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by

Grace Peak Erickson

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LEADERSHIP DEVELOPMENT IN HIGHER

EDUCATION FOR PUBLIC HEALTH

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DEDICATION

In Loving Memory

of my Parents

J. Francis F. Peak

Eleanor Sayers Peak

TABLE OF CONTENTS

	Page
Acknowledgements	viii
List of Tables	ix
List of Appendices	xiii
Abstract	xiv
Chapter One: The Problem	2
Introduction	2
Purpose	5
Research Questions	5
Chapter Two: Review of the Literature	7
Leadership for Public Health	7
Leadership	13
Definition and Terminology	14
Theoretical Approaches	17
Appointed or theocratic leadership	17
Personality traits or personal attributes	19
Behavioral styles	20
Contingency models	21
Path-goal theory	23
Democratic-participative leadership	24
Authentic leadership	25
Concepts of Leadership for Public Health	30
Summary	33

Chapter Three: Methodology..... 35

Sample..... 35

Instrumentation..... 36

Leadership Survey..... 36

Demographic Form..... 37

Leadership Practices Inventory..... 37

Validity and reliability..... 38

Data Collection..... 39

Hypotheses..... 40

Research Design..... 42

A Combination Design..... 42

Emergent Fit..... 43

Grounded Theory & Symbolic Interaction.. 44

Analysis..... 45

Limitations of the Study..... 47

Chapter Four: Analysis of Results..... 50

Dean/Director Perspectives and the Emphasis on Leadership in Schools and Programs of Public Health..... 50

Respondents..... 50

Relationship of Leadership Survey Results to Research Questions and Hypotheses..... 58

Characteristics of dean/director respondents..... 58

Definitions of leadership..... 65

Leadership emphasis in schools of public health..... 77

Practices and Behaviors of Leadership for Public Health..... 83

Kouzes and Pozner framework..... 83

Leadership skills cited in the IOM report..... 95

Functions of the management process..... 107

Public Health Leader and Follower Respondents and Leaderhip Practices and Behaviors of Contemporary Public Health Leaders..... 113

Relationship of LPI Results to Research Questions and Hypothesis..... 113

Respondents..... 113

Characteristics of Respondent Leaders and Followers..... 113

Public Health Leaders..... 115

Demographic characteristics..... 115

Educational preparation, discipline and area of specialization..... 115

Position title and number of years in the position..... 118

Followers of Public Health Leaders..... 121

Demographic characteristics..... 121

Education, discipline and area of specialization..... 121

Position title and number of years in the position..... 122

Comparison of findings to hypotheses 1b and 1c..... 123

Public Health Leaders and the Leadership Practices Inventory..... 126

Chapter Five: Discussion, Summary, and Recommendations..... 147

Contemporary Public Health Educational Administrators and Public Health Leaders and Followers..... 149

Leadership Perspectives in Schools of Public Health..... 151

Mission Statement and Course Content.... 151

Definitions of Leadership..... 153

Practices and Behaviors for Leadership in Public Health..... 156

Leadership and the Kouzes and Pozner framework..... 156

IOM defined leadership skills for public health..... 158

Leadership and the six functions of management..... 164

Leadership Practices of Contemporary Public Health Leaders..... 165

Summary..... 166

Course Content for Leadership Development.... 168

Emergent Fit of Study Findings to Existing Framework..... 170

Emerging Concepts..... 172

A Conceptual Framework for Leadership for Public Health..... 173

Implications for Future Research of Leadership for Public Health..... 175

Summary..... 178

References..... 181

Bibliography..... 186

Appendices..... 189

Vita..... 214

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LIST OF TABLES

Table Number		Page
1	Dean/Chairperson/Director Respondents by Number of Potential and Actual Sample Size and Return of Data Collection Tools.....	51
2	Number of Leader Recommendations Received per Dean/Director Respondents....	52
3	Survey Response Data: Deans/Chairs/ Directors.....	54
4	Dean/Director, Leader, and Follower Sample and Study Group Comparisons Based on Potential and Actual Respondents.....	56
5	Demographic and Educational Data: Deans and Program Directors in Higher Education for Public Health.....	60
6	Professional Discipline and Position Data: Deans and Program Directors in Higher Education for Public Health.....	62
6a	Professional Discipline and Position Data: Deans and Program Directors in Higher Education for Public Health.....	63
7	Content Interpretation and Classification of Key Activities in Dean/Director Definitions of Leadership.....	66
8	Definitional Components of Leadership that Correlate to Transactional Leadership - Reported by Twelve Deans and Directors in Higher Education for Public Health.....	68
9	Definitional Components of Leadership That Correlate to Transformational Leadership - Reported by twelve Deans and Directors in Higher Education for Public Health.....	69
10	The Number of Definitional Components of Leadership Reported by Twelve Deans and Directors in Higher Education for Public Health that Correlate to Roles and Relationships of Transactional Leadership.....	70

11	The Number of Definitional Components of Leadership Reported by Twelve Deans and Directors in Higher Education for Public Health that Correlate to Roles and Relationships of Transformational Leadership.....	71
12	Rank Ordered Frequency List of Words and Word Categories in Dean/Director Definitions of Leadership.....	72
13	Nouns and Verbs in the Definitional Components of Dean/Director Definitions of Leadership Correlated to Bass' (1985) and Burns' (1978) Definitions of Transactional and Transformational Leadership.....	75
14	Leadership Emphasis in Schools and Programs of Higher Education for Public Health Reported by Twelve Deans and Directors.....	78
15	Content on Leadership and Leadership Development in Mission Statements from Three Schools/Programs of Higher Education for Public Health as Reported by Deans and Directors.....	79
16	An Annotated Comparison of the Five Practices and Ten Behavioral Commitments (with Descriptive Phrases) of Kouzes' and Posner's Conceptual Framework of Leadership and the Leadership Practices and Behaviors (Listed in Alphabetical Order) Reported by Twelve Deans and Directors in Higher Education for Public Health.....	84
17	The Number of Leadership Practices and Behaviors Reported by Twelve Deans and Directors in Higher Education for Public Health that Show Correlation to Kouzes' and Posner's Conceptual Framework of Five Practices and Ten Behavioral Commitments of Leadership.....	88
18	Necessary Leadership Skills for Public Health: An Annotated Comparison of Leadership Skills Cited in the IOM Report and the Leadership Practices and Behaviors Listed by Twelve Deans and Directors of Higher Education for Public Health.....	96

19	The Number of Leadership Practices and Behaviors Reported by Twelve Deans and Directors of Higher Education for Public Health that Correspond to Leadership Skills Cited in the IOM Report.....	101
20	A Comparison of Leadership Practices and Behaviors Reported by Twelve Deans and Directors in Higher Education for Public Health to Six Functions of the Management Process.....	110
21	Follower Study Group Based on Potential and Actual Response to Leader Request to Participate.....	114
22	Age, Race, and Gender of the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI).....	116
23	Education and Professional Disciplines of the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI).....	117
24	Area of Specialization of the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI).	119
25	Position Title Category*, Number of Years in Position, and Number of Years Follower Worked with Leader for the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI).....	120
26	Gender by Employment Sector, Public or Private, for the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI)....	125
27	Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Leaders (Self) n=18 and Followers (Other) n=74.....	128
28	Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Female (n=8) and Male (n=10) Leaders (Self) n=18.....	129

29 Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Female (n=44) and Male (n=34) Followers (Others) n=74..... 130

30 Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Leaders (Self) by Sector, Public or Private. n=17..... 132

31 Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Followers (Other) by Sector, Public or Private. n=68..... 133

32 Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Followers (Other) by Academic Degree n=74..... 134

33 Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons by Leader Years in Position n=18..... 135

34 Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons By Number of Years Follower Worked with Leader n=74..... 136

35 Means and Standard Deviations for Leadership Practice Inventory (LPI) Scores. Study to Kouzes & Posner Leader-Follower Comparisons..... 138

36 Means and Standard Deviations for Leadership Practice Inventory (LPI) Scores. Study to Kouzes and Posner Leader Comparisons by Gender..... 140

37 Means and Standard Deviations for Leadership Practices Inventory (LPI) Scores. Study to Kouzes and Posner Leader Comparisons by Sector..... 141

38 Means and Standard Deviations for Leadership Practices Inventory (LPI) Scores. Study to Kouzes and Posner Follower Comparisons by Sector..... 142

LIST OF APPENDICES

Appendix		Page
A	Leadership Survey	189
B	Data Form (Deans/Chairpersons/Directors)	190
C	Data Form (Leaders)	191
D	Data Form (Followers)	192
E	Letter to Kouzes Posner International, Inc. Requesting Permission to use the LPI Survey Form	193
F	Leadership Practices Inventory (LPI): Self	194
G	Leadership Practices Inventory (LPI): Other	198
H	Participant Letter (Physician)	202
I	Participant Letter (University)	203
J	Participant Letter (Public Health Worker)	204
K	Leader Recommendation Form	205
L	Definitions of Nouns	206
M	Definitions of Verbs	208
N	Definition of Six Functions of the Management Process	210
O	Position Titles by Position Title Category for the Twenty-Two Leader Respondents to the Leadership Practices Inventory (LPI)	211
P	Position Titles by Position Title Category for the Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI)	212

LEADERSHIP DEVELOPMENT IN HIGHER EDUCATION FOR PUBLIC HEALTH

The dearth of public health leadership and lack of leadership development in higher education for public health, reported by the Institute of Medicine Committee for the Study of the Future of Public Health, prompted this study of leadership perspectives in schools of public health and the practices and behaviors of contemporary public health leaders. Ambiguity between management and leadership was evident. Academic responders identified transactional leadership roles and relationships more often than those of transformational leadership. Leader and follower ratings of leader performance were most often 'moderate' indicating that leaders sometimes or fairly often exhibit exemplary leadership practices and behaviors. Variances between academic and practice findings suggest that, although many graduates do become leaders in public health, this may not be an outcome of the educational experience. Content and comparative analyses identify twelve concepts of transformational leadership which form a framework for course content in leadership development for public health.

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"Do not forget the public health ethos."

Arthur J. Viseltear, Ph.D.
May 1989

LEADERSHIP DEVELOPMENT IN HIGHER EDUCATION FOR PUBLIC HEALTH

CHAPTER ONE

The Problem

Introduction

Public health is in disarray. There is a dearth of public health agency leadership and little specific focus on leadership development in higher education for public health. These charges appear in the report of the Institute of Medicine (IOM) (1988) Committee for the study of the Future of Public Health. The report asserts that a vital public health response to continuing and emergent threats to the health of the public is undermined by ineffective leadership. Schools of public health are challenged to identify individuals with leadership potential and to provide initial and continuing education for leadership development.

The IOM committee's vision of effective leadership encompasses a wide range of multifaceted characteristics. Technical competence, managerial ability, political acumen, and communication skills are frequently cited and there are repeated references to relationship building. That is, leaders in public health are expected to communicate values to employees and enlist their commitment, to foster public and private sector

cooperation, to develop relationships with and educate legislators, and to build constituencies to support public health action (IOM, 1988). These expectations call for distinct leadership practices and behaviors which are essential to, but not inherent in or exclusive to, the functions of management or administration or the exercise of technical or disciplinary-specific expertise. For example, the committee noted that several effective agency leaders were locally recognized for ".... their determination, ... ability to solve health problems, and .... ability to work with others" (p. 84).

Despite this and other evidence of noteworthy leadership, a lack of or ineffective leadership was found in the majority of public health agencies studied. The committee cited several contributing factors: lack of specific preparation in public health (many health officers had a background in private medical practice or general administration); official positions based on political appointment (resulting in either rapid turnover or lengthy tenure); low public and political interest in public health secondary to a poor image of public health; and the difficulty of public health work due to underfunding, understaffing, low community visibility, and lack of political authority (IOM, 1988).

The IOM report constitutes an urgent call for public health leadership and leadership development but it

emanates from selected study of the practice arena. Although the report indicates that "... some schools have become somewhat isolated from public health practice and therefore do not place a sufficiently high value on the training of professionals to work in health agencies" (IOM, 1988, p. 15), the schools were not studied.

Educational research is needed to determine the current focus on leadership in schools of public health and the leadership practices and behaviors of public health school graduates identified as leaders in the practice arena. Then, to respond to the IOM challenge for initial and continuing education for leadership development for public health, concepts of effective leadership practices and behaviors need to be identified to form a conceptual framework for course content and to contribute to generating a substantive theory of leadership for public health.

As more potential leaders are identified and more students graduate from, and more professionals have continuing education in, schools and programs of public health with coursework in leadership development, public health agency leadership will become stronger and more effective. A renewed focus on education for leadership development has the potential for a positive and pervasive impact on the future of public health.

Purpose

The purpose of this study was to determine concepts of public health leadership practices and behaviors which will provide a framework for course content in initial and continuing education for public health leadership and contribute to generating a substantive grounded theory specific to leadership for public health. Further, the study sought to identify the leadership perspectives of accredited programs in higher education for public health and the perceptions about, and content in, leadership development in public health curricula.

Research questions

This research sought answers to the following questions:

1. What are the demographic characteristics, educational preparation, and professional disciplines and areas of specialization of (a) public health school deans, department chairpersons, and directors; (b) public health leaders; and (c) the followers of public health leaders?
2. How do the school deans, department chairpersons, and directors in schools and programs of higher education for public health define leadership?
3. Do the mission or philosophy statements of these public health schools and programs address leadership or leadership development? If so, how?

4. What course and/or course content in leadership or leadership development is included in public health curricula?
5. What do the public health school deans, department chairpersons, and directors list as leadership practices and behaviors for public health?
6. What are the leadership practices and behaviors of contemporary leaders in public health?
7. What are the concepts of leadership practices and behaviors which will provide a basic framework for course content in leadership development for public health?
8. What are the concepts of leadership practices and behaviors which will provide a conceptual framework to contribute to generation of a substantive theory of leadership for public health?

CHAPTER TWO

Review of the Literature

Leadership for Public Health

Historic precedence and prior research combine with contemporary exigency to support the IOM challenge. Educational programs in public health in the United States emerged from the convergence of societal factors that arose at the turn of the century (Viseltear, 1988) and prompted a need to prepare officers to direct the work of local health departments. The early leaders secured a scientific base for practice: They garnered political support and mobilized resources to conquer major threats to health and advance the quality of life for all Americans.

The first academic instruction for public health was a single course in the 'new' science of bacteriology given in 1883 at the Massachusetts Institute of Technology (MIT). Courses in sanitation and hygiene were soon added and in 1913 the Harvard-MIT School for Health Officers came into being. Thereafter several programs and schools of public health became established in other major universities to prepare officers to direct the work of local health departments. Over time these schools of

public health multiplied and curricula were expanded in response to multiple changes in the values, expectations, and needs of society. However, as earlier threats to health were conquered and biomedical technology increased, national interest and support shifted from preventive to curative health care and caused a decline in public health. Schools of public health responded by diversifying curricula and by becoming centers for biomedical research. Diminished concentration on public health practice and community-based programs shifted the educational focus away from the preparation of public health agency leaders and brought about a devaluation of practice oriented research.

A call for leadership is explicitly and implicitly stated in the Welch and Rose Report which led to the establishment of the Institute of Hygiene at Johns Hopkins University in 1916, the first independent program in higher education for public health, and in more recently published studies of public health and education for public health (Fry, 1967; Bowers & Purcell, 1974; Milbank, 1976). The Welch and Rose Report recommended a school of high standards designed to educate leaders and practitioners of public health. But 50 years later a joint commission reported to the United States Public Health Service (Fry, 1967) that schools of public health were educating specialists instead of persons able to

define and promote public health. In addition to instituting a core curriculum requirement, schools were advised to make a distinction between coursework designed to educate agency leaders and clinical specialists. Several years later, the need to prepare students for leadership roles was repeated by the Macy Conference (Bowers & Purcell, 1974) and strongly advocated by the Milbank Commission. After close study of education programs for public health, the report of the Milbank Commission (1976) outlined specific recommendations centered on preparing leaders to administer vigorous programs and to direct public policy to meet the public health needs of society.

Contemporary writers also cite the need for leadership. Terris (1988) urges schools of public health to avoid an "ivory-tower complex" and to prepare leaders through curriculum changes "... emphasizing the development of true professionals dedicated to public health goals rather than the production of narrow technicians; ..." (p.258). The need for curriculum changes in education for public health is also noted by Pickett and Hanlon (1990). These well known authors of a public health administration textbook have written that "... a short training program in public health or administration with little or no training in human or social pathology is not sufficient to manage an enterprise

as complex as public health" (p.192). An effective public health agency director is described as a leader who has a clear understanding of the purpose and methods of the organization and knows how to develop strong program leaders who can enter into the work of planning and implementing the agency's total program.

Growing recognition of the broad base of knowledge in the physical, biological, and social sciences required for directing a public health agency has followed identification of the increasingly complex problems confronting local public health departments (Atwater, 1980). This perspective is gradually leading away from the view that local health departments are largely medical in orientation. For although physicians have been seen by custom and by law as the leaders of public health departments, many nonphysicians, such as public health nurses, public health scientists, and sanitarians, were instrumental leaders in the early development and administration of public health programs and services in the United States. Directors of public health, who are not physicians, are reported as early as the late 1800s but few others were appointed until the 1960s. During the next 20 years many states passed legislation enabling persons without medical degrees but with public health education to become local directors of health (Cameron & Kobylarz, 1980). A study of the Connecticut experience

found that nonphysician health directors, "... if well trained in public health...", are able to "... function effectively and are well accepted ..." (Jekel, Dunaye, Siker, & Rossetti, 1980, p.74). They establish positive relationships with physicians, the community, and government and increase the levels of services provided through full-time health department leadership.

The relationship of education for public health to subsequent job performance was addressed by surveys of alumni by two schools of public health (Clemmer & Bertrand, 1980; Monroe, Tuttle, & Lorimer, 1980). Both studies report a difference between graduates' perceptions of the content and emphasis of the academic programs and of their educational preparation for actual work responsibilities. Monroe, Tuttle, and Lorimer found that administrative/managerial functions and consultation were cited as major functions by half of the respondents in each of 13 job categories. This finding suggests that public health personnel often find themselves in leadership roles even when they do not occupy administrative or management positions. It highlights concern for the deficits in educational preparation for leadership for all students of public health and most especially for those who will become directors of the multiple and diverse public health agencies and organizations in the United States and abroad.

A professional doctorate in public health is proposed by Roemer (1986, 1988) as the way to prepare effective leaders. Based on his experiences as a physician, a public health worker, and a public health educator, Roemer comments on how little of the basic and clinical sciences learned in medical school are relevant to the tasks of public health. He cites the need for generalists who can direct population-based health planning and develop strategies for health promotion and disease prevention. As an alternative to the current preparation of specialists in narrow sub-divisions of public health, Roemer suggests a five year program designed to produce doctoral level generalists qualified to provide leadership in local, state, and national agencies. A curriculum outline lists many relevant topics on public health, management, government, and health policy but there are no courses specific to leadership or to the development of essential leadership skills.

A content review of recent catalogues (dated for academic years 1989 to 1991) of a geographically representative sample of 15 out of 24 schools of public health, accredited by the Association of Schools of Public Health (1988), gave evidence of the breadth and depth of scholarship that undergirds higher education for public health and the focus of educational programs. All of the mission or philosophy statements address the basic tenets

of public health but only three include the words leader or leadership. Department and course titles show diverse and abundant offerings in science, technology, and research. Curricula in health services administration include coursework in management, organization, and health policy. Just two courses mention leadership and both relate to singular topics specific to small group functions. While this review indicates sparse attention to leadership development in schools of public health, each school needs to be surveyed to obtain more definitive information.

The IOM report reiterates prior calls for public health leadership and reaffirms the responsibility of schools of public health to prepare leaders. It pointedly states that although the pioneers in public health "...fortuitously combined..." multiple leadership skills, "Today the need for leaders is too great to leave their emergence to chance." (1988, p.6).

Leadership

Leadership research has produced much useful theoretical and applicable knowledge yet leadership remains one of the most complex of social phenomena (Van Fleet & Yukl, 1986) as well as one of the most necessary and challenging. A review of the literature on leadership reveals ambiguity in definition and terminology and evolutionary transitions in theoretical approaches to the

study and practice of leadership.

Definition and Terminology

The terms leadership, management, and administration are used distinctively and interchangeably. Leadership is sometimes used erroneously as a synonym for management (Sullivan & Decker, 1992) but, as stated by Bass (1981), "Leaders must manage and managers must lead but the two are not synonymous" (p. 273). Likewise, Johnston and Bonoma (1979) bluntly state, "The idea that leadership is synonymous with management or that management is identical to leadership is incorrect" (p. 41). Nevertheless, Longest (1990) emphasizes that while good leadership ability and good managerial ability are not the same thing, "... a good manager possesses leadership ability" (p.139).

One succinct definition describes leadership as knowing where to go and management as knowing how to get there (Dressel, 1981). Another definition indicates, "A manager must plan and organize ... a leader ... must get others to follow" (Longest, 1990, p. 139). Bennis (1989) characterizes the differences between leaders and managers as "... the differences between those who master the context and those who surrender to it" (p. 44). Other crucial differences are noted such as, "The manager focuses on systems and structure; the leaders focuses on people. The manager asks how and when; the leader asks

what and why. The manager accepts the status quo; the leader challenges it" (p. 45). Likewise, "Where managers seeks to limit choices, leaders develop fresh approaches to long-standing problems ..." and to new issues and options (Marszalek-Gaucher & Coffey, 1991, p. 225).

This duality of definition is also evident when leadership is described as being in charge and being able to lead or guide. But these two capacities may or may not reside in the same person (Terris, 1988). However, even when the terms 'leader' or 'leadership' are not present, role definitions or descriptions reflect similar differences in practices and behaviors. For example, Dressel (1981) suggests that administration establishes policy and operational patterns and defines goals and objectives to accomplish the mission of an organization while management directs the coordination and integration of resources toward attainment of those goals and objectives.

The root origins of the words 'lead' and 'manage' come from words that mean, respectively, "to go" and "hand" (Partridge, 1977, p. 342, 378). On this basis, Kouzes and Posner (1987) use the metaphor of a journey in distinguishing the tasks of leadership. That is, leaders step out and go forward to seek new ventures and to provide direction for others while managers tend to handle (control and maintain) the status quo. Similarly,

leadership is a process of influence between a leader and those who are followers (Hollander, 1978) that influences group activities toward goal setting and goal attainment (Stogdill, 1959; Sullivan & Decker, 1992). Leadership occurs when one individual influences the activities and/or behaviors of another individual or a group and provides direction toward achievement of a particular goal or a set of objectives in a given situation (Hersey & Blanchard, 1982). These definitions reveal a major difference: administration and management need subordinates; leadership requires followers.

Essential leadership is that which occurs when influence is exerted through interpersonal processes without the use of the authority or power associated with a management or administrative position (Kellerman, 1984). That is, "In its pure form, leadership always implies free choice to follow" (Lieber, Levine & Dervitz, 1984, p.144).

This perspective on leadership places the emphasis on the interaction of leaders and followers as people. It is pertinent to the interactive leader-follower relationships between multidisciplinary public health professionals where each professional has expertise in a particular discipline and/or specialty area and where leader and follower roles may be interchangeable. Public health scientists and clinicians are followers of administrative planning, organization, and direction even as they provide

leadership in scientific investigation and discovery and in the delivery of clinical services. The role of public health directors is to build on a documented scientific and population need base and provide visionary leadership in directing the official agency to fulfill the mission of public health. Such proactive leadership for public health requires relationship-building and collaboration with public health personnel and with diverse organizational and civic officials, legislators, and the general public in order to promote the health of the public amid competing agendas.

