared with other colleagues. Their needs for autonomy, decreased bureaucracy, people skills, and rapid and measurable results make these independent people who are highly valued in leadership roles (World Health Organization Expert Committee, 1984), but the organization forfeits some of its best professionals to administrative positions.

When these persons are neither hired, trained, nor rewarded primarily for these tasks, professional organizations are challenged to find persons to lead and manage them. High achievers in the profession are sometimes ineffective as leaders because they do things their way, fail to delegate or be influenced, and do not develop a strong sense of commitment from their subordinates (Kouzes & Posner, 1990). Nevertheless, these same qualities could be used to describe good clinicians

who build their identities around their work, similar to other professionals (Lorsch & Mathias, 1987).

Good teachers or clinicians may or may not be good leaders. Leadership for professionals, like teaching, needs time and guidance to develop if the professional has not been specifically trained for this role (Lorsch & Mathias, 1987). In addition, professionals are increasingly called upon to serve as leaders today. Physicians, as professionals, are sought to be leaders in a multitude of groups in which they are members: departments, committees, specialty groups, and community groups. Multiple constituents seek their leadership, including other health care workers, hospital administrators, and patients (Calkins et al., 1986; Doughty et al., 1991). The acquisition of leadership skills is not restricted to senior professionals in academic medical centres alone but academic medical centres presume that all faculty members possess them (Bland et al., 1990). Therefore, most physicians who teach in academic medical centres find themselves in the role of potential leaders.

Medical leadership. The concept of academic medical teachers functioning as managers and leaders was described as early as 1972 (Stritter & Bowles, 1972). For the sake of healthy academic organizations, academic professionals in medicine need to acquire improved skills in leadership, collaborative planning, conflict resolution, and consensus

decision making (Bland et al., 1990). Although all departments within faculties may gain from some leadership training, the newest disciplines, such as family medicine, may have the most to gain since organizational structure for the discipline is relatively recent (Bland et al., 1990). These skills may be learned in different ways. The majority of successful leaders in organizations ranked the ways they learned about leadership in the following order: trial-and-error, people, and education (Zenke, cited in Kouzes & Posner, 1990). In organizations outside of health care, executive leaders often attend workshops to learn leadership skills by the third method, education. Similar training for medical leaders is almost non-existent (Doughty et al., 1991). Until the late 1970's, work on academic medical centre organizational models (Weisbord, Lawrence, & Charns, 1978) was sparse. Professional leadership studies in medicine did not appear until the 1980's, when Wilson & McLaughlin (1984) published Leadership and Management in Academic Medicine. The need for increased leadership in medical schools and health services still persists (Smith, Anderson, & Boumbulian, 1991; Pulido, 1989; Vevier, 1985). This sentiment was echoed by the World Health Organization Expert Committee (1984) which believed strongly that managerial skills in education are essential and should be reinforced with the development of leadership skills for health science teachers and managers in primary health care.

When physicians work together within an organization, they are part of a professional bureaucracy and managed by bureaucratic concepts (Fogel, 1989). Managers of a professional medical bureaucracy are most successful when they are physicians, but only if they are seen as serving the physicians in the organization. According to Brown and McCool (1987) and Fogel (1989), this finding is counter to the current trend of placing more power in the hands of non-medical administrators in health care settings.

The commitment of physician-managers to the profession of medicine, unlike that of non-medical administrators to the institutional organization, occasionally supersedes their bureaucratic commitment to the organization, consequently placing the organization's authority into conflict (Wilson & McLaughlin, 1984). Moreover, physicians have neither viewed management as a desirable path for career advancement, nor been suitably trained for these roles (Wilson & McLaughlin, 1984). These physicians may have learned leadership adaptability skills from caring for and negotiating with patients (Eisenthal, Emery, Lazare, & Udin, 1979; Szaz & Hollender, 1955; McWhinney, 1989) because few of them have educational backgrounds in either management or leadership. Unfortunately, the best and most productive workers in professions are chosen for leadership roles and are either asked to serve both functions, administrative and professional, or to relinquish various aspects of their

professional roles. Lorsch & Mathias (1987) have questioned
whether this approach is desirable. Persons in leadership
roles may or may not have characteristics or dimensions
associated with leadership in the next section.

Dimensions and items of leadership. Although some
authors, such as Martin (1990), emphasized a lack of agreement
on performance-based definitions of leadership effectiveness,
other authors (Hersey & Blanchard, 1988; Kouzes & Posner,
1990; Lorsch & Mathias, 1987) delineated several dimensions
related to leadership (Table 3). Whereas all the dimensions
recorded in a chronological comparison of the dimensions of
leadership (Table 3) are similar, Kouzes and Posner (1990)
appear to have developed the most comprehensive list of
dimensions integral to leadership. The specific items for
dimensions of leadership are listed under six categories
(Table 4). The attributes associated with leadership in
medical settings are comparable to leadership in general and
some of them, such as tolerating dissonance, are comparable to
the attributes which are identified for clinical teaching
(McWhinney, 1989).

Several attributes fatal to leadership advancement have
been identified by Kouzes and Posner (1990). These qualities
are: power motivation, aloofness, insensitivity to others,
arrogance, betrayal of trust, overmanaging, working
independently of others, highly critical of others,

Table 3

Chronological comparison of the dimensions of leadership

Lorsch & Mathias (1987)	Hersey & Blanchard (1988)	Kouzes & Posner (1990)
Displays integrity, dependability, and trust	Communicates in a way that is understood and accepted by people	Models the way
Understands other professionals' needs and means to meet them	Understands the situation that is being influenced	Encourages the "heart" and gives rewards
Uses wisdom and experience to enhance other professionals' decision-making	Adapts the behaviour and resources to meet the contingencies of the situation	Enables others to act
Has vision and direction for the organization		Inspires a shared vision
		Challenges the process and takes risks

Table 4

Summary of items for dimensions of leadership

I. Demographic

Age	Meskin (1991)
Gender	Gill (1984)
	Wilson & McLaughlin (1984)
Graduate degree(s)	Wilson & McLaughlin (1984)
Advanced degree in Management	Brown & McCool (1987)
Years in Graduate Training	Wilson & McLaughlin (1984)
Academic discipline	Wilson & McLaughlin (1984)
Appointments (positions held)	Wilson & McLaughlin (1984)
Kind of institutions employed	Wilson & McLaughlin (1984)

II. Model the Way

Has sufficient energy	Brown & McCool (1987)
Is enthusiastic	Wilson & McLaughlin (1984)
Is in good physical condition	Brown & McCool (1987)
Models values	Kouzes & Posner (1990)
Displays courage	Brown & McCool (1987)
Is decisive	Wilson & McLaughlin (1984)
Shows trust & integrity	Walker (1979)
Is intrinsically self-satisfied	Kouzes & Posner (1990)

III. Enable others to act

Has internal locus of control	Phelan et al. (1991)
Is open to others' opinions	Brown & McCool (1987)
Is tolerant of dissonance	Brown & McCool (1987)
Creates social support networks	Kouzes & Posner (1990)
Uses the word "we" instead of "I"	Kouzes & Posner (1984)
Is a cooperative problem-solver	Kouzes & Posner (1990)
	Wilson & McLaughlin (1984)

IV. Challenges the process

Asks "what if" questions	Brown & McCool (1987)
Is confident	Brown & McCool (1987)
	Wilson & McLaughlin (1984)
Draws from past experiences	Brown & McCool (1984)
Keeps options open	Brown & McCool (1987)
Confronts and changes status quo in first five years	Brown & McCool (1987)

Table 4 (cont'd)

Summary of items for dimensions of leadership

V. <u>Inspires shared vision</u>

Is mission orientated	Brown & McCool (1987)
	Lorsch & Mathias (1987)
Conceptualizes well	Brown & McCool (1987)
Plans 3-5 years into the future	Kouzes & Posner (1990)
Attracts others to common purposes	Kouzes & Posner (1990)

VI. <u>Encourages the heart and rewards</u>

Acts accountably	Brown & McCool (1987)
Rewards good performance	Kouzes & Posner (1990)

unwillingness to share control, poor team player, and poor interpersonal skills (Kouzes & Posner, 1990). As extensive as their writing is, however, Kouzes and Posner did not posit a model of leadership.

Leadership models. Various situational approaches to leadership and models have been developed, including the Tannenbaum-Schmidt Continuum of Leader Behaviour, Fiedler's Leadership Contingency Model, House-Mitchell Path-Goal Theory, and Vroom-Yetten Contingency Model (Hersey & Blanchard, 1990). The current model, situational leadership, focuses on observed behaviour (Hersey & Blanchard, 1988). The Tri-Dimensional Leader Effectiveness Model (Hersey and Blanchard, 1988) is based on the degree of guidance and direction given by a leader, the socio-emotional support provided by the leader and, lastly, the followers' readiness to do a task. Situational leadership, according to the authors, consists of four leadership styles which are commonly labelled: "telling", "selling", "participating", and "delegating". A "telling" leadership style provides specific instructions by the leader who closely supervises the follower's performance. A "selling" style is chosen by a leader who explains the decisions but provides the follower with the opportunity for clarification. In the third style, "participating", ideas and decision-making are shared and encouraged by the leader. Lastly, the leader for the "delegating" style hands over the

responsibility for the decision and its implementation to the follower. To determine appropriate leadership style actions, leaders must decide whom they want to influence, determine the readiness level of their followers, and then choose the most appropriate style.

This model has been used in a variety of settings, including parenting, research and development, business, and education (Gill, 1984; Hersey & Blanchard, 1988). In the educational setting, the model has been utilized for both student-teacher relationships and administrator-faculty relationships. Other educational relationships, such as associations between leadership and other academic roles, have been discussed by some authors.

Association of leadership with other academic roles. In the school system, instructional leadership by principals has been associated with teacher effectiveness (Pino, 1988; Short & Spencer, 1990) but no studies supported effective teaching related to qualities of leadership. The concept of teachers as leaders is relatively rare in the educational literature and is restricted to the leadership exercised by principals (Zimpher, 1988). The majority of leadership studies in the health professions appears in the nursing literature (Hern-Underwood & Kenner, 1991; Johnson & D'Argenio, 1991; Lawrence & Lawrence, 1984; McDaniel & Wolf, 1991; Reed, 1991; Zurlinder & Bongard, 1991) but few studies have been conducted for

medicine (Green, Murata, Lynch, & Puffer, 1991; Wharton, 1987). Statements have been made which assume that excellent teaching parallels excellent leadership (World Health Organization Expert Committee, 1984) and which report that both processes are similar (Roueche, 1990), but no research has been conducted to support them.

Other factors associated with leadership. Several other factors may affect leadership. These other factors are sociodemographic variables, educational background, administrative or leadership experience, social supports, and personal attributes related to locus of control and psychological hardiness.

Sociodemographic factors are known by health care professionals to affect many diseases and medical outcomes (Evans, Barer & Marmor, 1994). These factors, age and gender, also have an impact upon medical leadership. Meskin (1991) reported a disproportion of leadership activity in female dentists under the age of 39, compared with female dentists 39 years and over, and Ferrier & Woodward (1982) reported different abilities, personalities, and attitudes in male and female medical graduates in similar roles.

Wilson & McLaughlin (1984) described deans' experiences in major appointments prior to assuming their deanships. Most of these data are derived from descriptive surveys which provide the percentage of deans who previously served in

various positions, such as a department chair. Apart from this descriptive survey, the association of various aspects of previous work and educational experience with leadership has not been studied, although curricula vitae which list prior work and educational experience are highly valued by search committees during interviews with potential leadership candidates.

The association of social support with health and well-being has been extensively studied in medicine (Kaplan, 1985; Kouzes & Posner, 1987) but not in leadership. The precise meaning of social support varies depending on social links, social environment, and cultural values (Corin, 1994); that is, the cultural context in which a person lives and works. Depending on the context, individuals and groups determine the types of people whom they rely on for support, their "preferred supporters" (Corin, 1994). People seek different preferred supporters depending on the kind of support desired; that is, problem oriented support seekers search for friends who help solve problems by offering suggestions, whereas emotional support seekers search for friends who distract them from their problems or reduce their anxiety (Heller & Lakey, 1985). Perceived support from different types of people, for example family, friends, and colleagues, can affect the interactional behaviour such as task talk, but not the content of the interaction. Therefore, effective leaders may seek different support from family and colleagues depending on the

context and the problem. For example, a leader may seek family support as a distraction from work stress, yet search out a colleague at work for help in solving the same problem.

