AN ANALYSIS OF MANAGERIAL BEHAVIOR IN OKLAHOMA HOSPITALS

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PREFACE

This study is concerned with managerial behavior in Oklahoma hospitals. The primary objective is to provide a more thorough understanding of selected facets of managerial behavior in hospitals. Results presented are based on an analysis of empirical data gathered in selected Oklahoma hospitals.

The author wishes to express his appreciation to his major advisor, Dr. Ralph F. Catalanello, who provided very useful advice and encouragement throughout the study.

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CHAPTER I

INTRODUCTION

The Nature and Significance of the Problem

The rapidly increasing costs of hospital care have brought attention to the efficiency with which hospital care is provided. Authors such as Evers and Wallace (13) have criticized hospitals for their inefficiency. Others such as Kaitz (31) have suggested that there is a lack of concern for efficiency or production controls in hospitals. Irrespective of the truth of their statements, hospital management is receiving a great deal of public attention. To a major extent the efficiency with which hospital care is provided is dependent upon the administrators who manage the resources utilized in the provision of such care.

Little has been written regarding the nature of various situational variables associated with and influencing the potential effectiveness of managers in hospitals. Extensive research has been conducted in private industry to ascertain effective management techniques. Such research has yielded fruitful results having implications for increased efficiency. At the present time, no one seems to know what management styles are being utilized in the many different managerial positions existing within hospitals. Clearly the

organizational complexities in today's hospitals suggest that different types of managerial behavior may be required in different parts of the hospital.

Simply stated the problem is that the efficiency with which hospital care is provided is receiving considerable attention; however, little is known of the administration of the organizations providing this care, managers responsible for the provision of it, the demands of their positions, or how they might improve their efficiency and effectiveness. Research that will contribute to a better understanding of the similarities and differences of the managerial behavior in hospitals will significantly improve managerial effectiveness in the health care industry.

Objectives of the Study

The objective of this study is to gain a more thorough understanding of managerial behavior in selected Oklahoma hospitals than has previously existed. To accomplish this objective, the following five subobjectives will be dealt with in detail.

(1) To describe the management styles of managers in Oklahoma hospitals.

(2) To determine how Oklahoma hospitals differ and which variables account for the significant differences among the hospitals.

(3) To determine if managerial behavior in the hospitals varies as a function of hospital size.

(4) To determine if managerial behavior varies among the different management positions.

(5) To discuss relationships among the variables which are useful in explaining the behavior of managers.

Of course, it should be recognized that the above are objectives and that conclusive determinations can seldom, if ever, be obtained from a single research study.

Research Methodology

The research methodology first involved a review of the literature on leadership and hospital managerial behavior. A theoretical model incorporating the most relevant aspects of leadership and hospital managerial behavior was developed. The purpose of this theoretical model was to provide a framework useful for analyzing the selected dimensions of managerial behavior in hospitals which the literature review revealed to be the most important. The model was composed of the following seven basic dimensions: (1) background data, (2) task orientation (which indicates the extent to which the manager directs his subordinate's efforts toward goal attainment in his present job), (3) relationships orientation (the extent to which a manager has personal job relationships with subordinates on the job he now holds), (4) organizational climate, (5) tension and stress, (6) coordination and communication effectiveness, and (7) results of the Management Style Diagnosis Test (which is designed to provide a description of leadership styles). Each dimension

was represented by several variables. Expected relationships among the dimensions of the theoretical model and expected results from the Management Style Diagnosis Test will be discussed.

After the theoretical model was developed, the next major steps in the research were the selection of hospitals and the selection of managers within these hospitals to participate in the research.

The state of Oklahoma has 162 hospitals of which 131 are community hospitals. A community hospital is of a non-specialized nature and open to the general public. The category includes: municipal, nonprofit and volunteer hospitals and sometimes proprietary hospitals. Only community hospitals were included in the population of the research because it was felt it would be unrealistic to include other hospitals such as psychiatric or tuberculosis which are likely to have divergent characteristics. From Oklahoma's 131 community hospitals, selections for the research were made based on the following two criteria: (1) only hospitals which officials of the Oklahoma Hospital Association suggested, on the basis of their past experience, would be likely to participate in a research project such as this were considered; and (2) only hospitals within a 150 mile radius of Oklahoma State University were considered. Approximately 80-90% of the bed capacity in the state was within this 150 mile radius.

Total bed capacity of community hospitals in the state is approximately 11,050. The seventeen hospitals ultimately

included in the research had a bed capacity of approximately 3,800 beds. Six of the twenty-three hospitals contacted were unable to participate for various reasons. Although over one-third of the population, in terms of bed size, was included in the sample, a random sample was admittedly not obtained. Also, it is possible that the sample was biased in the sense that it may have included a high proportion of "progressive" hospitals and a small proportion of "less progressive" hospitals. This is assuming that "less progressive" hospitals would be less likely to participate in a study such as this; and that more "progressive" hospitals would be more likely to participate.

Since a statistically random sample was not obtained, obviously no statistically valid generalizations about the hospital industry as a whole can be inferred from the findings. However, useful insights and a basis upon which further research may build can be obtained.

Of the seventeen hospitals participating in the study, six had between 50-149 beds, six had between 150-249 beds, and five had more than 250 beds. In order to include a large percentage of the hospital bed capacity of the state in the sample, approximately 14 percent of the community hospitals with less than 150 beds and approximately 43 percent of the community hospitals with more than 150 beds were included in the sample.

An average of eighteen respondents from each hospital completed the research instruments. Only department heads

and those holding recognized administrative positions, such as administrator, personnel manager, or comptroller were invited to participate. Permission to gather data and the actual data gathering procedure were accomplished by the following four steps:

(1) sending an introductory letter to the administrator of each hospital (see Appendix A);

(2) telephoning the administrator of each hospital;

(3) making a personal visit to each hospital to discuss the project with its administrator; and,

(4) making another visit to each hospital for the actual data collection.

The purpose of the first three steps was to explain what the research involved and to solicit the administrator's permission to gather data in his hospital. The researcher personally visited each of the seventeen hospitals included in the research, spending one day at each of the hospitals administering the research instruments.

The research instruments utilized were: the Management Style Diagnosis Test designed by Reddin (50), and a nine-page questionnaire developed by the researcher. Both research instruments were field tested in a pilot study at a local hospital. The Management Style Diagnosis Test is designed to provide the following information: a measure of task orientation, a measure of relationships orientation, a measure of effectiveness, a management style profile, and dominant and supporting management styles. When task orientation,

relationships orientation and effectiveness measures are combined, the respondent is placed in one of eight different style categories. The first four are regarded as less effective and the last four as effective. The eight styles are: deserter, missionary, autocrat, compromiser, bureaucrat, developer, benevolent autocrat and executive. A less effective style indicates that a manager's leadership style does not match the demands of the five major elements of his situation. That is, his leadership style does not match the demands of his superiors, coworkers, subordinates, technology, and organizational climate as described by him when answering the test questions. Scores for each of the eight styles comprise the respondent's style profile. A score of eleven or above indicates a dominant style; a score of ten indicates a supporting style.

A nine-page questionnaire, designed by the researcher, was utilized to obtain independent measures of the five variables theorized by Reddin to result in particular leadership styles and to obtain additional information relating to the other dimensions of the theoretical model. A copy of the questionnaire is included as Appendix B. The questionnaire was designed to obtain information regarding the following six areas: (1) background information, (2) technology of the respondent's job, (3) organizational climate, (4) coordination and communication, (5) the influence of the medical staff, and (6) task orientation and relationships orientation.

Background information was gathered regarding the respondent's age, education, years worked in present position, years worked in the hospital, years worked in the health services industry, and number of subordinates.

Measures of the influence of technology (the type of work the manager's subordinates perform) on the respondent's managerial behavior were obtained using 20 questions developed by W. J. Reddin (50).

Measures of organizational climate of the hospital and the respondent's department were obtained using a 10-question group climate measurement device developed by Fiedler (14).

Coordination and communication measures were obtained by the use of four questions referring to the hospital and the respondent's department's coordination and communication effectiveness.

Measures of the influence of the medical staff were obtained by four variables relating to the perceived and desired influence of the medical staff on the hospital and on the respondent's department.

Measures of task orientation and relationships orientation of the respondent's superiors, coworkers, and subordinates were obtained by using twenty questions from the Leader Behavior Description Questionnaire (23), published by Ohio State University which was designed to measure these dimensions.

Programs from the "Statistical Analysis System" by A. J. Barr and J. H. Goodnight in A Users Guide to the Statistical

Analysis System (54), were used to analyze the data. The analysis and interpretation of the data was divided into the following parts: Management Style Diagnosis Test results, differences among hospitals, differences of hospital size, differences among the various managerial positions in the hospitals, and relationships among the variables.

The Management Style Diagnosis Test results were used to provide a descriptive analysis of respondents in general and also of respondents in selected managerial positions. One dominant "more effective" style of "developer" was found and one dominant "less effective" style of "missionary" was found. Results from the test indicated that the respondents were well above average in terms of effectiveness and considerably more relationships oriented than task oriented. A statistical analysis relating independent measures of situational elements basic to Reddin's theory of leadership styles with the results from the Management Style Diagnosis Test was made. Results from this analysis were disappointing, indicating that the test did not adequately discriminate among the respondents.

In order to obtain a better understanding of how the seventeen hospitals in the study differed, mean averages were computed for each hospital for each variable. Then taking each variable individually, the seventeen mean averages, one for each hospital, were compared using analysis of variance techniques (47) to determine which variables differed significantly among the hospitals.

The hospitals were placed into four size categories ranging from small to large, depending on their bed size and number of full-time equivalent employees. A statistical analysis was performed to see which variables differed significantly across the size categories.

Respondents from the various hospitals were placed into sixteen different managerial positions existing within the hospitals. The positions ranged from administrator to department heads such as housekeeping, laboratory, and nursing. The smallest number of respondents in any managerial position was nine. After the respondents were placed into the various managerial categories, a statistical analysis was performed to see how the positions differed and what variables differed significantly among them. A brief analysis of each of the managerial positions, discussing their particular characteristics, was provided.

Spearman rank order correlations were performed between selected variables among the mean averages of the hospitals on each of these variables. For example: using the hospital as the unit of analysis, a statistical technique was employed to determine if those hospitals having greater hospital tension and stress also tended to be the same hospitals that had warmer or colder hospital atmospheres. Findings of the correlational analysis among hospitals were: (1) those hospitals with a higher task orientation tended to be the same hospitals with greater tension and stress, poorer coordination and communication effectiveness and a colder

atmosphere; and (2) those hospitals with a higher relationships orientation tended to be the same hospitals with less tension and stress, more effective coordination and communication effectiveness, and a warmer atmosphere. Implications of this analysis were that the hospital, when viewed as an organization, should rely somewhat more heavily on a relationships orientation than a task orientation.

Organization of the Study

The second chapter of the study contains a review of the literature pertinent to leadership and hospital managerial behavior. Also included in the chapter is a theoretical model, based on the literature review, which was developed as a framework for analyzing hospital managerial behavior. The third chapter describes how the data was obtained, research instruments utilized and how the data was quantified for subsequent analysis.

A descriptive and interpretative analysis of the data collected from the hospitals in the study is presented in Chapter IV. Chapter V presents a summary of the results of the research, important findings and their significance, and recommendations for further research in this area.

CHAPTER II

REVIEW OF THE LITERATURE AND THE THEORETICAL MODEL

Introduction

This chapter presents a brief review of previous research relating to leadership and to hospital management. First, there is an analysis of the various different approaches which have been taken in the study of leadership. Next, a summary of Reddin's (49) 3-D Theory of managerial effectiveness and leadership styles is given. The next major section of the chapter deals with previous research in the area of hospital management.

The final section of the chapter presents a theoretical model of managerial behavior in hospitals. Expected relationships of variables in the model and expected results from the Management Style Diagnosis Test are discussed. The chapter was not intended to be an exhaustive exploration of previous research conducted in the areas of leadership and hospital management. Instead, the objective of the chapter was to disclose major concepts of leadership and relevant variables relating to hospital management and then to integrate these into a theoretical model with which to analyze managerial behavior in hospitals.

Prior Research of Leadership and Previous Approaches to the Study of Leadership

Introduction

Certainly the field of leadership has not suffered from a lack of research. It is estimated that over 1000 studies dealing with leadership have been conducted since the 1930's. Many of these studies have provided useful insights into small group procedures and the effectiveness of various leadership approaches. However, such studies have often led to contradictory results. Very little research attempting to integrate the various findings has been conducted. It appears that no single style or type of leadership can be established as "best" for most situations. There is wide recognition of the need for the selection and training of leaders but few clear-cut procedures for explaining or implementing the concept of leadership.

Frequently, the complexity of leadership has been dealt with in one of two ways. The first approach has been to describe leadership as an art which is quite subjective. The second approach has been to conduct research which is somewhat more objective but quite limited in scope.

It is perhaps unfortunate that the great majority of leadership research has been restricted to small groups or quite limited segments of larger organizations. Hypotheses which do not apply to two or more levels of a social system have little generality. Many sociological analyses

involving various organizational levels have been completed, yet few studies of leadership involving various organizational levels have been completed.

This research involves 16 different managerial positions in 17 different organizations (hospitals). It should considerably further our understanding of how leadership varies among different organizational levels.

The following statement by Lipham (36) lends additional support to the need for additional research on leadership in complex organizations:

> In view of the multitude of studies which have been concerned with leadership, it seems somewhat anomalous to suggest that our knowledge in the area is still limited. Of the completed investigations, however, only a limited number have been concerned with leadership in complex organizational settings.

Perhaps the most significant research of leadership was conducted at Ohio State University during the 1950's. Attempts were made to isolate dimensions that would indicate leadership behavior as perceived by both the leader and his subordinates. Two behavioral dimensions were isolated, initiating structure and consideration. The Leader Behavior Description Questionnaire and the Leadership Opinion Questionnaire were developed to measure these dimensions (23). Subsequently, a large number of studies have been carried out utilizing these instruments to "measure" leader behavior and relate it to organizational effectiveness.

Many other authors have also indicated the need for sound leadership theory. The following quotation from Stouffer, et al., (61, p. 6) gives some indication of this:

> There are few practical problems facing social science more urgent than that of studying leadership experimentally and developing some tested hypotheses to replace the copybook maxims that now fill most manuals on leadership, whether written for the Army, for industry, or for organizations like the YMCA.

Also, Browne and Cohen (5, V) have stated that the great majority of leadership literature:

> would have little organization; it would evidence little in the way of common assumptions and hypotheses, it would vary widely in theoretical and methodological approaches. To a great extent, therefore, leadership literature is a mass of content without any coagulating substances to bring it together as to produce coordination and point out interrelationships.

A lack of consensus of the scholars in the field of leadership is perhaps a strong indication of the need for and importance of further research in the field of leadership. Also, it should be noted that we have not established verifiable criteria for selecting leaders or potential leaders for the organizations to which we belong and to an extent control. More often than not, choices are subjectively made or else rely heavily on subjective evaluations developed by others. Frequently, evaluations of potential leaders or supervisors are based on past job performances that bear little resemblance to the job ability required for the leadership position for which the individual is being selected.

Certainly there are individuals who can perform well in many job situations, however, such individuals are rare, and in this age of increasing specialization are becoming more rare. The point is that subjective criteria and past performance are only as accurate as the perceptions of the

individuals using them as selection tools. Thus, more objective selection criteria are needed.

There appears to be little doubt as to the consensus among researchers as to the need for a more useful leadership theory which can be utilized for testing various past studies and to guide attempts in future studies.

Previous approaches to the study of leadership may roughly be placed in the following six categories: the trait approach, the group approach, the leader types approach, the situational approach, the task versus relationships approach and a leader skills approach. These will now be discussed.

The Trait Approach

Perhaps the oldest and most commonly accepted method of determining aspects of leadership is the study of the characteristics and behavior of existing leaders. Use of such an approach assumes that leadership is an inherent characteristic which is possessed only by certain individuals regardless of the environment in which they may be found. This approach eventually resulted in such a great number of traits and characteristics that its usefulness became quite limited.

In the light of current research and particularly a review of the literature carried out by Stogdill, the trait approach appears to have suffered considerably over the past two decades. After examining 124 studies on the relationship of personality factors to leadership, Stogdill (56,

p. 69) concluded that:

> A person does not become a leader by virtue of the possession of some combination of traits, but the pattern of personal characteristics, activities, and goals of the followers. Thus leadership must be conceived in terms of the interaction of variables which are in constant flux and change.

Gouldner (19) has also pointed out the inadequacies in the methodology of investigating only personality traits when studying leadership. He indicated that the traits usually referred to in these studies are not ranked in any order of relative importance, that they are usually interdependent and that a false assumption may be made when the researchers indicate that traits for achieving leadership are presumed to be the same as those for maintaining leadership. He also suggested that the same traits will manifest themselves differently in personalities which are different.

Although it seems quite logical to suppose that one's personality would affect his leadership, little conclusive research appears to have been conducted in this area. One can only conclude that, at the present time, the idea of personality is yet ambiguous enough that conclusions based on personality differences appear to serve only as a "catch-all" explanation for areas in the behavioral field which cannot be explained otherwise.

The Group Approach

As the process of leadership inevitably requires that there be followers, it seems only logical to study leadership in terms of requirements imposed on leaders by their

followers. This is to say that particular groups may well impose distinct demands on those who lead the group. In this sense, leadership is a function of emerging and dynamic group structures rather than a particular set of personality characteristics. This rationale implies that in order to understand the problem of leadership effectiveness, one must study the group and its characteristics.

It would seem that if group characteristics could be clearly defined they would vary to the same extent that individual characteristics vary possibly producing the same conclusions which have generally been accepted regarding individual leadership traits. This implies that the successful development of group leadership structures would not necessarily insure the development of successful leadership structures if the group were moved to a different organizational setting. This idea, irrespective of its degree of validity, has a broader application to informal groups than to those formal organizations to which most people are attached and through which they earn their means of subsistence. Ordinarily, structures are pre-existing within formal organizations which would preclude any "natural" development of leadership structure. Or, if not, it must develop informally within a preestablished framework.

Even if the concept of leadership as a function of the group could be substantiated, it would probably gain very slow acceptance in our role-oriented society. As Katz and Kahn (29, p. 300) have pointed out:

> There is an almost universal assumption that even a small subpart of an organization can operate successfully only if some person has been formally designated as leader. Difficult assignments are often awarded with the injunction to 'make it work,' a kind of implicit recognition that something more than the formal prescriptions of organization is required for the system to function successfully.

Apparently even though the idea of leadership as a function of the group has contributed to our understanding of leadership, it still leaves much to be desired.

The Leader Types Approach

For the most part, current leadership literature has avoided the classification of leaders *per se* recognizing that a wide variety of personality types hold similar positions and that there is little evidence supporting the idea that types of leader behavior and effectiveness are constant from situation to situation. However, there is a tendency to bipolarize both the individual leader and situational variables. This bipolarization has led to the classification of individuals and system functions roughly into a task orientation and relationships orientation--task orientation referring to a primary concern for production, and relationships orientation referring to a primary concern for warm interpersonal relationships with the employees.

Parsons and Bales (43) have theorized that all social systems tend to differentiate four subsystems, each of which is oriented to one of the following systems problems: (1) adaptation, (2) goal attainment, (3) integration, and (4) pattern maintenance and tension management. The first

two subsystems are similar to a task orientation; the latter two to a relationships orientation.

Williams (66) has suggested that this theory roughly corresponds to Etzioni's categorization of four leadership types associated with the differentiation of roles based on the functional problems of the social system. Etzioni (12) appears to support the bipolarization idea by suggesting that task oriented groups within formal organizations need two types of leaders, an instrumental (task oriented) and an experience (social-emotional) leader. He has also indicated that the qualities found in one type of leader are not usually found in the other. This is not surprising as additional emphasis on task goals could easily detract from the satisfaction of social-emotional goals and vice versa.