Theoretical Approaches

A review of approaches to leadership shows a shift from single to multiple factors as predictors of leadership ability. The transition from simple to more complex concepts and theories of leadership is evidenced by an emphasis on participatory rather than directive leader behaviors. Also, measuring leader effectiveness of work group performance has been replaced by assessment of leader-follower relationships and leader development of follower potential.

Appointed or theocratic leadership.

Machiavelli's The Prince, first published in 1513, is one of the earliest writings on leadership and, according to Burns (1978) it remains "...the most famous--and infamous..." (p. 444). Young princes were given advice on

how to balance principle and opportunism and how to win and wield power. But Machiavellian techniques set expediency over morality. Coercion and manipulation results in treatment of people as things or as tools to be used for the benefit of the power wielder (Burns, 1978). Rudimentary analysis of leadership in the nineteenth century emphasized possession of inherited qualities and heroic leadership.

Most leadership study and research evolved from the beginning of this century with Weber's assertion that a leader's influence and authority rest on rational/legal or traditional authority, or on the personal gift of charisma. However, Weber makes a distinction between leadership based on an ethic of responsibility versus an ethic of ultimate ends. Behaviors that demonstrate adherence to good ends or high purposes (principle and morality) are based on belief in one supreme value or hierarchy of values. Alternatively, actions that focus on specificity, immediacy, and the actual consequences (expediency and opportunism), rather than lofty intention, are calculated and rationalistic. That is, choices are made on the basis of many values, attitudes, or interests with primary consideration of the best means to attain one goal or another (Burns, 1978; Smith & Peterson, 1988). Burns (1978) notes the oversimplification of this dualistic approach. He points out that in modern,

pluralistic societies choices often must be made among a number of compelling end-values. Leadership based on principle and morality must then demonstrate "... its capacity to transcend the claims of the multiplicity of everyday wants and needs and expectations .... and relate leadership behavior .... to a set of reasoned, relatively explicit, conscious values" (p. 46).

Personality traits or personal attributes.

Trait theories of leadership focus on inherent personality and personal characteristics and intelligence, believed to be the result of inheritance, or of charisma, referred to as a gift from God. Because people who become leaders are considered different from those who are followers, this approach tends to create an elite leadership based on the exercise of power over others. It reduces democratic participation and creates a struggle for power between leaders and followers (Bass, 1985; Kellerman, 1984; Smith & Peterson, 1988).

The cumulative outcome of numerous studies of leadership suggests that while unique personality traits and behaviors are not predictive, successful leadership does involve interpersonal, technical, administrative, and intellectual skills and capabilities and that different situations require different leader traits, characteristics, and/or capabilities. Moreover, leader behavior may vary according to the situation. Persons who

are leaders in one situation may not be leaders in other situations (Bass, 1981).

Behavioral styles.

Attention then shifted to leadership behavior with a focus on personal characteristics that bear some relationship to the activity of followers. A classic study by Lewin and associates (cited in Kellerman, 1984) defines leadership in terms of three behavioral styles - autocratic, democratic, and laissez-faire. Other studies followed. The State University of Iowa investigation of democratic, autocratic, and laissez-faire leader behaviors found that group actions changed only when an autocratic leader left the room. It was determined that when majority-rule decision making and other participative techniques involve group members they continue to perform well even in the absence of the leader. Research studies at Ohio State University and the University of Michigan sought to discover what pattern of leadership behavior led to the attainment of group and organizational goals. The Ohio State study labeled leadership behaviors as Consideration (relationship-oriented) and Initiating Structure (task-oriented) (Yukl, 1981). Task performance was found to be the primary criterion of leader effectiveness but secondary criteria included leader-follower relationships. Studies at the University of Michigan compared the managerial behaviors of effective

and ineffective supervisors. Effective leaders were production-oriented but, after establishing goals and general guidelines, subordinates were allowed to determine how to get the work accomplished. These studies, as well as subsequent ones based on the same behavioral categories, indicate leader behavior is more complex than a simple dichotomy of task or maintenance behavior and suggest that patterns of effective behavior vary with the situation. The "one best way" approach to leadership research was therefore displaced by contingency theories (Van Fleet & Yukl, 1986).

Contingency models.

Contingency approaches consider the interaction of situational variables with leader traits and effectiveness criteria. While most researchers survey subordinate opinion of leader behaviors, Fiedler's Least Preferred Co-Worker (LPC) Scale (Fiedler & Garcia, 1987) measures leader response. The leader who gives a very negative rating to a LPC is defined as task motivated while a relatively positive rating of a LPC denotes leader motivation toward personal relationships. Later, a scale was developed based on three features of a situation: leader-member relations, degree of trust and support; task structure, clarity of task goals and procedures; and position power, degree of leader authority for follower reward or punishment. Neither the task motivated or the

personal relationship style of leader behaviors were found effective in all situations. A leader-match model was then designed to help a leader of a designated orientation change the situation or better adjust to given circumstances of the situation. This multiple screen model clarified the conditions wherein intellectual ability contributes to leader performance.

There has been considerable controversy over the meaning of the LPC scale, the appropriateness of situation variables, and the question of leader distortion of self-perceptions. Yet this contingency theory remains plausible because leader behaviors do affect subordinate behaviors and different styles of leadership do fit different settings (Bass, 1981; Fiedler & Garcia, 1987; Kellerman, 1984; Smith & Peterson, 1988). Fiedler has been willing to modify his theory. He acknowledges a primary focus on the leader and the effectiveness of group task performance and admits that his theory neglects important factors such as job satisfaction, quality of work life, and the need to provide for the personal growth of individuals in the work force. Fiedler's latest work, cognitive resource theory, integrates the LPC and multiple screen model to show conditions under which leader and group member abilities and job-relevant knowledge contribute to effective leadership performance (Fiedler & Garcia, 1987).

The contingency approach of Hersey and Blanchard (1982) is a situational theory based on two dimensions of leadership style, task behavior and relationship behavior. Four leadership styles, telling, selling, participating, and delegating, are a combination of task and relationship behavior appropriate to four levels of a continuum of follower maturity. Smith and Peterson (1988) speculate that this theory is popular because it 'makes sense' even though it has not received extensive empirical testing.

Path-goal theory.

The path-goal theory is a motivationally-based exchange theory based on two contingency variables: the personal characteristics of group members and the task and environment (Van Fleet & Yukl, 1986). The primary function of leadership is to motivate group members to attain organizational goals. The leader must diagnose the task and environment and select a behavioral style, supportive, directive, achievement-oriented, or participative, which will ensure group member motivation toward goal achievement. Despite multiple testing of path-goal theory, results have been highly variable. A link has been shown between the two contingency variables and leader style effectiveness in that environmental moderators and group member ability or professional identification may, in some situations, reduce or eliminate the need for leadership (Bass, 1981; Smith &

Peterson, 1988).

Democratic - participative leadership.

Vroom and Yetton (1973) present a leadership model of participation in decision-making based on two leadership styles, autocratic and participative, and two criteria, the quality of the decisions and the acceptance of the decisions by followers. Using a decision tree, a leader makes a series of choices to determine the appropriate degree of follower participation. The model has been carefully tested and revised to increase precision and realism. A reasonable criticism is its inability to help in emergency decision-making. However, because autocratic behavior is generally appropriate and acceptable during such events, the Vroom-Yetton model retains its utility for increasing democratic and participative decision-making in important non-emergency situations (Smith & Peterson, 1988; Van Fleet & Yukl, 1986).

Other contemporary writers focus on collaborative leadership practices to foster follower participation as opposed to directive and dominant leadership (Keohane, 1985). Cohen and March (1974) emphasize the importance of participation and sensitivity to professional colleagues while Keller (1983) points out that strategic planning must be participatory to ensure the contributions of key people.

Authentic leadership.

Burns' (1978) seminal work on transactional and transformational leadership initiated a paradigm shift in the study of leadership which continues to the present. The roles of leader and follower are conceptually united even as the processes and outcomes of transactional and transformational leadership are differentiated. Transactional leadership involves an exchange, that is, a relationship of mutual dependence wherein leader and follower exchange something needed or wanted by the other. Exchange transactions characterize most working relationships between leaders and followers. But Burns asserts that "Transforming leadership, while more complex, is more potent" (p.4). It moves from "... everyday contacts and collisions.....to the structure and dynamics of interaction" (p. 461). The transformational leader recognizes an existing need or potential in a follower and seeks to motivate the follower to work for higher level goals and to achieve self-actualization, as on the Maslow (1954) hierarchy, rather than immediate self-interest. As this process unfolds, a relationship of mutual stimulation results wherein both leader and follower are transformed to higher levels of conduct.

Most managers are transactional leaders, according to Bass (1985). They provide subordinates with an understanding of what is expected of them and what they

can expect in exchange for satisfactory effort and performance. The focus is on role and task requirements necessary to achieve desired outcomes. Transforming leadership goes farther and deeper. It challenges followers to expand their "... portfolio of needs and wants" .... and to "transcend self-interest for the sake of team, organization, or larger polity" (p. 20). Transformational leaders motivate performance beyond what is expected; they encourage and support personal growth and development of leadership potential.

Bass (1985) differs with Burns' (1978) contention that transforming leadership is necessarily elevating and of benefit to individuals and society. Bass asserts that transformational leadership may lead to evil as well as good and changes in followers may be of short- or long-term benefit or cost to them. Certainly, world events, past and present, attest to crises and debacles resulting from leaders who acted against the best interests of followers or prompted downward movements on Maslow's hierarchy of needs.

Conceptually and empirically, Burns (1978) views transformational leadership as the opposite end of a continuum from transactional leadership while the studies of Bass (1985) found most leaders exhibiting various patterns and intensities of both transformational and transactional leadership. Nevertheless, extra effort by

subordinates, perceptions of work unit effectiveness, and subordinate satisfaction were more highly correlated with the transformational factors than with the transactional ones.

Bass' research identified three transformational factors - charismatic and inspirational leadership, individual consideration, and intellectual stimulation; and two transactional factors - contingent reward and management-by-exception. Charismatic leadership is inherently inspirational but Bass (1985) notes that leaders who are not charismatic can still be inspirational. In addition, inspiration can be self-generated or emanate from many factors other than leadership. Individualizing and consideration occur in leader-follower exchanges and include individualized attention, a developmental orientation, delegating authority, and mentoring. The transformational leader provides intellectual stimulation by being proactive rather than reactive. Followers are stimulated and led to conceptualize, comprehend, and discern problems and their solutions.

Contingent reinforcement is a transactional leadership process (Bass, 1985). Leaders and followers carry out agreed upon interconnected roles and responsibilities to attain organizational goals. Positive contingent reinforcement and reward is given when

followers meet or exceed expected performance. Alternatively, a leader uses aversive contingent reinforcement when followers fail to meet performance standards. In management-by-exception, a transactional leader will only intervene when deviations occur. The extent to which leaders clarify role expectations contributes to the effect on followers of both contingent positive and aversive reinforcement. In management-by-exception, however, follower motivation is limited to avoidance of negative feedback; motivation to greater achievement through positive feedback does not occur as in contingency reward transactional leadership.

The work of Kouzes and Posner (1987) is consistent with the basic features of transformational leadership and collaborative interaction. It considers the needs and roles of both leaders and followers and claims that leadership is an observable, learnable set of practices that can be understood by most people. These researchers surveyed middle and senior level managers in public and private sector organizations using an extensive open ended questionnaire or an in-depth interview. Respondents were asked to describe an event of personal record-setting performance, one that met the individual's standards of excellence. Findings were subjected to comprehensive content analysis by two independent raters. Category labels went through several iterations. There emerged a

fundamental pattern of leadership behaviors that occurs when people accomplish extraordinary things within organizations. Ten behavioral strategies were listed, two each, under five leadership practices. A Leadership Practices Inventory (LPI) was designed to empirically measure this conceptual framework (p. 310):

1. Challenging the process
   - Search for opportunities
   - Experiment and take risks
2. Inspiring a shared vision
   - Envision the future
   - Enlist others
3. Enabling others to act
   - Foster collaboration
   - Strengthen others
4. Modeling the way
   - Set the example
   - Plan small wins
5. Encouraging the heart
   - Recognize contributions
   - Celebrate accomplishments

Successive administrations of the inventory evolved into dual forms, LPI-Self and LPI-Other, which differ only by whether the leader behavior described is a self report or a follower's report of the leader's behavior.

To balance leader perceptions of leadership, Kouzes and Posner (1987) also investigated the expectations that followers have for leaders. Results from several surveys found that the majority of respondents admire leaders who are honest, competent, forward-looking, and inspiring. Sixteen other characteristics were closely related to the

predominate four and showed similarity to the practices described by successful leaders.

Concepts of leadership for public health

The conceptual framework of leadership practices and behavioral commitments, developed by Kouzes and Posner (1987), has the potential for an emergent fit (Glaser, 1978) with characteristics of effective leadership for public health envisioned by the IOM (1988) committee. A few examples of recognizable public health leadership capacities are correlated to the ten leadership commitments to demonstrate their potential fit with the Kouzes and Posner framework. "Challenging the process" applies to "seeking opportunities" to forge contacts with legislators and "taking risks" to develop innovative strategies which demonstrate the worth of public health efforts. Leaders with a "vision of the future" of public health communicate the multifaceted role of public health and "enlist others" to foster public and private cooperation. "Enabling others to act" and "strengthening others" in their professional ability is a primary role in providing collegial leadership among the multidisciplinary practitioners in public health. These practices and behaviors help to distinguish both the variable and related components of transactional and transformational leadership. Moreover, "fostering collaboration", internally and externally, promotes interdisciplinary

cooperation and helps to build constituencies to support public health action. A leader "models the way" by citing current epidemiological data to document health care needs and problems and by role-modeling relationship-building; a leader "sets an example" of public health values and notes the "small wins" achieved through health promotion and disease prevention activities. By "encouraging the heart" a leader "recognizes the contributions" of each public health discipline and "celebrates accomplishments" of individual and group efforts that rise above underfunding and understaffing to address the identified needs of target populations.

The LPI-Self and LPI-Other are designed to measure the practices and behaviors of the Kouzes and Posner (1987) conceptual framework. The authors' stated belief in leadership as a set of learnable practices and leadership development as a process of self-development is consistent with professional education and practice. It provides a perspective on leadership appropriate to leader-follower and collegial interactions among multidisciplinary professionals in public health.

In addition, this approach is applicable to public health because of its emphasis on relationships and collaboration with others. However, the LPI has been tested primarily among leaders in business or corporate environments. Their counterparts in the public health

arena operate under quite different mission statements and organizational structures and among independent professionals and diverse client populations.

The majority of leaders in public health are found in tax supported organizations; some are employed in not-for-profit agencies. The product of these organizations is service. This product needs to be delivered by highly skilled professionals in the most cost-effective manner possible and 'sold' to populations who need to invest in behavioral change in order to receive the benefits of the service product. Clearly there is no financial profit margin or motivation. Rather, public health leaders must be professionally and politically articulate and persuasive with clients and followers, and among resource providers, generally legislators, and constituents, present and potential. These leaders must be true believers (Hoffer, 1951) in the mission of public health. They must possess a vivid vision and faith in the future of public health and see themselves as a part of its continuum. If this is absent, power "... is often mainly used to ward off the new and preserve the status quo" (p. 9). This concern relates to the IOM (1988) charges of disarray and of deficiency in leadership resulting in the lack of a vital public health response to current and future threats to health.

Summary

The need for leadership is a major theme which spurred the establishment of higher education for public health in the United States and which recurs again with each new report on public health education or service. During this century, research has revealed leadership to be a complex but learnable set of practices and behaviors rather than an inherited or mystical phenomenon.

Specific personality traits or behaviors are not predictive of leadership because a variety of characteristics or styles are applicable to different situations. Contingency theories consider a situation and its effect on both leadership effectiveness and the behaviors of subordinates. Path-goal theory emphasizes the leader's ability to motivate group goal attainment while democratic approaches focus on follower participation in decision-making.

Leadership is differentiated from management as being a process of interpersonal influence rather than of hierarchical direction. Transactional leadership promotes mutual dependence between leader and follower through the exchange of directives and actions which lead to accomplishment of organizational goals. It is transformational leadership, however, that seeks to motivate followers to work for higher level goals toward self-actualization with organizational outcomes as a

corollary product.

The leadership practices and behaviors identified in the research of Kouzes and Pozner (1987) display recognition of basic leader-follower transactions with an emphasis on transformational leadership behaviors. The five leadership practices and ten commitments defined by Kouzes and Posner (1987) provide a sound base for comparison with content analyzed leadership practices and behaviors cited by the deans/chairpersons/directors of schools and programs in public health. Likewise the LPI-Self and LPI-Other, using the same practices and behaviors, is a comparable tool with which to identify the leadership characteristics of contemporary leaders in public health. Finally, using a research-based conceptual framework of leadership enables identification of concepts which will form a basic framework for course content in leadership development and contribute to generation of a substantive grounded theory of leadership in public health.

CHAPTER THREE

Methodology

Sample

The study included three distinct sample populations. The deans of the 25 schools of public health and the department chairpersons/directors of the 12 graduate programs in community health/preventive medicine, accredited by the Council on Education for Public Health (CEPH), composed the first sample population. The second sample included 185 public health leaders, five named by each of the deans/chairpersons/directors, and the third sample was made up of 925 followers/subordinates, five designated by each of the leaders. These three populations provided a diverse empirical base for collecting data to contribute to formulating a conceptual framework of leadership for public health.

Data were sought from deans/directors/chairpersons of the universe of accredited schools of public health and programs in community health/preventive medicine to provide national representation and enable generalizability of the findings. Likewise, drawing the sample of contemporary leaders from MPH graduates of accredited schools and programs was done to assure that

each leader had completed course requirements in a curriculum of education for public health.

Instrumentation

Leadership Survey

Data were collected from deans/chairpersons/directors using a leadership survey tool designed by the investigator (See Appendix A). Six questions requested information on whether or not the school/program mission or philosophy statement addresses leadership or leadership development, delineation of current courses or course content in leadership, and statement of the respondent's definition of leadership and of the practices and behaviors believed to be necessary components of leadership for public health. Open ended questions were purposely used to simulate an interview and to elicit intuitive cognitive replies. Use of a leadership practices and behaviors checklist or a choice of given definitions could prompt perfunctory or textbook-like replies which would tend to skew the survey returns. Therefore, to uncover operational definitions and predominate perceptions on leadership for public health, responses were sought on the grounds of what leadership means to each dean/chairperson/director and on the basis of their own practices and behaviors and observations of public health leadership. This approach is consistent with grounded theory and the theory of symbolic

interaction because it prompts experiential replies. That is, it calls for each respondent's personal definition of leadership and the everyday practices and behaviors based on that belief.

Demographic Form

Demographic forms (See Appendices B, C, & D) include a request for information on the educational preparation and professional experience of each respondent. Followers/subordinates were also asked to state how long they have worked with the leader. Demographic and background data identify characteristics of the study populations and show whether or not respondents had prior education and/or work experience in public health. The duration of the leader-follower work relationships gives an indication of the strength of follower assessments of the practices and behaviors of their leaders.

Leadership Practices Inventory

The Leadership Practices Inventory (LPI) (Kouzes & Posner, 1987) was used, with permission (See Appendix E), to measure public health leader practices and behaviors. The LPI has two forms. The LPI-Self (See Appendix F) is for leader self assessment; the LPI-Other collects followers' perceptions of the leader's leadership ability (See Appendix G). Both LPIs call for graded responses to identical behavioral based statements that cover all of the ten behaviors within the five leadership practices.

Participant responses are cast on a five-point Likert scale from "rarely" to "very frequently do what is described". This framework correlates well to the wide range of multifaceted characteristics for leadership in public health cited in the IOM report (1988).

Each public health leader, as named by the deans/chairpersons/ directors, was asked to respond to the LPI-Self and to select five followers/subordinates and request each to respond to an LPI-Other. The leaders were instructed to choose persons with whom they work regularly and who are familiar with their leadership practices and behaviors. The followers/subordinates hold a variety of positions including assistant directors of public health, public health nursing directors and supervisors, physicians, social workers, sanitarians, epidemiologists, statisticians, and clerical staff.

Validity and reliability.

The LPI has been used with successive samples of 1,567, 2,100, and 2,876 managers and executives and their subordinates. Scores on internal reliabilities on the LPI-Self ranged from .69 to .85 and on the LPI-Other from .78 to .91. Test-retest reliability with a convenience sample of Master of Business Administration students averaged better than .93. Over 50% of the students had supervisory experience and 40% were women. To test validity, only the responses of the LPI-Other were used to

examine the relationship between leaders' effectiveness and the behaviors measured on the LPI. Using only the LPI-Other responses provided relatively independent assessments and minimized potential self-report bias. Regression analysis yielded a highly significant equation ($F=318.88$, $p < .001$). Leadership practices explained over 55% of the variance around subordinates' assessment of their leaders' effectiveness (Kouzes & Posner, 1987; Posner & Kouzes, 1988).

Data collection

Data were collected by mail. Explanatory letters appropriate to each of the three population samples (See Appendices H, I, & J) were included with all requests to participate. A stamped self-addressed envelope was provided. Completion of the survey and LPI instruments constituted agreement to participate in the study. Individual confidentiality was assured by a statement that all findings would be reported in the aggregate only.

In addition to the survey tool and demographic form, referral/consent forms (See Appendix K) were sent to every dean/chairperson/director with a request for referral of five MPH graduates of the school or program, who, irrespective of gender, discipline, or position, presently demonstrate leadership in public health. Each mailing to referred leaders included five packets to be distributed to followers/subordinates of their choice. Each packet

included an explanatory letter, demographic form, and LPI-Other. Both leaders and followers were instructed to return the LPI-Self or LPI-Other directly to the investigator.

Telephone calls were made to non-respondents. As needed, the letter and appropriate forms were remailed or sent via FAX. A second request to participate was mailed to each dean/chairperson/director who failed to respond to the telephone call.

Hypotheses

Hypotheses for the study of public health leadership are stated in relation to the research questions.

1. (a) The majority of public health deans, chairpersons, and directors are white, middle-aged, male physicians. Less than 50% hold an MPH degree. Internal and preventive medicine are the major areas of specialization. (b) The majority of public health leaders are white men in administrative and clinical positions which they have occupied for five years. (c) The followers of public health leaders have diverse demographic characteristics and represent an array of professional disciplines, areas of specialization, and position titles. Most have worked with their respective leaders from one to five years.

2. The dean, department chairperson, and director definitions of leadership demonstrate the definitional ambiguity between the terms leadership and management and show greater correlation with transactional leadership characteristics than with those of transformational leadership.
3. Less than 50% of the mission statements of schools of public health mention leadership or leadership development.
4. Course and/or course content on leadership or leadership development is identified in less than 25% of public health curricula.
5. The dean, department chairperson, and director listings of leadership practices and behaviors (a) reveal characteristics of transactional leadership relevant to public health but exhibit low to moderate similarity to the transformational leadership qualities of the Kouzes and Posner conceptual framework and (b) show high correlation to management and technical/professional skills but low or moderate correlation with the other public health leadership skills cited in the IOM report.

6. The LPI scores of leaders and followers are comparable to the scores obtained in studies done by Kouzes and Posner.
7. The Kouzes and Pozner framework of leadership practices and behaviors and the leadership skills cited in the IOM report will have emergent fit with the leadership practices and behaviors of contemporary public health leaders, derived from the LPI data analysis, and the perspectives of leadership identified by the dean/chairperson/director leadership survey findings. Concepts will emerge to provide a basis for course content in leadership development for public health.
8. Merger of concepts for leadership identified by the study will become the building blocks for components of a conceptual framework to contribute to future generation of a substantive theory of leadership for public health.