Indeed, the perception of social support is more important than the actual support a person may receive (Cohen, Mermelstein, Kamarck & Hoberman, 1985; Heller & Lakey, 1985; Wethrington & Kessler, 1986). Currently, this perception of social support is understood as a sense of acceptance within social relationships (Sarason, Pierce & Sarason, 1990). Sarason & Sarason (1985) suggested that persons in supportive social relationships may develop skills to improve their relationships or may possess skills to build these better support networks. Personal efficacy, defined as the confidence to explore the enviornment, is related to a continuing sense of acceptance and, therefore, may influence the self-perception of effective leadership (Sarason, Pierce & Sarason, 1990). Thus, social supports may be the factors which assist leaders to become more effective, by reducing the stresses of a demanding and sometimes hectic position (Kouzes & Posner, 1987; Sarason & Sarason, 1985). These stresses are compounded when individuals are removed from their professional work situations and are placed in leadership roles within the university environment. Heller & Lakey (1985) were unsure if people who serve as leaders choose their friends to meet specific support needs or, conversely, if people choose specific interaction behaviours to support the

needs of friends who are leaders. Because leaders influence the behaviours of others to meet goals, the latter explanation would be the more reasonable.

In addition to social support, a psychological hardiness factor has been proposed as a means to survive change and handle stress in demanding executive roles (Kouzes & Posner, 1991). Psychological hardiness is the commitment, sense of control, and positive challenge that people experience in their lives (Kobasa, Maddi, & Kahn, 1982). The stresses of medical teachers who integrate their multiple roles of teaching, research, community service, and patient care into their daily work may be compared more to executives in industry and other people who tend to differentiate these roles and function in only one role at a time (Wilson & McLaughlin, 1984).

Summary. Leadership has been defined, dilemmas in leadership have been raised and those dilemmas specific to medical leadership were discussed. Various leadership models were reviewed and dimensions and items which describe leadership were listed. Few studies have been conducted in medicine examining the association of leadership and other factors within academic roles. Issues surrounding the measurement of leadership and teaching are reviewed next.

Issues in Measurement

Issues arise when leadership and teaching are measured. The choice of instruments to measure these two variables is reviewed. The use of self-report for measuring these variables in medicine is discussed.

Instruments for Measuring Effective Teaching. Various research methodologies are available to measure effective teaching. As an example, ethnographic studies (Pugh, 1988) have been employed as methods for studying teacher effectiveness. They can provide dimensions unattainable by quantitative methods alone, but are also labour intensive and expensive. More general quantitative methods, such as global rating instruments, are available for evaluation of teaching and are rated highly (Bleys et al., 1986; Donald & Saroyan, 1991). These global instruments are not as specific as more extensive instruments and permit a greater element of personal bias to surface, as a result of the smaller number of items. Therefore quantitative methods for rating with specific items may be more appropriate for this investigation.

Self-evaluations remain one of the most frequently used indicators for assessing teaching. Various instruments available for measuring teaching effectiveness by self-evaluation are usually designed to measure classroom instruction in schools and colleges (Grosz, 1986; Seldin, 1984; Speer & Zoellick, 1974; Vocational Instructor Teaching

Skills Project, 1984; Washton, 1988) rather than one-on-one teaching, i.e., one teacher and one student, which occurs most commonly in academic family medicine (Woolliscroft & Schwenk, 1989).

The Peer and Self-Evaluation Checklist (PSEC) is a sixty item instrument developed for measuring six teaching competencies including professional skills (Stier, 1982). Because the instrument had not appeared previously in studies, it might be considered less valid. Other checklists for faculty self-evaluation, specifically for the basic and allied health professions, have been designed (Jones, Preusz, & Gilmore, 1987; Romberg, 1984; Washton, 1985) and might well seem ideal, but the instruments again measure aspects of classroom teaching and grading alone.

Two self-evaluation instruments, one by Seldin (1984) and the other by Irby (1978a), are applicable to clinical one-on-one teaching. Both instruments also have been cited extensively in the literature (Edwards, Kissling, Plauche, & Marier, 1986).

Other factors reported to influence ratings include professional roles, such as student, self, or peer; faculty members' department, such as family medicine or surgery; and teaching method, such as lecture, clinical supervision, or seminar (Irby, 1984b). Different teaching sites or university centres also could result in variable ratings from the evaluators (Anderson et al., 1991). In the sixteen Canadian

medical schools, the potential for wide discrepancies across university family medicine departments should be diminished by their having met accreditation standards set by the Assessment and Evaluation Committee of the College of Family Physicians of Canada. Teaching methods are more uniform in family medicine (College of Family Physicians of Canada, 1992). Small group teaching is taught in faculty workshops, both locally and nationally. These last three factors, role, department, and teaching methods, can be standardized in the design of a study if the subjects are chosen from only one department and discipline, such as family physicians.

Instruments for Measuring Effective Leadership. As with effective teaching, several instruments have been developed for measuring leadership in educational settings. The majority of these instruments apply only to the evaluation of leadership by public school principals (National Association of Elementary School Principals, 1991). Five instruments were found to be appropriate for measuring leadership. One instrument, developed by Kouzes & Posner (1990), was a list of open-ended questions which the leader answered. Although instruments using qualitative methods can be as valid and reliable as instruments using quantitative methods (Kirk & Miller, 1986), the comparison of results and use of multiple interviews by these methods limit their practical value in this study. Another instrument, The Leadership Performance

Assessment Inventory (LPAI) (Land, 1989) measures competence in generic leadership skills but utilizes information from various sources, such as observation and questionnaires, for each indicator of leadership. The use of multiple sources makes the data collection process unwieldy. The third instrument, The Leadership Behavior Opinionnaire, measures leadership behaviour by groups (Millar, 1986) rather than by individuals and thus is not acceptable. Another instrument, by McCombs (1980), contains 149 items for measuring leadership, which might be too long for completion by the busy subjects in this study. Therefore, none of these instruments would be appropriate for the current study.

In comparison, the LEAD-Self questionnaire (Appendix B) by Hersey and Blanchard (1988) has been used by practising managers, teachers, parents, and administrators for over twenty years (Gill, 1986; Hersey & Blanchard, 1988). The LEAD-Self instrument measures the individuals' perceptions of their leadership styles based on a choice of action in twelve situations. The instrument does not appear to contribute to learning a response pattern and, in addition, provides a method for calculating a score of leader effectiveness based on the chosen actions. Governance of universities (Birnbaum, 1988) and academic medical centres depend on adapting to each of four leadership styles (Wilson & McLaughlin, 1984). The LEAD-Self instrument would appear to be an appropriate

instrument for measuring leadership effectiveness with academic family physicians.

Use of Self Report for Measuring Effective Teaching. The reliability and validity of instruments on evaluation of teaching is still being developed and tested (Bleys, Gerrtisma, & Netjes, 1986; Donald & Saroyan, 1991). Students, colleagues, and the teachers themselves all have key roles in ascertaining effective teacher performance (Stritter, 1983). Student ratings of teachers are highly consistent and reliable (McKeachie, 1979, cited in Rippey, 1981; Stritter, 1983; Seldin, 1984) and few other factors, such as student, course, class, and instructor characteristics, have affected these measurements. Nevertheless, the ratings are limited if they are produced by less than 75% of the class over one semester, are the only source of information, or are not standardized when administered (Seldin, 1984).

Peers are best suited to judge certain criteria of teaching, such as the mastery of the subject, the instructional objectives, or the currency of teaching materials (Gould, 1991; Seldin, 1984). One major advantage of peers' evaluations is the opportunity to give informal feedback to improve other faculty members' performance (Stritter, 1983). The confidentiality afforded by the student ratings does not permit this direct feedback to occur. Nonetheless, colleague ratings often are met by faculty

resistance which may be interpreted as challenging their competence (Seldin, 1984; Fogel, 1989).

On the other hand, formative self-evaluation also has been reported useful as a tool to improve teaching (Cohen, 1991; Drake, 1984; Gould, 1991; Scholl, 1987; Skeff, 1983; Van Ort, 1983); and, because few or no repercussions result, the evaluation is likely to be honest (Seldin, 1984). The major problem associated with self-evaluation is not the inability on the part of some people to evaluate themselves (Howser, 1989), but their inability to use the information to become actually more effective teachers (Rippey, 1981; Stritter, 1983; Seldin, 1984).

Although student and colleague ratings are reliable and measure different aspects of teaching, they require evaluations from a number of students and colleagues for each faculty member (Irby, 1986; Lancaster et al., 1979), and preferably over several teaching semesters. Rippey (1981) cautioned against combining evaluations from multiple sources, because each source often has a different perspective. In contrast, Stier (1982) and Irby (1983) supported faculty evaluation based on multiple sources. These processes make data collection by these methods impractical for the proposed study. In addition, to be truly valuable to the individual, they require assistance from another source, such as colleagues to aid in the interpretation (Cohen, 1991; Skeff, 1983; Stritter, 1983).

In comparison, self-evaluations have some advantages over the former two methods. Self-evaluations rely on the faculty members' perceptions alone and allow for more valid comparisons with the self-perceptions of their leadership (Martin, 1990). Faculty self-evaluations more consistently report actual teaching practices than do evaluations from other sources (Heller, 1982). All three roles outlined by Arreola (1984) content expertise, instructional delivery, and instructional design, can be evaluated by the self-evaluation process, whereas neither student nor peer evaluation can do so (Gould, 1991). In addition, self-evaluation can measure other unique perspectives, such as intended learning outcomes and the teacher's own interpretation of students' ratings (Gould, 1991; Menges, 1984). According to Rippey (1981), self-evaluation is likely to be honest because it is derived from the person who is seeking to improve. Thus, self-report would appear to be a satisfactory method for measuring teachers' effectiveness.

Use of Self-report for Measuring Effective Leadership. Teachers' perceptions have been used to measure leadership (March & Crisci, 1991; Short & Spencer, 1990) but not without some criticisms (National Association of Elementary school Principals, 1991). Individuals' perceptions of themselves are the strongest motivators for change and commitment to change in their self-image and autonomy (Hersey & Blanchard, 1988).

Another instrument for measuring leadership effectiveness is the LEAD-Other instrument (Hersey & Blanchard, 1988) which measures the actual perceptions of followers of the individual's leadership. This instrument is not economically practical for this study because it requires responses from a number of each individual's followers. Moreover, this study is measuring the self-perceptions of individuals' teaching and leadership, rather than the perceptions of others, and consequently supports the selection of the LEAD-Self instrument.

Use of Self-report in Medicine. One might question whether family medicine teachers can complete self-report instruments accurately. Medicine is a profession which demands recognition of strengths and limitations in the individual and requires the professional to be a lifelong learner (Houle, 1980). The self-evaluators in this study evaluate family medicine residents daily and should bring the same rigours to this evaluation without additional training in the evaluation process. In addition, faculty who are former residents may have been trained to self-evaluate themselves more realistically through the socialization and maturation process of becoming a physician (Bleys et al., 1986). In a study of primary care residents (Woolliscroft, Palchik, Dielman, & Stross, 1985), self-assessment of professional abilities was emphasized and accepted, as evidenced by high

completion rates of the assessments over a four year period. With increasing clinical maturity, the residents in the study showed more critical assessment of their own personal abilities. In another study, video-taping, used considerably in family medicine, has increased the ability for people to rate themselves more accurately as a tool for self-directed learning (Hays, 1989). Moreover, the use of the Total Design Method for mail surveys by Dillman (1987) has resulted in high rates of completed questionnaires by physicians (Hoddinott & Bass, 1986). Thus, the use of self-assessments appears well supported in the profession of medicine.

Summary. Several instruments are available for measuring effective teaching and leadership but those instruments which require individuals to evaluate themselves appear to be the most suitable for the present study. The use of self-report for measuring teaching and leadership skills appears well supported generally, and particularly for family medicine.

Conclusion

Academic medical faculty play many roles in their professional capacity. Research and publication roles have been studied with respect to teaching roles. In the early 1980's, leadership roles were being examined in medicine. The literature provides definitions and specific criteria for evaluating both teacher and leader performance; however, the

literature reveals no studies comparing teaching skills with leadership skills. Therefore, the following research questions will guide this study.

Does an association exist in academic family medicine between:

1) teaching and leadership as measured by academic family physicians' self-perceptions of their own teaching and leadership?

2) age and effective leadership?

3) gender and effective leadership?

4) years of training and effective leadership?

5) graduate degrees, apart from a Doctor of Medicine, and effective leadership?

6) kinds of administrative appointments and effective leadership?

7) the number of years in administrative appointments and effective leadership?

8) personal attributes of psychological hardiness and effective leadership?

9) social supports and effective leadership?

Methodology

The instruments used to measure clinical teaching and leadership in the study are discussed in the first two sections of the methodology. In the procedures section, the selection of subjects, collection of data, choice of statistics for analysis, and the ethics for the study are delineated.

Instrument for Effective Teaching

Many checklists for faculty self-evaluation (Stier, 1982), including some checklists specifically designed for the basic and allied health professions (Jones, Preusz, & Gilmore, 1987; Romberg, 1984; Washton, 1985) might have appeared ideal for this study; but all of these instruments measured aspects of classroom teaching and grading alone.

Two self-evaluation instruments, one by Seldin (1984) and the other by Irby (1978a), were applicable to clinical one-on-one teaching which occurs frequently in the health professions, including family medicine. Both instruments have been cited extensively in the literature (Edwards, Kissling, Plauche, & Marier, 1986). The instrument by Irby (1978a) (Appendix A) was more appropriate for this study than the instrument by Seldin because it was designed specifically for self-evaluation of clinical teaching in medicine. Moreover,

it was more easily adapted to calculating an overall score of teacher effectiveness.