Support of the dichotomization of leader types is widespread and may be found in the writings and studies of such recognized authors as McGregor (39) in his Theory X and Theory Y, Blake and Mouton (2) in their human versus production needs management styles, Likert's (35) emphasis on democratic versus autocratic types of group leadership, Fiedler's (14) emphasis on leadership satisfaction in terms of human relationships versus task accomplishment, and finally, The Ohio State studies which isolated leadership into task and relationship dimensions. All of these researchers have tended to dichotomize leadership into two distinct dimensions.

A considerable amount of controversy has existed as to whether one type of management is more effective than any other type. That is, should a relationships orientation and perhaps participatory management be used or would a task oriented autocratic type of management be preferable?

Research conducted by Coch and French (8) indicates that the performance of production workers is enhanced when participative management is used. Subsequent research conducted by French (16), Vroom (65), and Tannenbaum (62) indicates that the participative style of management should be utilized only on those individuals who desire it.

One could easily conclude that approaches, such as "autocratic" versus "democratic," "directive" versus "non-directive" and "boss-centered" versus "employee-centered," do not adequately distinguish between leader behavior. A few studies, such as those conducted by Dunteman and Bass (11), Patchen (44) and Sales (53), suggest that a relationships orientation and/or participative management can even be less effective than a task oriented autocratic type of supervision.

Research conducted by Fleishman and Peters (15) indicates that whether a manager exhibits great concern for structure or consideration has no association with the manager's rated effectiveness. In 1966, Korman (34) reviewed twenty-five leadership studies concluding that a manager's effectiveness could not be predicted by the amount of consideration or structure he used.

Thus it may be concluded that there is no "one" effective leadership style, nor is one type of leadership style necessarily better than any other. Additional situational elements must be taken into consideration.

The Situational Approach

The situational approach to the study of leadership is based on the assumption that the "correct" leadership style to be used is directly contingent upon the situation. This implies that as situations change or differ from one to another, persons who are leaders in one situation may not be leaders in another. In terms of leadership or organizational effectiveness, the idea of situational determinants is important in that the situation must be well enough defined that reasonable effectiveness criteria for evaluation can be established for the particular group under consideration.

Various authors have indicated the importance of taking into consideration situational variables when studying leadership. Such is implicit in the following definition of leadership by Katz and Kahn (29, p. 301):

> . . . leadership is a rational concept implying two terms: the influencing agent and the persons influenced. Without followers there can be no leader. Hence, leadership conceived as an ability is a slippery concept, since it depends too much on properties of the situation and of the people to be 'led.'

Dolan (10, pp. 2-4) has also emphasized the importance of the situation in the process of leadership. He indicated that leadership is the function of four major variables: personality, competence, the social system and the situation;

the personality theoretically contributing the personal qualities essential for maximum effectiveness in leadership situations, and competence referring to one's knowledge and understanding of the social system. Dolan refers to the situation as those factors inherent within any social system that are subject to change over time.

The following quotation by Ross and Hendry (52, p. 37) lends support to the hypothesis that the process of leadership must vary from situation to situation:

> Perhaps the best we can say at this point is that any comprehensive theory of leadership must take into account the fact that roles in groups tend to be structured, and that the leadership role is probably related to personality factors, to the attitudes and needs of "followers" at a particular time, to the structure of the group, and to the situation as defined above. Leadership is probably a function of the interaction of such variables, and these undoubtedly provide for role differentiation which leads to the designation of a "central figure" or leader, without prohibiting other members in the group from performing leadership functions in various ways, and at various times, in the life of the group.

Fiedler's (14) Leadership Contingency Model programs leadership effectiveness to be a function of the extent to which the style matches the situation. The situation theoretically is composed of the following three variables: (1) position power of the leader (the degree to which the position possesses the power to obtain subordinate compliance); (2) structure of task (the extent to which the leader is allowed to control his group members by programming tasks); and (3) leader member relations (the degree to which leader member relations are good).

Most modern approaches to the study of group or organizational effectiveness, particularly the general systems approach, have begun to take into account the above mentioned variables. Leadership theory in terms of organizational effectiveness is faced with the same problem; that is, there are many more variables to take into consideration than were at first supposed.

It appears that there is wide recognition of the importance of thoroughly taking into consideration situational variables before arriving at any operational understanding of leadership.

The Task Orientation and Relationships Orientation Approach

As previously mentioned, The Ohio State research has indicated that two basic dimensions of leadership exist. These are the task orientation and relationships orientation dimensions. The task orientation represents the extent to which the manager shows concern with production and actual task accomplishment. The relationships orientation represents the extent to which the manager has personal job relationships; characterized by mutual trust, respect for subordinates' ideas and consideration of their feelings.

The Managerial Grid developed by Blake and Mouton (2) is based on these two dimensions. A manager with a low task and low relationships orientation is characterized as ineffective. A manager with a high task orientation and a high

relationships orientation is characterized as the most effective. Unless scores on both dimensions are high it is hypothesized that the manager is not as effective as he could be. The demands which particular situational elements might make are largely ignored.

A test designed to measure the extent to which individuals are task oriented and relationships oriented, using Blake and Mouton's Managerial Grid, has been developed by Hall, Harvey and Williams (22).

The Leader Skills Approach

Several authors, such as Katz and Mann have theorized that leaders possess certain skills which they must have in order to be effective.

Katz (32) proposed that effective administration rests on three basic skills: (1) technical skill, "an understanding of, and proficiency in, a specific kind of activity," (2) human skill, "the ability to work effectively as a group member," and (3) conceptual skill, "the ability to see the enterprise as a whole." The relative importance of these skills varies according to the individual manager's position in the organizational hierarchy. That is, according to the requirements of his job.

Mann (37) has hypothesized that a leader must have three essential skills: (1) administrative competence (the ability to coordinate organizational activities), (2) human relations competence (the ability to integrate organizational

objectives with individual member needs), and (3) technical competence (the ability to accomplish one's assigned tasks and technical duties. He suggests that the relative importance of these skills would vary according to the individual manager's position in the organization.

Reddin's Theoretical Model of Leadership Styles

A rather unique integration of the situational approach with the task and relationships orientation approach to the study of leadership has been proposed by Reddin (49) in his 3-D Theory of Managerial Effectiveness. Like many others, he has hypothesized that two basic dimensions of leadership exist, the task orientation and the relationships orientation dimensions.

As may be seen in Figure 1, these dimensions may be combined in four different manners indicating four different types of leader behavior. Reddin has designated these types as integrated, dedicated, related and separated. The integrated type of behavior is so named because it describes behavior which combines both a high task and a high relationships orientation. The dedicated type represents behavior with a high task and low relationships orientation. The related type represents behavior with a high relationship and low task orientation. The separated type encompasses both a low task orientation and a low relationships orientation.

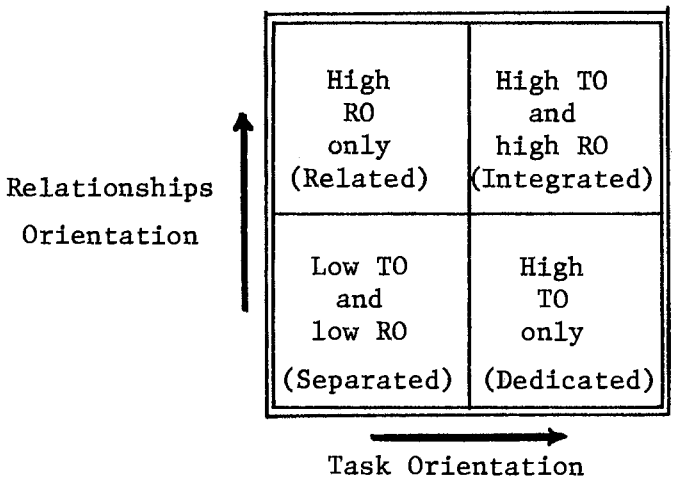

Figure 1. Four Types of Managerial Behavior

Reddin has theorized that depending on one's level of effectiveness, these four types of behavior result in eight styles of management. The eight styles of management are defined as follows:

EXECUTIVE--A manager who is using a high Task Orientation and a high Relationships Orientation in a situation where such behavior is appropriate and who is therefore more effective. Seen as a good motivator who sets high standards, who treats everyone somewhat differently and who prefers team management.

COMPROMISER--A manager who is using a high Task Orientation and a high Relationships Orientation in a situation that requires a high orientation to only one or neither and who is therefore less effective. Seen as being a poor decision maker and as one who allows various pressures in the situation to influence him too much. Seen as minimizing immediate pressures and problems rather than maximizing long term production.

BENEVOLENT AUTOCRAT--A manager who is using a high Task Orientation and a low Relationships Orientation in a situation where such behavior is appropriate and who is therefore more effective. Seen as

knowing what he wants, and knowing how to get it without creating resentment.

AUTOCRAT--A manager who is using a high Task Orientation and a low Relationships Orientation in a situation where such behavior is inappropriate and who is therefore less effective. Seen as having no confidence in others, as unpleasant, and as being interested only in the immediate job.

DEVELOPER--A manager who is using a high Relationships Orientation and a low Task Orientation in a situation where such behavior is appropriate and who is therefore more effective. Seen as having implicit trust in people and as being primarily concerned with developing them as individuals.

MISSIONARY--A manager who is using a high Relationships Orientation and a low Task Orientation in a situation where such behavior is inappropriate and who is therefore less effective. Seen as being primarily interested in harmony.

BUREAUCRAT--A manager who is using a low Task Orientation and a low Relationships Orientation in a situation where such behavior is appropriate and who is therefore more effective. Seen as being primarily interested in rules and procedures for their own sake, and as wanting to maintain and control the situation by their own use. Often seen as conscientious.

DESERTER--A manager who is using a low Task Orientation and low Relationships Orientation in a situation where such behavior is inappropriate and who is therefore less effective. Seen as uninvolved and passive.

Relationships between the previously mentioned four types of leader behavior and resulting eight different managerial styles are shown in Figure 2.

It may be observed that one who manages in an integrated manner with a high degree of effectiveness, Reddin labels an

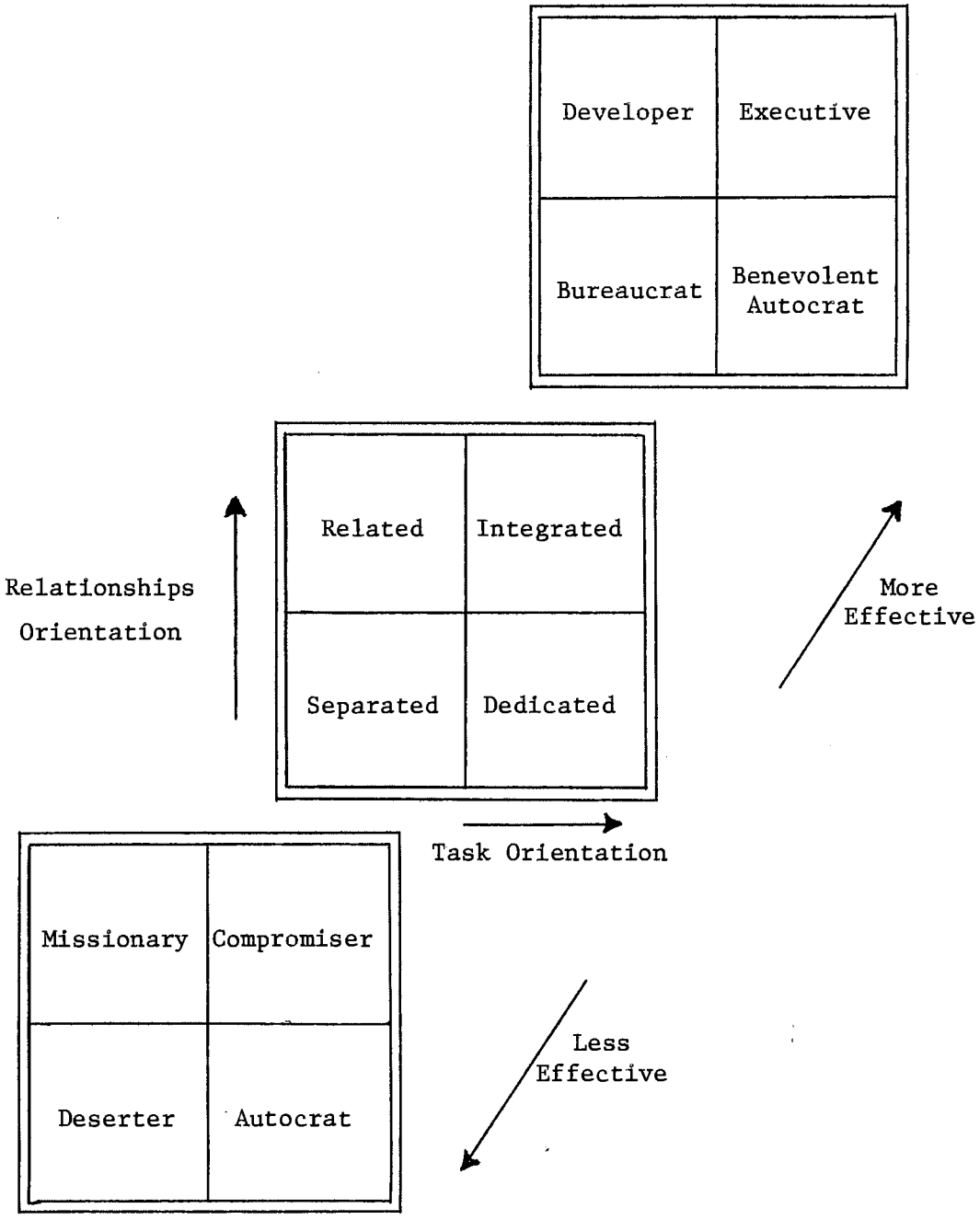

Figure 2. Reddin's Three Dimensions of Managerial Behavior

executive. One who manages in an integrated manner with a low degree of effectiveness, Reddin labels a compromisor.

One who manages in a related manner with a high degree of effectiveness is called a developer. One who manages in a related manner with a low degree of effectiveness is called a missionary.

One who manages in a dedicated manner with a high degree of effectiveness is called a benevolent autocrat. One who manages in a dedicated manner with a low degree of effectiveness is called an autocrat.

One who manages in a separated manner with a high degree of effectiveness is called a bureaucrat. One who manages in a separated manner with a low degree of effectiveness is called a deserter. The relationship between basic managerial types and more effective and less effective styles is shown in Table I.

TABLE I

LEADERSHIP STYLES

More Effective Managerial Style	Basic Style	Less Effective Managerial Style
Executive	Integrated	Compromisor
Benevolent Autocrat	Dedicated	Autocrat
Developer	Related	Missionary
Bureaucrat	Separated	Deserter

Reddin believes an effective manager must possess three skills: situational sensitivity (the ability to "read" a situation), situational management skill (the skill to change the situation, if necessary), and style flexibility (the use of a variety of styles to match a variety of situations). In short, effectiveness depends on using behavior appropriate to match the situation.

He has indicated that the situation may be characterized by five variables. The variables are: one's superiors, one's coworkers, one's subordinates, the technology of one's job and the organizational climate. Figure 3 provides a visual representation of this concept.

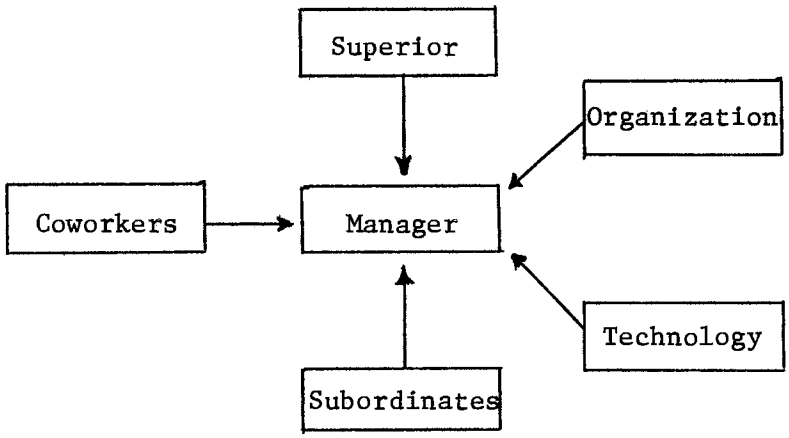

Figure 3. Reddin's Five Basic Situational Elements

Presumably superiors, coworkers, or subordinates with a high relationships orientation would exert an influence on a manager to also use a high relationships orientation and thus influence one to use particular leadership styles. Likewise, a high task orientation existing among these

individuals would influence one to use a high task orientation and thus use a leadership style such as an autocrat or benevolent autocrat.

A "warm" organizational climate as contrasted with a "cold" organizational climate would presumably influence the manager to use a higher relationships orientation and thus exert pressure to manage with certain styles.

Reddin's theory suggests that the technology (the type of work being performed and the demands it makes on the worker) of the work a manager's subordinates perform can effect the manager's leadership. His theory categorizes technology into four types: integrated, related, dedicated and separated. Each of these types of technology would presumably exert an influence to manage in an integrated, related, dedicated or separated manner. This, of course, exerts an influence to use certain leadership styles.

To further clarify these concepts, let us suppose that the technology of one's job requires a related type of behavior, one's superiors, coworkers and subordinates are above average in relationships orientation and the organizational climate is "warm;" then we would expect a relationships oriented type of leader such as a "developer." In this instance, if a task oriented type of style such as an "autocrat" or "benevolent autocrat" were used we would expect the manager to experience difficulty and be less effective an autocrat than he otherwise could be.

Certainly the theory and concepts put forth by Reddin are logical and appealing. However, it should be recognized that his ideas are theoretical in nature and have not yet gained general acceptance by behavioral scientists.

Prior Research on Hospital Administration

The general area of hospital administration has been discussed by many authors with a majority of the research relating to general administrative duties and problems in hospital administration. Works such as Modern Hospital Administration by Owen (42) and Principles of Hospital Administration by McGibony (38) are typical.

It appears that a large amount of the literature has been generated from a small base of empirical research. Perhaps the most comprehensive and thorough work which was solidly based on empirical research is that of Georgopoulos and Mann (18) in The Community General Hospital. They made a rather thorough analysis of the community general hospital, including management, communications and coordination in hospitals. As a part of their research, the Leadership Behavior Description Questionnaire was used to obtain measures of managerial behavior. From this data, an analysis of technical skill, administrative skill and human relations skill was made for various organizational levels. Figure 4 offers a visual representation of their findings regarding these skills at various organizational levels.