Research Design

A Combination Design

This was a qualitative study combining survey data collection and comparative data analysis, the major strategy of the grounded theory method wherein diverse data are systematically collected and comparatively analyzed (Glaser & Strauss, 1967; Glaser, 1978). In this

way, concepts emerge and contribute to the generation of grounded theory (Chenitz & Swanson, 1986). According to Glaser, the grounded theory method of analysis transcends specific data collection methods because the "generative nature of grounded theory constantly opens up the mind of the analyst to a myriad of new possibilities" (p. 6) such as new categories of data, new ideas, and new areas for research, as well as to emerging theory. Therefore, grounded theory is both process and product. The process of comparative analysis of data gleaned from the empirical area results in the discovery of concepts most likely to generate a theory, the product, that will fit (be applicable to) and work (be relevant to) and be able to explain the behavior being studied (Glaser & Strauss, 1967). An additional criteria of the grounded theory method states that "A theory must be readily modifiable, based on ever-emerging notions from more data" (Glaser, 1978, p.4)

Emergent Fit Mode

The emergent fit mode of grounded theory analysis applies to this study because it used the conceptual framework developed by Kouzes and Posner (1987). Emergent fit differs from the basic discovery mode of grounded theory in that it "does not start empty or non-pre-conceived" (Glaser, 1978, p. 108). Glaser explains that it is not necessary to "discover all categories or ignore

all categories in the literature that might apply in order to generate a grounded theory" (p. 4). Therefore, the emergent fit mode has a place in grounded theory if concepts are systematically studied to test their empirical validity (Blumer, 1969; Glaser, 1978). The categories or concepts of an existing framework must be carefully fitted as new data emerges to be sure they work. When they can be fitted and modified to work, that is, to explain, predict, and interpret the behavior being studied, the existing category or concept earns its way into the emerging theory (Glaser, 1978).

Grounded Theory and Symbolic Interaction

Leadership is inherently an interactive process between leader and follower(s). Grounded theory provides a way to study human behavior and interaction. It has its roots in the theory of symbolic interaction. This theory applies to the study of experiential aspects of human behavior - how people define events and how they act in relation to their beliefs in everyday settings (Chenitz & Swanson, 1986). Blumer (1969) cites three premises that underlie symbolic interaction: people act toward other persons and things on the basis of their meaning to them; meaning arises out of social interaction with other persons; and meaning is handled and modified through an interpretive process used in dealing with the persons and things one encounters. That is, all human behavior

results from " a vast interpretive process in which people, singly and collectively, guide themselves by defining the objects, events and situations they encounter" (p. 132).

Analysis

The emergent fit mode of grounded theory and the comparative analysis of grounded theory method were used to identify concepts of leadership for public health. Data were systematically collected and comparatively analyzed to investigate the focus on leadership in schools and programs of public health and to discern the practices and behaviors of contemporary public health leaders.

Content analysis of the dean/director definitions of leadership and their listings of leader practices and behaviors provided evidence of the predominate perceptions of leadership held by these persons in positions of responsibility in higher education for public health. The elemental analysis techniques of identification of words, word groups or categories (through reference to dictionary and thesaurus), and word frequencies were used to identify "those attributes of a message which have the greatest likelihood of leading to an accurate inference of the intention of the message source" (Hicks, Rush, & Strong, 1985, p. 58). Absolute and relative frequencies for these nominal and categorical data demonstrate the extent of word usage. The emerging components were correlated

to, and comparatively analyzed in relation to, the public health leadership skills cited in the IOM report (1988) and the leadership practices and behaviors of the conceptual framework of Kouzes and Posner (1987), Likewise, identification of course and/or course content on leadership in schools and programs for public health was assessed to indicate the perceived importance of leadership development in public health curricula. As patterns of meaning were identified, tentative hypotheses were generated for comparison to the LPI data.

The LPI-Self and LPI-Other data were analyzed to identify the leadership practices and behaviors of contemporary public health leaders. LPI scores in high or moderate rating categories were considered indicative of effective leadership practice behaviors. Frequency distributions, means, and standard deviations were calculated for each scale of the LPI. T-tests were used to compare differences between leader (LPI-Self) and follower (LPI-Other) scores and between the scores of other comparable groups that emerged as the data analysis progressed. In addition, comparisons of public health leader/follower LPI scores were compared to scores reported by Kouzes and Posner (1987). To assure confidence in the data findings, LPI-Self and LPI-Other comparisons were made only when there were two or more LPI-Other responses for each LPI-Self. Likewise, group

comparisons were made when six or more respondents comprised a categorical group. Group comparisons were categorized by age, race, gender, educational preparation, discipline, area of specialization, position title, years in the position, and sector (public or private) of employment.

Through comparative analysis of multiple categories of the LPI data, concepts and propositions were compared to the school and program data on leadership and to the research findings of Kouzes and Posner (1987). That is, results of the analyses of the academic leader definitions and listings of practices and behaviors of leadership, of the school mission statements, and of course content on leadership were compared to the LPI leadership findings. Through these analyses, an emergent fit evolved to identify concepts which provide a framework for course content in leadership development and which will contribute to future generation of a substantive grounded theory of leadership for public health.

Limitations of The Study

Confining the survey sample to the accredited schools of public health and programs in community health/ preventive medicine was in response to the IOM report's challenge specific to schools of public health. However, this process eliminated educational programs in other university departments which prepare related health

professionals who may assume leadership positions in public health.

The research design was a potential limitation of this study because it required data collection from three sample populations. Referrals from the dean/chairperson/director respondents were requisite to generating the public health leader sample; the follower sample population was dependent on designation of followers by each leader. Therefore, the response from the first sample diminished the quantity and quality of the succeeding samples. The sample sizes were small - 16 deans/directors, 22 leaders, 79 followers (see Table 4) and limit the generalizability of the study.

Respondents were sought via a mailed survey accompanied by a letter of explanation and invitation to participate. While this data collection method enabled clarity of communication and wide distribution at reasonable cost, it may have limited responses to the leadership survey questionnaire.

Data collection via mailed survey also represented a modification of the symbolic interaction research process. That method generally collects data in the natural setting through direct interview or participant observation. For this study, while it was reasonable to assume that most participants from the three sample populations responded to the data collection forms in the natural setting of

their workplace, direct interview or observations in their nationally distributed worksites was not feasible.

The leadership survey tool purposely used open-ended questions to glean spontaneous and intuitive responses in the dean/director definitions of leadership and in the behaviors and practices they listed as necessary components of leadership for public health. While this approach to data collection is deemed more effective in gleaning instinctive responses, it is less efficient. Use of open-ended questions does tend to yield fewer and less comprehensive responses than could be obtained by using a check list or scaling method.

The LPI-Self has potential for self-report bias. For this reason Kouzes and Posner's (1987) caution against making interpretations of LPI-Self data independently from LPI-Other group data is heeded. Nevertheless, responses to the LPI-Other could be skewed if the contemporary leaders identified only those followers known to have a positive orientation to their leadership practices.

While drawing the sample of identified leaders from graduates of schools of public health was purposeful, this process may also have skewed the LPI findings in a positive direction. Administrators are likely to have recommended persons who have demonstrated strong leadership ability rather than those defined as public health leaders on the basis of position and/or title.

CHAPTER FOUR

Analysis of Results
Dean/Director Perspectives
and the Emphasis on Leadership
in Schools and Programs of Public Health

Respondents

Twelve of the 16 respondents from the universe of 37 deans, chairpersons, and directors of accredited schools and programs of higher education for public health returned a completed data form and leadership survey. Fifteen respondents replied to the request for recommendations of graduates they believe to be public health leaders but four of them named less than the five leader referrals requested. All respondents were deans or directors; no responses were received from department chairpersons (See Tables 1 & 2).

Respondents included seven deans and one director of schools of public health and eight directors of departments of community health/preventive medicine in ten public and six private institutions of higher education. These sixteen universities are nationally distributed; the majority are located in urban areas. Geographically, 15 institutions are within the continental United States; one

Table 1

Dean/Chairperson/Director Respondents by Number of Potential and Actual Sample Size and Return of Data Collection Tools

RESPONDENTS

Title	Potential Number	Actual Number
Dean	21	7
Chairperson	3	0
Director	13	9
TOTAL	37	16

TYPE AND NUMBER OF DATA COLLECTION TOOLS RETURNED

Type		Number
Leader Recommendation Referral	(R)	15
Data Form	(D)	12
Leadership Survey	(L)	12

NUMBER AND TYPE OF DATA COLLECTION TOOLS RETURNED PER DEAN/DIRECTOR

Returned By	Number and Type					
	Three	Two		One		Total
	R,D,L	R&D,	R&L	R	L	
Dean	4	1	0	1	1	7
Director	6	1	1	1	0	9
TOTAL	10	2	1	2	1	16

Table 2

Number of Leader Recommendations Received per Dean/Director Respondents (n=16)

Number	Number Received Per Dean/Director	Total Number Received
5 (requested)	11	55
4	2	8
3	0	0
2	1	2
1	1	1
0	1	0
Total		66

is extra-continental. Four of the 15 universities on the continent are located in states in the northeast and the west, five are in the south, and two are in central states.

Initially, seven deans/directors responded affirmatively to the request to participate in this research study. Seven others replied and explained their reasons for declining to participate. Follow-up telephone calls and additional mailings garnered nine more participants and resulted in response rates of 43% overall and 34% for the leadership survey. Table 3 exhibits the sparse response to this study. It also displays the second mailings and the telephone calls made to generate additional respondents as well as the explanations given for declining to participate. The comments "more pressing duties" (n=1) and "busy" (n=13) comprised the major reason expressed (n=14) for non-participation followed by the combination of "traveling extensively" (n=3) and "out of town" (n=6) as the second most frequent explanation (n=9).

Although many contacts were made, it proved to be extremely difficult to speak directly to the deans/chairpersons/directors to attempt to make a personal appeal on behalf of research for leadership and leadership development. It is possible that if the nature of this research were truly understood there would have been

Table 3

Survey Response Data: Deans/Chairs/Directors n = 37

	RESPONSE				
Contact	Participate	Decline	None	Will Mail	Send Again
Initial Mailing	4	3	30		
First Follow-up Telephone Call	5	1		6	18
Second Mailing	4	3	17		
Second Follow-up Telephone Call	3		3		

Replied But Declined to Participate: Reasons Given

Self Sent Letter	
New program, no graduates	1
Swamped with much more pressing duties	3
New in position	1
Recently participated in another study	1
Letter From Secretary	
Unable to participate	1

Follow up Telephone Calls to Non Respondents*

Response	Explanation Given	Will Follow up	Will Mail	Remail Forms
busy	13	6	6	16
out-of-town	6	3		2
more pressing duties	1			
travels extensively	3	2		1
meetings	3	2		1
crisis to crisis	1	1		
unable to participate	2			

* Director contact to Dean/Director x 3; all other contacts with secretary.

greater participation. The educational administrators of accredited schools of public health, those who participated in this study and those who did not, do provide recognized leadership in multiple and diverse areas of public health. Nevertheless, despite repeated requests, two-thirds of the 37 deans/chairpersons/ directors of accredited schools and programs of higher education for public health declined to participate in this research study of leadership and leadership development for public health. Educational administration is, of course, a very demanding professional activity. General business, including traveling and participation in meetings, dominated the responses given during attempts to generate additional participants. If this is the case, valid responses notwithstanding, it may be that both the activity of delegation within the managerial function of organizing (Koontz, O'Donnell, & Weihrich, 1982) and the transformational leadership roles of involving others and helping others maximize use of their skills (Kouzes & Posner, 1987), were not being applied.

An immediate effect of the low response rate was a reduction in the size of the leader and follower samples. Table 4 shows a comparison of the potential and actual respondents in each of the three study groups - Dean/Director, Leader, and Follower.

Table 4

Dean/Director, Leader and Follower Sample and Study Group Comparisons Based on Potential and Actual Respondents

Group	Sample	Potential Respondents per Recommendation	Study Group Actual Respondents
Deans/ Directors	37	37	16
Leaders	185	66	22
Followers	925	110	79

The ... "less-than-desirable"... (p.16) response from administrators of educational programs for public health raises the same concern expressed in the IOM report (1988) that "... some schools have become somewhat isolated from public health practice and therefore no longer place a sufficiently high value on the training of professionals to work in health agencies" (p. 15). The low response rate may be symptomatic of the need for a refocus on seeking solutions to "... real public health problems..." (p.16) which the IOM report refers to as part of the "... unique research mission of schools of public health" (p.16). For, according to Roemer (1988), doctoral dissertations of public health school graduates exhibit research into highly specialized scientific subjects but show very few studies directed to the type and scope of public health problems encountered in the community or to the strategies needed for effective leadership of a public health agency. Therefore, the non-respondent educational administrators may have judged a dissertation study on leadership of less value than one that would have researched a biomedical topic.

While the underlying reasons for non-participation remain unknown, the theory of symbolic interaction supports reasoned speculation. That is, people define and respond to everyday events in relation to their beliefs (Blumer, 1969; Chenitz & Swanson, 1986). Given the

disparity between a biomedical specialist and a generalist approach to education for public health, the 'true belief' (Hoffer, 1951) in the mission of public health held by an educational administrator determines the response given to the daily academic work of education, service, and research. A preparatory and experiential base in solely scientific or clinical pursuits may not provide the same belief structure as a background in public health education, practice, and/or directorship. Likewise, the knowledge, skills, and perspectives held in regard to management and leadership practices and behaviors influence the role activities undertaken both administratively and personally. And ultimately, these beliefs will drive responses to the IOM challenge for the development and advancement of public health leadership.

Relationship of Leadership Survey Results to Research Questions and Hypotheses

The results of the leadership survey and dean/director data collection are reported following sequential restatement of research questions and hypotheses one (a) to five. As results are analyzed their relationship to the corresponding hypothesis is noted.

Characteristics of dean/director respondents.

Question 1(a): What are the demographic characteristics, educational preparation, and professional

disciplines and areas of specialization of public health deans, chairpersons, and directors?

Hypothesis 1(a): The majority of public health deans, chairpersons, and directors are white middle-aged male physicians. Less than 50% hold an MPH degree. Internal and preventive medicine are their major areas of specialization.

Demographic characteristics, educational preparation, and areas of specialization are reported in Table 5. Three-fourths of the responding deans and directors are middle aged men, eleven of twelve are white, and eight are physicians. Fifty percent of these public health education administrators hold an MPH degree; 50% do not. One respondent identified graduate education in public health at both masters and doctoral levels. Areas of specialization vary. Two dean\director respondents noted dual specialization and three did not specify any area. Epidemiology, the principle science of public health, is the educational area of specialization for three; two list preventive medicine; and one each name internal medicine, health administration, and health policy. Therefore, gender, race, and discipline agree with the hypothesis while the percentage of MPH degree holders is slightly higher and the areas of specialization are more variable than hypothesized.

Table 5

Demographic and Education Data: Dean's and Program Directors in Higher Education for Public Health n = 12*

Demographics

Age	n	Race	n	Sex	n
30-39	2	White	11	Female	3
40-49	6	Hispanic	1	Male	9
50-59	3				
60-69	1				

Educational Preparation

Highest Degree	n	MPH	n
PhD	4	Yes	6
MD	8		
DrPH	2	No	6
MBA	1		

Double Degree Combinations (Included above)	n
PhD and MD	2
MD and MPH	2
PhD and MPH	1
MD and DrPh	1
DrPH and MPH	1

Educational Area of Specialization	n
Preventive Medicine	2
Internal Medicine	1
Health Administration	1
Health Policy	1
Anthropology & Gerontology	1
Epidemiology	3
Reporductive Toxicology	1
Medical Genetics	1
Not Stated	3

*Four of the 16 respondents did not return the data form.

Tables 6 and 6a exhibit the professional discipline and current and prior positions of the dean/director respondents. Director is the position title of five public health education administrators while four are designated as professors of public health as well as administrators. Six respondents have 20 or more years of experience in higher education for public health but only four have been in their present position ten or more years. The majority of prior positions were in academia; others were in hospital or government administration or research.

Based on the circumstances of American society at the turn of the century, it was not surprising that leading positions in higher education for public health were most often held by mature, white men many of whom were physicians. However, given societal changes that have occurred during the past 100 years and the very nature of the public health profession, there is reason to question why the characteristics of public health education administrators do not more nearly reflect the advanced educational and career status of women and the growing cultural diversity of contemporary society as well as the multidisciplinary character of public health.

The finding that just half of the dean/director respondents hold a public health degree gives indication that the lack of formal training in public health is a

Table 6

Professional Discipline and Position Data: Deans and Program Directors in Higher Education for Public Health n = 12

Public Health Discipline	n
Epidemiology	3
Environmental and Occupational Health	2
Health Services Administration	1
Health Services Research	1
Health Policy	1
Community Medicine	1
Preventive Medicine	1
Education	1
Social Sciences	1
Total	12

Years	Number of Years in Higher Education for Public Health (n)	Number of Years in Present Position (n)
- 1	1	1
1 - 4	3	4
5 - 9	3	2
10 - 14	0	3
15 - 19	0	1
20 - 24	4	1
25 - 29	1	0

Table 6a

Professional Discipline and Position Data: Dean's and Program Directors in Higher Education for Public Health. n = 12*

Prior Positions	n	1-4	5-9	10-15	15+	Not Stated
In Higher Education						
Professor	4	1	2		1	
Associate Professor	4	2	2			
Assistant Professor	4	3	1			
Instructor	2	1	1			
Associate Dean	1	1				
Dept. Chairperson	3	2				1
Director	1		1			
Research Scientist	1		1			
Medical Education	1					
None	2					
Not Stated	2					
In Service						
Administration/ Management						
Federal Government	3		2			1
State Health Dept.	1					1
City Health Dept.	1					1
Hospital	1	1				
Research	2	1	1			
None	5					

*Four of the respondents did not return the data form.

deficit shared by many public health education administrators as well as by "... most public health workers"... (IOM, 1988, p.16). In addition, only two (25%) of the eight deans/directors with a medical degree (MD) also have a public health degree. Therefore, as evidenced by their reported areas of specialization (See Table 5), most of these administrators of higher education for public health are academically prepared only in clinical medicine or in a sub-specialty science. The essential nature of these professional endeavors is without question but the educational preparation for them is only partially relevant to that required for leadership in public health (Roemer, 1988). As McBeath (1981) points out, "Physicians are .... trained to deal with the pathology of disease, rather than the active promotion of health in population groups" (p. 193). Sheps (1980), Chair of the Milbank Commission on Higher Education for Public Health, asserts that the degree to which faculty are role models for public health is "... generally influenced by the nature and amount of the field experience of the faculty members themselves" (p. 8). Consequently, the divergence between education and practice may be broad when deans/directors and faculty lack public health education and experience and when theory is taught without relevant application to the practice of public health and to the leadership of public

health agencies and organizations.

Definitions of leadership.

Question 2: How do the school deans, department chairpersons, and directors in schools and programs of higher education for public health define leadership?

Hypothesis 2: The dean, department chairperson, and director definitions of leadership will demonstrate the definitional ambiguity between the terms leadership and management and show greater correlation with transactional leadership characteristics than with those of transformational leadership.

Content analysis of the definitions of leadership contributed by 12 deans\directors yields 23 definitional components of leadership in statements which are both visionary and task-oriented. As interpreted and classified, the 11 key activities identified from these components are shown on Table 7. Ability to define, develop, and direct tasks and programs to initiate and implement and to cope with change is the predominate leadership activity classification. The next most frequent category includes the processes of influencing and directing people to do what is necessary to achieve the identified goals and objectives of an organization. Related to these functions are the actions of managing and mobilizing resources, each named once. The third most frequently cited key activity classification is the

Table 7

Content Interpretation and Classification of Key Activities in Dean/Director Definitions of Leadership

Leadership is the ability to
- define and complete a task
- develop ideas and programmatic initiatives
- use own expertise
- play a directing role
- look for opportunities for change
- cope with change
- align people to cope with change
- bring about or implement change

Leadership is a process of influencing
- groups to do what they otherwise would not have done
- people toward achievement of a given or identified goal
- others in accomplishing objectives for an organization

Leadership is being a role model, an example of qualities, abilities, knowledge

Leadership is directing an organization or a group of people, a directing role

Leadership is managing

Leadership is mobilizing resources in the effort/cause

Leadership is articulating a vision of
- what needs to be done
- what can be done
- how public health goals can be achieved

Leadership is developing a shared vision of the future, people committed to that vision

Leadership is motivating others to share a vision

Leadership is involving and motivating group members to take action in accord with a shared purpose

Leadership is helping others
- maximize use of their skills
- feel a sense of commitment and ownership

combination of articulating, developing, and motivating a shared vision of public health goals. Role modeling and helping others are abilities, each named twice, which are applicable to both visionary and task oriented roles.

Tables 8 and 9 exhibit correlation of the 23 definitional components to the transactional and transformational leader roles and leader-follower relationships as defined by Bass (1985) and Burns (1978). The managerial functions of planning, organizing, and directing and an emphasis on task accomplishment are inherent in the definitional components that resemble transactional leadership. Alternatively, the components analogous to transformational leadership center on change, challenge, commitment, and risk-taking roles and on leader-follower relationships which stimulate involvement, motivation, and shared vision. Fifteen of the 23 components of the dean\director definitions of leadership correlate to the role and leader-follower definitions of transactional leadership. The remaining eight are comparable to transformational leadership (See Tables 10 and 11).

Rank ordered word frequencies of verbs and nouns in the dean/director definitions of leadership are shown on Table 12. Several words are placed in categories of similar or related meaning based on definitions (See Appendices L & M) cited in The Oxford Encyclopedic English

Table 8

Definitional Components of Leadership that Correlate to Transactional Leadership - Reported by twelve Deans and Directors in Higher Education for Public Health

Transactional Leader Role Provide followers or subordinates with an understanding of the role and task requirements expected of them and what they can expect in exchange for satisfactory effort and performance. The focus is on role and task requirements necessary to achieve desired outcomes (Bass, 1985). Definitional Components ..... be a good manager ..... define and complete a task ..... provide direction for an organization or group by developing ideas and programmatic initiatives; a realistic vision and strategy for getting there; strategies for getting things accomplished; and direct guidance to others in the field ..... set direction and align people to cope with change ..... successfully implement change ..... mobilize resources in the effort/cause
Transactional Leader-Follower Relationship A relationship of mutual dependence wherein leader and follower exchange something needed or wanted by the other (Burns, 1978). Definitional Components ..... use own expertise to serve as a role model ..... lead and direct relevant other people ..... direct others through example, qualities, abilities, and knowledge ..... influence or move people, individually or in groups, toward achievement of a given or identified goal ..... influence others in accomplishing objectives for an organization ..... get groups to do what they otherwise would not have done

Table 9

Definitional Components of Leadership That Correlate to Transformational Leadership - Reported by Twelve Deans and Directors in Higher Education for Public Health

TRANSFORMATIONAL LEADER ROLE Recognize an existing need or potential in a follower and motivate performance beyond what is expected; encourage and support personal growth and development of leadership potential (Bass, 1985). ..... look for opportunities for change and accept the challenge ..... bring about change ..... take necessary risks ..... articulate a vision of what needs to be done, what can be done and how public health goals can be achieved ..... help others maximize use of their skills, feel a sense of commitment and ownership
TRANSFORMATIONAL LEADER-FOLLOWER RELATIONSHIP A relationship of mutual stimulation wherein both leader and follower are transformed to higher levels of conduct (Burns, 1978). ..... involve and motivate group members to take action in accord with a shared purpose ..... develop a shared vision of the future and have people committed to that vision ..... motivate others to share that vision

Table 10

The Number of Definitional Components of Leadership Reported by Twelve Deans and Directors in Higher Education for Public Health that Correlate to Roles and Relationships of Transactional Leadership

Definitional Components	Reported by Deans and Directors (n)
Transactional Leader Role	
Provide an understanding of expected role and task requirements	1
Explain what to expect in exchange for effort and satisfactory performance	4
Promote role and task requirements to achieve desired outcomes	4
Transactional Leader-Follower Relationship	
Create relationship of mutual dependence	3
Exchange something needed or wanted by the other	3
Total	15

Table 11

The Number of Definitional Components of Leadership Reported by Twelve Deans and Directors in Higher Education for Public Health that Correlate to Roles and Relationships of Transformational Leadership

Definitional Components	Reported by Deans and Directors (n)
Transformational Leader Role	
Recognize existing need or potential in a follower	1
Motivate performance beyond what is expected	2
Encourage and support personal growth and development of leadership potential	2
Transformational Leader-Follower Relationship	
Promote relationship of mutual stimulation wherein leader and follower are transformed to higher levels of conduct.	3
Total	8

Table 12

Rank Ordered Frequency List of Words and Word Categories in Dean/Director Definitions of Leadership

Rank	Words and Word Categories	Frequency
	Verbs n = 26	
1	achieve/accomplish/complete/do	5
1	direct	5
2	influence/involve	3
2	share	3
2	use/implement/mobilize	3
3	articulate/define	2
3	bring about/move	2
3	develop	2
3	provide	2
4	align	1
4	cope	1
4	help	1
4	lead	1
4	look	1
4	manage	1
4	maximize	1
4	motivate	1
4	take risks	1
	Nouns n = 35	
1	people/groups/others	14
2	ability/capacity/expertise/ knowledge/qualities/skills	12
3	goal/objectives/purpose/cause	5
4	change	4
4	vision/ideas	4
5	process/strategy	3
6	action/effort	2
6	acceptance/willingness	2
6	commitment	2
6	example/role model	2
6	role/task	2
6	organization	2
7	challenge	1
7	future	1
7	guidance	1
7	initiative	1
7	opportunity	1
7	ownership	1
7	resources	1

Dictionary (Hawkins & Allen, 1991), on synonyms identified in Roget's II The New Thesaurus (Vianna, 1980), and on the investigator's interpretation of word usage in the sentence, phrase, and single word written replies of respondents. Among the verbs, 'direct', used five times, is the most frequently used single word followed by a category of four verbs focused on performing and completing tasks and activities. Ranked second are a trio of words, 'use/implement/mobilize', associated with directing efforts toward achieving a purpose or plan; a two-word category, 'influence/involve'; and the single verb "share", which stands alone among the word categories, is also used three times. Words used twice indicate some of the actions necessary to implementing or mobilizing work - 'articulate/define', 'provide', 'bring about/ move' and 'develop'. Then, in fourth rank are individual words as disparate as 'align' and 'take risks' which are each used once.