A number of instruments for measuring clinical teaching have employed a seven-point scale to rate the frequency of each teaching characteristic (Donnelly & Woolliscroft, 1989; Irby, 1978b; Vocational Instructor Teaching Skills Project, 1984) while other instruments have included a simpler five-point scale (Bleys et al., 1986; Cohen, 1991; Downing, English, & Dean, 1983; Lancaster, Mendelson, & Ross, 1979; Rous et al., 1972) or a larger nine-point scale (Arnold, Willoughby, & Calkins, 1985). The majority of instruments favoured a seven-point scale but scored it by various methods. In some studies (Arnold et al., 1985; Donnely & Woolliscroft, 1989; Edwards et al., 1986), a mean rating score was calculated across the items to reflect overall evaluations. In other studies, authors used a cumulative score of the items (Vocational Instructor Teaching Skills Project, 1984). In a study by Tortolani et al. (1990), each variable was dichotomized at a point on the frequency histogram where visual inspection suggested that two subgroups could be distinguished. The instrument proposed for this study was the Self-assessment Inventory for Clinical Teaching in Medicine by Irby, using a seven-point scale.

Instrument for Effective Leadership

The LEAD-Self questionnaire (Appendix B) by Hersey and Blanchard (1988), used by practising managers, teachers, parents, and administrators for over twenty years (Gill, 1986; Hersey & Blanchard, 1988), was the instrument proposed for measuring effective leadership. The LEAD-Self instrument measured the individuals' perceptions of their leadership styles, based on a choice of action in twelve situations. The instrument has not appeared to lend itself to the learning of a response pattern and, in addition, has provided a method for calculating a score of leader effectiveness based on the chosen actions. Governance of universities (Birnbaum, 1988) and academic medical centres have depended on adapting to each of the four leadership styles (Wilson & McLaughlin, 1984). Although the reliability of the instrument has not been reported in any of the articles which were reviewed, the construct validity of Hersey and Blanchard's theory of leadership effectiveness was confirmed by Hambleton and Gumpert (1982).

Validity and Reliability of the Self-Report Measure

Self-report measures have certain limitations with respect to validity (Stier, 1982). They were overcome in this study by choosing an instrument found to have acceptable content validity and which has been used previously in a variety of medical settings. Although the validity of self-

assessment techniques has not been established fully (Bleys et al., 1986), both of the chosen instruments have been used extensively in a wide variety of settings (Edwards et al., 1986; Gill, 1984; Hersey & Blanchard, 1988; Irby, 1978) and have been reported to have good face validity in the settings in which they were used. Adequate content validity for The Self-assessment Inventory for Clinical Teaching by Irby (1978) was provided by Table 2. Content validity determined whether the domain being measured was sufficiently addressed by the questionnaire (Del Greco, Walop, & McCarthy, 1987). The LEAD-Self instrument provided content validity by using the four leadership styles which were required in a variety of leadership positions. A study conducted by Sheets & Henry (1984) provided some criterion validity to self-reports for family medicine teachers, the subjects of the present study. The medical topics given the lowest self-reported ratings by a small sample of family physicians being prepared for teaching positions were also those topics on which the family physicians ranked poorly on testing. The notion of theory-in-use, i.e., theory which is operationalized, compared with espoused theory, i.e., theory which is not realized in practice, also would support this opinion (Argyris & Schon, 1974). No other instruments were shown to be more applicable for this study than these two instruments.

Because the same person was completing each form, the perceptions compared were those of only one person and might

have provided more valid comparisons than if they were chosen from different sources. Nonetheless, objectivity was enhanced and social desirability bias lessened by ensuring the confidentiality of the responses (Vocational Instructor Teaching Skills Project, 1984).

Thus, although self-evaluations may be considered a less valid method, research has not shown their invalidity (Bleys et al., 1986; Carrol, 1990, cited in Gould, 1991; Hanson & Rogers, 1984). Whereas literature supporting the reliability of evaluation instruments was limited, the face, content, and construct validity of the self-report instruments were supported.

Factors Associated with Effective Leadership

Several variables, which the literature has identified as potential factors influencing effective leadership, were included in the questionnaire and measured by responses to questions or scenarios (Appendix C). These variables were age, gender, years of training, other graduate degrees, kinds of administrative appointments, number of years in administrative positions, personal attributes related to psychological hardiness, and social supports.

Statistical Analysis

A probability level of .05, by convention, was considered significant. The data were analyzed by SAS System for

<u>Elementary Statistical Analysis</u> (Schotzhauer & Littel, 1987).
The two major variables, effective teaching and effective
leadership, were analyzed by both a chi-square test and
regression analysis. For each subsequent question, a chi-
square test was used to analyze each independent variable
listed with the dependent variable, because no natural
variation was commonly shown. Using a probability level of
.05 increased Type I error, but using a level less than .05
did not appreciably alter the significant results for the
study.

A sample size of 176 was required to detect a 15%
increase in leadership effectiveness for effective teachers,
using a base teacher effectiveness rate of 80% with an Alpha
equal to 0.05 and Beta equal to 0.20. (Dean, Dean, Burton, &
Dicker, 1990).

Procedures

Three procedures are outlined in this section. The
selection of subjects is described; the method for data
collection is summarized; and the procedure for obtaining
consent for the study is outlined.

<u>Selection of Subjects</u>. Subjects for the study were
selected by a random sample from the family physician members
of the Section of Teachers, College of Family Physicians of
Canada. The College Of Family Physicians is a voluntary

organization which is committed to mandatory continuing medical education and high standards of patient care. The College of Family Physicians of Canada is also the accrediting body for Family Medicine programs across Canada and ensures that comparable standards are met and practised in each teaching program. The Section of Teachers is a voluntary section within the College, which is committed to improving teaching. The majority of Family Medicine teachers in full-time teaching are members. These members include physicians and other health care workers, such as nutritionists and social workers, who also may assume academic leadership positions within Family Medicine. Only family physicians were surveyed, in order to eliminate the effect of other disciplines on the results.

Data Collection. A random selection of family physician members of the Section Of Teachers, College of Family Physicians of Canada was chosen to receive the mailed questionnaire in this cross-sectional study design. The mail survey was conducted according to the Total Design Method by Dillman (1987). This method was designed to increase the return rate for mail surveys. The questionnaire was mailed with a cover letter. This mailing was followed one week later by a postcard reminder which served either as a thank you for returning the questionnaire or as a reminder to return the questionnaire. Three weeks after the original mailing, a

second postcard was sent to the non-respondents with a shorter
cover letter that informed the non-respondents that the
questionnaire was not received. Dillman's seven week
certified final mailing was not used because of cost.

The study was introduced to the family medicine academic
community as a Free-standing paper at the Section Of Teachers
Meeting held in October, 1992 in Quebec City. Subjects not
choosing to complete the questionnaire were asked to return a
card confirming their non-participation. The questionnaire was
pilot-tested with other health professionals who are members
of the Section of Teachers, College of Family Physicians of
Canada. Letters were sent to the owners of the instruments
seeking their permission to use them. Replies were received,
granting permission to use the instruments (Appendix D). The
questionnaire, including Appendices A, B, and C, with
accompanying instructions for completing the questionnaire
(Appendix E), took approximately 20 minutes to complete.

Ethics. Ethics approval was obtained from the University
of Manitoba, Faculty of Education, Ethics Committee. All
subjects received information about the study in a covering
letter (Appendix F) and consented by choosing to complete and
mail the questionnaire to the researcher.

Results

In the first section, the participation rate and the characteristics of the family physicians who enroled in the study are presented. The participant characteristics in this section are descriptive statistics. In the second section statistical differences for the purposes of hypotheses testing are presented as are the results of the major research hypothesis and the eight minor hypotheses. Data were analyzed using t-test, chi-square, and Pearson correlation tests. The alpha value was set at .05 and the beta value at .08. Although the alpha could have been set lower, for example at $p < .03$, to reduce Type I errors with a large number of chi-square tests, the results would not have been dramatically altered. Therefore, the p-value was maintained at .05.

Participants

This section has two parts. In the first part is a description of the participation rate and participants. In the second part, characteristics of the participants, including previous educational and work background, are presented and the teaching behaviours and leadership scores of participants are described.

<u>Participation Rate</u>. One hundred and ninety-nine surveys were mailed; one hundred and twenty-three were returned. Two of the returned surveys were excluded from analysis because one person was not a family physician and the other person returned the questionnaire 10 months after the first mailing and five months after the analysis was completed. Four surveys were returned not completed; one person declined to participate; one person was retired; and two were on sabbatical in Australia. An attempt was made to contact the latter two but mailings were misdirected. Thus, 117 surveys from family physicians were available, resulting in a 59.3% participation rate for the study. Of the 117 participants, one person did not attempt the teaching behaviour instrument and 10 other persons either did not complete or return the Lead-self instrument. No differences were detected in the participants who did not attempt the Lead-Self instrument from those participants who did attempt it, except for one variable, the perception of family support, $\underline{x}^2$ (2, $\underline{N}$ = 104) = 4.03, $\underline{p}$<.05. Eighty-three percent ($\underline{n}$ = 79) of the participants who completed the instrument, compared to 55.5% ($\underline{n}$ = 5) of participants who had not completed the instrument, were likely to perceive their family as supportive of their academic position.

Participant Characteristics. The study participants, as shown in Table 5, were primarily males (75.2%) with two years of postgraduate training (56.0%) and with a mean age of 42.9 years. Besides a medical degree, 44.4% had a bachelor degree and 20.5% had a Master's degree as shown in Table 6. The most common Master's degrees (N = 26) were medical (38.4%, n = 10) or science related (23.1%, n = 6). Master's degrees in Family Medicine and Education/Administration were similar at 15.4% (n = 4) followed by degrees in Arts (7.7%, n = 2). One hundred and eight participants (92.3%) had received Certification in Family Medicine.

Ninety (76.9%) family physicians were currently serving in administrative or leadership positions. This percentage of service increased to 96.0% if past service was included. The most common administrative and leadership positions held by participants in the past were: chair of a departmental committee (35.0%), hospital department head (30.8%), president or vice-president of a professional organization (28.2%), and chair of a professional organization committee (23.1%). Table 7 shows the types and numbers of physicians in past administrative and leadership positions. A similar distribution existed with current administrative and leadership positions, as shown in Table 8. The majority of 90 family physicians (65.5%, n =59) had served three or fewer

Table 5

Characteristics of family physician participants

Characteristic	Participants (N=117)
Age	
mean age	42.9
Gender	
male	88 (75.2%)
female	29 (24.8%)
Years of postgraduate training[a]	
1 or less	24 (20.7%)
2	65 (56.0%)
3 or more	27 (23.3%)

[a] one participant did not state years of training

Table 6

<u>Other degrees held by participants</u>

Degree	Participants (N=117)
Bachelor	
yes	52 (44.4%)
no	65 (55.6%)
Master	
yes	24 (20.5%)
no	93 (79.5%)
Diploma	
yes	19 (16.2%)
no	98 (83.8%)
Doctor of Philosophy	
yes	2 (1.7%)
no	115 (98.3%)
Physician Management Institute (Canadian Medical Association Leadership Series)	
yes	6 (5.1%)
no	111 (94.9%)
Hospital administration	
yes	4 (3.4%)
no	113 (96.6%)

Table 7

Types and numbers of physicians in past

administrative/leadership positions

Type of position	Number of physicians[a]	
Chair of departmental committee	41	(35.0%)
Hospital department head	36	(30.8%)
President/vice-president of professional organization	33	(28.2%)
Chair of professional organization committee	27	(23.1%)
Chair of faculty committee	15	(12.8%)
University department head	3	(2.6%)
Associate/Assistant Dean	2	(1.7%)
Other positions	37	(31.6%)
Clinical director	17	(14.5%)
chief of medical staff	10	(8.5%)
program director	7	(6.0%)
board member	2	(1.7%)
other	1	(0.9%)

[a] total is greater than 117 because one individual could hold more than one position

Table 8

Types and number of physicians currently in an administrative
or leadership position

Type of position	Number of physicians[a]	
Chair of departmental committee	24	(20.5%)
Hospital department head	20	(17.1%)
Chair of professional organization committee	12	(10.3%)
President/vice-president of professional organization	11	(9.5%)
Chair of faculty committee	8	(6.8%)
University department head	6	(5.1%)
Associate/Assistant Dean	2	(1.7%)
Other positions	31	(26.5%)
program director	10	(8.5%)
chair unit	10	(8.5%)
chief of medical staff	3	(2.6%)
clinical unit director	3	(2.6%)

[a] total is less than 117 because not all persons held a position

years in the current administrative or leadership positions with 16 (17.8%) having served 6 or more years. In comparison, when the total number of years served by the 96 persons in administration or leadership positions was studied, 43 persons (44.8%) had served a total of six or more years in similar positions, with 21.4% of them serving greater than 10 years. Thirty-one (32.3%) had served 3 or fewer years in total.