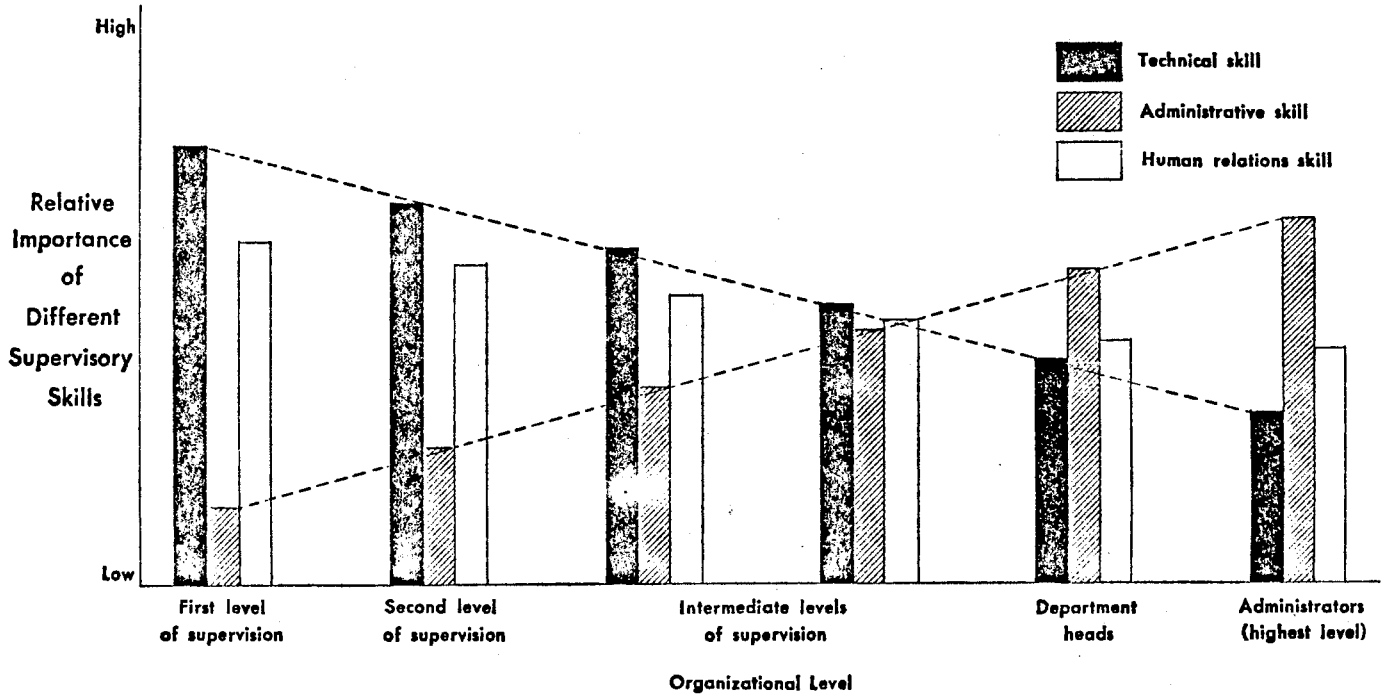

Figure 4. Schematic Representation of Supervisory Skill-Mix Required at Different Levels in Hierarchical Organizations

Certainly the work of Georgopoulos and Mann has added much to our understanding of how hospitals function and of managerial behavior within them.

Organizational Research on Health Institutions edited by Basil Georgopoulos (1972) (17) is probably the most current comprehensive work dealing with the organization and management of hospitals. It deals with the organizational structure of hospitals, the social control of hospitals, the quality of patient care, organizational effectiveness and various other topics.

Smalley (55), in Hospital Industrial Engineering, considered the application of industrial engineering techniques in hospitals in some detail but largely neglected managerial problems. As is frequently the case in the literature of hospital administration, a majority of his research was not primary but drawn from other sources.

Oakland and Fleishman (41) studied the relationship between styles of leadership and organizational stress in hospital settings. Organizational stress being characterized by interpersonal conflicts, hostility and non-cooperative relationships among organizational members. They hypothesized that supervisors who scored higher in consideration (a relationships orientation) would have lower levels of stress in their departments. Also, they hypothesized that supervisors who scored higher in structure would have lower levels of stress between units. Structure is defined as the extent to which the manager defines what is to be done and

emphasizes overt attempts to achieve organization goals. Stress within departments was found to have a negative correlation with the perceived amount of consideration existing within each department. No relationship was found between the amount of consideration existing within each department and the amount of stress between departments. Stress between departments was found to be negatively related to the emphasis of a production orientation in the voluntary hospital but not in the government hospital studied. With these inconsistent results in mind, Oaklander and Fleishman concluded that the patterns of relationships which are effective may be more of a function of the type of organization than of the type of supervisory job involved: i.e., the actual duties to be performed. Presumably, the government hospital was already more fully structured than the voluntary hospital and thus increased amounts of structure would have a more significant effect in the voluntary hospital than in the government hospital. They suggested that further research should be directed toward isolating the influence of organizational variables which effect the leadership process in hospitals. The present research has attempted to isolate these variables.

Survey programs such as that conducted by Holloway and Lonergan (26) have contributed significantly to our understanding of hospitals. Their research compared the responses of more than 2,100 hospital administrators and supervisors and over 9,000 other hospital employees with

those of more than 28,000 industrial employees. Data was gathered regarding work operations, work output, communications and performance evaluations. The responses from industry were compared to those from hospitals with the following results: hospital employees perceived communications and financial incentives as significantly poorer than did industrial employees; hospital employees responded more favorably than industrial employees in work operations, work output and administrative practices. Horizontal communications and interdepartment communication appeared to be significantly weaker in hospitals. This implies that further attention should be given to managerial communication in hospitals.

Other studies, such as that conducted by Jain (27), have also dealt with communication patterns in hospitals. Jain compared the frequency and amount of communication with employee communication satisfaction and supervisory performance. His research indicated that: (1) the more favorable the supervisory communication behavior was perceived to be, the more favorable the supervisory performance ratings were; (2) the greater the frequency and amount of job related communication between the supervisor and his subordinates, the more favorable were the supervisory performance ratings; and (3) the greater the communication satisfaction of employees, the more favorable were the supervisory performance ratings.

The most recent research found relating directly to managerial behavior in hospitals was that conducted by Casey (7) in 1972. His research attempted to identify the

philosophy and styles of hospital administrators and graduate students in hospital administration. The study was descriptive in nature and did not take into consideration organizational and situational elements which might have had a strong impact on the particular styles observed.

Casey used the "Styles of Management Inventory" developed by Hall, Harvey and Williams (22) to categorize the respondents on the "Managerial Grid" developed by Blake and Mouton (2). His findings were that both practicing managers and graduate students had a 9/9 style. That is, both groups exhibited a strong relationship orientation and a strong task orientation. The 1/9 style was exhibited by both groups as a supporting style. That is, the supporting style had a high relationships orientation but little concern for production. This implies that it might well be worthwhile to emphasize additional training for a production or task orientation in the hospital.

Casey has indicated that personnel in hospitals appear to be excessively "people oriented." This is probably due to the very nature of hospital duties which are primarily that of patient care. Due to the fact that Casey's research was restricted to hospitals in one city, Birmingham, Alabama, and that situational elements were not taken into consideration, it would be unwise to make generalizations about managerial styles in hospitals on the basis of his research alone. However, his research has provided valuable concepts which were incorporated in the present study.

In summary, apparently little research has been conducted exploring the "types" of managerial behavior in hospitals. Also, the effect of organizational and situational elements on managerial behavior in hospitals appears to be only vaguely known and a fruitful area for research.

The Theoretical Model

Introduction

A theoretical model was designed in order to provide a framework with which to analyze managerial behavior. Isolated variables are of little use in predicting or understanding managerial behavior until they have been integrated in such a fashion that their full meaning may be understood. The model presented here attempts to integrate the most widely accepted dimensions of leadership previously discussed, and also dimensions of hospital management which the literature review revealed to be significant.

Scope of the Theoretical Model

Various dimensions of managerial behavior, Reddin's "Management Style Diagnosis Test," and additional background data were utilized in the proposed theoretical model. Several variables were used for each dimension of behavior in order to better account for the complexity of the dimensions.

The following dimensions of managerial behavior were utilized:

task orientation

relationships orientation

organizational climate

technology

influence of the medical staff

tension and stress

coordination and communication

background data

the Management Style Diagnosis Test (MSDT).

Before the above dimensions of behavior are further clarified and put in the form of a model, a distinction must be made between the MSDT and the other dimensions of behavior. All of the above dimensions, including the MSDT, may be regarded as measures or indicators of behavior. All of the dimensions could be regarded as causal in nature, that is, contributing to managerial behavior, with the exception of the MSDT which was included only as a descriptive tool and not as a factor influencing managerial behavior.

A visual representation of the model is provided in Figure 5. As many of the above dimensions of behavior are overgeneralized or should refer to more specific groups, a more detailed analysis of these dimensions and why they were included in the model is now in order.

Background data relating to the respondents were included for the following areas: age, education, years in present position, years in hospital, years in health services and number of subordinates in order to obtain a more

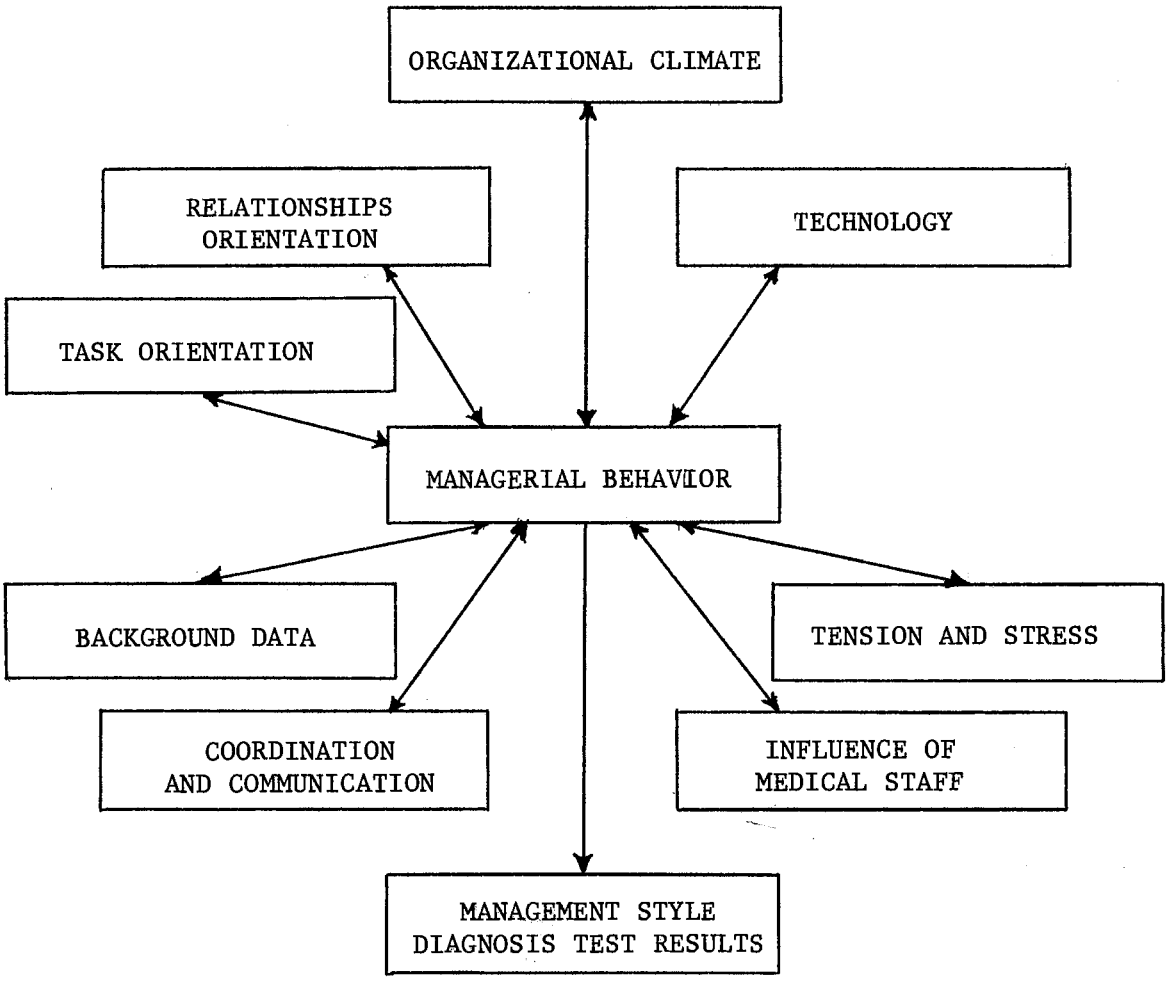

Figure 5. Theoretical Model Developed to Analyze Hospital Managerial Behavior

thorough understanding of those participating in the study.

Task orientation and relationships orientation were included in the model because they are widely accepted dimensions of leader behavior (34). The task orientation dimension was expanded to consider separately the perceived task orientation of superiors, coworkers and subordinates. Likewise, the relationships orientation was expanded to include separate measures of superiors, coworkers and subordinates relationships orientations.

Authors such as Fiedler (14) and Reddin (49) have indicated that organizational climate could have a strong influence on the type of leadership which will be used. Thus, organizational climate was included in the model. It was divided into two dimensions: department climate and hospital climate.

Technology was included in the model due to the importance attributed to it by recognized authors such as Likert (36), Blauner (3), and Reddin (49). They suggest that the type of technology existing will exert an influence on managerial behavior. The technology dimension was differentiated into four types of technology: separated, related, dedicated and integrated. Reddin (49) has theorized that each of the types of technology will exert an influence to utilize certain leadership styles.

The perceived influence of the medical staff was included as a part of the model due to a recommendation of

officials of the American College of Hospital Administrators. This dimension was composed of four variables: the perceived influence of the organized medical staff on the hospital, desired influence on the hospital, perceived influence on the respondent's department and desired influence on the respondent's department.

The dimension of tension and stress was included in the model because of research conducted by Oaklander and Fleishman (41) indicating that these variables were quite important in understanding managerial behavior in hospitals. The dimension was composed of four variables: perceived hospital tension and stress, anticipated normal hospital tension and stress, perceived department (the respondent's) tension and stress and anticipated normal department tension and stress.

Coordination and communication were included as dimensions in the model due to emphasis placed on these dimensions by authors such as Holloway and Lonergan (26). Their research suggests that hospitals experience more difficulty with these dimensions than does private industry. Jain (27) has conducted research which indicates that, in hospitals, communication effectiveness is clearly related to ratings of supervisory performance. The dimensions of coordination and communication were composed of four variables: hospital coordination effectiveness, department (the respondent's) coordination effectiveness, hospital communication effectiveness and the respondent's department communication effectiveness.

The Management Style Diagnosis Test was used, not as a dimension of managerial behavior but as an independent measure of it. The test has been rather widely used in business, government and universities. Over 100,000 people have taken it.

Expected Relationships in the Model

Due to the fact that the nature of the work in hospitals varies tremendously we would expect to find the relative amounts of task orientation and relationships orientation varying accordingly. Bauner (3) has indicated that where the work to be performed is of an unskilled or semi-skilled nature one would expect to find a Theory X type management. That is, a task oriented type management. In hospitals, work of this nature would most likely exist in housekeeping, engineering, food service and to some extent in accounting. Thus, we would expect to find above average levels of task orientation in these areas of the hospital. Bass (11) has suggested that engineers exhibit above average levels of task orientation. Thus, one might expect the hospital engineer to exhibit the same characteristic. Reddin (49) has hypothesized that one would expect to find a high level of relationships orientation existing among those holding jobs requiring a high degree of interpersonal contact. Accordingly, we would expect to find a high level of relationships orientation existing in areas such as administrators, associate and assistant administrators.

Several researchers have studied the effect of organizational "climate" (in this study the hospital and group climate) on managerial behavior. Fiedler (14) has suggested that the "warmth" of group climate would normally correlate negatively with the amount of stress perceived to exist.

As the technology of the hospital as an organization fits Thompson's (63, p. 16) "mediating" type of technology very closely, we would expect to find an above average level of relationships orientation existing for the hospital as a whole. It is generally acknowledged that tasks which are of a simple routine, repetitive nature will exert an influence to manage in a task oriented manner. Jobs involving skills which are non-routine, with many exceptions, will ordinarily require a higher degree of relationships orientation. Thus, among positions exhibiting related and integrated technology types, we would expect to find an above average degree of relationships orientation. Moore (40, p. 12) has suggested that among positions exhibiting separated and dedicated technology types, we would expect to find above average amounts of task oriented behavior.

Expected correlations of the influence of the medical staff with other variables are somewhat obscure. Georgopoulos and Mann (18, p. 574) have indicated that they would expect the perceived influence of the organized medical staff on the hospital to approximate the desired influence of the organized medical staff on the hospital. Georgopoulos (17, p. 290) has suggested that power in the hospital is shared

among the board of trustees, the medical staff and the administrator in approximately equal amounts. Thus, we would expect to find that the medical staff has a substantial influence on hospital operations.

Oaklander and Fleishman (41) have studied the relationship of tension and stress with other variables in hospitals. They indicated that in voluntary hospitals consideration (a relationships orientation) was positively associated with less intradepartmental stress. Other findings were that consideration was unrelated to interdepartmental stress. However, the amount of structure existing among departments had a strong negative correlation with stress. Thus, we would expect to find departments with a higher relationships orientation to have less stress. Also we would expect to find slight or nonexistent associations between relationships orientation and stress among departments.

Georgopoulos and Mann (18, p. 536) have indicated that coordination and communication can be expected to have a positive correlation among hospitals. It was found that in nursing communication effectiveness had a strong negative correlation with tension and stress. In addition, supervisory ratings were found to be positively correlated with communication effectiveness (18, p. 520). Jain (27) also found a positive correlation between communication effectiveness and supervisory ratings.

Background data was gathered primarily to obtain a better understanding of the respondent's past history. Several

of the variables such as age, years in present position, years in hospital, and years worked in the health services would be expected to show strong positive correlations.

Expected Results from the Management Style Diagnosis Test

This test has provided measures of task orientation, relationships orientation and effectiveness and placed the respondents into different managerial styles. As Reddin has hypothesized that managerial styles are a resultant function of five situational elements, we would expect independent measures of these five situational elements to behave as his theory predicts they would. The five variables are: one's superiors, one's coworkers, one's subordinates, the technology of one's job, and the prevailing organizational climate. In accordance with Reddin's theory, we would expect that those individuals labeled "deserter" to exhibit low task and relationships orientations, a separated type of technology and probably a "colder" organizational climate.

We would expect those individuals labeled "developer" to exhibit a high relationships orientation and a low task orientation for superiors, coworkers and subordinates, a related type of technology and a "warm" organizational climate. Likewise, we would expect the remaining individuals labeled "missionary," "autocrat," "compromisor," "benevolent autocrat" and "executive" to exhibit respective amounts of the five situational variables as his theory indicates they

will. In short, this is to say that we would expect the five major situational elements proposed by Reddin to result in the particular management styles as his theory predicts they will.

Summary

Although prior research has been extensive and a great amount of information regarding leadership has been obtained, little has been done to integrate the various findings into a useful theory. Few, if any, of the hypotheses may be applied usefully under varying circumstances.

Various past and present approaches to the study of leadership are: the trait approach, the group approach, the leader types approach, the situational approach, the task and relationships orientation approach and the leader skills approach.

The trait approach was based on the assumption that leaders have observable traits which distinguish them from other individuals. The number of traits soon became so large as to restrict severely the usefulness of this method for understanding the nature of leadership.

The group approach to the study of leadership was based on the assumption that characteristics of the group members would exert a strong influence on the most appropriate leadership style to be used. This approach does have considerable empirical support but would be more useful if it could be incorporated into broader dimensions.

The leader types approach, such as that indicated by McGregor's Theory X and Theory Y type managers, has gained wide support by modern theorists such as Likert, Blake and Mouton. A weakness of this theory is its polarization of managers into two types. In actuality, managers are not entirely one type nor are they entirely another type, but instead some combination of the two.

The situational approach is based on the assumption that leadership is a function of the situation in which it is exercised. This is to say that situational elements such as organizational climate and the technology existing would have an effect on the most appropriate style of leadership to be used. The validity of this approach can hardly be denied. The present need is that of isolating and identifying the impact of the most important situational variables.

The task and relationships orientation approach is based on the assumption that leadership can be analyzed in terms of these two well substantiated basic dimensions of leadership.