Dean/director definitions of leadership used the noun category, 'people/groups/others' fourteen times: A grouping of six words indicating knowledge and skills was used twelve times. In third rank order is a single category of words focused on goals and objectives. Next, in fourth rank, are the nouns 'change' and 'vision/ideas'. Standing alone in fifth rank, used three times, is the word group, 'process/strategy'. Nouns that appeared twice

in the definitions include 'task', 'effort', 'willingness', 'challenge' and 'role model' followed by single words used once which range from 'guidance' to 'initiative', 'challenge', and 'future'.

In like manner, the same nouns and verbs are listed on Table 13 according to interpretation and classification of their correlation to transactional and transformational leadership as defined by Bass (1985) and Burns (1978). The distribution of verbs and nouns follows the pattern seen in the analysis of definitional components shown on Tables 8 to 11. That is, the action and subject words associated with transactional leadership denote a focus on directing people to accomplish tasks that will achieve the goals and objectives of an organization. In contrast, the verbs and nouns that show correlation to transformational leadership tend to emphasize behaviors that help, share, develop, motivate, and take risks and feature subject words such as challenge, change, commitment, initiative, opportunity, role model, and vision.

The results of these comparative analyses of the dean/director definitions of leadership tend to be consistent with the second hypothesis. The correlation of words and definitional components to transactional leadership is stronger than it is to transformational leadership and the definitional ambiguity between the terms leadership and management is demonstrated. The

Table 13

Nouns and Verbs in the Definitional Components* of Dean/Director Definitions of Leadership Correlated to Bass' (1985) and Burns' (1978) Definitions of Transactional and Transformational Leadership

Category	Transactional	Transformational
Verbs	n=17	n=9
	accomplish	bring about
	achieve	develop
	align	help
	articulate	involve
	complete	look
	cope	maximize
	define	motivate
	direct	share
	do	take risks
	implement	
	influence	
	manage	
	mobilize	
	move	
	provide	
	lead	
	use	
Nouns	n=17	n=17
	ability	action
	acceptance	capacity
	cause	challenge
	effort	change
	expertise	commitment
	goals	example
	knowledge	future
	objectives	group
	others	ideas
	organization	initiative
	people	opportunity
	process	ownership
	qualities	purpose
	role	role model
	resources	skills
	strategy	willingness
	task	vision

*Listed in alphabetical order.

equivocality that persists is consistent with Bass' (1985) contention that most leaders evidence roles and leader-follower relationships which exhibit various patterns and intensities of both transactional and transformational leadership. This finding also corresponds to the statement that, "a good manager possesses leadership ability" (Longest, 1990, p. 139). That is, directing people to accomplish organizational goals and objectives is a necessary but not all-sufficient leadership ability. Transactional leadership skills must be supplemented by transformational leadership that encourages and enables people to "want" and to be "willing", through personal choice and inner motivation, to work toward higher levels of performance (Kouzes & Posner, 1987).

The mixed messages within the dean/director definitions of leadership reinforce concern about the status of leadership for public health. Because the characteristics of transformational leadership take second place behind those of transactional leadership in the dean/director definitions, acknowledgment of the need for interaction between leaders and followers is apparent. The definitional components, however, reveal a perspective on leader-follower interaction that has a predominate focus on the knowledge and ability of the leader to define and direct tasks and to influence and mobilize people to accomplish the objectives of the agency/organization.

Much less recognition is found for leader initiative in motivating and involving people to commit to a vision for public health and to recognize and support development of their leadership potential.

Leadership emphasis in schools of public health.

Question 3: Do the mission or philosophy statements of these public health schools and programs address leadership or leadership development? If so, how?

Hypothesis 3: Less than 50% of the mission statements of schools of public health mention leadership or leadership development.

Three or 25% of the twelve school of public health mission statements received are reported to include a reference to leadership or leadership development (See Table 14). One school indicates its mission is to provide leadership in education, research, and service (the traditional responsibility triad of academia) and in all aspects of public health. The two other statements identify similar missions of preparing professionals to assume leadership positions by promoting student acquisition of the knowledge, perspectives, and skills necessary for that role (See Table 15). One respondent indicated that, although not included in the mission statement, leadership and leadership development are 'implicit' in the goals of the school. Likewise, another school's mission statement is silent on leadership but

Table 14

Leadership Emphasis in Schools and Programs of Higher Education for Public Health Reported by Twelve Deans and Directors

Emphasis	Yes		No	
	n	%	n	%
Leadership Included in Mission or Philosophy Statement	3	25	9	75
Curriculum Includes A course in Leadership or Leadership Development	2	17	10	83
Leadership Included as a topic in Another Course	7	58	5	42

Table 15

Content on Leadership and Leadership Development in Mission Statements from Three Schools/Programs of Higher Education for Public Health as Reported by Deans and Directors

Mission Statements (n = 3 or 25%)
..... to provide leadership in education, research, service, and all aspects of public health
..... to prepare professionals, researchers, and academicians to assume leadership positions in the health field
..... to promote perspectives and skills necessary to assume effective leadership in public health

four school goals focus on providing education and training in public health sciences to promote community health programs and research. These replies tend to support the third hypothesis. They also correspond to the finding, from catalogue review, that few school of public health mission or philosophy statements mention the words leader or leadership.

Since higher education for public health was founded on the premise that leaders are needed to direct the work of public health (Fry, 1967; Bowers & Purcell, 1974; Milbank, 1976), there may be an unspoken assumption that preparation of leaders remains an 'implicit' mission of contemporary programs. Also, based on the dean/director definitions of leadership, curriculum content designed to expand student knowledge, ability, and specialized skill and expertise may reflect statements that cite a broad mission of educating researchers and practitioners prepared to fulfill the public health goals of health promotion and disease prevention. That is, as noted by Pickett and Hanlon (1990) and Terris (1988), the emphasis may be on acquisition of technical and management skills without attention to development of the abilities necessary for effective leadership. Nevertheless, while the IOM (1988) report did not study academic programs, it did clearly challenge schools of public health to resolve the deficit in leadership found in public health agencies.

Of the twelve schools represented by these study respondents, very few have mission statements that denote a response to this challenge.

Question 4: What course and/or course content in leadership development is included in public health curricula?

Hypothesis 4: Course or course content on leadership development is identified in less than 25% of public health curricula.

Two of twelve schools (16.7%) responding to this study have a required course which reportedly includes content on leadership concepts and the development of leadership skills (See Table 14). In both cases, this material is identified as an important component of the administrative and management foundation requisite for chief executive officers as well as for other leadership positions in public health.

Leadership and/or leadership development are stated topics in other courses in seven (58%) of the twelve schools (See Table 14). Most of these courses are part of a core curriculum; others are elective. Course titles include administration theory; administrative principles, planning, and practice; health policy; health service systems; health program and project management; and behavioral science for business . Clearly stated in a description of the course in administration theory is the

goal of preparing students for directing roles. Course content on leadership was named by two respondents. This topical content includes approaches to complex organizations, problem-solving, leadership and management style, group dynamics and group work, interpersonal skills, and community health education.

Although nine or 75% of these 12 schools of public health reported that they do present diverse components of leadership content in some course in the curriculum, none of the identified courses were devoted specifically to leadership and/or leadership development. One respondent, however, noted that a leadership course is being planned. Another dean\director acknowledged lack of a specific leadership course. This educational administrator maintained the curriculum does provide the necessary training because many graduates do become public health leaders.

While hypothesis 4 is not upheld, the responses to Question 4 leave the status of course content on leadership in the curricula of schools of public health unexplicit and debatable. The definitional ambiguity between the terms leadership and management is again demonstrated. Moreover, leadership appears to be considered a component of management and administration rather than a distinct skill in itself as emphasized by Johnson and Bonoma (1979), Longest (1990), and Sullivan

and Decker (1992).

Practices and Behaviors of Leadership for Public Health

Question 5: What do the public health school deans, department chairpersons, and directors list as leadership practices and behaviors for public health?

Hypothesis 5: The dean, department chairperson, and director listings of leadership practices and behaviors (a) reveal characteristics of transactional leadership relevant to public health but exhibit low to moderate similarity to the focus on transformational leadership in the conceptual framework of Kouzes and Posner and (b) show high correlation to management and technical/professional skills but low or moderate correlation with the other public health leadership skills cited in the IOM report.

The practices and behaviors that 12 deans\directors believe to be necessary components of leadership for public health were comparatively analyzed according to the conceptual framework of Kouzes and Posner (1985) and the leadership skills cited in the IOM (1988) report. Numerical counts are presented to note the frequency of occurrence of practices and behaviors reported by dean\director respondents which correlate to those of each standard.

Kouzes and Posner framework.

Table 16 displays an annotated comparison of content in 62 dean\director identified leadership practices and

Table 16

An Annotated Comparison of the Five Practices and Ten Behavioral Commitments (with Descriptive Phrases) of Kouzes' and Posner's Conceptual Framework of Leadership and the Leadership Practices and Behaviors (Listed in Alphabetical Order) Reported by Twelve Deans and Directors in Higher Education for Public Health

Kouzes' and Posner's Leadership Practices and Behaviors	Leadership Practices and Behaviors Reported by Deans and Directors
CHALLENGING THE PROCESS	
Search for Opportunities	
Question the status quo	Accept responsibility for promotion, protection, and preservation of the community
Find what needs fixing	Articulate goals
Eliminate unnecessary routines	Be creative
Treat every job as an adventure	Be innovative (2)
Involve others in problem-solving	Communicate change theories
	Get at root of problem
	Plan strategies to solve or ameliorate health problems of the community (2)
	Promote goals of the organization
	React to change
	Strategic planning
Experiment and Take Risks	
Collect innovative ideas	Decision-maker
Set up experiments	Willing to take risks (2)
Add new team members	
Model risk-taking	
Honor risk takers	
Foster hardiness	
INSPIRING A SHARED VISION	
Envision the Future	
Review the significant events of the past	Commitment to improve health of the community
Define an image of the future	Innovative thinking
Determine an agenda	Realistic vision (2)
Act on your intuition	Set clear directions for the future
Test your assumptions	
Enlist Others	
Identify your constituents	Charisma
Find common ground (interests, goals, needs, aspirations)	Communicate effectively with the media and community groups
Be positive and optimistic	Communicate orally and in writing
Hone your communication skills	Inspire others
Be prepared to communicate your vision for the agency on a moment's notice	Inspire young people to enter public health
Remain genuine	Interpret research to establish public policy
	Mobilize medical profession
	Motivate others
	Values clarification

ENABLING OTHERS TO ACT	
<u>Foster Collaboration</u>	
Always say "we"	Ability to work with others
Create interactions	Consensus building
Create climate of trust	Foster participation of others in analysis, design, and implementation of services and strategies
Focus on gains, not losses	Inspire professionals to achieve organization and community goals
Involve people in planning and problem-solving	Organizational behavior
Trust others	Participative management (2)
	Provide an atmosphere of cooperation and collaboration rather than competitiveness
	Team building
	Representation
	Respect for other opinions
<u>Strengthen Others</u>	
Get to know people	Delegation
Develop interpersonal competence	Good listener
Use your power to serve others	Help others maximize use of their skills
Delegate	Interpersonal skills
Keep people informed	Network among communities, government, medical profession
Announce accomplishments of others	Recognize difficulties that others face
	Understand the political process
	Work across disciplines, agencies/organizations (2)
MODELING THE WAY	
<u>Set the Example</u>	
Clarify personal values	Analytic and scientific skills
Determine your leadership credo	Commitment to personal growth and lifelong learning
Enlist others to generate and post list of organizational values	Knowledge and experience in public health
	Medical knowledge base
Establish systems and structures to reinforce the values to be upheld	Publish new knowledge
	Reputation and record of accomplishment (2)
Find teachable moments	
Show you care	
<u>Plan Small Wins</u>	
Make plans and preparations	Prioritize tasks
Involve others in developing a model program	Problem solving
Move forward in incremental steps	
Reduce negative consequences of new actions or behaviors	
Communicate the benefits of change and innovation	
Build commitment	
Create feelings of ownership	

ENCOURAGING THE HEART	
<u>Recognize Contributions</u>	
Develop tough measurable performances standards	Good personnel practices
Install a formal systematic process to reward achievements	Help others feel sense of accomplishment, ownership, commitment
Involve others in designing a system of nonmonetary compensation	Reward systems
Make recognitions public	
Be out and about as a leader	
Seek evidence of effort and quality performance	
<u>Celebrate Accomplishments</u>	
Schedule celebrations	None
Organize celebrations around evident performance-reward linkages	
Make celebrations of accomplishments visible	
Stay committed and enthusiastic	

behaviors to the ten behavioral commitments of the five essential leadership practices in the Kouzes and Posner (1985) framework. Each content item represents a single response unless it is followed by a numeral within parentheses to indicate more than one. The total number of dean/director listed leadership practices and behaviors compared to each of the behavior/practice groups is listed on Table 17. Respondent replies are examined following explication of each practice and the associated behaviors, according to the Kouzes and Posner framework.

"Challenging the process" involves pioneering - a willingness to seek opportunities for change, to be innovative, to question the status quo, and to have the hardiness and commitment to take the risks inherent therein. Behavioral commitments associated with this essential leadership practice are the "search for opportunities" and the courage to "experiment and take risks". Searching for opportunities includes looking for ways to make improvements and involving others in problem-solving. Being open to new ideas and a willingness to listen to others and to remove barriers to change are behavioral components of "experiment and take risks".

Twelve practices and behaviors identified by deans/directors show variable likeness to a "search for opportunities". Being creative and innovative and communicating change theories indicate proactive behavior

Table 17

The Number of Leadership Practices and Behaviors Reported by Twelve Deans and Directors in Higher Education for Public Health that Show Correlation to Kouzes' and Posner's Conceptual Framework of Five Practices and Ten Behavioral Commitments of Leadership

KOUZES AND POSNER FRAMEWORK	DEAN/DIRECTOR RESPONSES	
Practices/Behaviors	Practices	Behaviors
CHALLENGING THE PROCESS		
Search for Opportunities	15	12
Experiment and Task Risks		3
INSPIRING A SHARED VISION		
Envision the Future	14	5
Enlist Others		9
ENABLING OTHERS TO ACT		
Foster Collaboration	21	12
Strengthen Others		9
MODELING THE WAY		
Set the Example	9	7
Plan Small Wins		2
ENCOURAGING THE HEART		
Recognize Contributions	3	3
Celebrate Accomplishments		0
TOTAL		62

but reacting to change does not. Accepting responsibility, articulating and promoting goals, getting to the root of problems, and planning strategies are active behaviors. But because 'opportunities' in public health can be evident and urgent rather than sought out, a response could denote either acceptance of the challenge or effort to maintain the status quo (Bennis, 1989).

Just three responses are comparable to "experiment and take risks". Willingness to take risks indicates close fit to this behavior. Conversely, because no qualifying words were included with the term decision-maker, the respondent's intent cannot be interpreted. This essential behavior can range from a leadership style that, like the Vroom and Yetton model (1973), promotes democratic and participative decision-making in important non-emergent situations to an autocratic style of leadership where the leader consistently makes all program and policy determinations .

"Inspiring a shared vision" is future oriented. It requires a desire to make something happen, to change 'the ways thing are', to create something not done before. Vision involves mission and purpose and application of leadership practices and behaviors that inspire commitment and enthusiasm in others. A vision of the possible, an ideal worth striving for, and a clear sense of direction are essential factors in a behavioral commitment to

"envision the future".

Dean/director respondents contributed five statements consistent with an orientation to the future including two which specify having a realistic vision. The need to "enlist others" is recognized in nine responses: two use the verb inspire, two focus on communication, and five others specify behaviors to motivate, mobilize, interpret, and to evidence charisma, and to practice values clarification. The term charisma is correlated to "enlist others" because charisma actually denotes human expressiveness, not because of its use as "an overworked cliche' for strong, attractive, and inspiring personality" (Bass, 1985, p. 35). Dean/director comments focusing on communication to 'enlist others' denote a positive response to their recognition of the need for leader commitment to improving a community's health and for envisioning the future.

"Enabling others to act" is a leadership practice that encourages teamwork and collaboration and seeks to empower others. Leaders who "foster collaboration" tend to use the word 'we' instead of 'I'; they promote cooperation rather than competition. Involving people, creating interactions, and focusing on gains rather than losses are essential behaviors. "Strengthening others" recognizes the need to develop interpersonal competence and to get to know people. It involves sharing

information and power through delegation, keeping people informed, and recognizing achievements of others. Respondent replies were more highly correlated to this practice than to the other four.

Eight dean/director replies indicate or suggest collaborative behaviors. Four other statements listed in this category are expressions associated with management. They have the possibility, but not the promise, of fostering collaboration. Participative management generally denotes active involvement and shared communication (Vroom & Yetton, 1973) but representation may only signify the role of one who collects and transfers the directives given by an authoritarian manager or administrator. The terms personnel management and organizational behavior are broad labels rather than practices or behaviors. Since accompanying qualifying statements are absent, the respondents' intentions can only be conjectured. For example, personnel management could mean the managerial functions of organization and staffing (See Appendix N) or the leadership practices of trusting and involving others in problem-solving. Similarly, organizational behavior may suggest behavior modification related to staff development (Koontz et al., 1982) or an analysis of the effects of organizational operations on the behaviors of individuals and groups therein (Kaluzny, Warner, Warren, & Zelman, 1982).

Nine dean/director responses express recognition of the need for "strengthening others". Interpersonal skills, being a good listener, and delegation are practices and behaviors that coincide with helping others use their skills, with networking across disciplines, and with persons and groups both internal and external to an agency or organization. These skills correlate well to the interactions necessary for leadership in public health.

"Modeling the way" entails planning and leading by example, that is, being a role model. The key behavior to "set the example" is the demonstration of congruity between words and actions. This means being clear about rules and guiding principles and adhering to them; it means establishing systems and structures that incorporate and reinforce the values espoused by the leader. Because the change process often occurs in a step sequence, behaviors that "plan small wins" take one step at a time. Followers to be assigned to implement changes are involved in planning for them. As work progresses, leaders provide encouragement and support; they make progress visible at each step along the way.

Seven of the written comments are comparable to "set an example" because they include demonstration of knowledge and skills, possession of a reputation and record of accomplishment, and commitment to lifelong

learning. As in other dean/director responses, setting an example refers primarily to leader possession of knowledge and expertise rather than modeling values and beliefs - practices associated with transformational leadership. Two replies are listed as "plan small wins" because they are important components of any planning process even though they do not denote behaviors which necessarily involve other people or recognize progress toward a stated outcome. In fact, these behaviors are more closely aligned with the planning function of management (See Appendix N).

"Encouraging the heart" includes the ability to prompt the best performance from others and to acknowledge good work. It calls for a behavioral commitment to "recognize contributions" by linking performance to rewards. Again, congruity between words and actions is essential. Performance expectations must be clearly stated and feedback must be given to everyone but rewards must be dispensed only to those who meet performance standards. Recognition of contributions requires making plans to "celebrate accomplishments" and to do so visibly in the work group setting. Having good personnel practices and reward systems and helping others feel a sense of accomplishment, ownership, and commitment are the three dean/director responses that correlate to "recognize contributions". The activity of helping others correlate

well with this behavior but personnel practices and reward systems are more closely related to the staffing function of management (See Appendix N). There were no replies comparable to behaviors that "celebrate accomplishments".

These comparative analyses of the five practices and ten behavioral commitments of leadership identified by Kouzes and Posner (1987) with those listed by the twelve dean/director respondents reveal a mix of similar, dissimilar, and tenuous behaviors and one practice with no like behaviors. By number count, three of the five practices look fairly comparable but, when specifically enumerated according to the ten behaviors, differences and ambiguities become apparent.

The closest correlation of the dean/director reported leadership practices and behaviors is with those that "enable others to act". Their replies denote interest in involving others and in fostering collaboration in the work of the organization. A similar focus on the future is evident in the practice behaviors compared to "inspiring a vision" as well as a desire to enlist and inspire others. The practice of "search for opportunities" shows many dean/director listed behaviors having an emphasis on transactional leadership directed to solving identified problems rather than looking for what needs fixing; only two replies mention risk-taking. Likewise, transactional leadership based on public health

knowledge and skills is seen in the "modeling the way" practice behaviors of "set the example" while the comparison of prioritizing tasks and problem solving to "plan small wins" is both dissimilar and tenuous. Finally, just three out of the 62 dean/director behaviors show some similarity to "recognize contributions" but there are none relative to "celebrate accomplishments".

The collected array of dean/director listed leadership practices and behaviors provides some answers to Question 5 which tend to agree with Hypothesis 5a. That is, the comparative analyses reveal many transactional leadership characteristics relevant to public health but a low to moderate number of the transformational leadership qualities cited in the conceptual framework of Kouzes and Posner.

Leadership skills cited in the IOM report.

Ten essential leadership skills for public health have been gleaned from the IOM (1988) report. Table 18 displays an annotated comparison of each of these ten skills and their sub-components to 75 leadership practices and behaviors identified by dean/director respondents. The IOM leadership skills are presented in descending order according to the number of comparable practices and behaviors reported on Table 19. In preface to summarizing the dean/director responses, each IOM leadership skill is introduced and defined.