The majority (71.4%) of participants perceived that their colleagues were very or extremely supportive of them in their administrative or leadership positions, as presented in Table 9. Furthermore, Table 9 shows that 80.7% of the family physicians perceived that their families were very or extremely supportive of them in their academic positions.

The percentage of family physician teachers who were very or extremely confident in their teaching skills, as shown in Table 10, was 63.5%. In comparison, the percentage of those family physicians who were very or extremely confident in their leadership skills was only 53.5%. While 73.0% ($n = 84$) of participants ($N = 115$) never or only sometimes kept a list of their professional development needs, slightly over a quarter (27.0%, $n = 31$) of them often or always kept a list of them.

Psychological hardiness was a measure of a person's ability to cope with stress in the job by transforming this stress into a desirable outcome. The majority of the participants (69.6%), like Kelly in the scenario

Table 9

Social supports for current administrative/leadership positions

Colleague support	Participants (N=91)[a]	
Not supportive	3	(3.3%)
Slightly supportive	23	(25.3%)
Very supportive	50	(54.9%)
Extremely supportive	15	(16.5%)

Family support	Participants (N=104)[a]	
Not supportive	1	(1.0%)
Slightly supportive	19	(18.3%)
Very supportive	58	(55.7%)
Extremely supportive	26	(25.0%)

[a] total is less than 117 because not all participants in positions answered survey

Table 10

Confidence in teaching and leadership skills

Confidence in teaching	Participants ($\underline{N}$=115)[a]	
Not confident	1	(0.9%)
Somewhat confident	41	(35.6%)
Very confident	63	(54.8%)
Extremely confident	10	(8.7%)

Confidence in leadership	Participants ($\underline{N}$=114)[a]	
Not confident	6	(5.3%)
Somewhat confident	47	(41.2%)
Very confident	55	(48.2%)
Extremely confident	6	(5.3%)

[a] total is less than 117 because not all participants
answered survey question

(Appendix C, Question 15), believed that they were able to manage stressful job situations in this manner. Few of them (8.7%) believed they were like Leslie in the same scenario, unable to cope in these types of situations, and 21.7% believed that they were between the two types of behaviour.

The highest response chosen by the participant for each of the items of the Self-assessment Inventory for Clinical Teaching in Medicine by Irby (1978a) was added to yield an individual's total score for the instrument. The individual total scores ranged from 120 to 366. The mean of the total individual scores was 281.5 with one incomplete inventory recording a score of 25. Then the median percentile total score from all participants' total scores was calculated. The median was calculated to be 295.5. The total score of the Self-assessment Inventory for Clinical Teaching in Medicine above the median was chosen, by convention, to define self-perception of effective teaching. This measure of self-perceived effectiveness for teaching was used for further hypothesis testing.

Table 11 presents the range of scores for participants completing the LEAD-Self instrument ($\underline{N}$ = 107). The score represents the person's ability to change and choose appropriate leadership styles for each of the twelve situations presented. LEAD-Self scores ranged from 18 to 31 with a mean of 25.4 and a mode of 25. Scores in the 30 to 36 range indicate a leader with a high degree of adaptability,

Table 11

Participants and types of effectiveness leadership score

Less effective score	Participants ($\underline{N}$=107)[a]	
18	1	(0.9%)
19	4	(3.7%)
20	1	(0.9%)
21	3	(2.8%)
22	4	(3.7%)
23	8	(7.5%)

Moderately Effective Score		
24	13	(12.2%)
25	20	(18.7%)
26	14	(13.1%)
27	16	(15.0%)
28	15	(14.0%)
29	5	(4.7%)

Highly effective score		
30	2	(1.9%)
31	1	(.9%)

[a] total is less than 117 since not all participants returned instrument

while scores between 24 and 30 reflect a moderate degree of adaptability (Hersey, 1989). A score of 24 or higher was chosen as the measure of effective leadership. A score below 24 was a measure of less effective leaadership. This measure was used for further analyses in the following section about hypothesis testing.

Hypotheses

A major and eight minor hypotheses were tested. Five additional analyses were conducted.

Major Hypothesis. The major hypothesis that family physicians' self-perception of effective teaching is associated with their self-perception of effective leadership was not supported, x^2 (1, N = 116) = 3.57, p = .06. A Pearson Correlation between these two variables also was not shown, r (114, N = 116) = .02, p = .84.

Minor Hypotheses. Eight minor hypotheses were tested for associations between effective leadership in academic family medicine and age, gender, years of training, graduate degrees, kinds of administrative appointments, number of years in these appointments, personal attributes of psychological hardiness, and, finally, social supports. Neither of the first two minor hypotheses, the association of effective leadership with age or gender, as shown in Table 12, was supported.

Table 12

The association of sociodemographic variables and effective
leadership

	Effective leadership[a]	Less effective leadership[b]
Age (years)[c]		
29 to 40	35	13
41 to 45	16	6
46 or more	34	12
Gender[d]		
Female	24	5
Male	62	26

[a] number of participants with Lead-Self score $\geq$ 24

[b] number of participants with Lead-Self score < 24

[c] $\underline{N}$=116 because one of the participants did not state age
   $x^2 = 0.02$ df = 2   p = .99

[d] $\underline{N}$=117
   $x^2 = 1.70$ df = 1   p = .19

The next two minor hypotheses tested relate to educational training and background for academic teaching and leadership roles. An association between effective leadership with the number of years in training or either bachelor or master graduate degrees, as presented in Table 13, was not supported. Although diplomas were held by 19 (16.2%) of the family physicians, they were all medical diplomas related to the practising of clinical medicine rather than the practising of teaching or leadership and, therefore, were not analyzed further. Family physicians held other degrees, including Doctor of Philosophy, Physician Management Institute Certificates, and hospital administration, which also were not analyzed further because their numbers were too small.

The association between kinds of administrative appointments and effective leadership in academic family medicine was studied next. The relationship between having several current and past administrative appointments, and effective leadership, was tested. The past and current administrative appointments were arranged in the following categories: 1) major academic administrative/leadership positions, that is, university department head, hospital department head, or associate dean; 2) major professional organization administrative/leadership positions, that is, president or vice-president; 3) minor administrative/leadership positions, that is, chair of

Table 13

The association of educational background and effective leadership

	Effective leadership[a]	Less effective leadership[b]
Years in training[c]		
1 or less	17	7
2	46	19
3 or more	22	5
Bachelor degree[d]		
Yes	40	12
No	46	19
Master's degree[e]		
Yes	19	5
No	67	26

[a] number of participants with Lead-Self score $\geq$ 24

[b] number of participants with Lead-Self score < 24

[c] $\underline{N}$=116 because one of the participants did not state years in training

$x^2 = 1.21$ df = 2   p = .55

[d] $\underline{N}$=117

$x^2 = .56$ df = 1   p = .33

[e] $\underline{N}$=117

$x^2 = .50$ df = 1   p = .48

departmental, faculty, or professional organization committee. Table 14 presents the association of effective leadership with past major academic administrative/leadership positions, past major professional organization administrative/leadership positions, and past minor administrative/leadership positions; none of these hypotheses was supported. An association with effective leadership and persons in these current major academic administrative/leadership positions, major professional administrative/leadership positions, and minor administrative/leadership positions also was not supported, as shown in Table 15. The number of years served in these positions either currently or in the past, as presented in Table 16, was not significantly associated with leadership. Other important past or current important administrative/leadership positions identified by the participants were: program directors, Chiefs of medical staff, clinic directors, and board members. Although persons in these current other positions were significantly different, $\underline{x}^2$ (1, $\underline{N}$ =117) = 4.00, $\underline{p}$ = .05, from persons not in these positions currently, not all persons were equally able to identify themselves as being in these positions because the questionnaire design for this question was open-ended. Therefore, an association was shown when one might not exist, if all persons had been given an equal opportunity to respond.

Table 14

The association of past academic and professional
administrative/leadership positions and effective leadership

	Effective leadership[a]	Less effective leadership[b]
Major academic administrative/ leadership position[c]		
Yes	32	14
No	54	17
Major professional administrative/ leadership position[d]		
Yes	28	5
No	58	26
Minor administrative/ leadership position[e]		
Yes	41	9
No	45	22

[a] number of participants with Lead-Self score $\geq$ 24

[b] number of participants with Lead-Self score < 24

[c] N=117
  x^2 = .60   df = 1   p = .44

[d] N=117
  x^2 = 3.04   df = 1   p = .08

[e] N=117
  x^2 = 3.24   df = 1   p = .07

Table 15

The association of current academic and professional
administrative/leadership positions and effective leadership

	Effective leadership[a]	Less effective leadership[b]
Major academic administrative/leadership position[c]		
Yes	27	7
No	59	24
Major professional administrative/leadership position[d]		
Yes	9	2
No	77	29
Minor administrative/leadership position[e]		
Yes	27	7
No	59	24

[a] number of participants with Lead-Self score $\geq$ 24

[b] number of participants with Lead-Self score < 24

[c] $\underline{N}$=117
$x^2 = .86$ df = 1   p = .35

[d] $\underline{N}$=117
$x^2 = .43$ df = 1   p = .51

[e] $\underline{N}$=117
$x^2 = .86$ df = 1   p = .35

Table 16

The association of number of years in current and past

positions and effective leadership

	Effective leadership[a]	Less effective leadership[b]
Number of years in current position[c]		
3 or less	45	14
4 or more	23	8
Number of years in past positions[d]		
5 or less	42	11
6 or more	31	12

[a] number of participants with Lead-Self score $\geq$ 24

[b] number of participants with Lead-Self score < 24

[c] N=90 because not all participants stated years in current position

$x^2 = .05$ df = 1   p = .83

[d] N=96 because not all participants stated years in past position

$x^2 = .67$ df = 1   p = .41

Psychological hardiness was a measure of the ability to confront potentially taxing work situations in an effective manner. Family physicians' leadership effectiveness was not associated with the psychological hardiness measure, x^2(2, N = 117) = .76, p = .68.

Finally, an association between different kinds of social supports and effective leadership is shown in Table 17. A significant association was revealed between those persons who perceived themselves as effective leaders and who felt they had colleagues who were supportive of them in their current academic positions. Effective leadership also was associated with people who felt that family members or significant others were supportive of them in their current academic positions.

Additional Analyses. After the data were collected and reviewed, several additional analyses were conducted on the major and minor hypotheses originally proposed. These variables could be associated with effective leadership in academic family physicians. As indicated in Table 18, an association was shown to exist only between effective leadership and one other variable, the university site in which the academic family physician held an appointment. Effective leaders were more likely to hold an appointment at universities in the Prairie Provinces, British Columbia, and Ontario.

Table 17

The association of social support and effective leadership

	Effective leadership[a]	Less effective leadership[b]
Colleague support[c]		
very supportive	47	24
less supportive	18	2
Family support[d]		
very supportive	68	11
less supportive	16	9

[a] number of participants with Lead-Self score $\geq$ 24

[b] number of participants with Lead-Self score $<$ 24

[a] $\underline{N}$=91 because not all participants stated support from colleagues
$x^2 = 4.33$ df = 1   p = .04

[b] $\underline{N}$=104 because not all participants stated support from family
$x^2 = 5.96$ df = 1   p = .02

Table 18

The association of university affiliation and effective leadership[a]

University Affiliation	Effective leadership[b]	Less effective leadership[c]
British Columbia	10	2
Prairie provinces	18	2
Ontario	28	8
Quebec	26	13
Atlantic provinces	2	4

[a] $\underline{N}$=113 because not all participants listed their university
$x^2 = 9.80$ df = 4   p = .04
[b] number of participants with Lead-Self score $\geq$ 24
[c] number of participants with Lead-Self score < 24

The remaining analyses did not show significant associations. Effective leadership was not associated with the number of positions that a person had held x^2 (1, $\underline{N}$ = 117) = 1.08, or keeping a professional development list x^2 (1, $\underline{N}$ = 117) = .19. Nor was family physicians' self-perceived effective leadership associated with their confidence in either their skills as a teacher x^2 (1, $\underline{N}$ = 117) = 2.31, or their skills as a leader x^2 (1, $\underline{N}$ = 117) = .18.

<u>Summary</u>

The typical participant was male, 42 years old, with two years of postgraduate training. The majority (76.9%) of participants held administrative/leadership positions and had served three or fewer years in their current positions. Approximately eighty percent were self-classified as moderately effectively leaders.

The major hypothesis that an association existed between self-perceptions of effective teaching and the self-perceptions of effective leadership for academic family physicians, was not supported. Two of the minor hypotheses had significant findings. Effective leadership was associated with both colleagues' support and family's support within the current academic position. In additional analyses, effective leadership was associated with university affiliation. The importance and meaning of these findings are discussed in the next chapter.