The leader skills approach to leadership is based on the simple assumption that an effective leader will possess certain "leadership" skills. After these approaches to the study of leadership were considered, Reddin's 3-D Theory of Managerial Effectiveness and Leadership Styles (which integrated situational elements with the task and relationships dimensions of leadership) was discussed.

Previous research in hospitals was briefly surveyed in the chapter and then a theoretical model with which to analyze managerial behavior in hospitals was developed.

The final part of the chapter contains a discussion of expected relationships in the model.

CHAPTER III

THE EMPIRICAL MODEL

Introduction

This chapter offers a general outline of how the previously proposed theoretical model was tested. Data gathering procedures and the research instruments utilized to gather data are discussed at some length. A general methodological framework with which the data was analyzed is developed.

The Data Gathering Procedure

Introduction

The data gathering procedure was composed of four basic steps: (1) the selection of hospitals to be studied, (2) the selection of positions within hospitals, (3) the obtaining of permission to gather data at each hospital, and (4) the actual collection of the data.

A pilot study of the research instruments was made at a local hospital. Minor but appropriate modifications of the research instruments were made before they were subsequently utilized.

Selection of Hospitals

The state of Oklahoma has 162 hospitals of which 131 are community hospitals. A community hospital is defined as a "nonfederal short-term general or other special hospital whose facilities and services are available to the entire community" (1, p. 5).

The community hospital category includes the municipal hospital, the proprietary short-term hospital, and the voluntary, nonprofit organization found in most communities. Only community hospitals were included in the population because it was felt that it would be unrealistic to include "non community" hospitals such as psychiatric or tuberculosis hospitals which exhibit widely differing characteristics. From Oklahoma's 131 community hospitals, 23 hospitals were selected. These 23 hospitals were selected on the basis of suggestions from officials of the Oklahoma Hospital Association and on the hospital's location. Officials of the Oklahoma Hospital Association on the basis of their past experience were asked to indicate which hospitals would be most likely to participate in a research project of this nature. Hospitals located further than 150 miles from Oklahoma State University were not considered due to time and financial constraints. However, approximately 80-90% of the hospital bed capacity in the state was within the 150 mile radius.

Total bed capacity of community hospitals in the state is approximately 11,050 beds. The seventeen hospitals

ultimately participating in the project had a total bed capacity of approximately 3,800 beds. Six of the twenty-three hospitals initially contacted were unable to participate for various reasons or simply were not interested.

Although over one-third of the population, in terms of bed size, was included in the sample, a random sample was admittedly not obtained. It is possible that the sample was biased in the sense that it may have included a high proportion of "progressive" hospitals and a low proportion of less "progressive" hospitals. This is based on the assumption that the more progressive hospitals would have the time and be more willing to participate than hospitals faced with more immediate crises, perhaps in part due to bad management.

A breakdown by bed size of the seventeen hospitals studied is given in Table II. The great majority of community hospitals in Oklahoma have less than 150 beds, but the largest amount of bed capacity is in hospitals having over 150 beds. As may be seen in Table II, a considerably smaller percentage of hospitals with less than 150 beds than those with more than 150 beds was included in the sample. This was done in order that a substantial proportion of the bed capacity in the state could be included in the study and also because of the much larger number of smaller hospitals.

Selection of Respondents in Hospitals

Individuals from each of the following positions in each of the hospitals were invited to participate:

TABLE II

A COMPARISON OF HOSPITAL BED SIZE WITH NUMBER OF HOSPITALS INCLUDED IN THE STUDY

Hospital Bed Size	Number of Hospitals Included	Number of Hospitals Included as a % of Hospitals in Each Size Category
50 - 149	6	14%
150 - 249	6	43%
250 +	5	45%

administrator

associate and assistant administrators

comptroller or chief accountant

personnel manager

director of nursing

director of respiratory therapy

director of physical therapy

director of the laboratory

director of the x-ray department

director of drugs and pharmacy

director of housekeeping and laundry

director of engineering and maintenance

director of food service

director of volunteers

director of purchasing

director of medical records.

These 16 positions were selected due to the fact that they were in all hospitals and thus would be useful in making comparisons. In any particular hospital, not all personnel were available to participate. Some were ill, some were involved with emergencies, etc. The smallest number of respondents in any of the above listed groups was nine individuals, each from a different hospital. Thus, it was felt that a sufficiently large number of respondents to give an indication of the nature of the type of person holding each position was obtained.

The average number of respondents from each of the seventeen hospitals surveyed was approximately 18. With the exception of one hospital supplying only five respondents, the smallest number of respondents from any one hospital was 10, the largest number from any one hospital was 33. A few hospitals such as the one providing 33 respondents were large and fully committed to the project. In such instances, a few of the respondents participating fit neatly into any of the 16 managerial positions considered and were therefore dropped from that part of the study. In all instances, respondents participating in the study had two or more subordinates. For these reasons it was felt that a sufficiently large number of respondents was obtained from each hospital to provide a fair indication of each hospital's managerial characterictics.

Obtaining of Permission to Gather Data and Scheduling of Data Gathering

Permission to gather data and the data collection was obtained by means of the following four steps:

(1) sending an introductory letter to the administrator of each hospital;

(2) telephoning the administrator of each hospital;

(3) making a personal visit to each hospital to discuss the project with its administrator;

(4) making a visit to each hospital for the actual data collection.

The introductory letter sent to each administrator provided a brief description of what the project would involve, the value of the project and the purpose of the project. It was indicated in the letter that the researcher would telephone the administrator in the near future to answer any questions he might have regarding the research and to determine his interest in participating. A copy of the letter is included as Appendix A.

It was determined that the scope of the research project could not be adequately explained over the telephone. Because of this, the telephone call was used primarily to determine the administrator's interest in the project and to arrange a date for the researcher to discuss personally the project with the administrator at his hospital.

The main objective of the personal interview with each administrator was to solicit his permission to gather data. During the interview a copy of the research instruments to be utilized was provided. A copy of the questionnaire may be found in Appendix B. The Management Style Diagnosis Test was not included because it is copyrighted.

During the interview, a convenient date and time was arranged for the actual administering of the research instruments.

The Actual Data Gathering Procedure

The researcher personally visited each of the seventeen hospitals to collect the data, spending one day at each

hospital. Previous to the scheduled meeting date, respondents had been informed of the pending research and asked to participate in one of two groups. One group was scheduled in the morning and the other in the afternoon. It was strongly emphasized to each group of respondents that the project was part of an Oklahoma State University doctoral dissertation, and not a hospital study. Also, it was stressed that the respondent's replies and test scores would be kept strictly confidential. It was explained that only summary results of the group as a whole would be revealed to their superiors in the hospital administration. When possible, this explanation was made in the presence of the administrator in order to further reassure the respondents that their individual answers would remain confidential. Also, at the beginning of each session, the researcher clearly explained to the respondents the purpose of the research and what it would involve on their part. As an incentive, it was explained that normative data of other participants from different hospitals with similar duites would be compiled and mailed back to the respondents in order that they could compare their behavior with what others in a similar position were doing. The respondents were quite enthusiastic about this opportunity.

The respondents were asked first to complete the basic questionnaire, this requiring about 30 minutes, and then to complete the Management Style Diagnosis Test, this requiring another 30 minutes. Immediately after all respondents had

completed the test and questionnaire, the test was scored by the respondents with the help of the researcher. A brief explanation of the meaning of the test and what it was designed to measure was given by the researcher at this time.

Research Instruments Utilized

Introduction

Two research instruments were utilized to obtain the necessary data. The Management Style Diagnosis Test (50) developed by Reddin was used to obtain an indication of the respondents' management styles. Although the MSDT was primarily designed to be used as a development technique, Reddin has also indicated that it may be used as an assessment device.

In addition to the MSDT, a questionnaire designed by the researcher was utilized to obtain independent measures of the variables measured by the test and other additional information. A copy of the questionnaire is included in Appendix B.

The Management Style Diagnosis Test (MSDT)

The MSDT was developed by Reddin in 1970 to assess a manager's leadership style. It is a forced-choice type test consisting of 64 pairs of statements. The respondent is asked to select from each pair of statements the statement which he feels best describes his behavior in his present

job. Respondents normally complete the test in less than thirty minutes.

The test is designed to provide the following information:

a measure of task orientation

a measure of relationships orientation

a measure of effectiveness

a style profile

dominant and supporting management styles.

The relationships orientation score indicates the extent to which a manager has personal job relationships with subordinates on the job he now holds.

The task orientation indicates the extent to which the manager directs his subordinates' efforts toward goal attainment in his present job.

When these measures are combined, the respondent is placed in one of eight different style categories. The first four are regarded as less effective and the last four as effective. The eight styles are: deserter, missionary, autocrat, compromiser, bureaucrat, developer, benevolent autocrat and executive. A less effective style indicates that a manager's leadership style does not match the demands of the five major elements of his situation. That is, his leadership style does not match the demands of his superiors, coworkers, subordinates, technology and organizational climate as described by him when answering the test questions.

Scores for each of the eight styles comprise the respondent's style profile. A score of eleven or above indicates a dominant style, a score of ten indicates a supporting style.

The Questionnaire

Introduction. A nine page questionnaire designed by the researcher was utilized to obtain independent measures of the five variables theorized by Reddin to result in particular leadership styles, and to obtain additional information which other sources indicated would be relevant. A copy is included in Appendix B.

Likert type scales were used for all questions except those requiring general background information such as age or number of subordinates. Questions were typically asked in the following manner:

> Using the scale provided, please indicate the extent to which you feel each of the following statements apply.
>
> Not at all = 1
>
> Slightly = 2
>
> Moderately = 3
>
> Considerably = 4
>
> To a great extent = 5

Occasionally a respondent was responsible for managing several different groups of subordinates; and in such instances, only his primary group could be considered.

Measures of the Influence of Technology. Technology was categorized into four types: separated, related,

dedicated, and integrated (49, p. 69). The meaning of these types was explained in Chapter II. Twenty questions were utilized to obtain some indication of the type of technology each individual's job contained. This indication was obtained via the respondent's descriptions of their subordinate's work. Respondents were asked to indicate, using a scale provided, the extent to which they felt each of the following statements applied to their subordinates.

The following five questions were asked as separated technology indicators:

1. The subordinates are required to think rather than to act.
2. The subordinates' work and work method follow established procedures.
3. The subordinates' work is in and of itself interesting, motivating, or attractive.
4. Subordinates are required to be personally committed to their own individual tasks to achieve effectiveness standards.
5. The subordinates' tasks are simple to perform.

An above average score for the sum of these first responses would presumably indicate that the job is exerting an influence on the manager to manage in a separated manner. A low score would indicate the opposite.

The following five questions were asked as related technology indicators:

1. The position makes high skill or judgment demands on the individual subordinate.
2. Each subordinate has discretion over his own effectiveness standards.

3. Each subordinate can select the method, tools, or approach he wishes to use.

4. Substandard work by an individual subordinate is not immediately detected.

5. Each subordinate must develop new methods and ideas to perform his own work.

An above average score for the sum of these five responses would indicate that the job is exerting an influence on the manager to manage in a related manner. A low score would indicate the opposite.

The following five questions were asked as dedicated technology indicators:

1. The degree to which the subordinates are required to use physical effort.

2. The subordinates know less about the task than does the manager.

3. Unplanned and unanticipated events might occur which require corrective action by the manager.

4. The subordinates frequently need to be given directions.

5. The subordinate's performance is measurable, and the impact of remedial actions taken by the manager can be evaluated.

An above average score for the sum of these five responses would indicate that the job is exerting an influence to manage in a dedicated manner. A low score would indicate the opposite.

The following five questions were asked as integrated technology indicators:

1. The subordinates must talk with each other to complete their tasks.

2. The subordinates must depend on each other in meeting their own effectiveness standards.

3. Subordinates as a group set their own pace or level of involvement.

4. More than one effective solution is possible; the relative effectiveness of these solutions is difficult to measure but improved by interaction.

5. The manager must talk with subordinates as a group for them to complete their tasks.

An above average score for the sum of these five responses would indicate that the job is exerting an influence to manage in an integrated manner. A low score would indicate the opposite.

Measures of Hospital and Department Climate. To obtain an indication of the hospital climate, respondents were asked to rate their hospital on each of the following eleven questions:

1. Friendly :__:__:__:__:__:__:__:__: Unfriendly
2. Accepting :__:__:__:__:__:__:__:__: Rejecting
3. Frustrating :__:__:__:__:__:__:__:__: Satisfying
4. Ineffective :__:__:__:__:__:__:__:__: Effective
5. Unenthusiastic:__:__:__:__:__:__:__:__: Enthusiastic
6. Productive :__:__:__:__:__:__:__:__: Nonproductive
7. Warm :__:__:__:__:__:__:__:__: Cold
8. Uncooperative :__:__:__:__:__:__:__:__: Cooperative
9. Supportive :__:__:__:__:__:__:__:__: Hostile
10. Interesting :__:__:__:__:__:__:__:__: Boring
11. Unsuccessful :__:__:__:__:__:__:__:__: Successful

As may be observed, the order of several of the questions was reversed in order to insure that each question

would be individually considered. Ten of the eleven questions were developed by Fiedler (14) as a measure of group atmosphere. Question number four was added to obtain some indication of perceived effectiveness. Taking into consideration that the responses had to be assigned numeric values and the order of some responses reversed, responses from the eleven questions were summed to obtain a measure of group atmosphere.

To obtain an indication of department climate, the respondents were asked to rate their department on a separate list of the same eleven questions utilized as a measure of hospital climate. The questions were from the same source and handled in the same manner, the only difference being that this time they were asked in reference to the respondent's department rather than his hospital.

Measures of Superior's, Coworker's and Subordinate's Task Orientation and Relationships Orientation. Questions relating to two dimensions of the Leader Behavior Description Questionnaire, published by Ohio State University (23), were used to obtain a measure of the task and relationships orientation of the respondent's superiors, coworkers and subordinates. Twenty questions were used; ten as a measure of task orientation and ten as a measure of relationships orientation. Respondents were first asked to answer the questions in regard to their superiors, then to answer the questions in regard to their coworkers, and finally, in regard to their subordinates. The questions were

interspersed in order that it would not be obvious exactly what they were designed to measure. Responses were summed for each group for each dimension in order to obtain a measure of these dimensions for each of the three groups.

Other Variables Considered. Questions relating to the perceived and desired influence of the medical staff on the hospital and on the respondent's department were asked in order to obtain a measure of these variables. Also included were questions relating to the perceived effectiveness of coordination and communication in the hospital and the respondent's department.

The Framework of Data Analysis

The framework of the data analysis may be best understood by viewing the data as composed of the following five categories:

respondents	(1-301)
hospitals	(1-17)
different managerial positions in the hospitals	(1-16)
variables, i.e., measures of managerial behavior	(1-32)
Management Style Diagnosis Test measures of management style	(1-11).

Objectives of the data analysis were: (1) to describe managerial behavior in the hospitals; (2) to discover meaningful interrelationships among the variables; (3) to determine the extent to which managerial behavior varied among

the different positions in the hospitals; and (4) to determine if managerial behavior varied as a function of hospital size.

An intital data matrix, 301 x 43, was obtained. That is, for each of the 301 respondents, data regarding each of 43 different variables was obtained. The 43 variables included the 11 MSDT measures of style.

In this form, the data was of limited value in satisfying the above described objectives. In order to better understand this data matrix and the five categories of data previously mentioned, one should refer to Figure 6.

Figure 6-(a) allows one to visually compare, for each of the 32 variables, differences among respondents. Also, for each respondent, management styles with responses on each of the 32 variables may be compared.

Figure 6-(b) allows us to visually compare, for each of the 32 variables, differences among hospitals. Also, for each hospital we can compare averages of MSDT information with average values of each of the 32 variables.

Figure 6-(c) allows us to visually compare average responses of those from each of 16 different managerial positions on each variable. Also, for each of the 16 positions we can compare average MSDT style results, and compare average MSDT style results with average responses.

For any of the three data cubes given in Figure 6, one of the three dimensions may easily be collapsed and comparisons made among the remaining two dimensions.

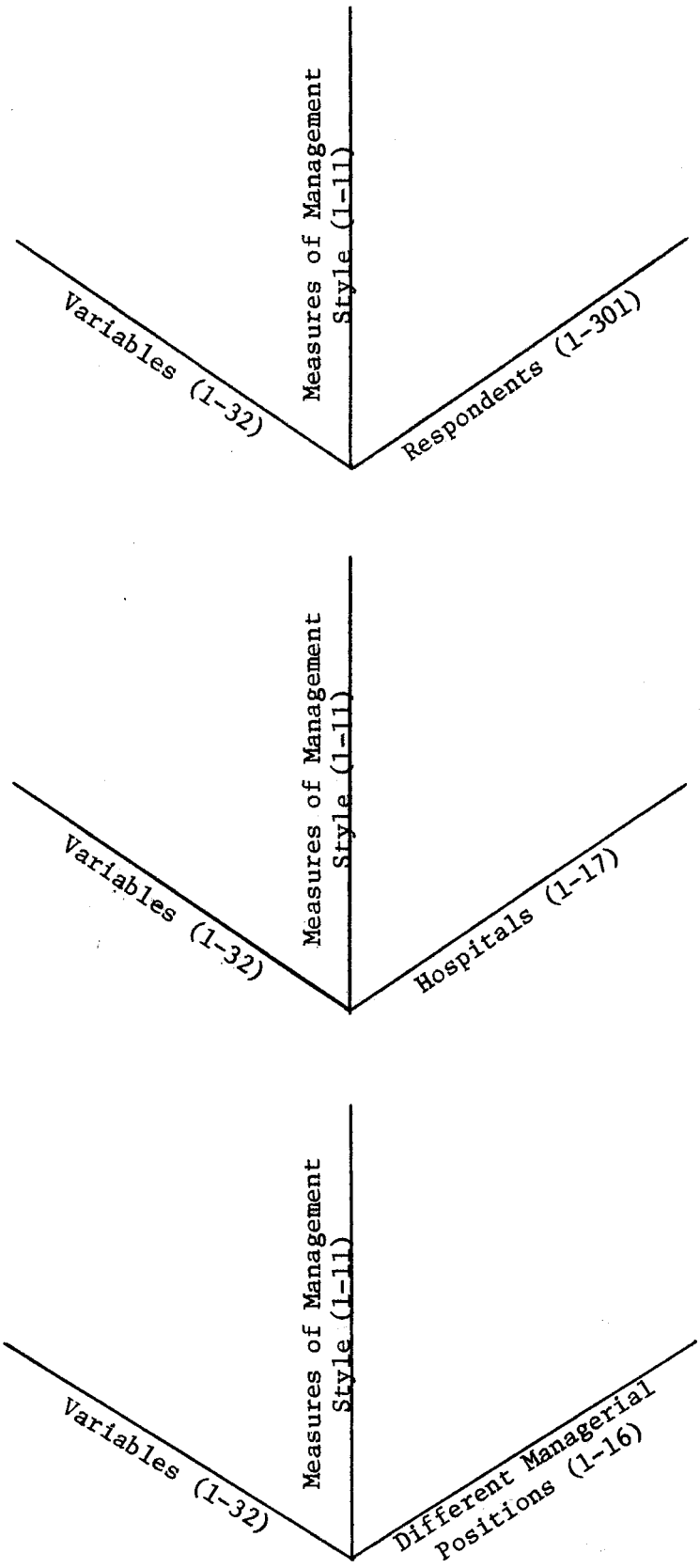

Figure 6. A Visual Analysis of the Data Obtained

The descriptive and statistical tools used included the use of mean averages, measures of rank correlation and analysis of variance techniques. Rank order correlations are obtained by means of the following steps: (1) rank ordering the sets of data, (2) assigning ranks to the observations within each set of data, and (3) then obtaining a measure of correlation, using the ranks, between the sets of ranked data. This technique is well suited to behavioral research because it does not require a thorough knowledge of the nature of the data utilized.