Table 18

Necessary Leadership Skills for Public Health: An Annotated Comparison of Leadership Skills Cited in the IOM Report and the Leadership Practices and Behaviors Listed by Twelve Deans and Directors of Higher Education for Public Health

Cited in IOM Report	Reported by Deans and Directors
MANAGEMENT SKILLS	
Demonstrate managerial abilities	Ability to manage programs Consistent management style Honesty Participative management Delegation Decision-making (2) Evaluation Problem solving (2) Personnel management (3) Team development
Plan and allocate resources: to avert disasters; to provide personal health care to those rejected by other sectors of health care system	Strategic planning to solve or ameliorate community health needs and problems (3)
Plan and set clear direction for the future	Realistic vision
Take on new problems while continuing to work on containing long-existing problems	Prioritize tasks
Mobilize resources	Organizational ability
Use resources effectively	Budgeting
Provide inservice education for employees	
Sense and deal with changes in agency environment	Knowledge of change theories Ability to manage change

TECHNICAL/PROFESSIONAL SKILLS	
Build on scientific base grounded in epidemiology and biostatistics	Broad concept of public health Analytic and scientific skills Medical knowledge base
Use accurate data and professional judgment to make decisions as comprehensive and objective as possible	Ability to interpret research Competence in the substance of public health issues Thorough knowledge and experience in public health
Upgrade knowledge and skills continuously	Reputation and record of professional competence and accomplishment (2) Commitment to personal growth and development and professional lifelong learning
Oversee and deal with health needs and problems of entire populations	Capability to integrate multiple factors related to solutions to contemporary community health problems
Develop comprehensive strategies to influence health-related behavior	Innovative thinking
Use prospective instead of reactive approach	Ability to be creative Willing to take risks (2)
COMMITMENT	
A firm grounding in, and commitment to, public good and social justice	Sincere motivation and commitment to improving the health of a community
Promote a public health coalition of professionals united by a shared mission	Ability to inspire and move public health professionals toward achievement of agency and community goals (2) Provide an atmosphere of cooperation and collaboration rather than competitiveness
Communicate public health values to agency workers and enlist their commitment to these values	Motivate employees (2) Encourage others to be effective and innovative (2) Promote goals of organization rather than own self-interest
Identify individuals with leadership potential	Help others to maximize their skills, feel a sense of commitment and ownership
Develop and nurture leadership capacities	Inspiring young people to enter public health and set high goals for themselves and for their generation

COMMUNICATION	
Communicate agency values to employees	Communication skills within organization Be a good listener
Ensure quality of contacts between agency employees and clients	
Communicate to diverse audiences	Communicate effectively (3) Communicate effectively with media and community groups
Communicate to build constituencies	Articulate goals and objectives, strategies and tactics
Identify and speak out on specific health problems	Charisma and vision Communication skills in writing and oral presentation
	Publish new knowledge and new application of existing knowledge and methods
RELATIONSHIP BUILDING	
Take initiative to seek and develop ongoing relationships... with legislators and other public officials; with other agencies and private sector representatives; with professional societies and academic medical centers	Interpersonal skills Ability to work with others Working to make agencies and professional organizations more effective
Develop and cultivate relationships with physicians and other private sector representatives	Demonstrated ability to mobilize the medical profession in support of public health goals Ability to network among groups of medical professionals
Strengthen relationships with professional and citizen groups including voluntary health organization	Combined involvement in activities which allow others to recognize that you understand the difficulties they face
Understand diverse needs and perspectives	Respect opinions of others

RELATE TO LARGER COMMUNITY	
Relate operation of agency to its larger community role	Accept responsibility for promotion, protection, and preservation of community health
Organize community efforts aimed at health promotion and disease prevention	Bridging the role of public health with the larger context to include housing, ethnic diversity, income/poverty, jobs, education, peace
Find common pathways for action with other professional and citizen groups pursuing interests with health implications	Ability to network within and among communities and governments
Foster local involvement and sense of ownership that emphasizes local needs and advocates equitable distribution of public resources	
Establish links between public and private sectors	Ability to work across disciplines and sectors
Strengthen competence of agency personnel in citizen participation techniques	
COMMUNITY ORGANIZATION	
Promote efforts aimed at health promotion and disease prevention	Plan strategies to ameliorate health problems and needs of the community
Organize community support for actions to achieve public health goals and objectives	
Marshall constituencies to support implementation of appropriate action	Consensus development
Build citizen participation in program implementation	Foster and maintain participation of others in analysis, design, and/or implementation of services or strategies
	Representation

POLITICAL SKILLS Exhibit knowledge of and skills in the public decision process including its political dimensions Demonstrative positive appreciation for the democratic political process and crucial role of policymakers Educate legislators and other public officials on community health needs and rationale for strategies advocated and pursued by health department	Understand the political process and act accordingly
PUBLIC POLICY MAKING Use scientific knowledge base in decision-making and in leading development of public health policy Develop strategies to demonstrate worth of public health efforts to legislators and the public and to compete with other perspectives for policy attention and support Educate public on community health and public policy issues	Interpret health research findings for establishing public policy
COMMUNITY ASSESSMENT AND DIAGNOSIS Gather and analyze data Monitor health problems and measure progress Sense and deal with important changes in the community that are the context for public health programs	

Table 19

The Number of Leadership Practices and Behaviors Reported by Twelve Deans and Directors of Higher Education for Public Health that Correspond to Leadership Skills Cited in the IOM Report

Cited in IOM Report	Reported by Deans and Directors (n)
Management Skills	23
Technical/Professional Skills	14
Commitment	11
Communication	10
Relationship Building	7
Relate to Larger Community	4
Community Organization	4
Political Skills	1
Public Policy Making	1
Community Assessment and Diagnosis	0
Total	75

"Management skills" have a focus on demonstration of managerial abilities including planning and resource allocation and setting directions for the future. The IOM report also calls for leadership attention to in-service education and to changes in the environment of an agency. Twenty-three of the 75 practices and behaviors listed by 12 deans/directors correlate to management skills. Seven responses use the words manage or management while others state well-known components of managerial and organizational functions such as planning, budgeting, delegation, problem-solving, and decision making. Two respondents listed practices related to change while another called for realistic vision.

"Technical/professional skills" for public health leadership build on a scientific base grounded in epidemiology, sound judgment for comprehensive and objective decision-making, a prospective approach to the health problems of populations, and the need to upgrade knowledge and skills continuously. Fourteen comparable respondent practices and behaviors include four focused on knowledge and experience in public health, five centered on scientific knowledge and professional competence, and two which state a willingness to take risks. Other once-listed behaviors are creativity, innovative thinking, and lifelong learning.

"Commitment" is characterized by firm grounding in, and commitment to, the public good and social justice. Committed leaders foster acquisition of public health values by agency workers and promote a coalition of professionals united by a shared mission. In addition, they identify and develop leadership potential in others. Inspiring, motivating, and encouraging others account for eight of the eleven dean/director replies that correspond to "commitment". Two practices and behaviors refer to agency goals and work atmosphere and one cites commitment to improving the health of a community.

"Communication skills" in the IOM report focus on the ability to build constituencies, to speak out about health problems to diverse audiences, and to promote agency values among employees. Six of ten dean/director responses target communication. Of these six, four use the word 'effectively'; two specify communicating to groups; and one lists written and oral presentation skills. Other practices and behaviors regarding communication include publishing knowledge, articulating goals and strategies, being a good listener, and having charisma and vision.

"Relationship building" is a necessary public health leadership practice centered on initiating and strengthening links with legislators, private sector representatives, professional societies and academic

centers, voluntary agencies, and other organizational representatives and citizen groups. It calls for understanding the diverse needs and perspectives of others. Interpersonal skills and the ability to work with persons and organizations highlight the seven practices and behaviors listed by deans/directors which correspond to relationship building. Two respondents called for networking among the medical profession; one cited a need for involvement in activities which help others recognize that the public health leader understands their needs and problems.

"Relate to the larger community" highlights the responsibility to take action in organizing community efforts for health promotion and disease prevention and in finding common pathways and linkages for interactions with citizen groups and between the public and private sectors. In combination, the four dean/director responses associated with this leadership skill highlight the basic mission of public health, the multifarious dimensions and disciplines of public health, and the need to engage in networking within and among communities, governments, and professional groups.

"Community organization " denotes proactivity in marshalling constituencies to support actions to achieve public health goals. This includes garnering community support for, and building citizen participation in,

implementing programs for health promotion and disease prevention. Four individual dean/director replies correlate to this public health leadership ability. Listings of representation and consensus development coincide with two other listings of leadership practices and behaviors: planning strategies to ameliorate community health needs and problems and fostering and maintaining participation of others in all phases of public health services.

"Political skills" include practices and behaviors that demonstrate a positive appreciation of the democratic political process and the crucial role of policy making. Political skills are built on knowledge of the legal foundation for public health and of the political dimensions of public decision-making. They find expression in the ability to educate various public officials on the health needs of communities and on the rationale for the strategies advocated and pursued by public health. One respondent listed the need to understand the political process and to act accordingly but did not specify the actions implied.

"Public policy-making" is the skill which calls for application of scientific knowledge in decision-making and in leading development of public health policy. Key practices and behaviors include development of strategies to educate legislators and the public on public health

issues and to demonstrate the worth of programs and services so that public health needs can compete with other perspectives for policy attention and support. For this activity, closely related to political skills, the one comparable dean/director reply is the practice of interpreting research findings related to establishing public policy.

"Community assessment and diagnosis" is the tenth public health leadership skill gleaned from the IOM report. This includes data collection and analysis to monitor health problems and to measure progress in responding to them. It is a practice necessary for accurately sensing and dealing with changes in the community that are the context for public health programs. None of the practices and behaviors cited by dean/directors are comparable to community assessment and diagnosis.

The annotated and numbered comparisons of leadership skills cited in the IOM report to the leadership practices and behaviors listed by the twelve dean/director respondents exhibit both similarity and difference with Hypothesis 5b. There is high correlation to management skills but less to technical/professional skills and only moderate comparisons could be made between commitment and communication actions. Alternatively, there is little evidence of like practices and behaviors relative to

community assessment, organization, and relationship building, or to political skills, and public policy making.

Functions of the management process

Given that analyses of dean/director listings of leadership practices and behaviors demonstrated high correlation to management skills called for in the IOM report and greater correlation to transactional leadership abilities than to transformational qualities cited in the Kouzes and Posner framework, additional analysis was warranted. A brief review of management literature guided identification of basic management functions appropriate for comparison to the leadership practices and behaviors cited by the dean/director respondents. Therefore, an additional hypothesis was generated.

Hypothesis 5(c): The dean/director listings of leadership practices and behaviors include many components of basic functions of the management process.

Henri Fayol, a Frenchman and proven manager and administrator, introduced the idea of teaching management. In 1916 he wrote a monograph outlining basic components of management theory and a conceptual framework for analyzing the management process. His work became the foundation upon which schools, textbooks, and additional theories and principles of management were later developed and expanded (Hodgetts, 1975). There are now multiple courses and

degree programs in management and the literature on management and organization is voluminous. Fayol's five functions of management -planning, organizing, commanding, coordinating, and controlling - have been alternately expanded and condensed by many writers. Nevertheless, managerial functions continue to provide a useful framework for organizing and presenting management knowledge (Koontz, O'Donnell, & Weihrich, 1982; Longest, 1990; Robbins, 1984).

Slevin (1979) asserts that six classical management functions - planning, organizing, directing, coordinating, reporting, and budgeting - represented by the acronym, POSDCORB, remain relevant to the multiple demands placed on contemporary managers. Some writers assume the function of coordinating to be a component of organizing and the functions of reporting and budgeting as controlling activities while others separate decision-making and staffing as functions distinct from planning and organizing (Leiber, Levine, & Dervitz, 1984; Longest, 1990). Proponents of management process consider planning, organizing, and controlling as the three functions universally essential to management performance "regardless of the enterprise, activity, or hierarchical level" of the manager (Hodgetts, 1975, p.111).

Recognition of the need for an effective manager to be an effective leader is evident in two lists of

management functions (Koontz, et al., 1982; Robbins, 1984) by the deletion of Fayol's commanding function and by insertion of the term 'leading' where 'directing' previously appeared. Descriptions of the 'leading' function, however, tend to focus on directing and influencing the work of subordinates to accomplish the goals of the organization. That is, the kind of leading functions recounted exhibit the characteristics of transactional leadership.

Based on the proposition that management and leadership are not the same, a framework without the term 'leading' was chosen for comparing the dean/director identified leadership practices and behaviors for public health to established functions of management. This framework has six functions of management (Sullivan & Decker, 1992) which include the predominate functions gleaned from the literature: the three universal functions essential to managers in any setting or position - planning, organizing, and controlling; the directing function rather than a leading function; and the staffing and decision-making functions which are relevant to working with the multidisciplinary personnel of public health and to making decisions on dealing with the complexity of everyday public health problems. Definitions of these six functions are stated in Appendix N. Table 20 presents each selected management function,

Table 20

A Comparison of Leadership Practices and Behaviors Reported by Twelve Deans and Directors in Higher Education for Public Health to Six Functions of the Management Process*

Six Major Functions of the Management Process (with Characteristics Actions)	Leadership Practices and Behaviors Reported by Public Health Deans/Directors	n
PLANNING Articulate purpose Determine existing situation and desired outcomes Establish goals Select objectives Define tasks and performance expectations	Articulate goals, objectives, strategies and tactics (2) Budgeting Plan strategies (3) Prioritize tasks	7
ORGANIZING Determine personnel needs Assign work roles Delegate authority and responsibility Coordination operations	Delegate Provide atmosphere of cooperation and collaboration Work to make agencies and organizations more effective (2)	4
CONTROLLING Determine what is being accomplished Assess performance in relation to accomplishment of the organizational goal Initiate corrective action	Evaluation Manage programs	2
DIRECTING Guide, teach, coach, and motivate personnel to work to achieve organizational goals and objectives	Coaching Foster and maintain participation in services and strategies Move professionals toward accomplishment of organizational goals Motivate others (4) Promote goals of organization Work with others	11
DECISION-MAKING Define problems Evaluate alternatives Select optimal solutions	Decision-making (2) Problem solving Get to root of problems	4
STAFFING Identify, recruit, select, place, orient, train, maintain, and appraise personnel	Good personnel practices Manage personnel (2)	3
TOTAL		31

*For Definitions, See Appendix N

with characteristic activities, in comparison to the leadership practices and behaviors listed by the dean/director respondents. The results of these comparisons are presented following a short statement of the essential activity within each function.

"Planning" includes defining and selecting the courses of action the agency/organization will follow to accomplish its mission or purpose. Seven practices and behaviors reported by dean/director respondents include three for planning strategies; two for articulating goals, and one each for budgeting and prioritizing tasks.

"Organizing" involves establishing the structure and coordination of roles and responsibilities to assure accomplishment of the specified goals and objectives of the agency/organization. A total of four behaviors are comparable to this function. Taking action to delegate and to provide an atmosphere of cooperation and collaboration are each cited once. Two responses targeted the need for working to make organizations more effective.

"Controlling" is the function involved with measuring work performance and initiating corrective actions for deviations and under-achievement. One dean/director respondent cited evaluation. The only other comparable response was a general statement - 'manage programs'.

"Directing" is an interpersonal function that encompasses guidance, teaching, and coaching employees and

motivating them to strive for work performance that accomplishes agency/organization goals. There are eleven comparable replies. Four deans/directors listed behaviors to motivate others and three cited working with others. Two related practices are promoting and moving professionals toward accomplishing organization goals; two others are fostering participation in services and strategies and the practice of coaching.

"Staffing" relates to the functions surrounding employment and retention of people who are able to carry out assigned tasks effectively. Two dean/director replies cited management of personnel and one noted the need for good personnel practices.

"Decision-making" is the process of defining problems, evaluating alternatives, and selecting optimal solutions. Of the four comparable practices and behaviors, decision-making was specifically listed by two respondents while the others identified problem solving and the need the get at the root of problems.

As projected by hypothesis 5c, the dean/director listings of leadership practices and behaviors do include many components of these six major functions of the management process. Of the 31 leadership practices and behaviors identified as having managerial content, a third (11) are comparable to the directing function and almost a quarter (7) correspond to planning. The other comparisons

are weaker. Four practices and behaviors correlate to organizing and another four to decision-making while three relate to staffing and two to controlling.

Public Health Leader and Follower Respondents and Leadership Practices and Behaviors of Contemporary Public Health Leaders

Relationship of LPI Results to Research Questions and Hypotheses

Leader and follower demographic data and the LPI-Self and LPI-Other findings are reported following restatement of research questions and hypotheses one (b) and (c), six, and seven. As results are analyzed, the relationship to each corresponding hypothesis is explained.

Respondents

Twenty-two persons identified as leaders in public health agreed to participate in this research by returning a completed data form and LPI-Self. These respondents represent one third of the number of persons recommended as public health leaders by the 16 dean/director respondents. From a potential of 110 follower participants (based on five followers per leader), there were 79 followers who returned a data form and an LPI-Other (See Table 21) for a follower per recommended leader response rate of 72%.

Characteristics of Respondent Leaders and Followers.

Question 1b and c: What are the demographic

Table 21

Follower Study Group Based on Potential and Actual Response to Leader Request to Participate

Follower	Total	Respondents @6	5	4	3	2	1 each
Potential	110						
Actual		1	7	4	6	1	2
Total	79	6	35	16	18	2	2

characteristics, educational preparation, professional disciplines, areas of specialization, and position titles of public health leaders and their followers?

Hypotheses (1b) and (c): The majority of public health leaders are white men in administrative and clinical positions which they have occupied for five years. The followers of public health leaders have diverse demographic characteristics and represent an array of professional disciplines, areas of specialization, and position titles. Most have worked with their respective leaders from one to five years.

Public Health Leaders

Demographic characteristics.

Sixty-eight percent of the respondent public health leaders are white, 59% are men, and 52% are between 40 and 49 years of age. Nineteen percent of the leaders are aged 60 to 69 followed by 13.6% in the age cohorts 30 to 39 and 50 to 59 years. Black and Hispanic leaders each account for 14% of the leader groups by race. (See Table 22).

Educational preparation, discipline, and area of specialization.

Eighty-six percent of the leaders have an MPH degree. Almost three-fourths are doctorally prepared; the others hold a masters degree (See Table 23). Six leaders (27%) identified medicine as their discipline followed by four leaders each in the areas of public health (18%) and

Table 22

Age, Race, and Gender of the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI)

Indicator	Leaders n	Leaders %	Followers n	Followers %
AGE				
20-29	0	0.00	1	1.27
30-39	3	13.64	27	34.18
40-49	11	50.00	31	39.24
50-59	3	13.64	17	21.52
60-69	4	18.18	3	3.80
Not Stated	1	4.54	0	0.00
RACE				
White	15	68.18	62	78.48
Black	3	13.64	5	6.33
Hispanic	3	13.64	11	13.92
Other	1	4.55	1	1.27
GENDER				
Female	9	40.91	48	60.76
Male	13	59.09	31	39.24

Table 23

Education and Professional Disciplines of the Twenty-Two Leader and Seventy-Nine follower Respondents to the Leadership Practices Inventory (LPI)

Education/Discipline	Leaders n	Leaders %	Followers n	Followers %
MPH DEGREE				
Yes	19	86.36	21	26.58
No	3	13.64	58	73.42
HIGHEST EDUCATION				
High School	0	0.00	2	2.53
Registered Nurse	0	0.00	3	3.79
Associated Degree	0	0.00	2	2.53
Baccalaureate	0	0.00	13	16.46
Masters	6	27.27	33	41.77
Doctorate	16	72.73	24	30.38
Not State	0	0.00	2	2.53
DISCIPLINE				
Administration and Planning	4	18.18	11	13.92
Biostatistics	1	04.54	0	
Business	0		3	3.79
Dentistry	2	09.09	5	6.33
Education	0		1	1.27
Environment	1	04.54	2	2.53
Epidemiology	1	04.54	1	1.27
Gerontology	0		1	1.27
Medicine	6	27.27	7	8.86
Nursing	1	04.54	14	17.72
Nutrition	1	04.54	1	1.27
Pharmacy	0		1	1.27
Public Health	4	18.18	9	11.39
Social Work	0		3	3.79
Veterinary Medicine	1	04.54	3	3.79
Research	0		2	2.53
Other	0		7	8.86
Not Stated	0		8	10.13

administration and planning (18%) and two in dentistry (9%). The remaining respondent leaders identified six other disciplines - biostatistics, environment, epidemiology, nursing, nutrition, and veterinary medicine (See Table 23).

Areas of specialization are also varied as shown in Table 24. Five of six leaders specialize in health administration, the other in public administration. Leaders in medical specialization included two in preventive medicine and one each in internal medicine, occupational health, and pediatrics. Public health was identified as the specialty by two leaders, health promotion by one, and finance by another. Of the remaining eight leaders, seven repeated their previously named discipline as the area of specialization and one gave no response.

Position title and number of years in the position.

Twenty-one different position titles were reported by the 22 leader respondents. Table 25 shows the frequency and comparative percentages of position leader titles by categorical groups and the number of years leaders have held their current positions. Each position title is listed separately and by categorical group on Appendix O. The category of administrator/director accounted for 11 or 50% of leader position titles. Four leaders hold positions in academia and two have positions in the

Table 24

Area of Specialization of the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI)

Specialization Area	Leaders		Followers	
	n	%	n	%
Administration				
Health	5	22.72	9	11.40
Business	0		1	1.27
Hospital	0		2	2.53
Public	1	4.54	2	2.53
Biostatistics	1	4.54	0	
Clerical	0		1	1.27
Counseling	0		1	1.27
Dental Hygiene	0		1	1.27
Dental	2	9.10	1	1.27
Biology, Parasitology	0		2	2.53
English	0		3	3.79
Environment	1	4.54	1	1.27
Exercise Physiology	0		1	1.27
Epidemiology	1	4.54	1	1.27
Family Planning	0		1	1.27
Finance	1	4.54	1	1.27
Gerontology	0		1	1.27
Health Planning	0		3	3.79
Health Promotion	1	4.54	2	2.53
History	0		2	2.53
International Health	0		2	2.53
Journalism	0		1	1.27
Medicine				
Family	0		2	2.53
Internal	1	4.54	0	
Obstetric	0		1	1.27
Occupational	1	4.54	0	
Pediatrics	1	4.54	2	2.53
Preventive	2	9.10	0	
Veterinary	0		2	2.53
Nutrition	1	4.54	1	1.27
Nursing				
General	0		3	3.79
Maternal Child	0		4	5.06
Public Health	0		3	3.79
Occupational Health	0		1	1.27
Oral Disease	0		1	1.27
Pharmacy	0		1	1.27
Public Health	2	9.10	2	2.53
Reserach	0		1	1.27
Terrestial Ecology	0		1	1.27
Veterinary Technology	0		3	3.79
Not Stated	1	4.54	12	15.19

Table 25

Position Title Category*, Number of Years in Position, and Number of Years Follower Worked with Leader for the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI)

Indicator	Leader n	Leader %	Followers n	Followers %
POSITION TITLE CATEGORY				
Administrator/Director	7	31.81	23	
Academician	3	13.63	8	
Advisor/Consultant	2	9.09	5	
Business/Clerical	1	4.54	2	
Environmentalist	1	4.54	0	
Fellow/Student	1	4.54	1	
Health Care Professional	2	9.09	1	
Health Officer/ Chief/Deputy	2	9.09	5	
Health Services Provider	1	4.54	2	
Manager/Supervisor	0	0.00	7	
Scientist/Analyst/ Researcher	2	9.09	1	
Specialist/Coordinator	1	0.00	12	
Veterinary Science	0	0.00	2	
Not Stated	0	0.00	3	
YEARS IN POSITION				
< 1	2	9.09	6	7.59
1- 4	10	45.45	37	46.83
5- 9	4	18.18	16	20.25
10-14	3	13.64	9	11.39
15-19	3	13.64	5	6.33
20-24	0	0.00	3	3.79
25 >	0	0.00	1	1.27
Not Stated	0	0.00	2	2.53
YEARS FOLLOWER WORKED WITH LEADER				
< 1			7	8.86
1- 4			33	41.77
5- 9			12	15.18
10-14			15	18.98
15-19			6	7.59
20-24			2	2.53
25>			1	1.27
Not Stated			3	3.79

*All position titles are listed on Appendices O and P

categories of advisor/consultant and health officer/chief/deputy. Approximately 50% of the leaders (12) have been in their present positions four years or less while ten or 45% have held their positions from five to 19 years.