Discussion

The discussion is composed of six sections. First, the reasons are explained for any differences between the participants who completed the LEAD-Self and those physicians who either did not complete or return the LEAD-Self instrument. Second, the characteristics of the physician participants associated with leadership are explained. The third section is a discussion of effective leadership with effective teaching, followed by the fourth section, the association of effective leadership with social supports.

Participants Completing and Not Completing LEAD-Self Instrument

The participants who completed the LEAD-Self instrument are significantly more likely to perceive their family as supportive of their academic position than those who did not complete the instrument. Otherwise they are similar in all other variables, for example, age, gender, years in training, and prior administrative or leadership appointments. Supportive families may permit participants to bring academic work home which could account for a higher completion rate of the instrument on the part of that group, as compared to participants coming from families which are perceived as less supportive. In addition, the total number of participants not completing the instrument is small, 8.5% (n = 10) of the total

participants ($\underline{N}$ = 117); and of these 5 perceived their families as not supportive. Although this difference is statistically significant, the actual difference ($\underline{N}$ = 5) between these two types of participants on one variable is less impressive. Therefore, the generalization of the results to the total participants involved in the study is acceptable.

Effective leadership and Characteristics of Participants

An association between effective leadership and either age or gender was not supported by this study, as compared to the work by Meskin (1991) and Ferrier & Woodward (1982). The results of this study suggest that the opportunity for effective leadership in family medicine is not based on these demographic traits. Although the interest levels and opportunities for seeking leadership for different genders and ages of family physicians are not known, future academic leaders should not be influenced by sociodemographic characteristics which are not amenable to change.

Three participant characteristics related to educational background and preparation for leadership are worthy of note: residency training, degrees other than Doctor of Medicine, and prior experience in administrative/leadership positions. Twenty-four of 116 (20.7%) of the participants have one or fewer years of postgraduate medical training, or residency, a situation which implies that many received their Certification in Family Medicine, a clinical specialty designation

requirement for teaching in family medicine, by the practice eligible route. With a mean age of 42.9 years, these participants did not have the opportunity to enter residency programs prior to 1968, but rather obtained this latter requirement.

Academic family physicians, apart from Certification in Family Medicine, do not require degrees other than their Doctor of Medicine to become family medicine teachers. However, 44.4% of them had an undergraduate degree, only recently a requirement for entry into medical school; and 20.5% of them had a Master's degree which was most commonly medical or science related. Although important for credibility with the university, accrediting bodies and licensing authorities, years in training and other graduate degrees are not associated with effective leadership for family physicians. Nevertheless, this finding attests to the commitment of family medicine faculty who are striving for academic credibility among other well established departments within Faculties of Medicine (Hennen, 1993).

The majority of participants (96%) have prior experience serving in administrative or leadership positions, and 44.4% of them have six or more years experience in some of these roles. This finding is expected because campus committee work, public service, and activity in professional societies are part of faculty persons' academic duties (Seldin, 1984). Prior appointments, number of appointments, and years of

experience in either these past or current positions are considered important prerequisites for assuming major academic positions, but none of these variables is associated with effective leadership in this study. The descriptive survey by Wilson & McLaughlin (1984), which delineated previous work experience by deans, also is not supported by these findings.

Nevertheless, the majority (77.6%) of participants reflect moderate degrees of adaptability in self-perceived leadership, with less than 3% of them reflecting high degrees of adaptability in their leadership styles, despite their lack of educational backgrounds in either management or leadership. This result supports the opinion of Lorsch & Mathias (1987), who stressed the similarities between managing interactions within organizations and managing interactions with patients, with the first reflecting adaptability skills which may have been learned from caring for and negotiating with patients (Eisenthal, Emery, Lazare, & Udin, 1979; Szaz & Hollender, 1955; McWhinney, 1989).

Few family medicine faculty have assumed administrative or leadership positions outside of their Departments of Family Medicine. Only a small percentage of family medicine faculty members have assumed leadership or administrative positions within higher university positions, such as a chair of a faculty committee (12.8%), a university department head (2.6%), or an associate or assistant dean (1.7%), in spite of their considerable experience in leadership roles.

Approximately 45% of them have served 6 or more years in some leadership positions. In comparison, larger proportions of participants have served in family medicine related departmental positions, for example, a hospital department head (30.8%), a chair of a departmental committee (35%), or a president/vice-president of a professional organization (28.2%). This apparent under-utilization of family medicine expertise within the university environment may reflect an equitable distribution of university administrative/leadership positions among departments and total faculty members as a whole. Thus, although family medicine teachers have a high number of moderately effective leaders, they may be no greater than the number of moderately effective teachers in other departments. Alternately, their numbers may be surpassed by highly effective leaders from other departments within the university. Studies comparing family medicine to other departments in Faculties of Medicine are required.

Thus, the need to acquire improved skills in leadership, collaborative planning, conflict resolution, and consensus decision-making, as delineated by Bland et al. (1990), is supported by this study. Family physician teachers need to improve from moderately adaptable leaders to highly adaptable leaders if they want to increase their leadership profiles outside and within their own departments. Therefore, effective leadership training is an important topic to be encompassed and addressed by faculty development programs for

academic family physicians. Additional hypotheses which compare leadership with academic behaviours, such as the hypothesis discussed next, are needed.

Effective Leadership and Effective Teaching

The major hypothesis of this study, an association between effective teaching and effective leadership, as measured by academic family physicians' self-perceptions of their own teaching and leadership, was not supported. Although Roueche (1990) stated that excellent teaching parallels excellent leadership and that leadership is a process similar to teaching, the results from this study do not support his opinion, at least not for moderately effective leaders. Confidence in teaching, confidence in leadership, or keeping a professional development list, factors conceptually similar to self-perception of effective teaching, were also not associated with effective leadership. Therefore, the leadership selection process from the ranks of clinicians and teachers, as reported by some authors (Cooper, 1984; Doughty, Williams, & Seashore, 1991; Magill, McClure, & Commerford, 1986), is not warranted. In fact, Simon (1985) has stated that the best academic students are taught to avoid leadership responsibilities if they want to become first class scholars, researchers, and professionals.

Although similarities between managing organizations and managing patients have been posited for medical leaders

(Lorsch & Mathias, 1987), this association has not been studied. Furthermore, good leadership is frequently confused with good management but each of them requires entirely separate skills (Covey, 1989; Detmer & Finney, 1993, Hersey & Blanchard, 1988). Thus, leaders must be assessed, trained, and chosen on their leadership qualities rather than on their publication, research, teaching, or management qualities. Academic medical centres cannot assume that persons who are highly effective in these other roles are effective also in leadership roles.

Moreover, within these academic medical centres, physicians work together as part of a professional bureaucracy governed by bureaucratic concepts (Fogel, 1989). The managers in professional bureaucracies are most successful when they are physicians, but only if they are seen as serving the physicians in the organization. Certain university environments may foster this success. The association of university affiliation with effective leadership, shown in this study by additional analysis, would tend to support this viewpoint that leaders in medicine should come from the ranks of their own kind. The current trend of providing more power to non-medical administrators in health care settings, however, is contrary to this concept (Brown & McCool, 1987; Fogel, 1989). If this former viewpoint is true, and if effective leadership is not associated with effective teaching, then universities need to reexamine seriously some

of the recommendations in the <u>Commission of Inquiry on Canadian University Education Report</u> (Smith, 1991). In this report the commission recommended that faculty members decide with their superiors whether their academic performance will be evaluated on their teaching or their research. Neither this commission nor the Report of the University Education Review Commission (Roblin, Gordon, Kavanaugh & Richardson, 1993), entitled <u>Post-Secondary Education in Manitoba: Doing Things Differently</u>, supported the increasing time and the importance placed in leadership or administrative roles by faculty members (Seldin, 1984). University authorities need to recognize the skills required in these positions and the subsequent benefits attained by the university when effective leaders serve in these positions. During these times, creative and well-trained leaders are required to solve the problems encountered in academic medical centres and to transform future visions into realities (Burg, McMichael, & Stemmler, 1986; Cooper, 1984; Swartz & Gottheil, 1991).

In summary, leadership continues to be an evasive and nebulous subject to study. Research supports the need to change our current criteria for selecting leaders. Curricula vitae, which outline demographic data, previous academic training and educational background, and prior experience in various situations, may be necessary but are not sufficient for selecting future leaders. Universities and departments will continue to use them until more reliable criteria are

identified.   Personal   interviews   with   randomly   selected
subordinates or completion of leadership instruments, such as
those developed by Kouzes & Posner (1991) or Hersey &
Blanchard (1988), might be more effective for choosing our
leaders in academic settings.

Effective Leadership, Social Supports, and Affiliations

Both   the   perception   of   colleague   support   and   the
perception of family support in current academic positions
being   associated   with   effective   leadership,   two   minor
hypotheses,   were   supported.   As   stated   by   Corin   (1994),
individuals and groups determine the types of people which
they rely on for support, their preferred supporters.

These preferred supporters differ in various contexts.
In this study, a greater proportion of participants affiliated
with universities in the western provinces were more effective
leaders.   University   environments   provide   these   various
contexts and may explain the association of effective leaders
with the various university affiliations in this study.   In
particular, the Western provinces may provide an environment
for developing or attracting preferred supporters.   The
aspects of the environment which foster this support require
study.

As suggested by Heller & Lakey (1985), effective leaders
may seek different support from family members than from
colleagues, depending on the context and the problem.   For

example, a leader may seek family support as a distraction from work stress, yet search out a colleague at work for help in solving the same problem.

An association between psychological hardiness and effective leadership, as proposed by Kouzes & Posner (1991), is not supported. Thus, this study distinguishes between social supports and psychological hardiness; that is, a need for acceptance of oneself compared to the need for control over situations.

Social supports may be the factors which assist leaders to become more effective, by reducing the stresses of a demanding and sometimes hectic position (Kouzes & Posner, 1987; Sarason & Sarason, 1985). If people choose specific interaction behaviours to support the needs of their friends, as suggested by Heller & Lakey (1985), then faculty development programs can assist leaders and faculty in recognizing and developing these behaviours to increase the leadership skills of academic family physicians and to foster supportive university environments. From our knowledge of effective leaders who influence the behaviours of others to meet goals, these behaviours should be teachable. Several conclusions can be reached and recommendations made, based on this study.

Conclusions

Some findings would bear further analysis: the current practice of using curricula vitae and interviews for selecting academic leaders, the poor representation of family physicians in leadership roles outside of their own departments, and the association of effective leaders with social supports and university affiliation. The major hypothesis of an association between effective teaching and effective leadership was not supported and also warrants further analysis. Topics for further research arose from the results and also are listed.

Methods in addition to curricula vitae and personal interviews, such as direct observation, leadership instruments, or interviews with subordinates, should be utilized by search committees when selecting people for leadership positions. Effective leaders could not be identified in the study simply by demographic factors, educational background, past work experiences, or personal attributes. Many of these factors, included in curricula vitae, are used as the main criteria to select leaders in academic departments. None of these factors, however, serves adequately to identify leaders. Leaders should be chosen by search committees primarily for their leadership qualities, rather than for their publication, research, teaching, or management experience. The finding that effective teaching and effective leadership were not associated also supports the

argument that less emphasis should be placed on teaching experience when selecting leaders.

Teaching of leadership skills in faculty development programs for family physicians is critical if moderately effective leaders wish to become highly effective leaders and compete for more important leadership positions outside of Departments of Family Medicine. Leadership, as a domain separate from administration, has only recently become a topic for faculty development (Bland et al.,1990). Family physicians are not represented well in leadership roles outside of their own departments. An explanation may be the greater number of highly effective leaders in other departments who are chosen for these roles. By increasing the number of highly effective leaders in Departments of Family Medicine, this shortcoming could be overcome, with a benefit to Faculties of Medicine, which could then choose from a larger number of highly effective leaders.

Leaders have needs, identified as family and colleague supports, which must be fulfilled for effective functioning. University affiliation, also associated with effective leadership, may encourage these supports in some environments more than in others. Universities in the western provinces appear to serve this function better than the eastern universities. Nevertheless, the specific factors in the environment at the university or the specific behaviours of family members, friends, and colleagues which are associated

with effective leaders are not identified. In addition, the results do not determine whether these social supports develop effective leaders or whether the reverse is true and effective leaders develop supportive relationships and networks. Past studies about leadership usually discuss only how the leader's role influences behaviours of others to meet certain goals (Hersey & Blanchard, 1988) rather than what role others play in supporting leaders in academic positions. The needs of leaders, other than social supports and university affiliation, the specific behaviours of supportive individuals, and the aspects of university environments which foster effective leadership, are not known and require further research.