Analysis of variance may be used to determine whether the data from two or more samples are sufficiently homogeneous that we may reasonably conclude that the samples could have all been drawn from a single population. Using this technique the significance of differences between sample means is tested using the ratio of the variance between the independent samples to the variance within those samples. This technique is, in many respects, ideal for this research because in order to accomplish the purposes of this research the 301 respondents must be divided into many smaller groups of respondents such as those from particular hospitals or particular managerial positions.

Summary

This chapter has described the various stages of the data gathering procedure and offered a rather thorough analysis of the research instruments utilized. Methods of

quantifying the variables were considered. The final part of the chapter offers a basic framework useful for visualizing and analyzing the data and a brief description of the statistical techniques to be utilized.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

Introduction

This chapter offers a descriptive analysis of the data along with an interpretation of the significance of the relationships observed. The dimensions of the theoretical model were independently considered to determine which dimensions of the model were most useful in explaining managerial behavior in the hospitals.

Results from the Management Style Diagnosis Test were used to obtain an indication of the management style of the following groups: (1) all respondents, (2) respondents in particular hospitals, (3) respondents in various managerial positions, and (4) respondents from hospitals of particular size groups.

Responses from respondents comprising particular management styles were compared among the various styles to determine if the styles did adequately discriminate among the respondents. Also, the five major situational elements of Reddin's theoretical model were compared across styles to see if they behaved in the manner his theory suggested they would.

Hospitals were considered both as a group and also as distinct entities in order to better understand their behavior. Statistical tests were conducted to determine which variables deviated significantly among hospitals and to determine which hospitals were significantly above or below the mean of all hospitals on each variable.

Hospitals were placed in various size categories to determine if size had an influence on their managerial behavior and, if so, in what manner.

Sixteen distinct managerial positions existing in each hospital were individually considered in some detail. A statistical analysis was made to determine which variables differed significantly among the positions. Also, an analysis was made to determine which managerial positions exhibited significantly high or significantly low amounts of each variable.

A major part of the chapter was devoted to an analysis of relationships and correlations among the variables. A better understanding was obtained of how the variables were interrelated and which variables were interrelated. Rank correlations were made among the variables using the seventeen hospitals as entities. This provided an indication of which variables tended to increase or decrease together from hospital to hospital. Other authors, such as Georgopolus and Mann (17) and also Stogdill and Shartle (59) have used a similar procedure.

The "Statistical Analysis System" developed by A. J. Barr and J. H. Goodnight in A User's Guide to the Statistical Analysis System (54) was used to perform the analytical processing and statistical analysis of the data. Two basic statistical techniques were used: analysis of variance and Spearman rank order correlations. Analysis of variance was used to determine if the mean averages of the various categories and classifications of data varied significantly. It was felt that a sufficiently large number of respondents were included in the study that analysis of variance, which is a parametric statistical technique, could justifiably be used. Spearman rank order correlations were used to obtain an indication of which variables were significantly interrelated and the manner in which they were interrelated.

The Management Style Diagnosis Test Results

Introduction

The Management Style Diagnosis Test (MSDT) was primarily used to describe the management styles of respondents. The descriptive analysis in this part of the chapter has taken the form of a description of all respondents, respondents in each of the various managerial positions, and differences among the hospitals in general. An additional analysis was made to determine the extent to which the test actually discriminated among the respondents. That is, to determine in what respects respondents placed in the various styles differed in terms of the variables independently measured. The

key elements of Reddin's theory of leadership styles were considered to determine if they varied among the different leadership styles in the manner his theory suggests they would.

Management Style Diagnosis Test
Results of all Respondents

Not surprisingly, the respondent's test results differed somewhat from previous test results of other occupational groups taking the test. The test was designed to obtain an average score of two on task orientation, relationships orientation, and effectiveness. The respondents' average scores on these variables were 1.75, 2.54 and 2.35 respectively. This indicates that managers in hospitals, compared with managers in general, are below average in task orientation, considerably above average in relationships orientation and somewhat above average in terms of "measured" effectiveness. The below average task orientation and above average relationships orientation are not surprising when one considers that the "product" being "processed" in hospitals is an actual human being rather than an object or other impersonal resource. The effectiveness score of 2.35 is considerably above the expected score of 2.0, indicating that the managers participating in this study could be judged as being quite competent. The extent to which task orientation, relationships orientation and effectiveness varied among the different hospitals may be seen in

Figure 7, Figure 8 and Figure 9. The basic style profile of all respondents taking the test is provided in Figure 10. After taking into consideration that this profile represents the average of over 300 respondents, we would expect it to approximate rather closely, for each style, the average score of eight which it was designed to obtain. As may be observed, the profile obtained shows scores both above and below the expected score of eight. The respondents' score of 6.2 for deserter is considerably below the expected score of eight. This is in accordance with the researcher's observation that the respondents exhibited a great amount of pride in and loyalty to their particular hospitals. The styles of missionary and developer were both considerably above the expected value of eight. This is not surprising when one considers that both are relationships oriented management styles which would logically be appropriate for work in hospitals.

The percent of respondents falling into each style may be seen in Figure 11. The MSDT was designed such that each style would have an equally likely chance of occurring. Since there are eight styles, we would expect that approximately twelve and one-half percent of the respondents would fall in each style. However, this was not the case, as one may observe. A predominant style of developer including over 30% of the respondents was found. Among the less effective styles, the largest number of respondents fell in the missionary category. After considering the objectives