Followers of the Public Health Leaders

Demographic characteristics.

Table 22 shows that the majority of followers of the study group leaders are white women between 30 and 49 years of age. Specifically, 61% are female, 78% are white, and close to 75% are in the 30 to 49 year old age cohort. The proportion of Hispanic followers is greater than that of black followers, 14% and 6% respectively.

Education, discipline, and area of specialization.

Close to 27% of the followers of public health leaders have an MPH degree; 73% do not. A majority of the followers are college educated: Thirty percent hold a doctorate, 42% are masters prepared, and 17% hold a baccalaureate degree.

The most frequently reported discipline is nursing (17.7%) followed by administration and planning (14%) and public health (11%). Medicine accounted for over eight percent and dentistry for six percent (See Table 23). As shown on Table 24, areas of specialization are numerous and diverse. Fourteen or almost 18% of the followers named one of four areas of administration as their

specialty; ten or 12.7% listed three areas of nursing and five (6%) cited three areas of medical practice. Twenty-six other areas were identified by one to three followers but 12 respondents gave no indication of an area of specialization.

Position title and number of years in the position.

There were 66 separate position titles reported by the 79 followers (See Table 25). Twenty different titles in the category of administrator/director were listed by 24 or 30% of the followers. Twelve or 15% hold five types of specialist/coordinator positions, nine or 11% are managers/supervisors, and eight or 10% are academicians. There are five or 6% of the followers who occupy positions in both the health officer/chief/deputy and advisor/consultant categories. These follower position titles as well as the remaining ones are listed both by individual title and categorical group on Appendix P.

Table 25 also displays the number of years followers have held their reported positions and how long they have worked with the study leaders. Most followers (47%) have been in their positions from 1-4 years. Sixteen or 20% and 14 or 18% have held their present positions for 5-9 and 10-19 years respectively. The number of years followers have worked with leaders is similar to their length of employment. For example, 33 or 42% of the respondent followers report working with their leaders 1-4

years, 12 or 15% for 5-9 years, and 21 or almost 27% for 10-19 years. There are also three followers who have apparently held their positions and worked with the leader for 20-25 years.

Comparison of findings to hypotheses 1b and 1c.

There is general agreement with these two hypotheses in that fifty-nine percent of public health leaders are men and 68% of all the leaders are white. In addition, 50% of the leaders occupy administrative positions and 41% are in clinical practice disciplines. Similarly, duration of time in the present leader position is 50% for 1-4 years and 45% for 5-9 years.

The followers of public health leaders have many different work positions and many similar demographic characteristics. Seventy-eight percent of followers are white, 61% are women, and 58 or 73% are between the ages of 30 - 49. Nursing (14 or 18%) and administration and planning (11 or 14%) are the most frequently reported disciplines. The remaining 54 followers are spread across more than 14 other disciplinary areas.

Sixty-seven followers of public health leaders list an array of 36 different areas of specialization; twelve did not list a specialty. Administrator/director was the position title most often named but an additional 46 positions were also listed. As hypothesized, many followers have worked with the leader at least 1-5 years

and many others for up to 19 years.

Leaders and followers are also identified by gender and employment sector (See Table 26). Of a total of 21 leaders, 57% have positions in the public sector and 43% in the private sector. Men hold just over half (57%) of leader positions while women fill close to a third (60%) of the follower positions.

Gender distributions of leaders by sectors have opposite proportions. In the public sector 48% of the leaders are men and 9% are women while in the private sector women occupy 33% and men fill 9% of the leader positions. Female followers are fairly evenly distributed, 33% in the public sector and 27% in the private sector, but males hold more than half (27%) of the public sector follower positions and just 12% of those in the private sector. Overall, there are more male leaders and more female followers in the public sector but women occupy the greater number of both leader and follower positions in the private sector.

Question 6: What are the leadership practices and behaviors of contemporary leaders in public health?

Hypotheses 6: The LPI scores of leaders and followers are comparable to the scores obtained in studies done by Kouzes and Posner and enable identification and analysis of the leadership practices and behaviors of contemporary public health leaders.

Table 26

Gender by Employment Sector*, Public or Private, for the Twenty-Two Leader and Seventy-Nine Follower Respondents to the Leadership Practices Inventory (LPI)

Leader/ Follower	Gender	Public n	Public %	Private n	Private %
Leaders	Female	2	16.67	7	77.78
	Male	10	83.33	2	22.22
Followers	Female	24	54.44	20	68.97
	Male	20	45.45	9	31.03

*Frequency Missing: Leader = 1; Follower = 6.

Public Health Leaders and the Leadership Practices Inventory

The Leadership Practices Inventory (LPI) lists a total of thirty statements covering ten behaviors within the five leadership practices of the Kouzes and Posner (1987) framework. Leader and follower responders grade the inventory (LPI-Self or LPI-Other) on an ascending five point Likert scale from "rarely or never" to "very frequently or always" to indicate the leader's performance on each of the stated behaviors. The Kouzes and Posner (1988) LPI scoring system is based on percentile rankings of leaders who have participated in their research. A score of low, moderate, or high is determined for both Self and Other ratings for each of the five leadership practices. A high score is one at the 70th percentile or above and a low score falls at the 30th percentile or below. Therefore a moderate score will range from a percentile ranking above 30 but below 70.

An LPI, specifically an LPI-Self, was returned by 22 of the 66 public health leaders recommended by 15 deans/directors. Seventy-nine followers returned an LPI-Other. However, four of the LPI-Self and five of the LPI-Other returns were eliminated from data comparisons to adhere to the reliability standard of having at least two followers for each leader. This was necessary because there were three follower respondents without a leader

respondent, two leader respondents with no followers, and two leaders with only one follower respondent.

To test for differences between LPI scores of the remaining 18 leader and 74 follower study participants, t-tests were performed between leader and follower groups. This was in keeping with the analyses reported by Kouzes and Posner (1987). However, the number and variety of possible comparisons in this study were very much limited by the small leader and follower sample sizes. The t-tests showed very few statistical differences. A series of nonparametric tests also failed to show statistical differences in all but one comparison. Therefore, means and standard deviations for the five leadership practices of the LPI-Self compared to those of the LPI-Other are reported with notation of levels of significance only for those that are statistically significant or close to statistical significance.

Results of the basic leader (LPI-Self) and follower (LPI-Other) comparisons are presented in Table 27. There are no statistical differences. Nevertheless, for each practice, leaders rate themselves the same or higher than their followers rate them. The practice of Enabling Others to Act shows the highest score for both groups.

Comparisons between male and female leader and follower LPI scores are exhibited in Tables 28 and 29. There are no statistical differences by gender of the

Table 27

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Leaders (Self) n=18 and Followers (Other) n=74

Leadership Practice	Group	n	Mean	Standard Deviation
Challenging the Process	Leaders	18	25.06	3.21
	Followers	71	24.37	4.15
Inspiring a Shared Vision	Leaders	18	24.00	2.99
	Followers	70	23.77	4.19
Enabling Others to Act	Leaders	18	26.50	2.28
	Followers	71	25.75	4.49
Modeling the Way	Leaders	17	23.94	3.17
	Followers	69	23.54	4.46
Encouraging the Heart	Leaders	18	24.16	3.76
	Followers	72	23.86	5.67

Table 28

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Female (n=8) and Male (n=10) Leaders (Self) n=18

Leadership Practice	Gender	n	Mean	Standard Deviation
Challenging the Process	Female	8	24.50	2.45
	Male	10	25.50	3.78
Inspiring a Shared Vision	Female	8	23.25	2.82
	Male	10	24.60	3.13
Enabling Others to Act	Female	8	25.87	2.59
	Male	10	27.00	2.00
Modeling the Way	Female	7	22.71	2.93
	Male	10	24.80	3.19
Encouraging the Heart	Female	8	23.37	3.58
	Male	10	25.80	3.96

Table 29

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Female (n=44) and Male (n=34) Followers (Others) n=74

Leadership Practice	Gender	n	Mean	Standard Deviation
Challenging the Process	Female	41	24.82	3.95
	Male	30	23.73	4.41
Inspiring a Shared Vision	Female	41	24.41	3.56
	Male	29	22.86	4.88
Enabling Others to Act	Female	41	26.17	4.08
	Male	30	25.17	5.02
Modeling the Way	Female	39	24.20	4.13
	Male	30	22.67	4.79
Encouraging the Heart*	Female	42	24.95	5.18
	Male	30	22.33	6.05

*$p \leq .06$

leaders. A difference close to statistical significance ($p = <.06$) is found between male and female follower scores for the leadership practice of Encouraging the Heart but not for the other four practices. For both groups, the practice of Enabling Others to Act received the highest scores. Interestingly, in each of the leadership practices, the female follower mean scores are higher than those of male followers. Conversely, the female leader scores are lower than the male leader scores in each practice category.

LPI scores between public and private sector leaders and followers are compared in Tables 30 and 31. No statistical differences were found among leaders. For the follower group, however, there is a statistically significant difference ($p = .01$) for Encouraging the Heart and less difference for the practice of Inspiring a Shared Vision ($p = < .06$). In both categories, mean scores of followers in the private sector are higher than those in the public sector.

Collapsing data into larger groups enabled four other comparisons. Means and standard deviations of the LPI scores of followers by academic degree, of leaders by number of years in present position, and of followers by number of years worked with leaders are presented on Tables 32, 33, and 34. There are no statistical differences but, for the three comparisons, the leadership

Table 30

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Leaders (Self) by Sector, Public or Private. n=17

Leadership Practice	Sector	n	Mean	Standard Deviation
Challenging the Process	Public	10	24.60	3.27
	Private	07	25.00	2.94
Inspiring a Shared Vision	Public	10	23.20	1.81
	Private	07	24.28	3.64
Enabling Others to Act	Public	10	26.10	1.91
	Private	07	26.71	2.81
Modeling the Way	Public	09	23.66	3.31
	Private	07	23.71	3.04
Encouraging the Heart	Public	10	23.20	2.97
	Private	07	24.71	4.38

Table 31

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Followers (Other) by Sector, Public or Private. n=68

Leadership Practice	Sector	n	Mean	Standard Deviation
Challenging the Process	Public	39	23.43	4.37
	Private	26	25.19	3.83
Inspiring a Shared Vision*	Public	38	22.66	4.33
	Private	26	24.73	3.84
Enabling Others to Act	Public	39	24.95	5.17
	Private	26	26.85	3.35
Modeling the Way	Public	39	22.79	4.93
	Private	25	24.24	3.74
Encouraging the Heart**	Public	39	22.10	6.08
	Private	27	25.44	4.59

*p = < .06
** p =< .02

Table 32

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons Between Followers (Other) by Academic Degree n=74

Leadership Practice	Degree	n	Mean	Standard Deviation
Challenging the Process	Advanced*	50	24.58	4.16
	Baccalaureate	18	23.28	4.06
Inspiring a Shared Vision	Advanced	50	24.08	4.48
	Baccaluareate	18	22.76	3.36
Enabling Others to Act	Advanced	50	25.74	4.51
	Baccalaureate	18	25.50	4.86
Modeling the Way	Advanced	48	23.27	4.56
	Baccalaureate	18	23.72	4.46
Encouraging the Heart	Advanced	51	24.16	5.94
	Baccalaureate	18	22.55	5.17

* Advanced Degree = Masters or Doctorate

Table 33

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons By Leader Years in Position n=18

Leadership Practice	Years in Position	n	Mean	Standard Deviation
Challenging the Process	0-4 Years	8	25.37	1.77
	5 or More Years	10	24.80	4.10
Inspiring a Shared Vision	0-4 Years	8	23.50	2.56
	5 or More Years	10	24.40	3.37
Enabling Others to Act	0-4 Years	8	26.37	2.44
	5 or More Years	10	26.60	2.27
Modeling the Way	0-4 Years	7	24.28	3.45
	5 or More Years	10	23.70	3.13
Encouraging the Heart	0-4 Years	8	24.12	3.79
	5 or More Years	10	24.20	3.93

Table 34

Means and Standard Deviations for Leadership Practices Inventory Scores Comparisons By Number of Years Follower Worked with Leader n = 74

Leadership Practice	Years Worked With Leader	n	Mean	Standard Deviation
Challenging the Process	0-4 Years	34	24.79	4.71
	5 or More Years	34	23.82	3.69
Inspiring a Shared Vision	0-4 Years	33	24.03	4.16
	5 or More Years	34	23.29	4.32
Enabling Others to Act	0-4 Years	34	26.15	4.96
	5 or More Years	34	25.15	4.14
Modeling the Way	0-4 Years	32	24.22	4.73
	5 or More Years	34	22.91	4.30
Encouraging the Heart	0-4 Years	35	24.57	6.23
	5 or More Years	34	23.12	5.20

practice of Enabling Others To Act shows the highest scores. Of the nonparametric test comparisons of three follower discipline categories of administration, healthcare, and research, only the nonparametric analysis of variance showed a difference ($F = .02$) in just one practice, Encouraging the Heart.

Finally, the means and standard deviations of the differences between scores on the LPI-Self and LPI-Other comparisons from this study are compared to findings from the research of Kouzes and Posner (1987). Table 35 exhibits the basic Self-Other comparisons for the five leadership practices mean scores of the study public health leaders and followers with those of 423 manager and subordinate respondents. In the Kouzes and Posner (p.315) groups, the mean scores for the practices Challenging the Process and Enabling Others to Act were statistically significant ($p = <.01$). The managers rated themselves higher in behaviors such as innovation and risk taking and in developing cooperative relationships and involving others in planning than did their subordinates. Most of the LPI-Self and LPI-Other scores were in the moderate range but the practice of Inspiring a Shared Vision fell into the low range.

The study respondent scores by gender were also compared to those of a Kouzes and Posner sample of 73 male and female senior human resource management professionals

Table 35

Means and Standard Deviations for Leadership Practice Inventory (LPI) Scores. Study to Kouzes & Posner Leader-Follower Comparisons

		LPI - SELF		LPI - OTHER	
Leadership Practice	Mean/Standard Deviation (SD)	Study n=18	K&P n=423	Study n=74	K&P n=1144
Challenging* the Process	Mean	25.06	23.12	24.37	22.41
	SD	3.21	3.20	4.15	4.04
Inspiring a Shared Vision	Mean	24.00	20.05	23.77	19.86
	SD	2.99	4.07	4.19	5.04
Enabling Others to Act	Mean	26.50	24.94	25.75	23.47
	SD	2.28	2.43	4.49	4.23
Modeling the Way	Mean	23.94	22.71	23.54	22.25
	SD	3.17	3.29	4.46	4.08
Encouraging the Heart	Mean	24.16	22.72	23.86	21.93
	SD	3.76	3.82	5.67	4.92

*p = <.01 K&P groups

(p. 315). As shown in Table 36, the sole scores that were statistically significant ($p = <.001$) are in the Kouzes and Posner groups' responses to the leadership practice of Encouraging the Heart. Female managers ranked their performance in the high range while male managers judged their support and appreciation of others as only moderate.

Tables 37 and 38 exhibit comparisons between public and private sector public health leaders and followers in this study and 22 public-sector administrators and 35 private-sector senior executives and their respective others (public, 115; private, 162) (Kouzes and Posner, 1987, p. 317). There were no statistically significant differences between the LPI-Self or the LPI-Other Kouzes and Posner scores. All were within the moderate range. In the study group comparisons, differences were found for the LPI-Other scores for the leadership practices of Inspiring a Shared Vision ($p = <.06$) and Encouraging the Heart ($p = <.02$). Private sector followers rated their leaders higher on these practices than the public sector followers did. There were no statistically significant differences in the LPI-Self comparisons.

As stated in Hypothesis 6, the LPI scores of leaders and followers are comparable to the scores obtained in studies done by Kouzes and Posner. In all comparisons between LPI-Self and LPI-Other scores, leaders/managers consistently rated themselves the same or higher that did

Table 36

Means and Standard Deviations for Leadership Practice Inventory (LPI) Scores. Study to Kouzes & Posner Leader Comparisons by Gender

LPI SELF		FEMALE		MALE	
Leadership Practice	Mean/Standard Deviation (SD)	Study n=8	K&P n=24	Study n=10	K&P n=49
Challenging the Process	Mean	24.50	24.71	25.50	24.35
	SD	2.45	3.48	3.78	2.61
Inspiring a Shared Vision	Mean	23.25	23.62	24.60	22.98
	SD	2.82	3.51	3.13	3.19
Enabling Others to Act	Mean	25.87	26.46	27.00	26.63
	SD	2.59	2.81	2.00	2.17
Modeling the Way	Mean	22.71	23.67	24.80	23.94
	SD	2.93	3.28	3.19	2.66
Encouraging the Heart*	Mean	23.37	26.25	24.80	23.22
	SD	3.58	2.94	3.96	3.85

*p = <.001 K&P groups

Table 37

Means and Standard Deviations for Leadership Practices Inventory (LPI) Scores. Study to Kouzes & Posner Leader Comparisons by Sector

LPI SELF		PUBLIC		PRIVATE	
Leadership Practice	Mean/Standard Deviation (SD)	Study n=10	K&P n=22	Study n= 7	K&P n=35
Challenging the Process	Mean	24.60	24.05	25.00	23.54
	SD	3.27	3.05	2.94	3.35
Inspiring a Shared Vision	Mean	23.20	21.05	24.28	20.34
	SD	1.81	4.12	3.64	4.34
Enabling Others to Act	Mean	26.10	25.36	26.71	25.49
	SD	1.91	1.81	2.81	2.50
Modeling the Way	Mean	23.66	24.27	23.71	22.83
	SD	3.31	2.05	3.04	3.27
Encouraging the Heart	Mean	23.20	24.36	24.71	23.54
	SD	2.97	4.75	4.38	3.90

Table 38

Means and Standard Deviations for Leadership Practices Inventory (LPI) Scores. Study to Kouzes & Posner Follower Comparisons by Sector

LPI OTHER		PUBLIC		PRIVATE	
Leadership Practice	Mean/Standard Deviation (SD)	Study n=41	K&P n=115	Study n=27	K&P n=162
Challenging the Process	Mean	23.43	22.14	25.19	22.87
	SD	4.37	4.90	3.83	4.04
Inspiring a Shared Vision*	Mean	22.66	20.18	24.73	19.81
	SD	4.33	5.28	3.84	5.42
Enabling Others to Act	Mean	24.95	23.30	26.85	23.66
	SD	5.17	4.67	3.35	4.52
Modeling the Way	Mean	22.79	21.25	24.24	22.36
	SD	4.93	4.52	3.74	4.49
Encouraging the Heart**	Mean	22.10	21.76	25.44	22.43
	SD	6.08	5.72	4.59	4.88

* p = < .06 Study Groups
**p = < .02 Study Groups

their followers/subordinates. However, in almost all comparisons, the scores of respondents to this study were higher than those of the respondents to the studies of Kouzes and Posner (1987). Only in the female leader comparisons were there similar or higher scores for the Kouzes and Posner respondents. That is, scores for three leadership practices, Enabling Others to Act, Modeling the Way, and Encouraging the Heart, were higher for the female senior human resources management professionals than for the female public health leaders. Their scores were almost alike for Challenging the Process and Inspiring a Shared Vision. It could be conjectured, but not assured, that the educational background and experience of the senior human resource women prompted their higher scores in practices focused on collaboration, role-modeling, and helping others.

Analysis of the LPI-Self and LPI-Other scores shows that, based on the Kouzes and Posner ranking system, the leadership practices and behaviors of contemporary public health leaders are in the moderate range ("sometimes do it") of those found to be common to most extraordinary leadership achievements (Kouzes & Posner, 1988). That is, the scores generally fall between the 30th percentile and the 70th percentile with a few scores in the 80th percentile which approaches the middle of the high range in the ranking system.

In all of the comparisons the practice of Enabling the Way received higher scores than the other four leadership practices. There were no statistically significant differences found between the mean scores for this practice so, according to the Kouzes and Posner framework and ranking system, the leaders "sometimes" or "fairly often" exhibit behaviors that encourage teamwork and collaboration and seek to strengthen others.

Gender comparisons indicate that male leaders consistently rank themselves higher than do their female counterparts. Male LPI-Self ratings ranged from high-moderate to mid-high range while female LPI-Self scores were mostly low- to high-moderate. Women often ranked themselves low-high in Enabling Others to Act but low-moderate for Modeling the Way. Since none of the differences were statistically significant, it may be that men are more likely to award higher self-ratings than women. And, while it is generally recognized that women tend to be more introspective, it may also be that women, as minority members in public health leadership circles, are more self-critical.

Female followers, however, ranked their leaders higher than the male followers did but only one comparison showed a difference ($p = <.06$). Female followers gave leaders a high-moderate ranking in Encouraging the Heart: Male followers gave leaders a low-moderate ranking. This

finding suggests that female followers "fairly often" (rather than "sometimes") perceive their leaders as prompting the best performance from others and acknowledging good work.

Higher leadership practice scores were found for both leaders and followers in the private sector than for those in the public sector. Private sector ratings were primarily high-moderate to low-high while public sector scores spanned the range of moderate ratings. The two follower mean scores that were identified as close to statistical significance, Inspiring the Way ($p = <.06$) and Encouraging the Heart ($p = <.02$) indicate that private sector leaders are rated as having more vision and a greater sense of commitment and are more likely to recognize follower contributions and to celebrate accomplishments than are public sector leaders. Because the proportion of women leaders and followers is greater in the private sector than in the public sector, the higher scores is these practices may be related to gender characteristics and the way women approach leadership roles.

Followers with advanced degrees rated their leaders somewhat higher than followers with baccalaureate degrees. Leader years in the position did not affect LPI-Self scores but LPI-Other scores were higher for followers who worked with the leader from 0-4 years than for followers

who had worked with the leader 5 years or more. Again, none of the differences were statistically different.

CHAPTER FIVE

Discussion, Summary, and Recommendations

The findings of this study are multiple, diverse, and ambiguous, not unlike the characteristics of both education and public health. Explication of the demographic, educational, and professional attributes of the public health study participants demonstrates some of the identifying characteristics of a core of contemporary public health educators and practitioners from which the samplings of leadership practices and behaviors were drawn. Because leadership is inherently a process of human interaction, knowledge of the population of respondents is informative to the process of formulating conclusions about the content of their responses.

Interpretations derive from correlation of the leadership perspectives reported by dean/director respondents to the practice and behavior ratings of the Leadership Practices Inventory (LPI) data, based on the Kouzes and Posner (1987) framework, and the characteristics and components of public health leadership gleaned from the IOM (1988) report. As these data are interpreted, the pre-existent LPI and IOM categories of leadership can be adapted and/or modified (Glaser, 1978) with the empirical data drawn

from beliefs about leadership originating from the daily interactive leadership experiences of the respondent deans/directors and public health leaders and followers. Through these comparative processes some of the building blocks of public health leadership can be identified and explained. In this way concepts emerge to provide a basis for proposing course content in leadership development and for contributing to future generation of a substantive theory of leadership for public health. Consequently, answers and conclusions to questions and hypotheses 7 and 8 respond to the purpose of this research and enable interpretations that signal implications for leadership development in higher education for public health and for continuing research into leadership for public health.