Further research

Further research in leadership is required in many areas and, based on this study, the following specific research is suggested:

a) Assess the proportion of highly effective leaders in other departments in the Faculties of Medicine. Few of the participating family physicians who were moderately effective leaders were serving in higher leadership positions within the university and Faculty of Medicine. Other departments may have a higher proportion of highly effective leaders who are chosen to serve in these leadership positions.

b) Determine whether effective leaders possess the skills to develop supportive relationships and networks, or whether supportive environments are more likely to develop effective leaders. The relationship of these two factors, that is, cause or effect, is unknown.

c) Measure actual leadership performance of subjects or their subordinates' perception of their abilities. A study using actual leadership performance rather than self-perceived performance could produce different findings.

d) Identify other factors, in addition to social supports and university affiliation, required by leaders to function effectively.

e) Replicate this study with a larger study sample. While the sample size is small (N = 117) and represents a participation rate of 59.3%, the number of chi-square tests could have increased the number of Type 1 errors when a $p <$ .05 was used.

Recommendations

Based on the results of this study, it is recommended that:

1. Selection committees decide upon successful candidates for leadership positions based on methods other than a curriculum vitae and personal interview alone, such as the use of leadership instruments and interviews with subordinates.

2. Applicants for leadership positions in Departments of Family Medicine allow selection committees to evaluate their leadership skills by such methods as the use of leadership instruments and interviews with subordinates, in addition to the curriculum vitae and personal interviews.

3. Faculty development programs for Departments of Family Medicine conduct leadership workshops to increase their proportion of highly effective leaders across Canada.

4. Universities fund and conduct research to identify: a) the specific factors in their environments and b) the specific behaviours of family members, friends, and colleagues which are associated with the greater proportion of effective leaders in the western provinces.

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Appendix A

The Instrument for Self-perception of Teaching Effectiveness

SECTION I - TEACHING BEHAVIOURS

Directions: In this inventory there are statements which reflect some of the ways clinical instructors can be described. For *each* statement, circle the number on the scale which indicates how *descriptive* the behaviour is of your teaching. The scale ranges from 1 for not at all descriptive to 7 for very descriptive. Check (/)if the behaviour is not applicable to the type of teaching you do.

In rating your teaching, respond to each item carefully and thoughtfully. Avoid letting your response to some items influence your responses to others.

TEACHER BEHAVIOURS	NOT AT ALL DESCRIPTIVE				VERY DESCRIPTIVE			NOT APPLICABLE

A. Organization/clarity

1. Summarizes major points	1	2	3	4	5	6	7	( )
2. Explains clearly	1	2	3	4	5	6	7	( )
3. Communicates what is expected to be learned	1	2	3	4	5	6	7	( )
4. Presents material in an organized manner	1	2	3	4	5	6	7	( )
5. Emphasizes what is important	1	2	3	4	5	6	7	( )

B. Enthusiasm/stimulation

6. Stimulates student's/resident's interest in the subject	1	2	3	4	5	6	7	( )
7. Is enthusiastic about the subject	1	2	3	4	5	6	7	( )
8. Seems to enjoy teaching	1	2	3	4	5	6	7	( )
9. Is a dynamic and energetic person	1	2	3	4	5	6	7	( )
10. Has an interesting style of presentation	1	2	3	4	5	6	7	( )

C. Instructor knowledge

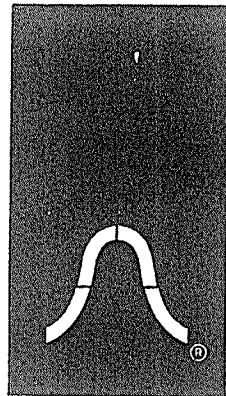|								
11. Reveals broad reading in his/her medical specialty	1	2	3	4	5	6	7	( )
12. Directs students/residents to useful literature in the field	1	2	3	4	5	6	7	( )
13. Discusses current developments in his/her specialty	1	2	3	4	5	6	7	( )
14. Demonstrates a breadth of knowledge in medicine generally	1	2	3	4	5	6	7	( )

TEACHER BEHAVIOURS	NOT AT ALL DESCRIPTIVE					VERY DESCRIPTIVE		NOT APPLICABLE

15. Discusses points of view other than his/her own   1   2   3   4   5   6   7   ( )

D. <u>Rapport</u>

16. Provides professional support and encouragement to students/residents   1   2   3   4   5   6   7   ( )

17. Establishes rapport with others   1   2   3   4   5   6   7   ( )

18. Encourages a climate of mutual respect   1   2   3   4   5   6   7   ( )

19. Listens attentively   1   2   3   4   5   6   7   ( )

20. Shows a personal interest in students/residents   1   2   3   4   5   6   7   ( )

21. Corrects students'/residents' mistakes without belittling them   1   2   3   4   5   6   7   ( )

22. Demonstrates sensitivity to the needs of others   1   2   3   4   5   6   7   ( )

23. Willingly remains accessible to students/residents   1   2   3   4   5   6   7   ( )

E. <u>Instructional Skill</u>

24. Encourages active participation in discussion   1   2   3   4   5   6   7   ( )

25. Utilizes audiovisual resources effectively   1   2   3   4   5   6   7   ( )

26. Gives students/residents positive reinforcement for good contributions, observations, or performance   1   2   3   4   5   6   7   ( )

27. Gears instruction to students/ residents level of readiness   1   2   3   4   5   6   7   ( )

28. Quickly grasps what students/ residents are asking or telling   1   2   3   4   5   6   7   ( )

29. Answers carefully and precisely questions raised by students   1   2   3   4   5   6   7   ( )

30. Questions students/residents to elicit underlying reasoning   1   2   3   4   5   6   7   ( )

31. Helps students/residents organize their thoughts about patient problems   1   2   3   4   5   6   7   ( )

32. Demonstrates clinical procedures and techniques being taught   1   2   3   4   5   6   7   ( )

TEACHER BEHAVIOURS	NOT AT ALL DESCRIPTIVE							VERY DESCRIPTIVE	NOT APPLICABLE

F. Clinical Supervision

33. Communicates role expectations to students/residents	1	2	3	4	5	6	7		( )
34. Guides student's/resident's development of clinical skills	1	2	3	4	5	6	7		( )
35. Provides specific practice opportunities	1	2	3	4	5	6	7		( )
36. Prepares students/residents for difficult clinical situations	1	2	3	4	5	6	7		( )
37. Offers special help when difficulties arise	1	2	3	4	5	6	7		( )
38. Observes students'/residents' performance frequently	1	2	3	4	5	6	7		( )
39. Identifies students'/residents' strengths and limitations objectively	1	2	3	4	5	6	7		( )
40. Provides frequent feedback on students'/residents' performance	1	2	3	4	5	6	7		( )
41. Makes specific suggestions for improvement	1	2	3	4	5	6	7		( )
42. Seems well prepared for teaching contacts with students/residents	1	2	3	4	5	6	7		( )
43. Questions students/residents in a non-threatening manner	1	2	3	4	5	6	7		( )

G. Clinical Competence

44. Demonstrates clinical skill and judgement	1	2	3	4	5	6	7		( )
45. Demonstrates skill at data gathering	1	2	3	4	5	6	7		( )
46. Objectively defines patient problems	1	2	3	4	5	6	7		( )
47. Synthesizes patient problems rapidly	1	2	3	4	5	6	7		( )
48. Interprets laboratory data skilfully	1	2	3	4	5	6	7		( )

H. Professional Characteristics

49. Takes responsibility for own actions and procedures	1	2	3	4	5	6	7		( )
50. Recognizes own limitations	1	2	3	4	5	6	7		( )
51. Seems to have self-confidence	1	2	3	4	5	6	7		( )
52. Is self-critical	1	2	3	4	5	6	7		( )
53. Is open-minded and non-judgemental	1	2	3	4	5	6	7		( )
54. Does not appear to be arrogant	1	2	3	4	5	6	7		( )

Appendix B

The Instrument for Self-perception of Leadership Effectiveness

LEAD

SELF

Leadership Style/Perception of Self

Developed by Paul Hersey and Kenneth H. Blanchard

Your name _____

PURPOSE

The purpose of this instrument is to evaluate your perception of your leadership style in terms of "telling," "selling," "participating," or "delegating," and to indicate whether the style is appropriate in various situations.

INSTRUCTIONS

Assume you are involved in each of the following twelve situations. Each situation has four alternative actions you might initiate. Read each item carefully. Think about what you would do in each circumstance. Then, circle the letter of the alternative action choice which you think would most closely describe your behavior in the situation presented. Circle only one choice.

After you have circled one choice for each situation, use the "LEAD Directions for Self-Scoring and Analysis" to score and array the data.

Leader Effectiveness & Adaptability Description

1. SITUATION

Your followers are not responding lately to your friendly conversation and obvious concern for their welfare. Their performance is declining rapidly.

ALTERNATIVE ACTIONS

You would. . .

A. Emphasize the use of uniform procedures and the necessity for task accomplishment.

B. Make yourself available for discussion but not push your involvement.

C. Talk with followers and then set goals.

D. Intentionally not intervene.

2. SITUATION

The observable performance of your group is increasing. You have been making sure that all members were aware of their responsibilities and expected standards of performance.

ALTERNATIVE ACTIONS

You would. . .

A. Engage in friendly interaction, but continue to make sure that all members are aware of their responsibilities and expected standards of performance.

B. Take no definite action.

C. Do what you can to make the group feel important and involved.

D. Emphasize the importance of deadlines and tasks.

3. SITUATION

Members of your group are unable to solve a problem. You have normally left them alone. Group performance and interpersonal relations have been good.

ALTERNATIVE ACTIONS

You would. . .

A. Work with the group and together engage in problem solving.

B. Let the group work it out.

C. Act quickly and firmly to correct and redirect.

D. Encourage the group to work on the problem and be supportive of their efforts.

4. SITUATION

You are considering a change. Your followers have a fine record of accomplishment. They respect the need for change.

ALTERNATIVE ACTIONS

You would...

A. Allow group involvement in developing the change, but not be too directive.

B. Announce changes and then implement with close supervision.

C. Allow the group to formulate its own direction.

D. Incorporate group recommendations, but you direct the change.

5. SITUATION

The performance of your group has been dropping during the last few months. Members have been unconcerned with meeting objectives. Redefining roles and responsibilities has helped in the past. They have continually needed reminding to have their tasks done on time.

ALTERNATIVE ACTIONS

You would...

A. Allow the group to formulate its own direction.

B. Incorporate group recommendations, but see that objectives are met.

C. Redefine roles and responsibilities and supervise carefully.

D. Allow group involvement in determining roles and responsibilities, but not be too directive.

6. SITUATION

You stepped into an efficiently run organization. The previous administrator tightly controlled the situation. You want to maintain a productive situation, but would like to begin humanizing the environment.

ALTERNATIVE ACTIONS

You would...

A. Do what you can to make the group feel important and involved.

B. Emphasize the importance of deadlines and tasks.

C. Intentionally not intervene.

D. Get the group involved in decision making, but see that objectives are met.

7. SITUATION

You are considering changing to a structure that will be new to your group. Members of the group have made suggestions about needed change. The group has been productive and demonstrated flexibility in its operations.

ALTERNATIVE ACTIONS

You would...
A. Define the change and supervise carefully.
B. Participate with the group in developing the change, but allow members to organize the implementation.
C. Be willing to make changes as recommended, but maintain control of implementation.
D. Avoid confrontation; leave things alone.

8. SITUATION

Group performance and interpersonal relations are good. You feel somewhat insecure about your lack of direction of the group.

ALTERNATIVE ACTIONS

You would...
A. Leave the group alone.
B. Discuss the situation with the group and then initiate necessary changes.
C. Take steps to direct followers toward working in a well-defined manner.
D. Be supportive in discussing the situation with the group, but not too directive.

9. SITUATION

Your boss has appointed you to head a task force that is far overdue in making requested recommendations for change. The group is not clear on its goals. Attendance at sessions has been poor. Their meetings have turned into social gatherings. Potentially, they have the talent necessary to help.

ALTERNATIVE ACTIONS

You would...
A. Let the group work out its problems.
B. Incorporate group recommendations, but see that objectives are met.
C. Redefine goals and supervise carefully.
D. Allow group involvement in setting goals, but not push.

10. SITUATION

Your followers, usually able to take responsibility, are not responding to your recent redefining of standards.

ALTERNATIVE ACTIONS

You would. . .

A. Allow group involvement in redefining standards, but not take control.

B. Redefine standards and supervise carefully.

C. Avoid confrontation by not applying pressure; leave the situation alone.

D. Incorporate group recommendations, but see that new standards are met.

---

11. SITUATION

You have been promoted to a new position. The previous supervisor was uninvolved in the affairs of the group. The group has adequately handled its tasks and direction. Group interrelations are good.

ALTERNATIVE ACTIONS

You would. . .

A. Take steps to direct followers toward working in a well-defined manner.

B. Involve followers in decision making and reinforce good contributions.

C. Discuss past performance with the group and then examine the need for new practices.

D. Continue to leave the group alone.

---

12. SITUATION

Recent information indicates some internal difficulties among followers. The group has a remarkable record of accomplishment. Members have effectively maintained long-range goals. They have worked in harmony for the past year. All are well qualified for the task.

ALTERNATIVE ACTIONS

You would. . .