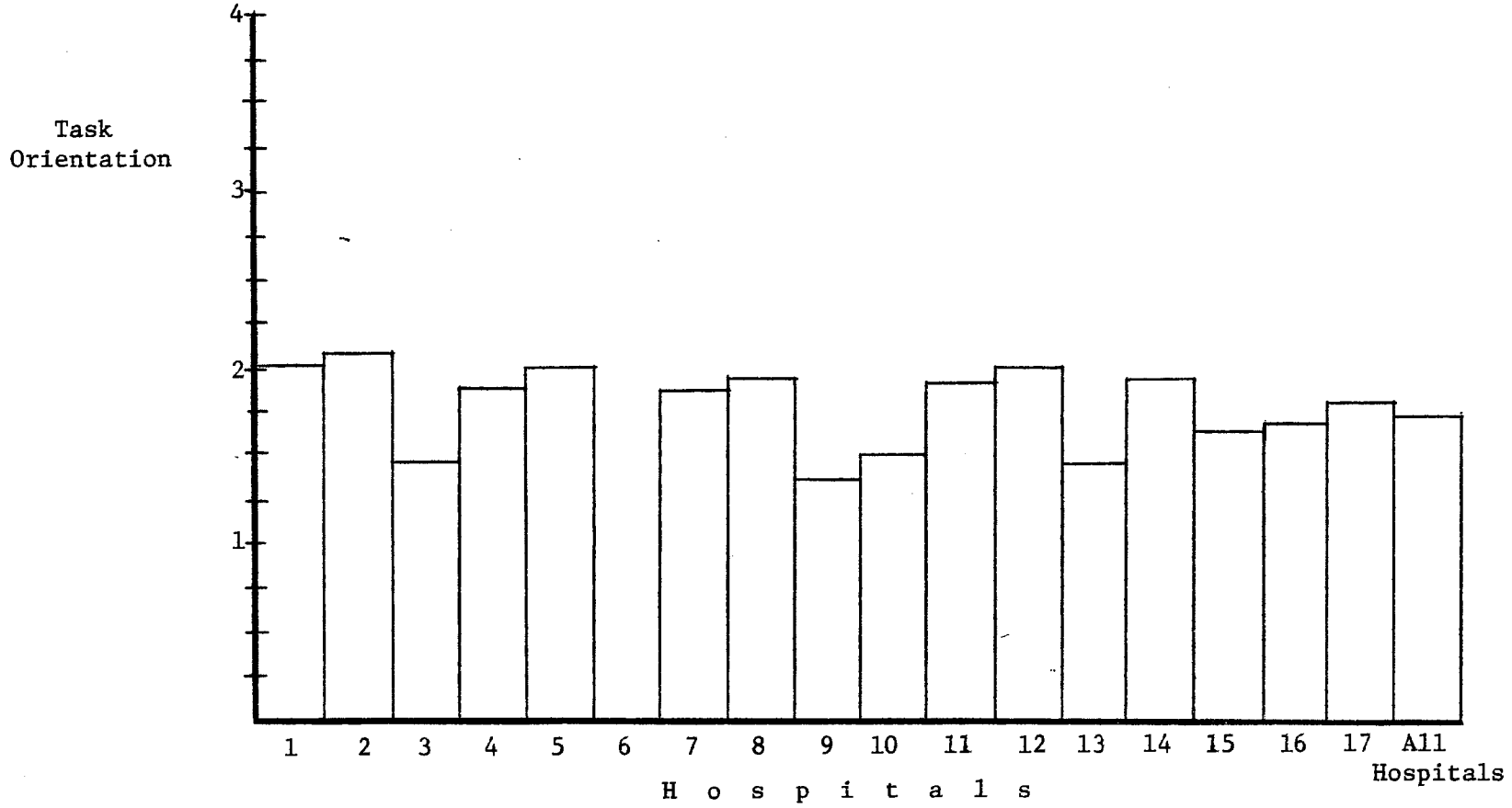

Figure 7. Task Orientation of Hospitals

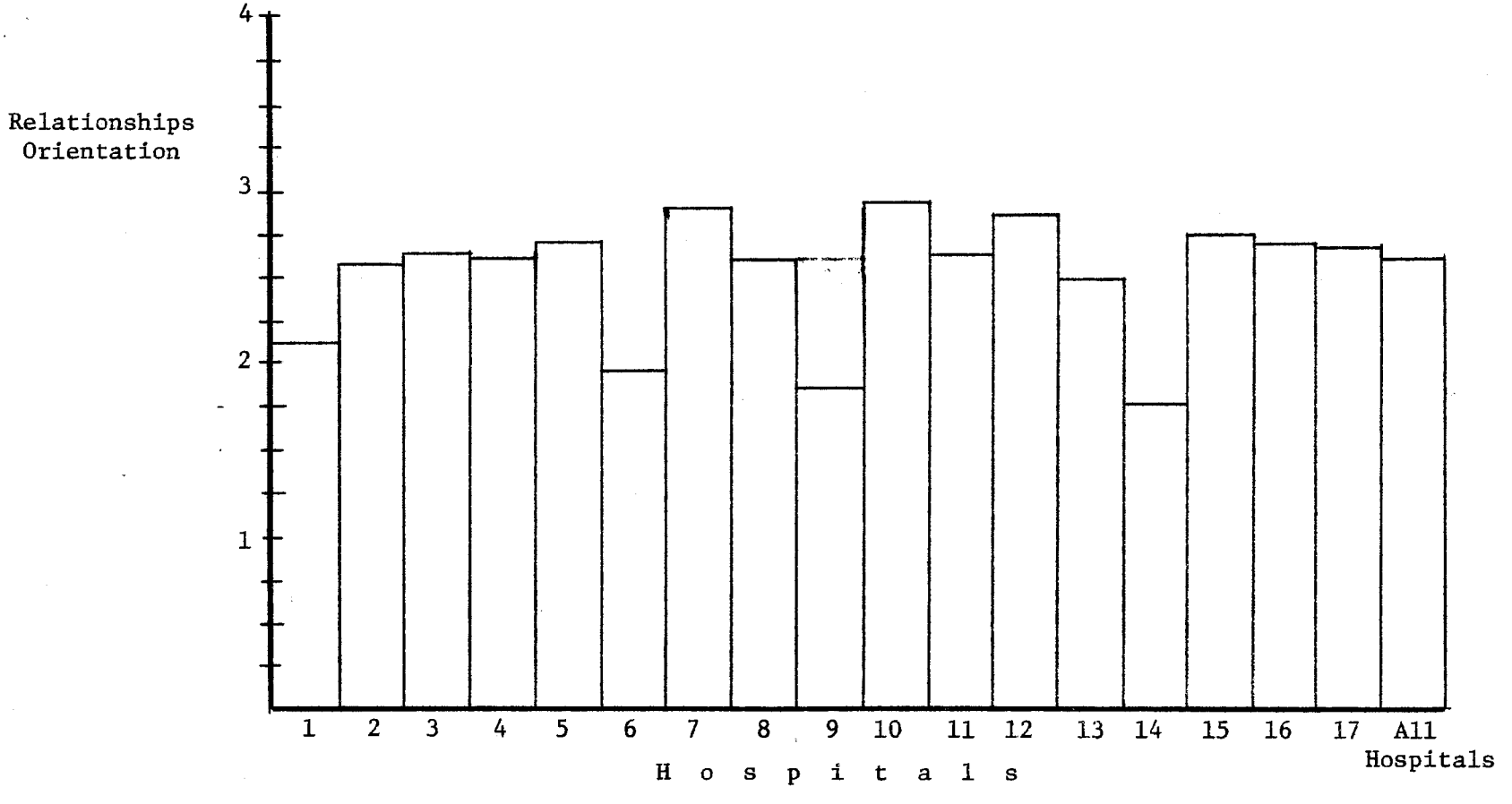

Figure 8. Relationships Orientation of Hospitals

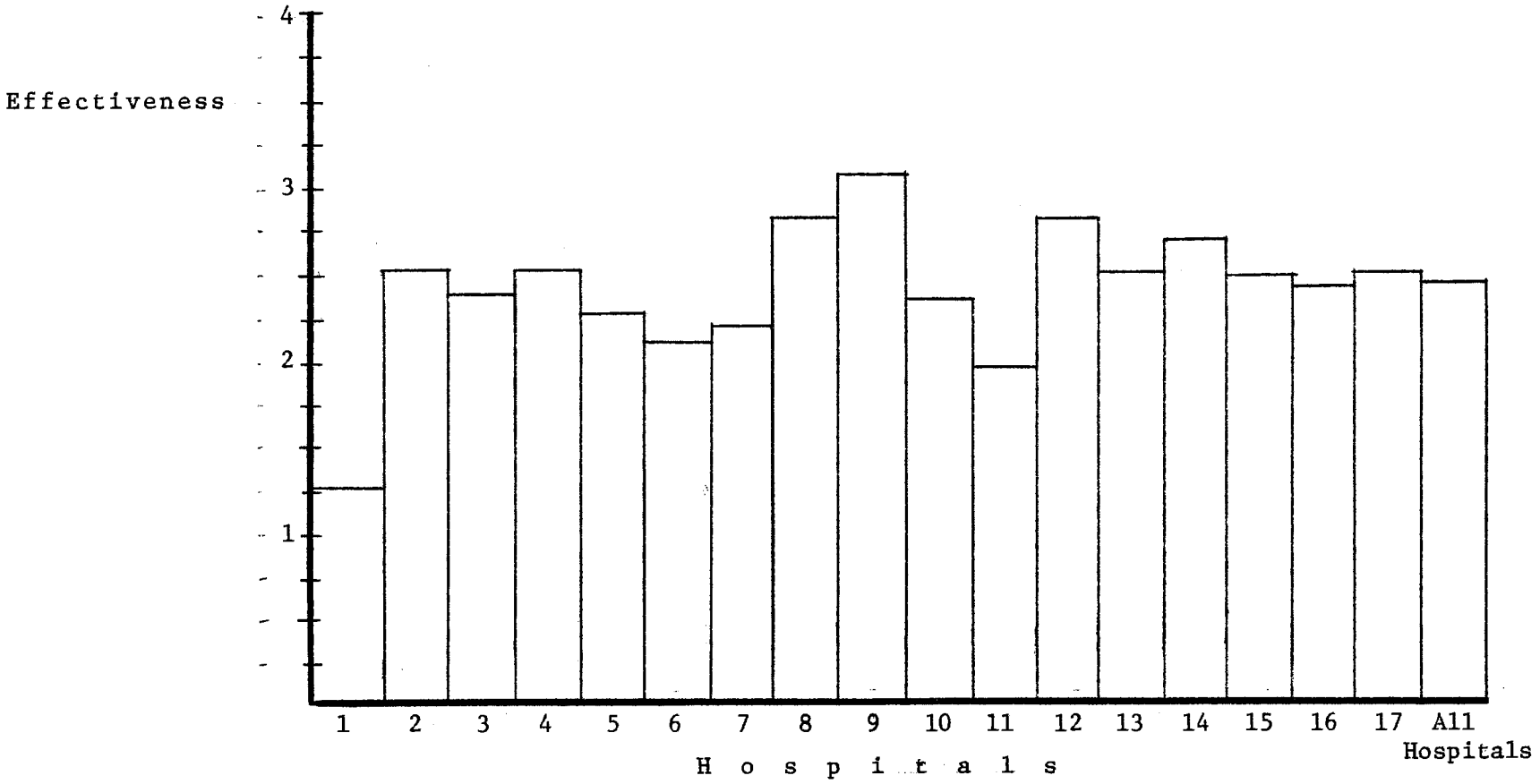

Figure 9. Effectiveness of Hospitals

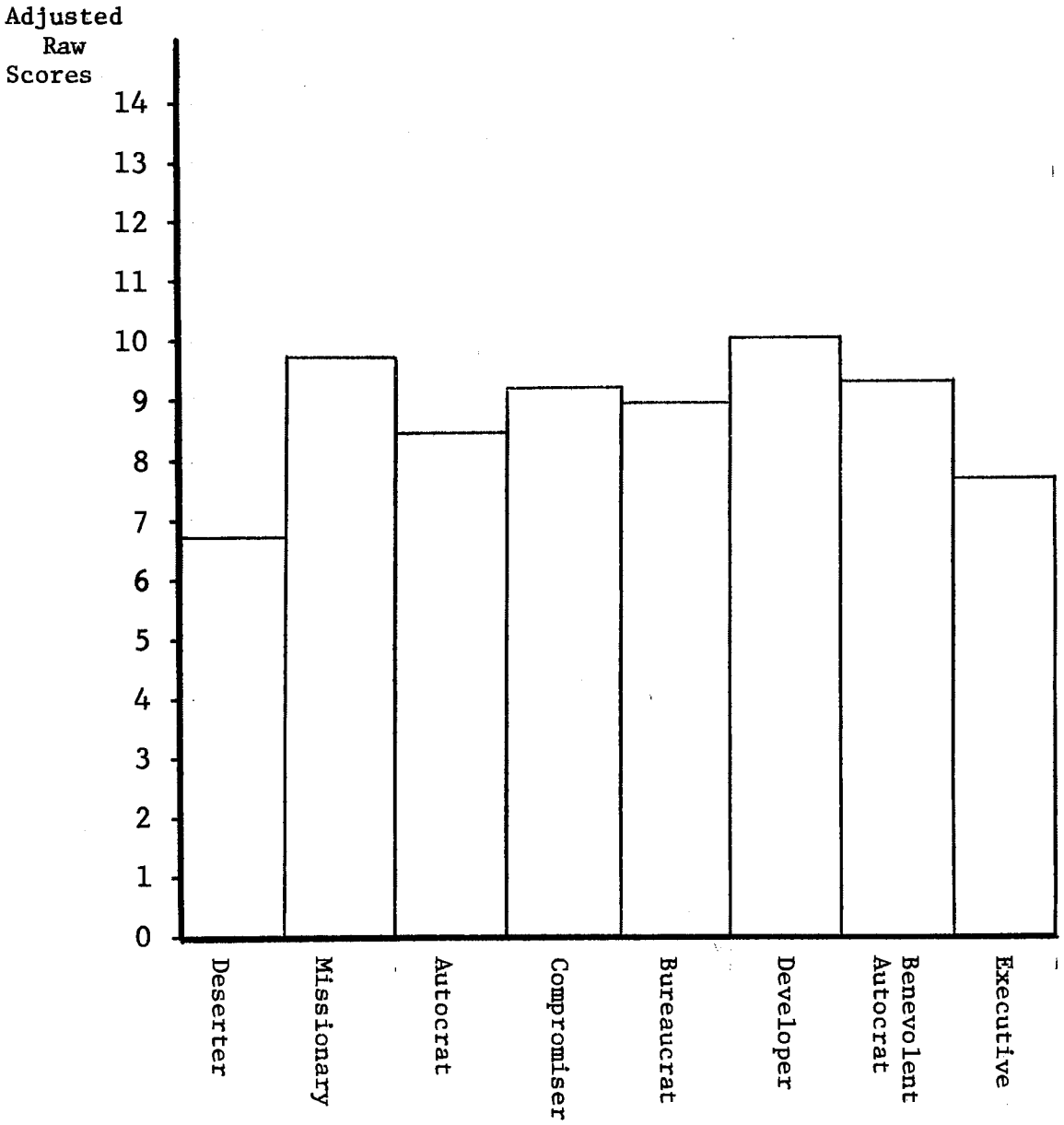

Figure 10. Basic Style Profile of All Respondents

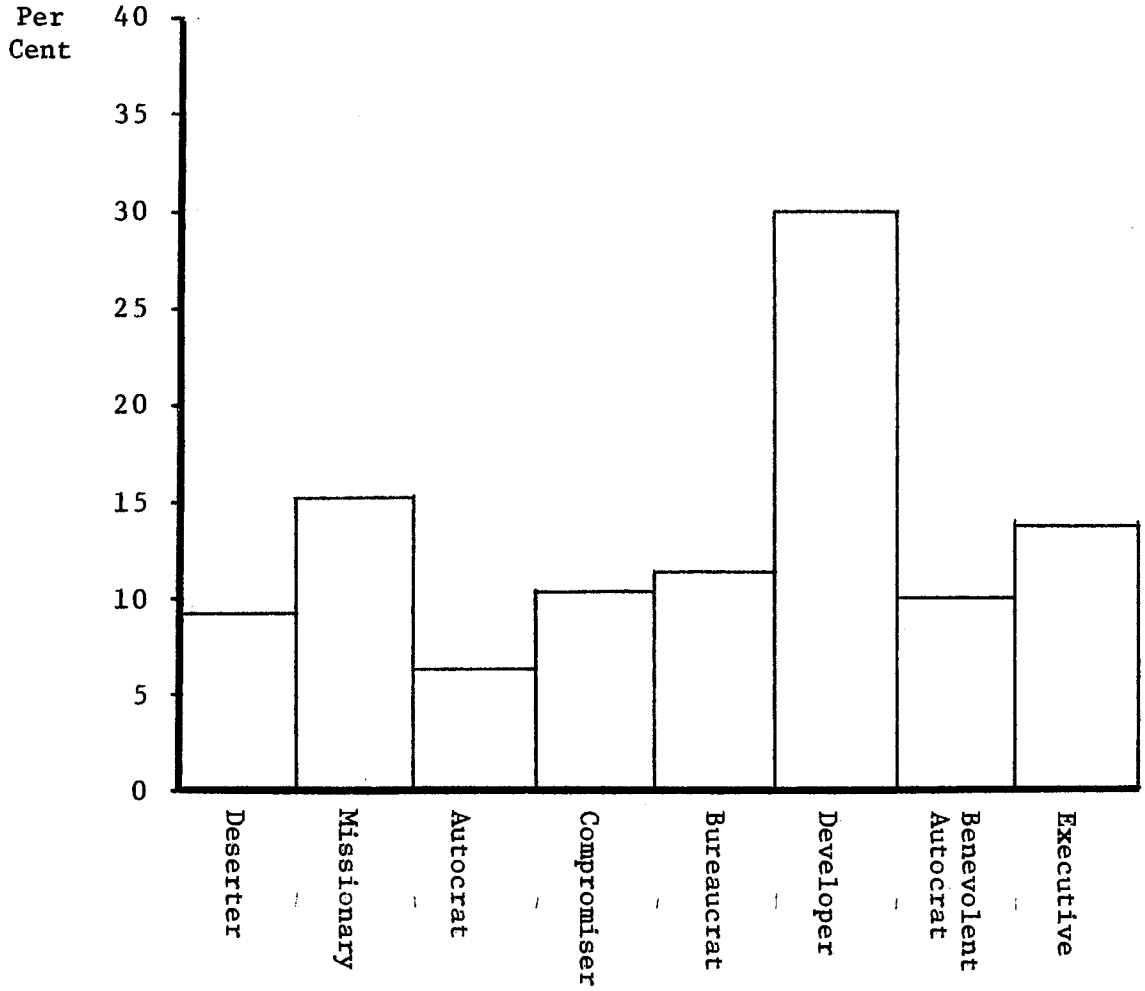

Figure 11. Percent of Respondents in Each Style

of hospitals; i.e., patient care, it is not surprising to find many managers excessively concerned with warm relationships at the expense of managerial effectiveness; i.e., missionaries.

The percent of managers with dominant styles may be seen in Figure 12. Over 30% of the respondents used a dominant style of developer, probably because of the nature of patient care and warm relationships existing within hospitals. Of the less effective styles, missionary and compromiser were the most common dominant styles used. It is quite possible that these less effective styles exist because of a reluctance on the part of the respondents to lower their relationships orientation even though they have obtained a managerial position which requires a lower relationships orientation. The very small percentage of dominant styles of deserter might be expected because almost all of the respondents appeared to be fully committed to their jobs and their hospitals. Why such a small percentage of the respondents displayed a dominant style of executive is uncertain.

Responses from the sixteen managerial positions which were considered individually in this analysis varied considerably. Profiles of each of the managerial positions are included in Appendix C.

Task orientation, relationships orientation and measured effectiveness of the various positions differed considerably indicating that considerable differences exist within the hospitals for these variables. It is apparent that while

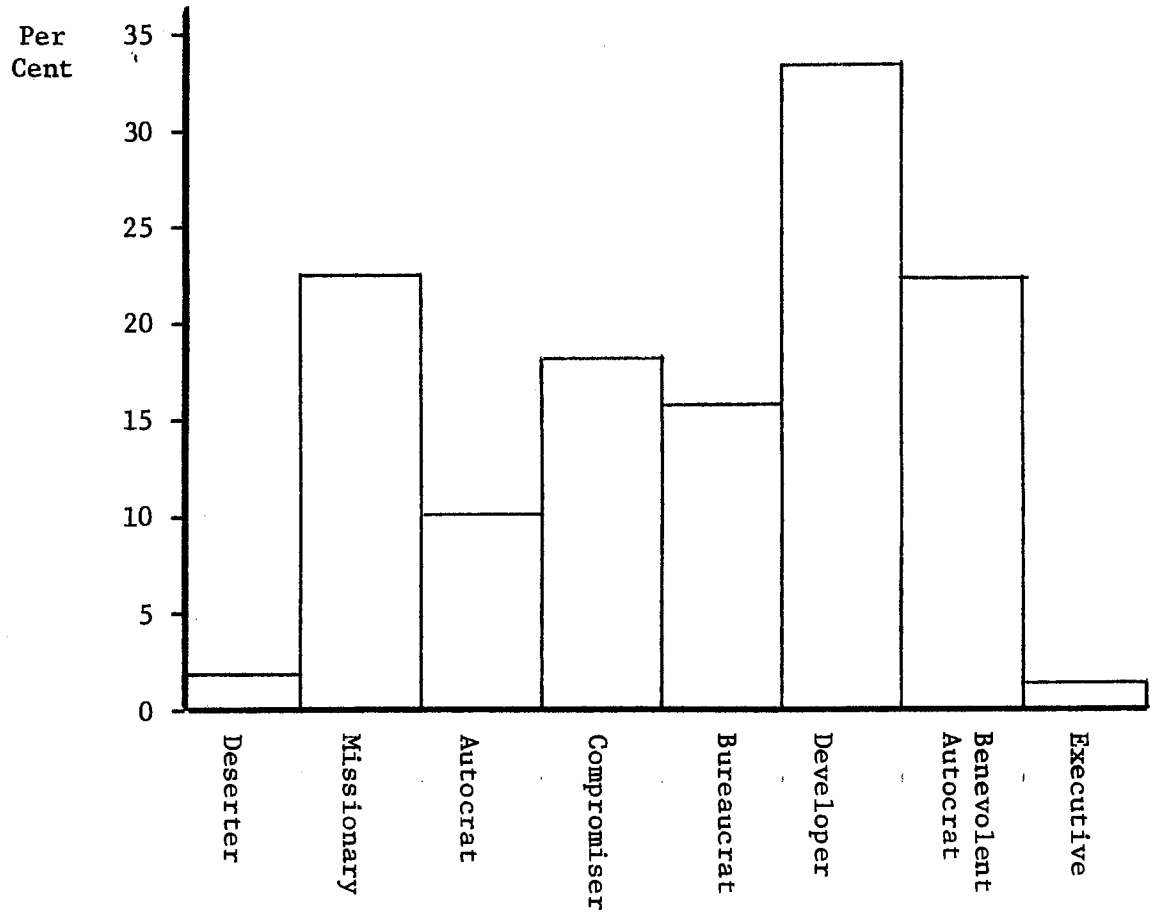

Figure 12. Percentage of Respondents With Dominant Styles*

*The percentages given here may not sum to 100% because some respondents may not have had a dominant style or they may have had more than one dominant style.

the different positions possessed roughly the same style profiles, they did vary in terms of specific styles, task orientation and measured effectiveness. A more thorough analysis of differences among the managerial positions is provided later in this chapter.

Although results from the MSDT did differ among the seventeen hospitals surveyed, most of the hospitals exhibited somewhat similar profiles. However, four of the seventeen hospitals had distinctive profiles. Two of these four hospitals placed a heavy influence on the developer type management style. One of the hospitals placed a heavy emphasis on the bureaucrat style and one was comprised largely of compromisers. A more thorough analysis of differences among the hospitals is provided later in the chapter.

A Comparison of Situational Elements with the Test Results

This research presented a rather unique opportunity to determine if the major situational elements of Reddin's theory of leadership styles behaved in the manner and were associated with the styles of leadership which his theory suggests. Independent measures of the situational elements comprising Reddin's theory were obtained in the questionnaire used. A comparison of the Management Style Diagnosis Test results was made with the independently gathered measures of the situational elements basic to his theory.

Before systematically analyzing relationships among the situational elements and leadership styles, a statistical analysis was made to determine if the MSDT, by placing the respondents in various leadership styles, adequately discriminated among the respondents. That is, did the various styles represent distinct types of managers in the terms of the variables considered? It is recognized that deserters, missionaries, autocrats and compromisers may not be distinct groups of respondents in terms of the variables measured. All that Reddin's theory tells us about these individuals is that they are using a style which is inappropriate to the situation. It does not tell us what that situation is. However, we would clearly expect the four effective styles, bureaucrat, developer, benevolent autocrat and executive, to exhibit different values on the variables basic to Reddin's theory. This is so because his theory suggests that these managers are effectively managing with different styles because differing amounts of the situational elements exist in their positions.

An analysis of variance was made comparing differences among means of the eight management styles on each variable. Table III shows the means of each style on all variables considered and the significance of differences among the means of the various styles for each variable.

Significant differences among the eight leadership styles were found for only two of the 32 variables considered. The two variables differing significantly among styles

TABLE III

MEANS OF LEADERSHIP STYLES ON EACH OF THE 32 VARIABLES

Variables	Styles									Signif. of Differences Among Means		Significance of Differences Between			
	Deserter n = 24	Missionary n = 44	Autocrat n = 20	Compromisor n = 29	Bureaucrat n = 32	Developer n = 86	Benevolent Autocrat n = 27	Executive n = 39	All Styles N = 301	Of All Styles **	Effective Styles **	Deserters & Bureaucrats **	Missionaries & Developrs.**	Benev. Autcrt.**	Autocrats & Executives **	Compromisors **
BACKGROUND VARIABLES																
Age	47.5	40.7	39.4	42.2	40.5	40.6	39.1	41.2	41.2	I	I	S	I	I	I	
Years in Present Position	6.5	6.4	4.9	4.8	4.8	4.9	6.0	4.5	5.3	I	I	S	I	I	I	
Years in Hospital	9.5	7.3	8.2	7.6	7.5	7.2	7.4	6.2	7.4	I	I	I	I	I	I	
Years in Health Services	13.8	12.3	11.8	13.1	12.1	12.6	12.5	10.9	12.4	I	I	I	I	I	I	
Education	2.8	3.8	3.4	3.3	3.6	3.7	3.3	3.4	3.5	I	I	I	I	I	I	
Number of Subordinates	22.4	20.1	22.9	19.9	34.7	30.2	24.8	29.1	26.5	I	I	I	I	I	I	
TECHNOLOGY VARIABLES																
Technology-Separated Type	18.9	18.4	18.2	18.5	18.3	18.7	19.3	18.6	18.6	I	I	I	I	S	I	
Technology-Related Type	15.0	13.7*	14.8	15.4	14.6	16.6	14.8	16.2	15.4	S	S	I	S	I	I	
Technology-Dedicated Type	15.6	15.2	15.6	15.1	15.3	14.3	15.7	15.1	15.0	I	I	I	I	I	I	
Technology-Integrated Type	14.6	14.7	14.1	15.2	14.9	15.5	14.2	15.4	15.0	I	I	I	I	I	I	
Technol. Relashps. Orient.	29.6	28.4	28.8	30.7	29.5	32.1	29.0	31.6	30.4	S	S	I	S	I	I	
Technol. Task Orientation	30.2	29.9	29.7	30.3	30.2	29.8	29.9	30.5	30.0	I	I	I	I	I	I	
VARIABLES RELATING TO THE INFLUENCE OF THE MEDICAL STAFF																
Influence of Medical Staff on Hospital	4.2	3.9	4.2	4.1	4.0	4.0	4.1	4.1	4.0	I	I	I	I	I	I	
Influence of Medical Staff on Department	3.4	3.2	3.1	3.4	3.2	3.0	2.6	3.1	3.1	I	I	I	I	I	I	
Desired Influ. of the Medical Staff on the Hospital	4.0	3.5	3.7	3.5	3.5	3.4	3.4	3.5	3.5	I	I	I	I	I	I	
Desired Influ. of the Medical Staff on Respdnt.'s Dept.	3.4	3.0	2.6	3.0	3.1	2.8	2.5	2.8	2.9	I	I	I	I	I	I	
VARIABLES RELATING TO ORGANIZATIONAL CLIMATE																
Hospital Atmosphere	72.3	72.4	75.0	75.2	74.5	74.5	74.7	74.2	74.0	I	I	I	I	I	I	
Group Atmosphere	73.4	77.8	76.9	80.3	76.5	77.6	77.5	78.1	77.5	I	I	I	I	I	I	
VARIABLES RELATING TO TENSION AND STRESS																
Hospital Tension & Stress	3.1	3.1	3.1	3.1	2.9	3.1	3.2	3.1	3.1	I	I	I	I	I	I	
Anticipated Normal Hospital Tension and Stress	2.8	2.8	3.1	2.9	3.1	3.0	3.3	3.0	3.0	I	I	I	I	I	I	
Dept. Tension and Stress	2.9	2.5	2.9	2.7	2.7	2.7	2.9	2.7	2.7	I	I	I	I	I	I	
Anticipated Normal Dept. Tension and Stress	2.8	2.7	2.8	2.6	2.8	2.8	2.7	2.9	2.8	I	I	I	I	I	I	
VARIABLES RELATING TO COORDINATION & COMMUNICATION																
Dept. Coord. Effectiveness	3.6	3.8	3.6	4.0	4.0	3.8	3.9	3.9	3.8	I	I	I	I	I	I	
Hosp. Coord. Effectiveness	3.3	3.3	3.2	3.4	3.5	3.3	3.7	3.2	3.3	I	S	I	I	S	I	
Dept. Commu. Effectiveness	3.6	3.8	3.4	3.9	3.9	3.6	3.8	3.7	3.7	I	I	I	I	I	I	
Hosp. Commu. Effectiveness	3.0	3.1	3.2	3.1	3.2	3.0	3.2	3.1	3.1	I	I	I	I	I	I	
TASK ORIENTATION VARIABLES																
Subordinate's Task Orient.	32.6	33.9	34.1	34.7	33.9	33.6	35.9	36.4	34.3	I	S	I	I	I	I	
Coworker's Task Orientation	32.3	31.9	32.2	33.6	32.2	32.1	33.1	34.2	32.6	I	I	I	I	I	I	
Superior's Task Orientation	31.3	32.3	31.5	33.9	31.8	31.8	34.0	32.5	32.3	I	I	I	I	I	I	
RELATIONSHIPS ORIENTATION VARIABLES																
Subordinate's Rela. Orient.	36.1	35.4	37.6	36.8	39.0	37.0	37.4	37.5	37.0	I	I	I	I	I	I	
Coworker's Rela. Orientation	36.3	36.5	37.3	37.5	38.4	37.5	35.9	37.7	37.2	I	I	I	I	I	I	
Superior's Rela. Orientation	37.1	38.6	36.9	38.4	39.7	38.8	38.6	38.5	38.5	I	I	I	I	I	I	

*Significantly different from the overall mean at the .05 level.

**S denotes that the differences between the means was significantly different at the .05 level. I denotes that the differences between the means were not significant at the .05 level.

were: related technology and technology relationships orientation. These results were somewhat disappointing as we would have expected the different categories of managers to differ considerably in terms of the variables measured.

Another analysis of variance was made comparing differences among means of the four effective styles which according to Reddin's theory should differ on at least the five major situational elements of his theory. This analysis indicated that four of the 32 variables differed significantly among the four effective styles. These four variables were: related technology, technology relationships orientation, hospital coordination effectiveness and subordinates task orientation. As was the case in the previous analysis, one can only conclude that the results are quite disappointing.

Reddin's theory suggests that deserters and bureaucrats are managing in a separated manner; that missionaries and developers are managing in a related manner; that autocrats and benevolent autocrats are managing in a dedicated manner; and that compromisers and executives are managing in an integrated manner. It also suggests that the first style of each of these four pairs of styles of management is less effective than the latter of each pair because situational elements are different within the pairs matching only the styles of the more effective manager in each pair. If this is ture, and the test is accurate, deserters and bureaucrats, missionaries and developers, autocrats and benevolent autocrats, and

compromisers and executives should display significantly different amounts of the situational elements. With this in mind, four additional computer runs were made comparing situational elements of each less effective style with situational elements of its component more effective style. For example, scores of deserters on the variables were compared with scores of bureaucrats on the variables to see if these two groups of respondents described their situations significantly differently. The results for each of these four comparisons were, again, quite disappointing. As may be seen in Table III, only random differences among the pairs of styles were observed.

With these analyses in mind we can conclude only that little empirical support was found regarding the validity of the MSDT in this research project and thus its results should not be heavily relied on.

Summary

This section has presented a rather detailed descriptive analysis of the results from the Management Style Diagnosis Test. Style profiles, the percentage of respondents falling into each style and the dominant styles of respondents were discussed. Also, results from the various hospitals and managerial positions were compared.

Differences among the respondents placed in each of the managerial styles were compared to gain an indication of the extent to which the test discriminated among the respondents.

Various statistical analyses were made comparing the results from the Management Style Diagnosis Test with measures of the situational elements basic to Reddin's theoretical model.

Little empirical support was found to substantiate the Management Style Diagnosis Test results. One can conclude only that, in this instance, the test did not adequately discriminate among the respondents and in this research the test findings should not be heavily relied on.