It must be noted that the conclusions and interpretations herein are based on the relatively small samples of the public health deans/directors, leaders, and followers who participated in this study. The lack of greater participation points to the possibility that more data could have changed the results. It may be that the majority of dean/director respondents are more bureaucratic than nonrespondents in their view of leadership. Few of the respondents are likely to have had a background of coursework or continuing education for leadership. However, the findings are reasonably representative because the study respondents come from various regions of the country and

hold positions of responsibility in public health and related public and private sector agencies across the nation. While the sample size does limit the overall reliability and generalizability of the study findings, it should not diminish the worth of the findings or the importance of the thoughtful responses from those educational administrators and public health leaders and followers who did participate.

Contemporary Public Health Educational Administrators and Public Health Leaders and Followers

The diverse nature of the profession of public health is seen in the variety of reported specialization areas and position titles but demographic and disciplinary diversity are not as evident. There are more Caucasians in all three sample populations than any other racial group. Men and physicians and advanced degrees are prominent in both the educational administrator and leader groups but there are more women and nurses and administrators/planners in the follower group where 70% have advanced degrees. While the majority of leaders are MPH prepared, only half of educational administrators and a quarter of the followers hold the public health degree.

The variances between the philosophy, educational preparation, and practice of medicine and public health (McBeath, 1985; Roemer, 1986, 1988; Viseltear, 1990) are well documented. The study finding that half of the school

of public health administrators lack preparation and experience in public health is similar to the IOM (1988) study finding of many agency directors who hold a medical degree but lack education in public health. Given these findings, the continuance of education and service leadership positions being filled exclusively by doctorally prepared persons without an MPH or DrPH degree does not seem warranted. Indeed, many practitioners of other disciplines within public health have both education in a health discipline and broad experience among populations with pragmatic practical problems. These public health practitioners represent nursing, the largest direct care provider of public health services, dentistry, environment, nutrition, and social work. When supplemented by education for public health, the real world experiential knowledge of these professionals is highly relevant to the sensitive and realistic administration of public health agencies as well as educational and other programs.

It appears that outmoded traditions, outdated legislation, and illness oriented funding patterns support physician dominance in leadership positions (Atwater, 1980; Cameron & Kobylarz, 1980; Jekel et al., 1980) even though nonphysician public health directors have proven to be capable administrators able to promote and expand the delivery of services (Jekel et al., 1980). Greater consideration must be given to the need and value of leaders

who possess education and experience in public health and represent the multidisciplinary focus essential to public health education and practice and the delivery of comprehensive public health services. The rationale for a public health degree as requisite to agency director positions needs to be clearly explicated, documented, and supported by public health professionals and organizations. Moreover, knowledge and skill in public policy making and the political process will be needed to explain and promote this position to legislators who will initiate a revision of laws that limit directors of public health to holders of a medical license.

Likewise, there is need for greater proportions of women and other minority populations in public health leadership positions. With more leaders who are both educationally prepared in public health and representative of the growing diversity of American society, it is projected that public health education will be less "isolated from public health practice" (IOM, 1988, p. 15) and that public health practice will become more attuned to "assuring the conditions in which people can be healthy" (IOM, 1988, p. 40) through renewed linkages to the practice arena.

Leadership Perspectives in Schools of Public Health Mission Statements and Course Content

The findings that only three out of a dozen school of

public health mission statements include a reference to leadership and that just two of the 12 schools offer a course on the subject of leadership suggest that the transmission of knowledge about leadership and the development of leadership skills are not considered a major educational priority or responsibility in most schools of public health. Because seven schools reportedly include leadership as a topic in another course, it appears that content on leadership is provided as an adjunct to other subjects such as management or public policy. This inference is supported by the focus on transactional leadership roles found in the dean/director definitions of leadership and in the practices and behaviors they listed as necessary components of leadership for public health. So although many graduates do become leaders in public health, there is little evidence to suggest that leadership ability is a direct outcome of the educational experience.

Despite multiple calls for educating leaders for public health agencies (Fry, 1967; Bowers & Purcell, 1974; Milbank, 1976; IOM, 1988), schools of public health have been slow to respond. Adherence to a medical practice model and a focus on biomedical research has been described by several authors as inadequate and/or contradictory to an epidemiology model and a population focus engendered and supported by applied epidemiological research (Editorial, 1985; IOM, 1988; Terris, 1988; Robbins, 1985; Roemer, 1986, 1988). Terris

points out the link between leadership in public health and epidemiology which the IOM report also identifies. An epidemiological focus on identifying and responding to the health promotion and disease prevention needs of population groups is indispensable to the essential work of public health agencies. But unless those in positions of leadership also possess both a firm commitment to "the public health ethos" (Visaltear, 1990, p.146) and the transformational leadership skills with which to articulate a vision and to enlist others, both internal and external support for applied research and for efforts to promote the health of the public is likely to be weak and tentative. A focus on education for public health leadership seems long overdue.

Definitions of Leadership

The characteristics of a transactional leader role emerged from content analysis of the dean/director definitions of leadership. The key activities in the definitions emphasize the ability of the leader to be a role model and to direct the work of a group of people. Leader activities related to getting things done through influencing people and mobilizing resources were more frequent than abilities calling for vision and helping others to maximize use of their skills. There are almost twice as many definitional components of leadership that correlate to the role of a transactional leader and to

transactional leader-follower relationships than those related to the role of a transformational leader and to transformational leader-follower relationships as defined by Bass (1985) and Burns (1978). Analysis of noun and verb definitions and rank ordered word frequencies, based on established word definitions (Hawkins & Allen, 1991; Vianna, 1980) and interpretation of their use in respondent replies, tends to support this interpretation. That is, the most frequently used words were the single verb, direct, and a verb category focused on achievement while noun categories centered on people, ability, and skills. However, if taken out of context to their use, the association of nouns and verbs with specific leadership roles cannot be definitively ascertained.

Likewise there are mixed and somewhat contradictory messages in the dean/director definitions of leadership. Given the often sparse resources that public health leaders often have to work with, it would not be surprising if leadership were defined by agency directors, rather than educational administrators, in terms of getting tasks accomplished. Perhaps these educational administrators are more aware of the practice arena than the IOM (1988) study infers. Or the busy schedules, heavy demands, and limited resources relative to educational administration in schools of public health may engender a task orientation to their own roles. In any case, it is likely that the focus on work

accomplishment and organizational goal achievement derives from a view of leadership as a component of management rather than as a set of distinct skills. This is consistent with the perspectives on leadership evidenced by the reported levels of emphasis on leadership in the mission statements and curricula of the schools.

The same perspective is evident in the strong management emphasis expressed in the dean/director statements of necessary leadership practices. It also agrees with information gleaned from a review of catalogues of a sample of 15 schools of public health. That is, curricula in health services administration listed courses in management, organization, and health policy but none in leadership.

Several entries in the dean/director definitions exhibit recognition of the need for transformational leader abilities. Words and phrases denoting commitment, shared vision, looking for opportunities for change, and taking risks indicate an orientation toward the future and the possibility of transformational leadership and transformational leader-follower relationships. Given that the multiple roles of deans/directors often include their participation in work and study on regional, national, and international issues for health and disease and networking with many people in many places, recognition of these attributes could be expected. The concern is that these

leadership qualities and capabilities did not surface more prominently or more frequently in both the definitions and the practices and behaviors of leadership that were submitted.

Practices and Behaviors for Leadership in Public Health

Leadership and the Kouzes and Posner framework.

Comparisons were made between the leadership practices and behaviors listed by the dean/director respondents and the five practices and ten behaviors of the Kouzes and Posner (1987) framework. The mix of similar, dissimilar, and tenuous behaviors gives further evidence of the ambiguity in the study findings. That is, while all of the respondent provided behaviors and practices are matched with at least one in the Kouzes and Posner framework, the category where each fits best could be debated. Most practices have several behavior matches, others have only a few, and one has none. Although management functions are identified along with transactional role activities, there are also entries that manifest public health goals and transformational roles.

Enabling Others to Act, the practice with the greatest number of comparisons, shows a strong mix of management and transactional leadership behaviors to Foster Collaboration that is similar to the definitional components oriented to task accomplishment. Yet behaviors for Strengthening Others compare with behaviors of a transformational role such as

interpersonal skills, networking, and helping others. The comparisons with Challenging the Process relate primarily to transactional behaviors for problem-solving but two respondents did urge leaders to take risks. Included under the practice of Inspiring a Shared Vision is the public health commitment to improve the health of a community. Responses related to this practice indicate that communication skills are necessary behaviors to Enlist Others as well as to an ability to realistically Envision the Future. Visionary practices clearly call for the exercise of transformation leadership behaviors. There appears to be recognition of the need for leader-follower relationships of a transformational nature but an urgency for problem-solving related to task accomplishment apparently takes precedence.

Dean/director identified behaviors to Set The Example centered on the practice of Modeling The Way through application of medical and public health knowledge, a habit of lifelong learning, and establishment of a reputation and record of accomplishment. These responses appear quite consistent to the predominate focus in higher education for public health, as well as in educational programs for many other disciplines. However, as important and worthy as these accomplishments are, they relate primarily to the exhibition of individual achievements rather than to application of transformational-type behaviors identified as

components of extraordinary leadership achievements (Kouzes & Posner, 1987).

Making a comparison of problem solving and task accomplishment to behaviors oriented to Plan Small Wins is an example of behavioral categorizing that could be debated. Although definitely reflective of behaviors that are predominately transactional, it is possible that if these behaviors were applied in a transformational manner, leader-follower relationships supportive to development of the potential skills of a follower could ensue.

Comparisons to the practice of Encouraging The Heart were few although one dean/director identified a behavior that is clearly transformational, that is, to Recognize Contributions by helping others feel a sense of accomplishment, ownership, and commitment. With only three comparisons to this behavior and none to Celebrate Accomplishments, the practice of leader encouragement for followers, through behaviors that provide recognition of achievements and celebrate performance, is apparently not widely viewed as a component of leadership for public health.

IOM defined leadership skills for public health.

The leadership practices and behaviors listed by the dean/director respondents were also compared to ten necessary leadership skills for public health, and related descriptive content, derived from the IOM (1988) report.

These comparisons also seem representative of mixed perspectives on leadership. Interpretations in relation to the IOM skills often touch upon critical issues within the multidisciplinary profession of public health and its multiple role responsibilities.

Half of the respondent identified practices and behaviors compared closely to the IOM descriptors of management abilities and technical/professional skills. The emergence of these two skills as dominant practices is consistent with the emphasis on transactional leadership evident in the dean/director definitions. It also seems to mirror the available curriculum choices in health administration in most schools of public health. Knowledge of the theory and functions of management and organization is necessary, but not sufficient, preparation for competent agency management and health services administration. For as two of multiple definitions and commentaries on leadership in the literature make quite clear, "Leaders must manage and managers must lead but the two are not synonymous" (Bass, 1981, p.273), and "A manager must plan and organize ... a leader ... must get others to follow" (Longest, 1990, p. 130).

The emphasis on technical skills can also be seen in abundant and varied course offerings in the sciences and in highly specialized dissertation topics (Roemer, 1988). Schools of public health have likely been caught up in the

intense and pervasive emphasis on technology that has dominated health care, actually illness care, during recent decades. If schools have become isolated from public health practice, as the IOM (1988) report asserts, perhaps it is because establishment of close associations with the practice arena may seem irrelevant to education and research increasingly directed toward technology and the bench sciences. There may be acknowledgment of the public health movement that led to reductions in morbidity and mortality at the turn of the century without realization that contemporary conditions of health and disease have similar circumstances and call for the same intensity of effort and purpose. A return to applied epidemiological research is urgently needed to address "real public health problems" (p. 16) such as the return of tuberculosis, malaria, and cholera, the pandemic of HIV infection, and multiple threats to health resulting from unhealthy lifestyles and a mix of demographic variables and diverse social, psychological, and economic deficits and inequities (McBeath, 1991; Terris, 1985; Walker, 1992).

Transformational skills of leadership are needed to compliment managerial ability and technical/professional skill as well as the other necessary skills called for in the IOM (1988) report. When leadership skills in networking for change and shared activity and in articulating public health goals have not been learned or applied, the expertise

of public health and its contribution to scientific investigation and the enhancement of health care system may be unknown, under-utilized, and/or undervalued.

Behaviors comparable to commitment do identify closely with transformation leadership skills. This can be interpreted as a dean/director call for leaders to be true believers (Hoffer, 1951) in the mission of public health. Communication skills are vaguely described as needing to be 'effective 'and two educational administrators note the need for writing and oral communication skills and the ability to publish new knowledge.

Two responses identified relationship building practices and behaviors that would be directed to increasing interactions with the medical community. Skill to network among and to mobilize the medical profession in support of public health goals highlights an endeavor that, although worthy, has had a poor history of success. The longterm disparity between medicine and public health is well known (McBeath, 1985; Roemer, 1988; Viseltear, 1990; White, 1991). Sometimes described as a schism (White, 1991), there are definite differences which can be broadly defined as opposite orientations toward health and disease, prevention and cure, and an individual versus population focus in education, service, and research. An identified need to mend these differences can alternatively be considered urgent or futile so there is another mixed message here.

Medicine is clearly one of the highly valued multiple disciplines of public health. But it is reasonable to question why there is no identified need to network among and to mobilize any of the other disciplines. The previously stated longterm dominance of medicine in administrative public health positions and the recognized power of organized medicine are likely answers. Regardless, based on current challenges to health, it seems clear that a combined biological, social, and behavioral science base for public health (Walker, 1992) must be retained and further developed and that the collaborative efforts of an interdisciplinary, not just multidisciplinary, public health community are requisite to meeting those challenges. Therefore, the behavior calling for combined involvement in activities to promote understanding is right on target and very much needed. It also points to the need for transformational leadership qualities among leaders in all the disciplines and specialty areas of public health.

The sparsity of comparisons to the remaining five necessary leadership skills derived from the IOM report calls attention to deficits stated in the report. While several leadership practices and behaviors identify a need for leaders to relate to the larger community and to promote organized community efforts, the lack of strong correlation to these skills suggests but does not confirm otherwise. Some schools may be negligent in relating to the larger

community of public health agencies or to other health professional schools while others may have failed to promote organized linkages with the practice arena. These deficits may explain the absence of identified practices and behaviors related to community assessment and diagnosis. It is difficult to comprehend how public health leaders could promote and guide effective and efficient responses to the changing health needs of communities without the knowledge base derived from periodic data collection and analysis.

The minimal identification of political and public policy skills and transformational leadership practices and behaviors signals a major deficit. If these findings are reflective of a wider view of necessary practices and behaviors for public health, the dearth of public health leadership (IOM, 1988) may remain. An increase in the quantity and quality of public health leaders may not be realized unless schools of public health modify the perspectives on leadership suggested by the study findings and introduce course content for leadership development. The IOM report calls for public health leaders to advance public health priorities through cultivation of working relationships with legislators and other community representatives. Programs in higher education for public health could generate a response to this challenge by offering course work and continuing education in public policy development and in the transformational leader

strategies relevant to relationship building and to involvement in the political process.

Leadership and the six functions of management.

Due to the strong correlation of dean/director identified leadership practices and behaviors to components of transactional leadership and to the management skills cited in the IOM (1988) report, a comparison to management functions was undertaken. As brief comparisons demonstrate, the findings suggest a managerial view of the practices and behaviors considered to be necessary components of leadership for public health. The practices and behaviors most frequently reported were those descriptive of the directing function, primarily the activities of working with and motivating or coaching others. Planning was the function having the second highest number of correlates: These centered on articulating objectives and strategies and prioritizing tasks. Organizing to make agencies more effective and decision-making to solve problems are the management function and cited leadership behavior matches that display leadership practices directed toward the accomplishment of organizational goals. Although small in number, the practice and behavior references to managing personnel and managing programs were clearly associated with, respectively, the staffing and controlling functions of management.

In addition to showing similarity between dean/director

defined leadership practices and behaviors and the management skills cited in the IOM (1988) report, the outcomes of this comparison resemble three findings from the analysis of dean/director definitions of leadership. Functions of management are evident in the key activities and in the high ranked word frequencies as well as in the dominance of definitional components associated with transactional leadership roles and transactional leader-follower relationships as defined by Bass (1985) and Burns (1978).

Leadership Practices of Contemporary Public Health Leaders

The mean scores of contemporary public health leaders on the Leadership Practices Inventory are comparable to, although slightly higher than, the reported scores of leaders in the Kouzes and Posner (1987) research studies. That is, according to the LPI scoring system, public health leaders primarily rank moderate to high, between the 50th to the 80th percentile, on practices and behaviors common to extraordinary leadership achievements. Few statistically significant differences are found between scores on the LPI-Self and the LPI-Other indicating a general lack of disagreement on leader and follower perceptions of leaders' leadership abilities. Enabling Others To Act is the practice that consistently received the higher mean scores. This shows consistency with other study findings of leader emphasis on enabling people to accomplish the goals of an

organization.

Areas of difference among leader scores surface between gender and sector of employment. Female leader LPI-Self scores are somewhat lower than those of male leaders. Alternatively, female followers gave all leaders higher ratings on the LPI-Other than male followers did although the only score with a statistically significant difference was for the practice of Encouraging The Heart. Private and public sector LPI-Self scores vary little and the higher scores are again found for Enabling Others To Act. Close to statistically significant differences are seen in the LPI-Other scores where private sector leaders are rated higher on the practices of Inspiring A Shared Vision and Encouraging The Heart than are leaders in the public sector.

Women leaders in the private sector outnumber male leaders and leaders in the private sector are rated higher in practices of a transformational nature. The convergence of these two findings suggests that women have greater leadership opportunity in the private sector. Moreover, although women may rate themselves lower in leadership practices than their male counterparts, there is evidence that followers find women demonstrating more of the practices associated with extraordinary leadership achievement.

Summary

The dearth in public health agency leadership cited in

the IOM (1988) report did not arise just prior to the study nor will it be eliminated solely by identification of the problem or by debate about it. Almost 20 years ago Rogers (1974) described "the progressive weakening of local, county and state public health agencies" (p. 530) and now Walker (1992) writes of accumulating evidence of the erosion of state and local public health agencies. During the past 25 years three separate reports on public health education and practice were published (Fry, 1967; Bowers & Purcell, 1974; Milbank, 1976) with each one calling on schools of public health to prepare students for leadership roles. The IOM report reiterates these same two concerns. There is reason to question, therefore, if this continuing identification of deficits in public health leadership is due, at least in part, to a dearth of course content in leadership and the lack of an emphasis on leadership and leadership development in higher education for public health.

The findings of this study suggest explanations for the absence of leadership content in curricula of schools of public health. From school mission statements to course content, the topic of leadership is sparse or absent. The administrative perspective on leadership appears primarily of a transactional nature. Despite heartening indications of transformational leadership, the practices and behaviors identified by the study findings reveal a leadership focus skewed toward the functions of management. Yet, despite the

absence of education for leadership in schools of public health, the LPI scores of contemporary public health leaders can be graded as above average. It appears that just as the early pioneers inherently possessed multiple leadership skills, so do many contemporary leaders. Nevertheless, the situation remains that, "Today the need for leaders is too great to leave their emergence to chance" (IOM, 1988, p.6). At this latter part of the 20th century, emergent threats to health demand that leadership for public health no longer be left to chance.

Course Content for Leadership Development

Question 7: What are the concepts of leadership practices and behaviors which will provide a basis for course content in leadership development for public health?

Hypothesis 7: The Kouzes and Posner framework of leadership practices and behaviors will have emergent fit with the leadership practices and behaviors of contemporary public health leaders derived from the LPI data analysis. The public health leadership skills cited in the IOM report will have emergent fit with the perspectives on leadership identified by the dean/chairperson/ director leadership survey. Concepts will emerge to provide a basis for course content in leadership development for public health.

The methodology of this study affords meaningful response to this and the following hypothesis. Even though the data collection was smaller than envisioned when this

research was conceived, the process of comparative analysis of data gleaned from empirical sources was adhered to. In fact, both of the pre-existent categories of leadership, LPI (Kouzes & Posner, 1987) and IOM (1988), as well as the study findings, derive from varying degrees of research into the interactive process of leadership experienced by persons in leader and follower positions in geographic areas across the nation. The LPI is based on responses from managers and subordinates in a variety of public and private organizations and corporations. The findings of the IOM report and this study come from leaders and followers employed in public health although the IOM data represent only public agencies while this study includes respondents in both the public and private sectors.

Quantitative methods provide some of the important data measurements of the study. But it is the empirical aspect of the qualitative methodology that denotes application of the emergent fit mode of the "generative nature of grounded theory" and provides evidence of its roots in the theory of symbolic interaction (Chenitz & Swanson, 1986; Glaser, 1978). That is, the findings of all three studies are gleaned from data based on respondent beliefs which are predicated on how each individual experiences and defines events and human interactions in the everyday settings of places of employment. Use of this qualitative method for educational research gives recognition of the need for

research findings that reveal implications relevant to practical application (Bogdan & Biklen, 1982).

Emergent Fit of Study findings to Existent Frameworks

The practices and behaviors of the Kouzes and Posner (1987) framework have good emergent fit with the practices and behaviors of the respondent contemporary public health leaders as evidenced by the generally high and comparable LPI scores. Concepts of collaboration and others (Enabling Others to Act) emerge more strongly than those of other practices and behaviors.

A more moderate emergent fit to the dean/director perspectives on leadership appears predictive of gaps is leadership ability. Translation of the Kouzes and Posner practices and behaviors into concept terminology results in the following list of concepts of leadership: opportunity (chance, opening), risk (chance, hazard), vision (insight, foresight), constituency (supportive citizen group), collaboration (cooperation), others (people), example (model), communication (exchange of ideas and messages), recognition (acknowledgement), and celebration (observance). On this basis, the concepts that fit to the dean/director practices and behaviors are listed on a descending scale as follows: high - opportunity and collaboration; moderate - constituency, others, and example; low - risk, vision, communication, and recognition; and celebration - none.

The leadership skills cited in the IOM (1988) report

have a mix of emergent fit to the dean/director practices and behaviors of leadership in a descending range from high to absent. The fit is high for managerial (administrative) skills and technical/professional (public health) skills; moderate with commitment (engagement) and communication (exchange of ideas and messages); and only fair with the skill of relationship building (initiating interaction, networking). Because study respondents infrequently identified practices and behaviors necessary to relating to the larger community (reaching out, making linkages) and to community organization (garnering citizen support and participation), there is lack of good fit of the IOM leadership skills. Likewise, there was barely mention of practices requiring political skills or public policy making and no identification if skills for community assessment and diagnosis.

The identified levels of fit of these two existing frameworks of leadership to the study findings of the leadership practices and behaviors named by educational administrators and exhibited by the LPI scores of contemporary leaders in public health are both explanatory and predictive. The good fit of the leader-follower LPI results is in contrast to the moderate to poor fit of the dean/director leadership survey findings. This can be explained by the results of the multiple comparative analyses that showed the predominance of transactional

leadership roles and leader-follower relationships over those of a transformational nature. Furthermore, the categories of the IOM public health leadership skills framework were found to fit well with practices and behaviors that could be fulfilled with primarily transactional leadership abilities rather than those requiring the exercise of transformational leadership. It is therefore predicted that the transformational leadership roles exhibited by the practice and behavior concepts derived from the Kouzes and Posner (1987) and the IOM (1988) public health leadership skills be combined to identify come of the concepts to undergird leadership development for public health.

Emerging Concepts

Repeated identification of the need for consonance between managerial ability, technical/professional expertise, and transformational leadership forms the basis for naming concepts necessary for leadership in public health. Technical/professional skills, including those for political activity, public policy making, and community assessment and diagnosis, are requisite, in varying levels of intensity, to all public health professionals. Knowledge and ability in the functions of management are essential for those who will guide the complex work of diverse public health agencies. Therefore, concepts will relate to the acquisition of transformational leadership skills without

which the application of public health knowledge to agency management and political activity will not be advanced.