A. Try out your solution with followers and examine the need for new practices.

B. Allow group members to work it out themselves.

C. Act quickly and firmly to correct and redirect.

D. Participate in problem discussion while providing support for followers.

Address inquiries or orders to:

Pfeiffer & Company	Pfeiffer & Company	Pfeiffer & Company
8517 Production Avenue	4190 Fairview Street	Roggestraat 15
San Diego, California 92121	Burlington, Ontario L7L 4Y8	2153 GC Nieuw-Vennep
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FAX: (619) 578-2042	FAX: (416) 333-5675	31-02526-89840, FAX: 31-02526-86885

For more information on Situational Leadership instruments, publications, training programs, video resources, and related materials, consult the **Situational Leadership**® Resource Guide. To receive a copy, write to or call: Pfeiffer & Company, 8517 Production Avenue, San Diego, CA 92121, telephone 619-578-5900.

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Appendix C

Additional Variables

APPENDIX C

ADDITIONAL VARIABLES

QUESTIONNAIRE

1. In what year were you born? 19__

2. What is your gender? Male___ Female___

3. a) At which University do you hold an academic appointment in the Department of Family Medicine?

    ___British Columbia ___Toronto
    ___Calgary   ___McMaster
    ___Edmonton   ___Sherbrook
    ___Saskatchewan   ___Laval
    ___Manitoba   ___Montreal
    ___Western Ontario   ___McGill
    ___Ottawa   ___Dalhousie
    ___Queen's   ___Memorial

    b) How many years in total have you held academic appointments?

    ___less than one year
    ___one to three years
    ___four to five years
    ___six to ten years
    ___ten to twenty years
    ___more than twenty years

4. In what year did you graduate with an M.D. degree? 19__

5. Are you a Certificant of the College of Family Physician's of Canada (CCFP)?

    ___yes   ___no

6. How many years of postgraduate (residency) training did you obtain (including both family medicine and other specialities)?

    ___ 0 years
    ___ 1-2 years
    ___ 3-5 years
    ___ > 5 years

7. What other degrees do you hold? (Please check as many categories as are necessary.)
     ___Bachelor (Please specify_____)

     ___Diploma in (please specify_____)

     ___Master (please specify _____)

     ___PH.D. (please specify _____)

     ___Other (please specify _____)

8. a) What kinds of administrative/leadership positions have you served, or are currently serving? (please check as many as are appropriate)

     ___University Department Head
     ___Hospital Department Head
     ___Associate or Assistant Dean
     ___Chair of Departmental Committee
     ___Chair of Faculty Committee
     ___Chair of Professional Organization
     ___other (please specify)_____

b) how many years have you served in your current position?

     ___less than one year
     ___one to three years
     ___four to five years
     ___six to ten years
     ___more than ten years

9. How many years have you served in the aforementioned positions in total?

     ___less than one year
     ___1-4 years
     ___5-10 years
     ___11-15 years
     ___16-20 years
     ___20 or more years

10. How supportive do you feel your colleagues are/were to you in your present administrative/leadership position. (Please circle the answer which is closest to how you feel)

    not   slightly   very   extremely
supportive   supportive   supportive   supportive

11. How supportive do you feel your family and/or friends are to you in your current academic position? (please circle the answer which comes closest to how you feel)

    not   slightly   very   extremely
supportive   supportive   supportive   supportive

Please complete the following sentences. (Circle the word in parenthesis which would come closest to completing the sentence for you.)

12. I am (not, somewhat, very, extremely) confident in my skills as a teacher.

13. I am (not, somewhat, very, extremely) confident in my skills as a leader.

14. I (never, sometimes, often, always) keep track of my professional developmental needs.

15. Please read the following story and choose who you are most like.

Both Kelly and Leslie think it is important to take care of academic committee work. Kelly always makes a maximum effort cheerfully, sees life as strenuous but exciting, and anticipates change as a useful stimulus to development. By contrast, Leslie hangs back from involvement in tasks, often appears taxed and sees the possibility of change as disruptive to comfort and security. (Please check (/) who you feel you are most like from the following choices).

Do you feel:

    ___exactly like Kelly
    ___somewhat like Kelly
    ___halfway between both Kelly and Leslie
    ___somewhat like Leslie
    ___exactly like Leslie

Appendix D

Letters of Permission

November 23, 1992

Dr. D. Irby
Medical Education
SC45
University of Washington
Seattle, Washington 98195

Dear Dr. Irby:

I am writing to seek your written permission to use all or part of " The Self-assessment Inventory for Clinical Teaching in Medicine" developed by you. I wish to use the instrument as the independent variable to study the research question " Is self-perception of effective teaching associated with self-perception of effective leadership among Canadian academic family physicians? I have chosen this research question for my Master of Education thesis at the Faculty of Education, University of Manitoba, Winnipeg, Manitoba in which I have pursued studies in the program entitled Administration and Governance in Post-secondary Institutions. I completed all my course work for the Master degree during my sabbatical last year.

Your instrument was the best suited for measuring clinical teaching. During the literature search I was unable to find any information on its reliability and validity. If you have any further information about these aspects of the instrument I would be grateful if you could forward them with the permission letter which I require for the ethics and thesis Committees at the University of Manitoba.

I am currently an associate professor with the Department of Family Medicine, Faculty of Medicine, University of Manitoba and greatly appreciate your consideration of this request. I will gladly share the results of my study with you when the results are available. I may be reached at the above clinical address and phone number or by fax at for further information.

Yours sincerely,

Frank J. Martin, M.D.

November 27, 1992

Dr. Frank Martin
Department of Family Medicine
University of Manitoba
Seven Oaks General Hospital
2300 McPhilips Street
Winnipeg, Manitoba R2V 3M3

Dear Dr. Martin:

I am delighted to hear of your work on an advanced degree in education. We are creating doctoral program options in medical education as an area of concentration in the College of Education PhD program. I am also pleased to learn of your interest in using my self-assessment inventory. You have my permission to use the inventory for your research or to adapt it as you see fit. I have not done any reliability studies on the self-assessment form. But, the shorter version of the form that is used for student ratings has high reliability (see Irby D. and Rakestraw P.: Evaluating Clinical Teaching in Medicine. **J. Med. Educ** 56:181-186. 1981).

My latest research on clinical teaching has moved away from descriptions of teacher characteristics toward illumination of teacher knowledge, reasoning and action. The first installment of this research is in the recent issue of Academic Medicine (see Irby D. How Attending Physicians Make Instructional Decisions when Conducting Teaching Rounds. **Academic Medicine** 67:10, 630-638, 1992).

Let me know if I can be of further assistance to you. Best wishes for successful completion of your research.

Sincerely,

David M. Irby
Professor

November 23, 1992

Ms. S. Moskal
Pfieffer & Company International Publishers
4190 Fairview Street
Burlington, Ontario   L7L 4Y8

Dear Ms. Moskal:

I am writing to seek your permission and any anticipated costs for using the LEAD-Self/Code 019APS instrument developed by Hersey and Blanchard for my Master of Education thesis at the Faculty of Education, University of Manitoba, Winnipeg, Manitoba. My thesis topic is entitled "Is effective teaching associated with effective leadership in academic family medicine?" The LEAD-Self instrument will be used as the dependent variable for this research question. I will require approximately 200 instruments, or at the most 400 instruments if a second mailing is required for non-respondents, to complete the study.

In the Spring of this year I contacted the Centre for Creative Leadership in La Hoya, California and talked with a representative of your company in San Diego who advised me that there was a reduced cost of the instrument if used for research purposes. A letter from my thesis advisor, if required, can be forwarded to you. I would be grateful if you could also forward any information documenting the reliability and validity of the instrument for research because I have not come across such information in my review of the literature.

I greatly appreciate your consideration of my request. I can be reached at the above address and phone number or by fax   for any further information which may be required.

Yours sincerely,

Frank J. Martin, M.D.

Pfeiffer
& COMPANY
INTERNATIONAL PUBLISHERS

San Diego • Toronto • Amsterdam • Sydney

11.25.92

Frank J Martin M.D.
Family Practice
Residency Program
Seven Oaks General Hospital
2300 McPhillips St
Winnipeg   MB   R2V3M3

Dear Frank:

Thank you for your recent letter concerning the Lead Self
instrument by Paul Hersey/Ken Blanchard. You may purchase this
instrument at a reduced cost of $2.50 ea for your thesis. You
did not mention how you were going to score this instrument. We
have two scoring instruments.. 1]LEAD Directions for Scoring,
providing information and perceptions, 2] LEAD Matrix
Directions for Scoring providing feedback.

The LEAD Summary does not provide reliability or validation. My
suggestion would be to contact the authors. I'm sure
they would have the information you require.

When ordering, please refer to this letter for pricing. We
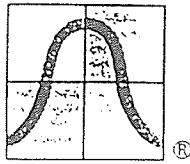will be able to provide you with product within 4 business days
of receipt of your order.

Many thanks for selecting Pfeiffer & Company for your needs. I
look forward to speaking with you in the future.

Goou Luck!

Best Regards,

Suzanne Moskal
Manager Canadian Operations

LEADERSHIP
STUDIES

February 8, 1995

Mr. Frank J. Martin
Seven Oaks General Hospital
Family Practice Res. Program
2300 Mc Phillips Street
Winnipeg, Manitoba R2V 3M3
Canada

Dear Mr. Martin,

Thank you for your interest in Situational Leadership®.

You may use a copy of the LEAD Self instrument providing you print on the copy in large block letters "COPYRIGHTED MATERIAL DO NOT REPRODUCE, Escondido, California: The Center for Leadership Studies. All Rights reserved."

The Center for Leadership Studies is the sole copyright holder for the Situational Leadership® model. This is a one time use permission only.

Sincerely,

Joan Groom
Permissions Department

Appendix E

The Teaching and Leadership Questionnaire

TEACHING AND LEADERSHIP STUDY

When completed please return in the self-addressed envelope to:

Dr. Frank Martin
Department of Family Medicine
158-770 Bannatyne Avenue
Winnipeg, Manitoba
R3E OW3

You will be asked to complete three sections in this questionnaire:

I   Questions about you

II   Teaching Behaviours

III   Leadership Behaviours

Let's go on to the first section about you. Please check (/) or complete each question as instructed.

SECTION I - QUESTIONS ABOUT YOU

1.   In what year were you born? 19__

2.   What is your gender?
   1)   ___ Male
   2)   ___ Female

3.   At which University do you hold an academic appointment in the Department of Family Medicine,

   1) ___British Columbia   9) ___Toronto
   2) ___Calgary   10) ___McMaster
   3) ___Edmonton   11) ___Sherbrook
   4) ___Saskatchewan   12) ___Laval
   5) ___Manitoba   13) ___Montreal
   6) ___Western Ontario   14) ___McGill
   7) ___Ottawa   15) ___Dalhousie
   8) ___Queen's   16) ___Memorial

4.   In what year did you graduate with an M.D. degree? 19__

5.   Are you a Certificant of the College of Family Physicians of Canada (CCFP)?

   1) ___yes
   2) ___no

2

6. How many years of postgraduate internship and/or residency training did you obtain (including both family medicine and other specialities)?

    1) ___ 1 - 11 months
    2) ___ 1 year
    3) ___ 2 years
    4) ___ 3 - 5 years
    5) ___ > 5 years

7. What other degrees do you hold? (Please check as many categories as are necessary.)

    ___Bachelor (please specify) _____

    ___Diploma (please specify) _____

    ___Master (please specify) _____

    ___PH.D. (please specify) _____

    ___Physician Management Institute Certificant
        (please specify Level) _____

    ___Other (please specify) _____

8. What kinds of administrative/leadership positions have you served in the past? (please check as many as are appropriate)

    ___University Department Head
    ___Hospital Department Head
    ___Associate or Assistant Dean
    ___Chair of Departmental Committee
    ___Chair of Faculty Committee
    ___Chair of Professional Organization Committee
    ___President and/or Vice-President of Professional Organization
    ___other (please specify) _____

3

9. a) What kinds of administrative/leadership positions are you currently serving?

        ___University Department Head
        ___Hospital Department Head
        ___Associate or Assistant Dean
        ___Chair of Departmental Committee
        ___Chair of Faculty Committee
        ___Chair of Professional Organization Committee
        ___President and/or Vice-President of Professional Organization
        ___other (please specify) _____

    b) How many years have you served in your current position?

        ____ less than 1 year
        ____ 1 - 3 years
        ____ 4 - 5 years
        ____ 6 - 10 years
        ____ more than 10 years

10. How many years have you served in the aforementioned positions in total?

        ____ less than 1 year
        ____ 1 - 3 years
        ____ 4 - 5 years
        ____ 6 - 10 years
        ____ more than 10 years

11. How supportive do you feel your colleagues are to you in your present administrative/leadership position? (Please check the answer which is closest to how you feel)

        ___ not supportive
        ___ slightly supportive
        ___ very supportive
        ___ extremely supportive

4

12.   How supportive do you feel your family or significant others are to you in your current academic position? (please check the answer which comes closest to how you feel)

        __ not supportive
        __ slightly supportive
        __ very supportive
        __ extremely supportive

Now, please complete the following sentences. (Circle the word in parentheses which would come closest to completing the sentence for you.)