An Analysis of Mean Averages of All Respondents on the Variables

Data from all of the respondents were averaged for each variable to obtain a general idea of how the respondents, in general, viewed various aspects of managerial behavior. The average value of all respondents on each variable may be found in Table IV under the notation "All Hospitals." Not all of the variables measured were discussed in the following analysis because before some of the variables could attain any meaning they must be compared between other groups or categories.

It may be observed that the respondents would prefer for the medical staff to have less influence on the hospital than they perceived it to have. The perceived influence was 4.0 while the desired influence was 3.5 on the following scale:

1 = very little

2 = some

TABLE IV

MEANS OF HOSPITALS ON EACH OF THE 32 VARIABLES

Variables	Hospitals 1 n=13	2 n=14	3 n=30	4 n=21	5 n=16	6 n=10	7 n=15	8 n=18	9 n=5	10 n=26	11 n=20	12 n=25	13 n=15	14 n=13	15 n=33	16 n=13	17 n=14	All Hospitals N = 301	Significance of Differences Among Means**
BACKGROUND VARIABLES																			
Age	43.2	40.7	40.8	41.1	41.3	48.9	36.8	38.8	34.4	42.2	40.8	43.1	41.9	37.8	43.3	41.0	38.1	41.2	Insignificant
Years in Present Position	6.6	4.0	4.9	7.2	4.9	8.4	6.3	6.0	4.6	5.4	5.1	5.1	3.2	3.2	5.6	4.0	4.1	5.3	Insignificant
Years in Hospital	7.8	4.6	6.0	9.6	4.8	11.5*	7.8	7.1	6.2	6.7	8.5	10.4	5.9	5.5	8.7	8.0	4.9	7.4	Significant
Years in Health Services	12.6	10.4	9.1	13.0	8.8	13.3	11.4	13.5	13.0	13.0	13.9	17.8	9.9	10.2	14.8	10.6	10.2	12.4	Insignificant
Education	3.3	3.4	3.5	4.0	3.8	2.6*	3.1	3.4	6.0*	3.7	3.4	3.6	2.5*	2.8	3.5	4.2	3.7	3.5	Significant
Number of Subordinates	24.5	39.4	24.3	21.3	26.4	15.3	42.9	27.6	6.4	14.2	23.7	42.0	17.3	40.3	29.9	25.5	12.4	27.5	Insignificant
TECHNOLOGY VARIABLES																			
Technology--Separated Type	19.5	18.6	18.6	18.5	18.9	19.2	18.3	18.9	17.0	18.8	18.9	18.2	18.6	18.5	18.0	18.2	19.6	18.6	Insignificant
Technology--Related Type	15.1	15.4	14.4	16.0	15.4	15.7	15.5	13.7	18.0	15.8	13.9	17.1	15.3	14.1	16.1	15.3	15.7	15.4	Insignificant
Technology--Dedicated Type	14.5	14.4	15.5	15.1	15.1	16.2	14.2	15.5	12.0	15.4	15.2	14.0	16.3	15.5	14.8	15.1	15.0	15.0	Insignificant
Technology--Integrated Type	13.8	14.6	13.8	16.0	15.9	14.9	14.8	14.3	17.4	15.7	15.1	16.1	15.6	12.1	14.8	15.0	15.9	15.0	Insignificant
Technology Relationships Orientation	28.9	30.0	28.2	32.0	31.3	30.6	30.3	28.0	35.4*	31.5	28.9	33.2	30.9	26.2*	30.8	30.3	31.6	30.4	Significant
Technology Task Orientation	28.4	28.9	29.3	31.1	31.4	31.1	29.0	29.8	29.4	31.1	30.2	30.2	31.9	27.5	29.6	30.1	30.9	30.0	Insignificant
VARIABLES RELATING TO THE INFLUENCE OF THE MEDICAL STAFF																			
Influence of Medical Staff on Hospital	4.5	3.9	3.8	3.8	3.7	2.9*	4.6*	3.9	3.8	4.2	4.3	4.2	4.1	4.4	4.2	4.4	3.9	4.0	Significant
Influence of Medical Staff on Department	3.5	3.3	2.8	3.0	2.9	2.5	3.5	2.8	3.8	3.3	3.7	3.3	3.1	3.5	2.8	2.8	2.9	3.1	Insignificant
Desired Influ. of Med. Staff on Hospital	4.0	3.5	3.5	3.6	3.3	2.5	3.7	3.3	3.8	3.3	3.8	3.3	3.8	3.8	3.5	3.5	3.6	3.5	Insignificant
Desired Influ. of Med. Staff on Respondent's Department	3.5	3.1	3.0	3.0	2.8	2.4	2.8	2.5	4.0	2.7	3.0	3.0	3.3	3.2	2.5	2.5	3.1	2.9	Insignificant
VARIABLES RELATING TO ORGANIZATIONAL CLIMATE																			
Hospital Atmosphere	67.8	68.9	81.6*	69.6	71.1	78.6	74.9	77.3	60.8*	69.9	74.9	71.3	76.7	78.2	74.7	76.3	77.3	74.1	Significant
Group Atmosphere	78.5	72.9	81.1	74.7	76.4	77.8	78.8	77.2	65.8*	78.7	77.3	75.6	80.5	79.8	75.0	77.9	82.2	77.5	Significant

TABLE IV

(Continued)

Variables	Hospitals																	All Hospitals	Significance of Differences Among Means**
	1 n=13	2 n=14	3 n=30	4 n=21	5 n=16	6 n=10	7 n=15	8 n=18	9 n=5	10 n=26	11 n=20	12 n=25	13 n=15	14 n=13	15 n=33	16 n=13	17 n=14	N = 301	
VARIABLES RELATED TO TENSION AND STRESS																			
Hospital Tension and Stress	3.2	2.9	2.7	3.4	3.8*	2.5*	2.9	3.2	3.8	3.0	2.7	3.4	2.5*	2.9	3.4	2.8	3.4	3.1	Significant
Anticipated Normal Hospital Tension and Stress	2.7	3.3	3.2	3.0	3.3	2.4*	3.0	3.2	3.2	2.7	2.7	3.2	2.9	3.4	2.9	3.0	2.9	3.0	Significant
Department Tension and Stress	2.8	2.9	2.6	3.0	2.9	1.9	2.3	2.7	3.0	2.5	2.9	3.0	2.1	2.6	2.9	2.5	2.6	2.7	Insignificant
Anticipated Normal Department Tension and Stress	2.7	3.2	3.1	2.9	2.9	2.1	2.7	2.6	2.6	2.3	3.0	2.8	2.5	2.9	2.9	2.7	2.6	2.8	Insignificant
VARIABLES RELATING TO COORDINATION AND COMMUNICATION																			
Department Coordination Effectiveness	3.8	3.6	3.9	3.6	4.1	3.8	4.1	3.7	3.2	4.0	3.6	3.6	3.9	4.0	3.8	4.2	4.0	3.8	Insignificant
Hospital Coordination Effectiveness	3.0	3.3	3.9*	2.9	3.3	3.5	3.5	3.3	2.4*	3.3	3.2	3.2	3.7	3.2	3.4	3.7	3.1	3.3	Significant
Department Communications Effectiveness	3.7	3.6	3.7	3.6	3.6	4.0	4.0	3.3	3.2	3.7	3.6	3.6	4.1	3.9	3.8	4.2	3.6	3.7	Insignificant
Hospital Communications Effectiveness	2.6	2.9	3.3	2.8	3.2	3.1	3.3	3.0	2.4	2.9	3.1	3.1	3.5	3.1	3.3	3.4	2.9	3.1	Insignificant
TASK ORIENTATION VARIABLES																			
Subordinate's Task Orientation	37.1	34.3	32.2	35.6	37.1	29.0*	34.0	31.7	35.6	34.2	33.1	37.0	35.3	34.1	34.1	34.4	34.7	34.3	Significant
Coworker's Task Orientation	35.0	29.9	31.4	33.6	33.2	28.4*	31.8	31.4	34.4	31.2	33.0	35.1	33.1	31.3	33.7	31.7	33.9	32.6	Significant
Superior's Task Orientation	34.0	33.6	34.9	38.0	36.8	37.8	35.8	37.5	36.6	36.2	39.3	40.3	38.5	37.3	37.7	39.0	38.1	37.2	Significant
RELATIONSHIPS ORIENTATION VARIABLES																			
Subordinate's Relationships Orientation	33.0	36.0	35.5	34.3	35.9	38.5	36.6	37.4	35.6	35.3	35.4	39.8	39.9	41.0	38.2	41.4*	36.9	37.0	Significant
Coworker's Relationships Orientation	37.4*	30.8	31.6	34.0	32.8	28.1*	32.3	30.8	32.6	30.5	31.0	35.1	33.6	30.6	32.1	31.7	33.7	32.3	Significant
Superior's Relationships Orientation	38.6	37.3	40.2	37.8	37.4	38.0	37.3	37.9	37.0	36.0	36.8	39.8	42.3	38.8	39.2	38.5	40.0	38.5	Insignificant

*Significantly different from the overall mean at the .05 level.

**The .05 level of significance was used.

3 = a moderate amount

4 = a considerable amount

5 = a great deal.

Respondents regarded the medical staff as having considerably less influence on their own departments than on their hospital. The perceived influence of the medical staff on the respondents' departments was 3.11 while the desired influence was 2.9.

Hospital atmosphere and department atmosphere scores were 74.1 and 77.5 respectively on a scale of 11-88, indicating that the respondents regarded these variables rather favorably. The higher department atmosphere probably indicates a bias on the part of respondents to rate their department higher than their hospital in general. Logically, the two atmospheres would be related since the hospital atmosphere could be regarded as composed of group atmospheres.

Tension and stress in the hospital was regarded as moderate, being 3.1 on the previously described scale, which was only slightly more than the amount they regarded as normal in hospitals. Tension and stress in the respondents' departments was 2.7 which is slightly less than the perceived normal tension and stress of 2.8 in their respective departments. These results are not surprising when one takes into consideration that a bias might exist on the part of most respondents to rate their department more favorably, i.e., as having less tension and stress, a warmer climate and better coordination and communication than the hospital at

large. However, the smaller size of departments as compared with the hospital suggests that these perceptions may actually be quite accurate.

Variables relating to coordination and communication effectiveness were rated using the following scale:

1 = very poorly

2 = poorly

3 = normally

4 = well

5 = very well.

The average values of 3.8 for department coordination effectiveness and 3.7 for department communication effectiveness indicates that the respondents were reasonably well satisfied with the coordination and communication existing within their departments. Perceived hospital coordination was 3.3 and perceived hospital communication was 3.1 indicating that coordination and communication within the hospital to be somewhat lower than within departments as would be expected. The fact that respondents perceived hospital coordination and communication as approximately normal, yet rated most other variables in the questionnaire much more favorably could indicate that these areas in the hospital offer the greatest room for improvement.

The task orientation and relationships orientation existing in the hospitals appeared to be distinctively different from what we would expect in many other industries. Possible points for each respondent on the variables ranged

from a low of 10 to a high of 50. Subordinates were rated 34.3 on task orientation and 37.0 on relationships orientation. Coworkers were rated 32.6 and 37.2, respectively, and superiors were rated 32.3 and 38.5 respectively. Of course, these values represent an average for all respondents and when particular departments are considered, different values may be obtained.

It may be observed that subordinates were perceived to have a considerably lower task orientation than relationships orientation; that coworkers were perceived to have a considerably lower task orientation than relationships orientation; and that superiors were perceived to have a considerably lower task orientation than relationships orientation. Thus, it should be apparent that a relationships orientation has a dominant influence on managerial behavior in hospitals.

One may conclude that the respondents described their hospitals and their departments quite favorably. The fact that respondents perceived hospital coordination effectiveness and hospital communication effectiveness as approximately normal while at the same time, most other variables were described quite favorable indicates that further attention should be directed to these areas. Also, a majority of the respondents would prefer that the medical staff have less influence on the hospital and on their department's activity.

Differences Among the Hospitals

In order better to understand managerial behavior, an analysis was made to determine which characteristics hospitals possessed that varied significantly among them. Table IV presents a visual analysis of each hospital's average response on each variable. For instance, the average age of the 13 respondents in hospital number one was 43.2 years.

Analysis of variance techniques were used to determine the significance of differences between the average scores of hospitals for each variable. Independent estimates of the variance due to differences between hospitals were obtained and tested for significance against within group variance using analysis of variance methods. Results of the analysis showing the level of significance (the probability that differences observed may be due to chance) are provided at the right-hand side of the table for each variable. The various dimensions of managerial behavior developed in the theoretical model were considered to obtain an indication of which groups of variables accounted for the major proportion of variation among the hospitals.

Variables relating to background data were: age, years in present position, years in the respondent's hospital, years in the health services industry, education and number of subordinates. It did not seem likely that significant differences would be observed among most of these variables. However, significant differences among the hospitals were observed for the years spent in the hospital and education

of the respondents in each hospital. A closer analysis reveals that the difference existing for the number of years respondents had spent in their respective hospitals was related to hospital size with respondents from the largest hospitals having more years seniority in their respective hospitals. In general, the lower educational levels were found in the smallest hospitals.

Variables relating to the technology existing in hospitals were: separated technology, related technology, dedicated technology, integrated technology, technology task orientation and technology relationships orientation. When making comparisons among hospitals, one would not expect these variables to differ significantly. That is, when each hospital is regarded as an entity, we would expect it to roughly approximate the technology of other hospitals. Within the hospitals one would expect significant differences to exist among these variables. Among hospitals only technology relationships orientation varied significantly. The differences in this variable may largely be accounted for by an exceptionally high value for one hospital with a small "n" size and an exceptionally low value for one hospital which had recently experienced a change in administration. Thus it is probable that perceptions of this variable are of limited value when making comparisons among hospitals.

Variables relating to the influence of the medical staff were: its influence on the hospital, its influence on the respondent's department, desired influence of the medical

staff on the hospital and desired influence of the medical staff on the respondent's department. Perceived influence of the medical staff did vary significantly among the different hospitals. This is not surprising as one would expect the medical staff to exert a stronger influence in some hospitals than in others. Situational factors such as tradition and the power of the board of trustees and the administrator could all affect the amount of influence the medical staff might have in each hospital. The remaining variables relating to the influence of the medical staff did not vary significantly.

Variables relating to organizational climate were hospital atmosphere and group atmosphere. Both of these variables varied significantly among the different hospitals. The hospital which had a significantly high value for hospital atmosphere was nearly as significantly high on group atmosphere. This hospital, for a continued period of time, has made every effort to maintain an extremely warm atmosphere and has a reputation for such. Although the variable group atmosphere was intended to measure differences within the hospitals it is not surprising to find that it is positively associated with hospital atmosphere due to the fact that the hospital atmosphere could be regarded as composed of group atmospheres. The significantly colder hospital and group atmospheres were both found in the same hospital. This lends added support to the idea that the two variables are positively associated.

Variables relating to tension and stress were: tension and stress in the hospital, tension and stress in the respondent's department, anticipated normal tension and stress in the hospital, and anticipated normal tension and stress in the respondent's department. Hospital tension and stress and anticipated normal hospital tension and stress varied significantly among the different hospitals. The two hospitals exhibiting significantly low tension and stress were both small hospitals in isolated communities. The one hospital exhibiting significantly high tension and stress had been involved with major cost cutting programs over the past four years. Probably this resulted in the high tension and stress in this hospital. Nine of the seventeen hospitals surveyed had a lower score for anticipated normal tension and stress than was perceived to exist within their own hospital. Seven of these nine hospitals had above average levels of stress indicating that most respondents were correct in their perceptions of above average tension and stress. Anticipated normal tension and stress varied significantly among the hospitals and was closely related to existing tension and stress. This indicates simply that the respondents used the perceived tension and stress existing in their hospitals as a partial indicator of what they would expect to exist in other hospitals. Tension and stress and anticipated normal tension and stress variables referring to the respondent's department were not intended to measure differences among hospitals and did not differ significantly among the hospitals.

Variables relating to coordination and communication were: hospital communication effectiveness, department communication effectiveness, hospital coordination effectiveness and department coordination effectiveness. Of these four variables only hospital coordination effectiveness varied significantly among the hospitals. The one hospital with significantly high hospital coordination effectiveness was the same hospital with a significantly high hospital atmosphere, indicating that these variables could be interrelated. The one hospital with significantly low hospital coordination effectiveness was the one hospital which also had significantly low hospital and group atmospheres, lending further support to the idea of a relationship among these variables. This leads one to suspect that hospital atmosphere and hospital coordination are positively associated. Interrelationships among these variables are dealt with in some detail later in this chapter.

Variables relating to task orientation were: subordinate's task orientation, coworker's task orientation and superior's task orientation. In all hospitals subordinate's task orientation was perceived to be greater than coworker's task orientation and in most hospitals superior's task orientation was perceived to be greater than either subordinate's or coworker's task orientation. In most hospitals superior's relationships orientation was perceived as greater than the relationships orientation of either coworkers or subordinates with coworker's relationship usually the lowest.

Subordinate's and coworker's relationships orientation varied significantly among the hospitals. The perceived relationships orientation of superior's did not vary significantly among hospitals. This indicates simply that the dimension of relationships orientation did vary significantly among the hospitals with subordinates and coworkers compromising the most important parts of the dimension.

In conclusion, we may note that many of the variables observed did vary significantly among the hospitals. The most significant differences existing among the hospitals were: the task and relationships orientation dimension, organizational climate, tension and stress and a few isolated variables such as hospital coordination effectiveness, the influence of the medical staff on the hospital, years spent in the respondent's hospital and education.

Differences of Hospital Size

Hospitals of considerably varying size were deliberately included in the project in order to obtain an indication of how managerial behavior in hospitals is related to hospital size. Hospitals surveyed ranged from approximately 50 to 600 beds in size. The number of full-time equivalent personnel in these hospitals varied from approximately 100 to 1800 persons. These large differences in bed capacity and the number of personnel employed presented a good opportunity to analyze differences of size as may be seen in Table V.

The seventeen hospitals were divided into the following four size categories: small, medium, medium large and large.

TABLE V

VARIOUS SIZE GROUPS OF HOSPITALS STUDIED

Size	Approximate Number of Beds*	Approximate Number of Employees**	Number of Hospitals
Small	50 - 139	100 - 249	5
Medium	140 - 174	250 - 399	3
Medium Large	175 - 299	400 - 799	5
Large	300 +	800 +	4

*An exact breakdown of bed size and number of employees was not made in order to retain the confidentiality of the participating hospitals.

**Number of full-time equivalent employees.

As in the previous analysis of management styles and hospitals, an analysis of variance was made for each variable to determine which variables differed significantly among the various size categories. Table VI provides the results of this analysis.