The concepts to guide course content for leadership development for public health include six beginning with the letter 'c' - commitment, communication, community, constituency, collaboration, and celebration; relationship building, role modeling, and recognition; and opportunity, risk taking, and vision. These twelve concepts need to be incorporated into courses such as community organization, communication strategies, behavioral science, and forecasting. But more importantly, courses need to be designed to develop leadership as a separate study and to identify leadership practices and behaviors as a set of learnable skills.

A Conceptual Framework for Leadership for Public Health

Question 8: What are the concepts of leadership practices and behaviors which provide a conceptual framework to contribute to generation of a substantive grounded theory of leadership for public health?

Hypothesis 8: Merger of the concepts for leadership identified in this study will become the building blocks for components of a conceptual framework to contribute to future generation of a substantive theory of leadership for public health.

Commitment forms the foundation for developing and advancing a transformational role. Commitment includes

applied belief in the ethos of public health by acting on the responsibility for health promotion, health protection, and disease prevention actions to preserve and advance the health of communities. Commitment also means developing interpersonal competence, establishing relationships between education and practice and among community and professional agencies and institutions, and building community organizations. The concept of relationship building is key to these interactions. It signals need to reach out and involve diverse people in all aspects of agency work and community effort. But realization of self precedes outreach to others.

A vision of the future must be built upon knowledge of significant events of the past as well as a realistic determination of the present. Questioning the status quo involves a search for opportunity that includes innovative response to pragmatic crises as well as strategic planning. Necessary ingredients for openness to risk taking are hardiness and willingness to experiment. This means being a role model and responding to appropriate risk behaviors in others.

Communication is another cornerstone concept without which many others are irrelevant. Ability to articulate vision, to establish collaborative working relationships with employees, colleagues, legislators, and a host of citizens and community professionals and leaders rests upon

skill in communication. Moreover, ability to establish a constituency for public health necessitates commitment to communicating public health values, to explaining public health priorities based on epidemiological data, and to nurturing the leadership potential of others.

Recognition and celebration are prime concepts for enlisting, enabling, and strengthening others, regularly and over time. Yet such leadership practices are often ignored. But because leadership is basically a process of human interaction, these two concepts are essential ingredients which enhance the practices and behaviors arising from all of the previously identified concepts.

The addition of course content to foster acquisition of transformational leadership skills along with development of transactional leadership abilities is recommended. Presentation of leadership theory provides the foundation for interactive teaching-learning that involve strategies such as case studies, role play, computer assisted instruction, and field internships to stimulate acquistion of leadership skills.

Implications For Future Research of Leadership for Public Health

The need for further research in leadership for public health cannot be understated. Indeed, as previously noted, this study is incomplete due to the less than desired response rates. Broader and deeper investigation into the

focus on leadership in schools and programs of higher education for public health is necessary. Direct participant interviews would perhaps glean additional data on the perspectives on leadership held by educational administrators. It would also be important to survey their leadership practices and behaviors. Given the multitude of key roles that public health deans/chairpersons/directors play, it is essential that persons in these positions exhibit and employ the characteristics of transformational leaders.

Components of this research study could also be extended to administrators and graduates of other programs where public health professionals are educated. Schools and programs of public health not yet accredited by CEPH and other health science schools could be studied. And, in addition, the leadership perspectives and attributes of other administrators and of faculty in public health and related educational programs should be surveyed.

A closer look at leadership content in public health curricula is urgently needed. There may be greater attention given to concepts of leadership than this study was able to identify. It is probable that some course content, and perhaps specific courses, may have since been developed and implemented as a result of the findings of the IOM (1988) report.

Surveys of public health graduates could provide

valuable feedback to their former schools and programs. Many professionals in public health carry leadership responsibilities even though their position titles may not be indicative of this. It is important to collect data on the leadership roles and responsibilities of these graduates and to assess how well prepared they were as a result of their education for public health. Information on their perceived continuing education needs could also be requested.

Public health personnel in local and state agencies could be surveyed to determine and analyze their role responsibilities and learning needs. Despite the assertion of disarray, there are many local agencies providing essential services which are guided and implemented by capable public health personnel. While many of these workers do lack formal training in public health, their experiential knowledge of leadership would likely be both informative and instructive. Many diverse and multidisciplinary public health personnel would be able to respond from personal experience as both leaders and followers and provide a pragmatic and practical view of leadership that could not otherwise be obtained. Evidence of their academic interests could be demonstrated in this manner and topics for needed continuing education could be obtained.

The status of education to agency interaction is

another area where research is needed. To reverse the purported isolation of some schools and to increase an emphasis on applied epidemiological research, data need to be collected on linkages between educational institutions and service agencies. A survey of the focus of research in schools of public health would also provide data to distinguish the mix of bench and applied research being conducted.

To promote the advancement of leadership study and education for leadership development, research into teaching methods and strategies is also recommended. Case studies for classroom discussion and computer assisted instruction would be relevant. Internships in real world practice settings would be mandatory. A distinction also needs to be made on the level and focus of education for leadership that is appropriate for all public health students and that which is essential for those preparing for administrative and management positions. Finally, as a result of the research findings from studies suggested above, topical content for a textbook specific to leadership for public health could be identified and structured.

Summary

This research has explored the subject of leadership in response to the challenge for leadership development given to schools of public health by the IOM (1988) report on The Future of Public Health. Necessary leadership skills for

public health, identified from the IOM report, and the leadership practices and behaviors relative to extraordinary leadership, explicated by Kouzes and Posner (1987), provided relevant criteria compatible with use of the emergent fit process of grounded research methodology. Empirical data were obtained from three sample populations. The leadership perspectives of educational administrators in schools of public health were surveyed and the leadership practices and behaviors of contemporary leaders in public health, recommended by the deans/directors, were assessed using the two components of the Leadership Practices Inventory, LPI-Self (leaders) and LPI-Other (followers) designed by Kouzes and Posner.

The basic finding that emerged from this study is that schools of public health and their key educational administrators appear to consider leadership as a adjunct to management and administration rather than as a distinct set of essential and learnable skills. An emphasis on management instead of leadership in the survey results was evident. The skills of transactional leadership were more often cited than the characteristics of transformational leadership.

All components of this study point to the great need for designing, implementing, and furthering education for leadership and leadership development in schools and programs of higher education for public health. Communities

across the nation deserve no less than strong and viable health departments guided by professionals trained in public health, committed to the ethos of public health, and able to advance the principles and practice of public health through implementation and example of transformational leadership.

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APPENDIX A

LEADERSHIP SURVEY

1. What does leadership mean to you? Please state your own definition of leadership.

2. Does the mission or philosophy statement of your school include a reference to leadership or leadership development?

   If yes, what does it state?

3. Does the curriculum of your school include a course on leadership or leadership development?

4. Is leadership included as a topic in another course?

5. If yes, what course?

6. Please list the behaviors and practices you believe to be necessary components of leadership for public health. Write any that come to mind.

APPENDIX B

DATA FORM

DEANS/CHAIRPERSONS/DIRECTORS

Please circle or write in the correct response or responses.

1. AGE 20-29 30-39 40-49 50-59 60-69
2. SEX Female Male
3. RACE White Black American Indian
   Hispanic Oriental Indian Other
4. EDUCATION MPH Yes No
   Highest Degree
   Area of Specialization
5. PUBLIC HEALTH DISCIPLINE
6. TITLE OF PRESENT POSITION
7. NUMBER OF YEARS IN POSITION
8. NUMBER OF YEARS IN HIGHER EDUCATION FOR PUBLIC HEALTH
9. PRIOR POSITIONS IN ACADEME; NUMBER OF YEARS
10. PRIOR POSITIONS IN SERVICE; NUMBER OF YEARS

APPEMDIX C

DATA FORM

LEADERS

Please circle or write in the correct response or responses.

1. AGE 20-29 30-39 40-49 50-59 60-69

2. SEX Female Male

3. RACE White Black American Indian Hispanic Oriental Indian Other

4. EDUCATION MPH Yes No

   Highest Degree

   Area of Specialization

5. PUBLIC HEALTH DISCIPLINE

6. TITLE OF PRESENT POSITION

7. NUMBER OF YEARS IN POSITION

APPENDIX D

DATA FORM

FOLLOWERS

Please circle or write in the correct response or responses.

1. AGE 20-29 30-39 40-49 50-59 60-69

2. SEX Female Male

3. RACE White Black American Indian Hispanic
Oriental Indian Other

4. EDUCATION MPH Yes No

Highest Degree

Area of Specialization

5. PUBLIC HEALTH DISCIPLINE

6. TITLE OF PRESENT POSITION

7. NUMBER OF YEARS IN POSITION

8. NUMBER OF YEARS WORKED WITH LEADER

KOUZES POSNER INTERNATIONAL, INC.
2330 Forbes Avenue, Suite A
Santa Clara, California 95050

October 1, 1990

Ms. Grace P. Erickson
Medical College of Virgina School of Nursing
Dept of Community & Psychiatric Nursing, Box 567
Richmond, Virginia 23298-0567

Dear Grace:

Thank you for your correspondence of September 28 requesting permission to use the Leadership Practices Inventory (LPI) in your doctoral research. We are pleased to allow you to make copies of the LPI in your research studies to the extent outlined in your letter and according to the following three stipulations:

1. That the following copyright notice appear on all copies of the LPI-Self and LPI-Other: Copyright 1990 by Kouzes Posner International, Inc. Used with permission.

2. That we receive copies of <u>all</u> reports, papers, articles, including your dissertation itself, etc. which make use of the LPI data.

3. That the LPI may not be sold or used in workshop settings. In other words, that the LPI will be used by you solely as a research instrument.

If you agree to the terms outlined above, please sign one copy of this letter and return it in the enclosed envelope. Enclosed is a copy of an article providing more technical information about the instrument and its psychometric properties.

If we can be of any further assistance, please do not hesitate to let us know. Best wishes in your research efforts.

Cordially,

Barry Z. Posner, Ph.D.
Managing Director

I understand and agree to abide by these terms:

Grace P. Erickson Date: 10/15/90

PLEASE NOTE

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

194-197 Leadership Practices Inventory (LPI) : SELF*
198-201 Leadership Practices Inventory (LPI) : OTHER*

University Microfilms International

APPENDIX H

January 1991

Dear Dr. :

You are invited to participate in a study of leadership for public health. As you know, the Institute of Medicine (IOM) Study on the Future of Public Health cites a dearth of leadership in public health and challenges schools of public health to develop leaders. It states, " Today the need for leaders is too important to leave there emergence to chance." Therefore it is imperative to discern curricular content in leadership and to identify the practices of leaders who are graduates of educational programs in public health.

As a student of higher education at the College of William and Mary in Virginia I have explored higher education for public health. In light of the IOM report and considering the challenges of this decade and the year 2000, the time is right to study the phenomenon of leadership for public health and to develop a grounded theory for leadership and leadership development for public health. This is the focus of my doctoral dissertation.

I hope you will consent to contribute your expertise to this study. Please respond to the enclosed data form and the leadership survey. Then, on the five short forms, identify five MPH graduates of your program, irrespective of age, race, gender, or discipline, who you believe exhibit leadership in public health. Your name will be used only in requesting these persons to participate in the study. These leaders, and subordinates/followers of their choosing, will be asked to anonymously respond to a short inventory of leadership practices and behaviors. All data will be reported in the aggregate only.

Your response will indicate agreement to participate in this study. I will be pleased to answer questions and can be reached at 804-786-0835. My dissertation committee members are Roger G. Baldwin, PhD, Martha N. Smith, PhD, MPH, and John R. Thelin, PhD.

Please return your completed materials by January , 1991.
Thank you for your time and your valuable contributions to higher education for public health.

Sincerely,

Grace P. Erickson, MPH, MSN

APPENDIX I

January 1991

Dear

Congratulations! You have been named as a leader in public health by of University. Therefore, you are invited to participate in a study to identify the behaviors and practices of leaders in public health.

As you know, the Institute of Medicine Study on the Future of Public Health cites a dearth of leadership in public health and calls schools of public health to the task of leadership development. Considering the challenges of this decade and the year 2000 and the urgent need for leaders, the time is right to study the phenomenon of leadership for public health and to develop a grounded theory for leadership development for public health. This is the focus of my doctoral dissertation at the College of William and Mary in Virginia where I am a doctoral candidate in higher education.

If you agree to participate, please complete the enclosed data form and the Leadership Practices Inventory-Self (LPI, c. 1990 by Kouzes and Posner International, Inc.) and return them in the stamped self-addressed envelope. Then please select five persons to respond to a similar LPI. These persons should be working with you regularly in a leader to subordinate/follower capacity and be familiar with your leadership practices. Give each of these persons one of the enclosed packets which contains a letter of invitation and information, a data form, the LPI-Other, and a return stamped self-addressed envelope.

Your response will indicate agreement to participate in the study. All data will be reported in the aggregate only.

Please return the data form and LPI by 1991.

Thank you for your participation and this valuable contribution to leadership for public health.

Sincerely,

Grace P. Erickson, MPH, MSN

APPENDIX J

January 1991

Dear Public Health Worker:

A recognized leader in public health has chosen you to participate in a study to identify the behaviors and practices of leaders in public health. You are invited to respond to the enclosed Leadership Practices Inventory based on your own experiences of working with this public health leader.

The Institute of Medicine Study on the Future of Public Health cites a need for public health leadership and calls schools of public health to the task of leadership development. Considering the challenges of this decade and the year 2000 and the need for leaders, the time is right to study leadership and to develop a grounded theory for leadership development for public health. This is the focus of my doctoral dissertation at the College of William and Mary in Virginia where I am a doctoral candidate in higher education.

If you agree to participate, please complete the enclosed data form and Leadership Practices Inventory-Other (LPI, c 1990 by Kouzes and Posner International, Inc.) and return them in the stamped self-addressed envelope. All information will be reported in the aggregate only. Your name will not be used.

Your response will indicate agreement to participate.

Please return the data form and LPI by 1991.

Thank you for your valuable help. It will be an important contribution to leadership development for public health.

Sincerely,

Grace P. Erickson, MPH, MSN

APPENDIX K

DISSERTATION RESEARCH
GENERATING A GROUNDED THEORY OF LEADERSHIP AND LEADERSHIP DEVELOPMENT FOR PUBLIC HEALTH
Grace P. Erickson

LEADER RECOMMENDATION FORM

I RECOMMEND (name)_____
OF (address): _____
_____
AS A LEADER IN PUBLIC HEALTH.

I understand my name and the above information will only be used in the letter to request the named leaders's participation in this study. I also understand that all data in this study will be reported in the aggregate without the use any personal identifying information.

Signature_____

Position Title_____

University_____

Date_____

THANK YOU.

==========

LEADER RECOMMENDATION FORM

I RECOMMEND (name)_____
OF (address): _____
_____
AS A LEADER IN PUBLIC HEALTH.

I understand my name and the above information will only be used in the letter to request the named leaders's participation in this study. I also understand that all data in this study will be reported in the aggregate without the use any personal identifying information.

Signature_____

Position Title_____

University_____

Date_____
THANK YOU.

APPENDIX L

DEFINITIONS OF NOUNS

ability:	Capacity or power; cleverness; talent; mental power.
acceptance:	Willingness to receive; an affirmative answer.
action:	Forcefulness or energy; something done; a deed.
capacity:	A faculty or talent.
cause:	A reason or motive; a principle, belief or purpose.
challenge:	A demanding or difficult task; a call to respond.
change:	An alteration or modification.
commitment:	An engagement or obligation; a pledge or understanding.
effort:	A physical or mental exertion; a vigorous or determined attempt.
example:	A person, thing, or piece of conduct to be imitated.
expertise:	Expert skill, knowledge or judgement.
future:	A time to come.
goal:	The objective of ambition or effort; a destination; an aim.
groups:	A number of persons considered or classed together; a number of people working together or sharing beliefs.
guidance:	Advice or information aimed at resolving a problem, difficulty, etc.
ideas:	Conception of plans formed by mental effort; a mental expression or notation.
initiative:	Enterprise; to power to begin something.

knowledge:	Awareness or familiarity gained by experience; a theoretical or practical understanding of a subject.
objective(s):	Something sought or aimed at.
opportunity:	A good chance; a chance or opening offered by circumstances.
organization:	An organized body; esp. business, government department, etc.
others:	Not the same as; separate identity or distinct in kind.
ownership:	Belonging to oneself or itself; possession of.
people:	A group of persons; persons composing a community, race, nation, etc.
process:	A course of action or proceeding.
purpose:	An objective to be attained; a thing intended.
qualities:	Attributes; characteristics; traits.
resources:	The means available to achieve or fulfill a function; stock or supply that can be drawn on.
role:	A characteristic or expected function.
role model:	A person looked to by others as an example in a particular role.
skills:	Practiced abilities; dexterity or tact.
strategy:	A plan of action or policy.
task:	A piece of work to be done or undertaken.
vision:	Imaginative insight; statesmanlike foresight; sagacity in planning.
willingness:	Readiness or consent to undertake; cheerful intention.

APPENDIX M

DEFINITIONS OF VERBS

accomplish:	Perform, complete, succeed in doing.
achieve:	Reach or attain by effort.
align:	Bring into agreement or alliance with a cause.
articulate:	Speak fluently and coherently; clearly distinguish parts.
bring about:	Cause to happen; turn around.
complete:	Finish.
cope:	Deal effectively with a situation or problem.
define:	Describe or explain; make clear.
develop:	Make or become bigger, fuller, more elaborate or more systematic.
direct:	Control, guide, govern.
do:	Perform, carry out, achieve, complete.
help:	Assist or give support.
implement:	Put a decision or plan into effect.
influence:	Have an effect or impact on a person or thing.
involve:	Cause a person or thing to participate; include in operations.
lead:	To guide or show the way by going in front; direct the actions or opinions of; guide by persuasion or example or argument.
look:	Make visual or mental search; hope or be in watch for; expect; inquire.
manage:	Organize, regulate, be in charge of; gain influence with or maintain control over.
maximize:	Increase or enhance to the utmost.

mobilize:	Organize for service or action; render movable; bring into circulation.
motivate:	Cause a person to act in a particular way; stimulate the interest of a person in an activity.
move:	Put or keep in motion; rouse, stir, change one's position or posture or cause to do this.
provide:	Supply; furnish; prepare for; equip with necessities.
share:	Use or benefit from jointly with others; divide and distribute; give away part of.
take risks:	Accept the chance of; expose oneself to danger or loss.
use:	Treat in a specific manner; cause to act or serve for a purpose; bring into service.

APPENDIX N

DEFINITIONS OF SIX FUNCTIONS OF THE MANAGEMENT PROCESS*

PLANNING

Planning encompasses defining the overall purpose and the long and short term goals and objectives of the agency/organization and determining the strategies and courses of action necessary to accomplish them.

ORGANIZING

Organizing involves determination, assignment, and coordination of tasks and role responsibilities, including appropriate delegation of authority, to the personnel best able to carry out the activities necessary to the achievement of agency/organization goals and objectives.

CONTROLLING

Controlling entails monitoring work performance through the measurement and correcting of personnel according to the criteria and standards of established plans designed to assure attainment of agency/organization goals and objectives.

DIRECTING

Directing involves guiding, teaching, coaching, and motivating people to work effectively and efficiently to accomplish the goals and objectives of the agency/organization.

DECISION-MAKING

Decision-making integrates identification of a problem with searching for, and consideration of, available solutions and with the selection of actions most likely to yield an outcome consistent with the established purpose and the goals and objectives of the agency/organization.

STAFFING

Staffing includes identification, recruitment, selection, placement, orientation, training, maintaining, and appraisal of personnel to fulfill the roles and positions required to accomplish the work of the agency/organization.

*Adapted from Hodgetts, 1975; Koontz, O'Donnell, & Weihrich, 1982; Leiber, Levine, & Dervitz, 1984; Longest, 1990; Robbins, 1984; Sullivan & Decker, 1992; Zaltman, 1979.

Appendix O

POSITION TITLES BY POSITION TITLE CATEGORY FOR THE TWENTY-TWO LEADER RESPONDENTS TO THE LEADERSHIP PRACTICES INVENTORY (LPI)

POSITION TITLE CATEGORY (n)
POSITION TITLE (n)

Administrator/Director (11)
- Vice President
- Executive Health Maintanence Organization
- Director Maternal Child Health
- Director State Health Department
- Director Environmental Health
- Director, Medical Directors
- Medical Director (2)
- Medical Director Employee Health
- Regional Health Director
- Assistant Director

Academician (3)
- Dean School of Dentistry
- Associate Dean Academic Programs
- Chair and Associate Professor

Advisor/Consultant (2)
- International Advisor
- Public Health Medical Consultant

Business/Clerical
- None

Environmental Engineer (1)
- Environmental Engineer

Fellow/Student (1)
- Fellow, Pediatric Specialty

Health Care Professional (1)
- Public Health Dentist

Health Officer/Chief/Deputy (2)
- Principal Deputy
- Chief

Health Services Provider
- None

Manager/Supervisor
- None

Scientist/Analyst/Researcher (1)
- Senior Epidemiologist

Specialist/Coordinator
- None

Veterinary Science
- None

Not Stated
- None

Appendix P

POSITION TITLES BY POSITION TITLE CATEGORY
FOR THE SEVENTY-NINE FOLLOWER
RESPONDENTS TO THE LEADERSHIP PRACTICES INVENTORY (LPI)

POSITION TITLE CATEGORY (n)
POSITION TITLE (n)

Administrator/Director (24)
- President (2)
- Senior Vice President
- Executive Director
- Director of Communications
- Director Maternal Child Health (2)
- Director, Policy and Planning
- Director of Research
- Bureau Director Health Resources
- Dental Director
- District Director, County Health District
- Medical Director
- Training Director
- Administrator, State Program
- Human Resource Administrator
- Deputy Director
- Deputy Division Director
- Associate Director (2)
- Associate Administrator
- Assistant to Director
- Acting Director (2)

Academician (8)
- Dean
- Associate Dean (2)
- Professor and Department Chair
- Associate Professor
- Assistant Professor (3)

Advisor/Consultant (5)
- Consultant
- Public Health Advisor
- Nurse Consultant
- Obstetrics and Gynecology Consultant
- Regional Pharmacist Consultant

Business/Clerical (2)
- Secretary
- Clerk

Environmental Engineer
- None

Fellow/Student (1)
- Student

Health Care Professional (3)
- Medical Staff
- Public Health Dentist
- Public Health Dental Hygienist

Health Officer/Chief/Deputy (5)
- Chief
- Chief Officer
- Chief of Staff (2)
- State Health Officer

Health Services Provider (2)
- Assistant Secretary Health Affairs
- Medical Staff Assistant

Manager/Supervisor (9)
- Administrative Manager
- Program Manager
- Manager Vehicle Pollution
- Environmental Services Manager
- Supervisor Compensation Insurance
- Nurse Supervisor
- Public Health Nursing Supervisor
- Office Supervisor
- Regional Dentist Supervisor

Scientist/Analyst/Researcher (3)
- Epidemiology Analyst
- State Epidemiologist
- Senior Research Associate

Specialist/Coordinator (12)
- Program Development Specialist
- Program Specialist Health Promotion
- Cost Containment Specialist
- Clinical Coordinator
- Community Involvement Coordinator
- Coordinator Primary Care Project
- Medical Services Coordinator (2)
- Program Coordinator
- Project Coordinator
- Registered Nurse Coordinator
- Smoking Cessation Coordinator

Veterinary Science (2)
- Animal Care Specialist (2)

Not Stated (3)

VITA

Grace Peak Erickson

The College of William and Mary
Williamsburg, Virginia
Educational Specialist

Yale University
New Haven, Connecticut
Master of Public Health

Yale University
New Haven, Connecticut
Master of Science in Nursing

Columbia University
New York, New York
Bachelor of Science

St. Luke's Hospital School of Nursing
New York, New York
Diploma