13.   I am (not, somewhat, very, extremely) confident in my skills as a teacher.

14.   I am (not, somewhat, very, extremely) confident in my skills as a leader.

15.   I (never, sometimes, often, always) keep a list of my professional developmental needs.

16.   Please read the following story and choose who you are most like.

Both Kelly and Leslie think it is important to take care of academic committee work. Kelly always makes a maximum effort cheerfully, sees life as strenuous but exciting, and anticipates change as a useful stimulus to development. By contrast, Leslie hangs back from involvement in tasks, often appears taxed and sees the possibility of change as disruptive to comfort and security. (Please check (/) who you feel you are most like from the following choices).

        Do you feel:
        ___exactly like Kelly
        ___somewhat like Kelly
        ___halfway between both Kelly and Leslie
        ___somewhat like Leslie
        ___exactly like Leslie

YOU HAVE COMPLETED SECTION I. PLEASE PROCEED TO SECTION II ON THE NEXT PAGE WHICH ASKS ABOUT YOUR PERCEPTIONS OF YOUR TEACHING BEHAVIOURS.

Directions: In this inventory there are statements which reflect some of the ways clinical instructors can be described. For *each* statement, circle the number on the scale which indicates how *descriptive* the behaviour is of your teaching. The scale ranges from 1 for not at all descriptive to 7 for very descriptive. Check (/)if the behaviour is not applicable to the type of teaching you do.

In rating your teaching, respond to each item carefully and thoughtfully. Avoid letting your response to some items influence your responses to others.

TEACHER BEHAVIOURS	NOT AT ALL DESCRIPTIVE				VERY DESCRIPTIVE			NOT APPLICABLE

A. Organization/clarity

1.	Summarizes major points	1	2	3	4	5	6	7	( )
2.	Explains clearly	1	2	3	4	5	6	7	( )
3.	Communicates what is expected to be learned	1	2	3	4	5	6	7	( )
4.	Presents material in an organized manner	1	2	3	4	5	6	7	( )
5.	Emphasizes what is important	1	2	3	4	5	6	7	( )

B. Enthusiasm/stimulation

6.	Stimulates student's/resident's interest in the subject	1	2	3	4	5	6	7	( )
7.	Is enthusiastic about the subject	1	2	3	4	5	6	7	( )
8.	Seems to enjoy teaching	1	2	3	4	5	6	7	( )
9.	Is a dynamic and energetic person	1	2	3	4	5	6	7	( )
10.	Has an interesting style of presentation	1	2	3	4	5	6	7	( )

C. Instructor knowledge

11.	Reveals broad reading in his/her medical specialty	1	2	3	4	5	6	7	( )
12.	Directs students/residents to useful literature in the field	1	2	3	4	5	6	7	( )
13.	Discusses current developments in his/her specialty	1	2	3	4	5	6	7	( )
14.	Demonstrates a breadth of knowledge in medicine generally	1	2	3	4	5	6	7	( )

TEACHER BEHAVIOURS	NOT AT ALL DESCRIPTIVE					VERY DESCRIPTIVE		NOT APPLICABLE

D. Rapport

15. Discusses points of view other than his/her own 1 2 3 4 5 6 7   ( )

D. Rapport

16. Provides professional support and encouragement to students/residents 1 2 3 4 5 6 7   ( )
17. Establishes rapport with others 1 2 3 4 5 6 7   ( )
18. Encourages a climate of mutual respect 1 2 3 4 5 6 7   ( )
19. Listens attentively 1 2 3 4 5 6 7   ( )
20. Shows a personal interest in students/residents 1 2 3 4 5 6 7   ( )
21. Corrects students'/residents' mistakes without belittling them 1 2 3 4 5 6 7   ( )
22. Demonstrates sensitivity to the needs of others 1 2 3 4 5 6 7   ( )
23. Willingly remains accessible to students/residents 1 2 3 4 5 6 7   ( )

E. Instructional Skill

24. Encourages active participation in discussion 1 2 3 4 5 6 7   ( )
25. Utilizes audiovisual resources effectively 1 2 3 4 5 6 7   ( )
26. Gives students/residents positive reinforcement for good contributions, observations, or performance 1 2 3 4 5 6 7   ( )
27. Gears instruction to students/ residents level of readiness 1 2 3 4 5 6 7   ( )
28. Quickly grasps what students/ residents are asking or telling 1 2 3 4 5 6 7   ( )
29. Answers carefully and precisely questions raised by students 1 2 3 4 5 6 7   ( )
30. Questions students/residents to elicit underlying reasoning 1 2 3 4 5 6 7   ( )
31. Helps students/residents organize their thoughts about patient problems 1 2 3 4 5 6 7   ( )
32. Demonstrates clinical procedures and techniques being taught 1 2 3 4 5 6 7   ( )

TEACHER BEHAVIOURS		NOT AT ALL DESCRIPTIVE				VERY DESCRIPTIVE			NOT APPLICABLE
F.	**Clinical Supervision**								
33.	Communicates role expectations to students/residents	1	2	3	4	5	6	7	( )
34.	Guides student's/resident's development of clinical skills	1	2	3	4	5	6	7	( )
35.	Provides specific practice opportunities	1	2	3	4	5	6	7	( )
36.	Prepares students/residents for difficult clinical situations	1	2	3	4	5	6	7	( )
37.	Offers special help when difficulties arise	1	2	3	4	5	6	7	( )
38.	Observes students'/residents' performance frequently	1	2	3	4	5	6	7	( )
39.	Identifies students'/residents' strengths and limitations objectively	1	2	3	4	5	6	7	( )
40.	Provides frequent feedback on students'/residents' performance	1	2	3	4	5	6	7	( )
41.	Makes specific suggestions for improvement	1	2	3	4	5	6	7	( )
42.	Seems well prepared for teaching contacts with students/residents	1	2	3	4	5	6	7	( )
43.	Questions students/residents in a non-threatening manner	1	2	3	4	5	6	7	( )
G.	**Clinical Competence**								
44.	Demonstrates clinical skill and judgement	1	2	3	4	5	6	7	( )
45.	Demonstrates skill at data gathering	1	2	3	4	5	6	7	( )
46.	Objectively defines patient problems	1	2	3	4	5	6	7	( )
47.	Synthesizes patient problems rapidly	1	2	3	4	5	6	7	( )
48.	Interprets laboratory data skilfully	1	2	3	4	5	6	7	( )
H.	**Professional Characteristics**								
49.	Takes responsibility for own actions and procedures	1	2	3	4	5	6	7	( )
50.	Recognizes own limitations	1	2	3	4	5	6	7	( )
51.	Seems to have self-confidence	1	2	3	4	5	6	7	( )
52.	Is self-critical	1	2	3	4	5	6	7	( )
53.	Is open-minded and non-judgemental	1	2	3	4	5	6	7	( )
54.	Does not appear to be arrogant	1	2	3	4	5	6	7	( )

You have completed more than two-thirds of the questionnaire and will be proceeding to the LEAD-Self Questionnaire, the third and last section, which is enclosed.

Do not respond to the items as if they were part of a test or in terms of what you think a leader or manager ought to do. Respond to the items in terms of the way you think you have behaved in the past when you were faced with situations to those described or in terms of the ways you would behave if you were faced with each of the situations described. In reading each situation, interpret key concepts in terms of the environment or situation in which you most often think of yourself as assuming a leadership role. As a teacher, think about your students as subordinates. Do not change your situational frame of reference from one item to another.

When you have completed the LEAD-Self questionnaire, please enclose all three sections of the questionnaire in the stamped self-addressed return envelope. If you wish a copy of the results when they are compiled, please call   4 and leave a message with your name and address or mail it in a separate envelope to:

> Dr. Frank Martin
> Department of Family Medicine
> 158-770 Bannatyne Avenue
> Winnipeg, Manitoba
> R3E OW3

Now proceed to the instrument and read the instructions carefully. Do not put your name on page 1 of the questionnaire and the LEAD-Self instrument. You will not be scoring the instrument.

Appendix F

Letter of Consent

APPENDIX F
LETTER OF INFORMATION

Dear Colleague:

You are being asked to participate in a study to examine the effects of teaching on leadership qualities of teachers in Family Medicine. The study proposal was presented as a Free-standing paper at the Section of Teachers Meeting held at Quebec City in 1992 and the section members who attended were very intrigued by the study.

The questionnaire will require approximately 20 minutes of your time and can be completed at your leisure. You are asked to complete two standardized questionnaires and provide some information about yourself. Unfortunately, the questionnaire protected by copyright has no French translation and all the questionnaires are written in English. I realize that an English questionaire may be a problem for you. However, I sincerely hope that despite this shortcoming you will decide to participate in this study.

All the results and information will be held in strictest confidence and your anonymity is ensured if the results are presented in any form. Your responses will not be shown to your superior.

You may refuse to participate, to answer any of the questions, or to complete the questionnaire any time without any adverse consequences to you.

I am conducting the study as a graduate student in the Faculty of Education, University of Manitoba, although I am known better in my association with the Department of Family Medicine, University of Manitoba. If you have any questions I may be reached at where a message may be left and I will contact you as soon as possible thereafter.

I would be prepared to share the results of the study with you at a later date. If you so desire a copy of the results, please contact me at the above address either by phone or mail, leaving your name and address. To ensure your confidentiality, do not return your name or address with your completed survey. When the results are compiled, I will send them to you.

Thank you for your cooperation and time in helping with this study. Please take some time now to complete the enclosed questionnaire and return it in the self-addressed envelope.

Yours truly,

Frank J. Martin M.D.

Cher(e) collègue

J aimerais, par la présente, vous demander de participer à une étude qui a pour but d'examiner les effets de l'enseignement sur les qualités de direction des enseignants en Médecine de Famille. Le projet d'étude a été présenté comme communication indépendante à la section des enseignants à la réunion qui a eu lieu à Québec en 1992. Les membres de cette section ont dit qu'ils s'intéressaient beaucoup à cette étude.

Il vous faudra environ vingt minutes de votre temps libre pour compléter ce questionnaire. Je vous demande de bien vouloir compléter les deux questionnaires standardisés et de me fournir des renseignements à votre sujet. Malheureusement, ce questionnaire, protégé par les droits d'auteur, n'a pas été traduit en français et n'est disponible qu'en anglais. Je me rends compte qu'un questionnaire en anglais peut vous causer quelques inconvénients. Ce pendant, j'espère que, malgré cette carence, vous déciderez de participer à cette étude.

Toutes les informations et tous les résultats seront strictement confidentiels et votre anonymat reste assuré peu importe la forme de la présentation des résultats. Vos réponses ne seront pas communiquées àa votre directeur.

Vous pouvez refuser de participer, de répondre à n'importe laquelle des questions ou de compléter le questionnaire sans peus des conséquences négatives.

Je mène cette enquête comme étudiant de troisieme cycle à la Faculté d'Education à l'Université du Manitoba quoique je sois mieux connu pour mon association avec le département de Médecine de Famille à la même universiteé. Si vous avez des qeustions à me poser, n'hésitez pas de me joindre au   où vous poussez laisser un message. Je vous rappelierai aussitôt que possible.

Je serai prêt à partager avec vous les résultats de cette étude lorsqu'elle sera finie. Pour obtenir une copie de ces résultats, vous pouvez me laisser votre nom et votre addresse aux coordonnées ci-dessus. Pour assurer l'aspect confidentiel de l'étude, n'envoyez pas votre adresse avec le sondage complété. Lorsque les résultats seront compilés, je vous les enverrai.

Je vous remercie d'avance de votre concours et de votre aide avec cette çtude. J'apprécierais si vous preniez le temps de compléter le questionnaire ci-joint et vous me le renvoyiez dans l'enveloppe prévue à cet effet.

Avec l'expression de mes sentiments les meilleurs.

Frank J. Martin, M.D.

Faculty of Education
ETHICS APPROVAL FORM

To be completed by the applicant

Title of Study

The association of self-perception of effective teaching associated with effective
leadership by academic family physicians

Name of Principal Investigator(s) (please print):

Francis John Martin

Name of Thesis/Dissertation Advisor or Course Instructor (if Principal Investigator is a student) (please print):

A. Stalker / A. Gregor

I/We, the undersigned, agree to abide by the University of Manitoba's ethical standards and guidelines for research involving human subjects, and agree to carry out the study named above as described in the Ethics Review Application.

_____

Signature of Thesis/Dissertation Advisor or Course Instructor
(if required)

_____
Signature(s) of Principal Investigator(s)

To be completed by the Research and Ethics Committee:

This is to certify that the Faculty of Education Research and Ethics Committee has reviewed the proposed study named above and has concluded that it conforms with the University of Manitoba's ethical standards and guidelines for research involving human subjects.

S.B. STRAW
UNIVERSITY OF MANITOBA
Name of Research and Ethics
Committee Chairperson

Feb. 22 /93
Date

Signature of Research and Ethics
Committee Chairperson