Among the background variables significant differences were found to exist for: years in hospital, years in health services, and education. Age, years in present position and number of subordinates did not differ significantly among the size categories. Respondents in the largest hospitals were found to have significantly more years experience in the hospital and health services industry than respondents in the

TABLE VI

MEANS OF HOSPITAL SIZES ON EACH OF THE 32 VARIABLES

Variables	Sizes					Significances of Differences Among Means**
	Small n=66	Medium n=48	Medium-Large n=104	Large n=83	All Sizes N=301	
BACKGROUND VARIABLES						
Age	42.4	39.2	40.7	42.1	41.2	Insignificant
Years in Present Position	4.9	5.0	5.6	5.3	5.3	Insignificant
Years in Hospital	6.7	5.7	7.4	9.0	7.4	Significant
Years in Health Services	11.3	10.8	11.4	15.4*	12.4	Significant
Education	2.6*	3.6	3.7	3.6	3.5	Significant
Number of Subordiantes	27.6	23.0	24.0	30.6	26.5	Insignificant
TECHNOLOGY VARIABLES						
Technology--Separated Type	18.8	19.1	18.5	18.2	18.6	Insignificant
Technology--Related Type	15.1	14.8	15.4	16.0	15.4	Insignificant
Technology--Dedicated Type	15.4	15.4	15.1	14.5	15.0	Insignificant
Technology--Integrated Type	14.3	15.2	15.0	15.4	15.0	Insignificant
Technology Relationships Orientation	29.4	30.0	30.4	31.4	30.4	Insignificant
Technology Task Orientation	29.6	30.6	30.1	29.9	30.0	Insignificant
VARIABLES RELATING TO THE INFLUENCE OF THE MEDICAL STAFF						
Influence of Medical Staff on Hospital	4.0	3.9	4.1	4.2	4.0	Insignificant
Influence of Medical Staff on Department	3.2	2.9	3.1	3.2	3.1	Insignificant
Desired Influence of the Medical Staff on the Hospital	3.6	3.3	3.5	3.6	3.5	Insignificant
Desired Influence of the Medical Staff on Respondent's Department	3.2	2.7	2.8	2.9	2.9	Insignificant
VARIABLES RELATING TO ORGANIZATIONAL CLIMATE						
Hospital Atmosphere	73.4	76.1	74.6	72.9	74.1	Insignificant
Group Atmosphere	77.9	78.5	78.5	75.2	77.5	Significant
VARIABLES RELATING TO TENSION AND STRESS						
Hospital Tension and Stress	2.8*	3.4*	3.0	3.3	3.1	Significant
Anticipated Normal Hospital Tension and Stress	3.0	3.2	3.0	3.0	3.0	Insignificant
Department Tension and Stress	2.5	2.8	2.6	2.9	2.7	Significant
Anticipated Normal Department Tension and Stress	2.7	2.7	2.7	2.9	2.8	Insignificant
VARIABLES RELATING TO COORDINATION AND COMMUNICATION						
Department Coordination Effectiveness	3.8	3.9	3.9	3.7	3.8	Insignificant
Hospital Coordination Effectiveness	3.3	3.3	3.5	3.2	3.3	Insignificant
Department Communications Effectiveness	3.9	3.4*	3.8	3.7	3.7	Significant
Hospital Communications Effectiveness	3.0	3.0	3.1	3.1	3.1	Insignificant
TASK ORIENTATION VARIABLES						
Subordinate's Task Orientation	34.2	34.3	33.9	34.8	34.3	Insignificant
Coworker's Task Orientation	31.7	31.6	31.9	34.1*	32.6	Significant
Superior's Task Orientation	32.3	32.3	32.0	32.8	32.3	Insignificant
RELATIONSHIPS ORIENTATION VARIABLES						
Subordinate's Relationships Orientation	37.9	36.5	36.1	37.8	37.0	Insignificant
Coworker's Relationships Orientation	36.4	37.2	36.5	38.8	37.2	Significant
Superior's Relationships Orientation	39.3	38.1	38.1	38.7	38.5	Insignificant

*Significantly different from the overall mean at the .05 level.

**The .05 level of significance was used.

other size categories. Respondents in the small hospitals had significantly less education than respondents in the other size categories which had very similar levels of education.

None of the six variables representing the technology dimension of behavior varied significantly among the different size categories. This is not surprising as we would not expect the type of work managers and their subordinates do to vary to any great extent among different size categories since all hospitals have roughly the same functions and departments such as: radiology, food service, medical records, etc.

Although the medical staff did appear to exert the strongest influence on respondents in the largest hospitals, there were no significant differences among the size categories for variables belonging in this dimension.

Organizational climate was measured by two variables, hospital atmosphere and department atmosphere. Surprisingly, group atmosphere varied among the sizes but hospital atmosphere did not. A closer analysis of the data reveals that hospital atmosphere had a large standard deviation while department atmosphere had a small standard deviation. This apparently accounts for one variable deviating significantly and the other not. The two variables were closely associated with medium sized hospitals exhibiting the "warmest" hospital and group atmosphere. As might be expected, the largest hospitals had the "coldest" hospital and group atmospheres.

This was probably due to the very size of the larger hospitals resulting in more impersonal relations.

The dimension of tension and stress was represented by the following four variables: (1) hospital tension and stress, (2) department tension and stress, (3) anticipated normal hospital tension and stress, and (4) anticipated normal department tension and stress. Of the four variables, hospital tension and stress and anticipated normal hospital tension and stress differed significantly. Small hospitals exhibited significantly less tension and stress and had the lowest departmental tension and stress. Medium sized hospitals displayed significantly high tension and stress and above average departmental tension and stress. It is apparent that medium and large sized hospitals displayed the highest amount of tension and stress while small and medium-large sized hospitals displayed the lowest amount of tension and stress. However, it is likely that tension and stress increases as hospital size increases. The small sized hospitals may have displayed less of this variable because of a more relationships oriented atmosphere existing in these hospitals. The high tension and stress in the medium sized hospitals was probably due to the fact that administrators from two of these three hospitals were quite concerned with efficiency and accountability throughout their hospitals. In one hospital efficiency contests and bonuses were regularly used.

The dimension of coordination and communication effectiveness was represented by the following four variables: hospital coordination effectiveness, hospital communication effectiveness, department coordination effectiveness and department communication effectiveness. Of the four variables, only departmental communication effectiveness varied significantly. It was significantly low in the medium sized hospitals. It should be noted that medium sized hospitals also displayed significantly high tension and stress. This raises the question: "Are tension and stress causal factors of poor communication or do they simply make managers more aware of communication difficulties?" At this time, the answer to this question is uncertain but a more thorough analysis of the relationships between the two variables is offered later in this chapter. In general, this data suggests that coordination and communication are not strongly related to hospital size.

The dimensions of task and relationships orientation were represented by measures of subordinate's, coworker's and superior's relationships orientation and subordinate's coworker's and superior's task orientation. Of these variables, the task orientation and relationships orientation of the respondent's coworkers varied significantly among the different size categories. It is not surprising to find that the largest hospitals exhibited a significantly higher task orientation but it is surprising to find that they also had the highest relationships orientation which did vary

significantly among the size categories. Frequently, a high task orientation may be obtained only at the expense of a low relationships orientation or a high relationships orientation may be obtained at the expense of a low task orientation. Both a high task orientation and a high relationships orientation are more difficult to obtain together but probably would indicate a more competent management since managers with these characteristics could presumably deal effectively with many different types of situations.

In conclusion, we may say that hospitals of different size categories differ significantly in many respects. Several background variables, such as years in the hospital, years in the health services industry, and education, differed significantly among the various size categories. Respondents from the largest hospitals had worked significantly longer in their hospitals and the health services industry. Respondents from the smallest hospitals had the lowest education.

Other variables differing significantly were: group atmosphere, hospital tension and stress, department tension and stress, department coordination effectiveness and the task and relationships orientation of the respondent's coworkers. The coldest hospital and group atmospheres were found in the largest hospitals. Hospital tension and stress was significantly low in small hospitals and significantly high in the medium sized hospitals. The task and relationships orientations of the respondent's coworkers were the

highest in large hospitals. In summary, this section has provided an analysis of which variables we may expect to vary as a function of hospital size and which variables appear to be unaffected by hospital size.

Differences Among Managerial Positions

Introduction

As hospitals encompass one of the most complex and rapidly changing technologies of any industry it seems likely that tremendously different demands would be made on the hospital manager's behavior depending on what part of the hospital's technology they and their subordinates are involved in. The following analysis offers an indication of the different demands made on hospital managers and the different elements of management found in the various managerial positions existing in hospitals. Sixteen distinct managerial positions which one would expect to find in hospitals were considered. The sixteen positions were:

1. administrator
2. associate and assistant administrator
3. chief accountant
4. personnel manager
5. director and associate director of nursing
6. director of respiratory therapy
7. director of physical therapy
8. director of the laboratory
9. director of radiology

10. pharmacist
11. director of housekeeping and laundry
12. director of engineering and maintenance
13. director of food service
14. director of volunteers
15. director of purchasing
16. medical records.

Of the 300 respondents participating in the research approximately 60 did not fit neatly into any of the above named positions and were therefore deleted from this part of the analysis. Examples of such positions are: Business Office Manager, Computer Center Manager and Public Relations Director. Analysis of variance was used to test for significant differences among the various classifications, i. e., managerial positions. Results of the analysis are presented in Table VII.

A Discussion of the Variables and Significant Differences Among the Managerial Positions

Background variables relating to the respondents were: age, years in present position, years in the hospital, years in the health services industry, education, and number of subordinates. Of the variables, age, years in the health service industry, education and number of subordinates varied significantly among the different positions. Respondents from respiratory therapy were significantly younger than the

TABLE VII

MEANS OF DIFFERENT MANAGERIAL POSITIONS ON EACH OF THE 32 VARIABLES

Variables	Managerial						
	Administrator n = 9	Associate & Asst. Administrator n=26	Accountant n=12	Personnel Manager n=11	Nursing n=34	Respiratory Therapy n = 8	Physical Therapy n = 9
BACKGROUND VARIABLES							
Age	44.9	40.0	34.1	38.8	41.3	32.9*	33.7
Years in Present Position	7.2	4.8	3.5	3.1	5.0	2.6	4.4
Years in Hospital	8.9	6.7	5.7	6.5	10.4	2.8	4.3
Years in Health Services	17.8	11.3	7.3	9.3	19.6	8.3	9.0
Education	4.9*	5.0*	4.0	3.9	3.3	3.8	4.2
Number of Subordinates	9.6	6.5	16.7	3.5	47.9	45.0	3.7
TECHNOLOGY VARIABLES							
Technology--Separated Type	17.2	17.8	18.1	18.9	18.9	18.6	18.3
Technology--Related Type	18.6*	18.2*	13.6	16.2	16.9	13.4	13.0*
Technology--Dedicated Type	13.3	13.0*	14.1	13.6	15.7	15.9	15.7
Technology--Integrated Type	15.9	15.9	14.7	15.7	16.1	14.9	14.7
Technol. Relashps. Orientation	34.4*	34.1	28.3	31.9	33.0	28.3	27.7
Technology Task Orientation	29.2	28.9	28.8	29.4	31.8	30.8	30.3
VARIABLES RELATING TO THE INFLUENCE OF THE MEDICAL STAFF							
Influence of Medical Staff on Hospital	3.7	4.0	4.1	3.7	4.0	3.8	3.7
Influence of Medical Staff on Department	3.2	3.5	1.8*	1.5*	3.6	3.3	2.6
Desired Influence of Medical Staff on the Hospital	4.0	3.5	3.5	2.8	3.3	4.0	3.2
Desired Influence of Medical Staff on Respondent's Department	3.3	3.3	1.5*	1.5*	3.1	4.1*	2.9
VARIABLES RELATING TO ORGANIZATIONAL CLIMATE							
Hospital Atmosphere	75.1	73.8	76.5	73.9	70.4	73.1	70.8
Group Atmosphere	76.6	76.1	79.2	79.2	76.3	78.4	80.0
VARIABLES RELATING TO TENSION AND STRESS							
Hospital Tension and Stress	3.2	3.2	3.4	3.4	3.6	2.8	3.2
Anticipated Normal Hospital Tension and Stress	3.1	3.2	3.3	2.8	2.9	2.9	2.9
Department Tension and Stress	3.0	2.9	3.3	2.6	3.1	2.1	2.1
Anticipated Normal Department Tension and Stress	2.9	2.9	3.1	2.8	2.9	2.6	2.4
VARIABLES RELATING TO COORDINATION AND COMMUNICATION							
Dept. Coordination Effectiveness	3.7	3.5	3.8	3.9	3.6	4.0	3.9
Hospital Coordina. Effectiveness	3.0	3.2	3.5	3.5	3.2	3.8	3.0
Dept. Communica. Effectiveness	3.4	3.6	3.8	4.2	3.5	3.8	3.9
Hosp. Communica. Effectiveness	3.0	3.0	3.2	2.8	2.8	3.5	2.4*
TASK ORIENTATION VARIABLES							
Subordinate's Task Orientation	33.9	36.3	35.1	34.9	36.3	34.9	32.6
Coworker's Task Orientation	32.6	34.6	33.3	33.1	34.1	31.6	31.0
Superior's Task Orientation	32.2	33.1	34.6	32.7	33.7	34.3	30.7
RELATIONSHIPS ORIENTATION VARIABLES							
Subordinate's Relashps. Orienta.	36.2	37.2	34.0	36.0	37.1	37.1	34.1
Coworker's Relashps. Orientation	36.9	38.2	35.3	34.3	37.7	35.4	36.9
Superior's Relashps. Orientation	37.7	38.5	38.5	40.6	38.9	39.1	38.1

*Significantly different from the overall mean at the .05 level.

**58 of the original 301 respondents were omitted from this analysis because they did not belong in any of the 16 groups considered here.

***The .05 level of significance was used.

TABLE VII

(Continued)

Positions										
Laboratory n=17	Radiology n=21	Pharmacist n=11	Housekeeping and Laundry n=15	Engineer and Maintenance n=16	Food Service n=14	Director of Volunteers n=9	Purchasing n=15	Medical Records & Librarian n=16	All Positions N=243**	Significance of Differences Among Means ***
36.9	39.8	39.5	44.4	45.8	46.4	53.4*	44.8	38.4	41.0	Significant
4.8	8.4	8.3	6.1	5.9	6.7	5.8	5.4	5.4	5.5	Insignificant
5.7	10.1	8.9	6.9	9.4	7.5	7.7	8.3	6.1	7.7	Insignificant
14.4	17.5	16.1	9.3	10.3	11.9	8.1	13.7	9.8	13.0	Significant
3.8	3.4	4.0	2.5*	2.4*	3.2	2.6*	2.7*	3.4	3.6	Significant
22.4	21.7	5.7	21.1	12.8	48.3	216.8*	7.9	9.8	28.1	Significant
18.8	18.7	19.8	18.3	18.1	18.2	21.8*	18.5	18.9	18.6	Significant
14.4	15.0	16.5	12.3*	15.1	13.9	14.2	15.1	14.9	15.4	Significant
14.7	14.8	13.6	16.7	16.9*	16.1	16.7	16.6	13.8	15.0	Significant
13.6	14.6	14.3	13.6	13.1	14.6	17.8*	15.7	13.2	14.9	Significant
27.9	29.6	30.7	25.9*	28.2	28.6	32.0	30.8	28.1	30.3	Significant
28.3	29.4	27.9	30.3	29.9	30.8	34.4*	32.3	26.9	30.0	Significant
4.4	4.1	3.7	4.1	4.3	4.1	4.2	3.9	4.3	4.0	Insignificant
3.9*	3.6	3.0	2.6	2.8	2.9	2.7	2.7	3.9*	3.1	Significant
3.8	3.5	3.3	3.3	3.4	3.8	4.0	3.4	3.6	3.5	Insignificant
3.4	3.0	3.0	2.7	2.5	3.0	3.0	2.3	3.4	2.9	Significant
74.4	74.1	69.6	78.9	69.9	74.7	81.9	75.6	73.6	73.8	Insignificant
75.9	76.5	79.8	77.1	73.9	77.4	84.3	74.7	78.4	77.2	Insignificant
2.8	2.8	3.5	3.1	2.9	2.6	3.0	2.8	3.1	3.1	Insignificant
2.7	2.9	3.1	2.9	2.8	2.9	3.3	3.1	3.2	3.0	Insignificant
2.6	2.4	2.5	2.5	2.8	2.4	2.6	2.5	2.9	2.7	Insignificant
2.9	2.5	2.4	2.3	2.9	2.6	2.7	2.9	3.1	2.8	Insignificant
3.9	4.1	4.0	3.9	3.4	3.9	4.1	3.7	4.0	3.8	Insignificant
3.5	3.6	3.0	3.2	3.3	3.1	3.9	3.3	3.3	3.3	Insignificant
3.8	3.7	4.1	3.5	3.6	3.6	4.0	3.3	3.6	3.7	Insignificant
3.2	3.2	2.8	3.5	3.1	3.4	3.6*	3.1	2.7	3.1	Significant
33.8	34.4	30.2	32.7	33.8	33.7	32.6	32.4	33.8	34.2	Insignificant
33.0	32.7	30.3	31.7	32.5	31.6	33.2	30.4	31.8	32.6	Insignificant
31.5	32.6	32.9	32.5	32.3	32.6	32.7	28.6	32.1	32.5	Insignificant
39.4	36.3	37.8	40.6	36.4	36.2	41.1	37.3	35.9	37.1	Insignificant
37.5	38.3	38.5	38.5	35.9	36.1	40.0	37.4	37.3	37.3	Insignificant
39.0	38.1	40.9	39.0	37.9	36.5	42.8	36.9	40.0	38.7	Insignificant

average respondent. The directors of volunteers were significantly older than the average respondent. Administrators and those working as directors of radiology had significantly greater experience in the health services field. Those working as chief accountants had significantly less experience in the health services field.

Administrators, associate and assistant administrators had significantly greater education than the average respondent. Most respondents from these positions had at least some graduate training in addition to at least a B. A. degree. Respondents in housekeeping, engineering and maintenance, and purchasing had significantly less education than the average respondent. Although the average number of subordinates did vary significantly, this variable should not be relied on heavily because it had an extremely large standard deviation.

The dimension of technology was represented by the following variables: separated technology, related technology, dedicated technology, integrated technology, technology task orientation and technology relationships orientation. This dimension was used as an indicator of the type of demands a job makes on managerial behavior. As was explained in Chapter II, a separated type of technology presumably exerts an influence to manage with both a low task orientation and a low relationships orientation. A related type presumably exerts an influence to manage with a high relationships orientation and a low task orientation. A dedicated type presumably exerts an influence to manage with a high task

and low relationships orientation; and an integrated type of technology presumably exerts an influence to manage with both a high relationships and high task orientation. The variable technology task orientation is composed of the dedicated and integrated technology types combined. It provides an indication of the task orientation influence of the job. The variable technology relationships orientation is composed of the related and integrated technology types combined. It provides an indication of the relationships orientation of the job.

The related technology was significantly high for administrators and associate and assistant administrators indicating that their type of work exerted an influence to use a relationships orientation in their management. The related technology was significantly low for physical therapy and housekeeping and laundry indicating that these jobs do not require a relationships oriented type of managerial behavior.

The dedicated technology variable was significantly low for associate and assistant administrators and quite low for administrators indicating that these groups should not use a task oriented managerial behavior. This variable was significantly high for engineering and maintenance and next highest for housekeeping and the director of volunteers indicating that a high task orientation would be appropriate in these positions.

The integrated technology variable was significantly high for the director of volunteers and quite low for

engineering and maintenance. It is difficult to understand how the director of volunteers could exhibit significantly high separated and integrated management styles. Apparently this individual must be a most unusual person. The low integrated score for engineering and maintenance indicates that this person should not attempt to use both a high task and high relationships orientation but rather only a high task orientation as previously indicated.

The technology relationships orientation was significantly high for administrators and next highest for associate and assistant administrators indicating that these groups should use a high relationships orientation in their management. This variable was significantly low for housekeeping and laundry indicating that these individuals should not use a high relationships orientation in their management. Technology task orientation was significantly high for the director of volunteers indicating that perhaps a task orientation should be used in this unusual position.

The dimension of the influence of the medical staff was represented by the following four variables: influence on the hospital, desired influence on the hospital, influence on the respondent's department and desired influence on the respondent's department. Of the four variables, the influence on the respondent's department and the desired influence on the respondent's department varied significantly. The perceived influence of the medical staff on the accounting and personnel management departments was significantly low.

This was to be expected as the medical staff would logically have little interest in these areas. The perceived influence of the medical staff was significantly high in the laboratory and medical records areas indicating that the medical staff exerted considerable influence on these departments. Managers of the respiratory therapy department indicated a significantly high desired influence of the medical staff on their department. The influence which the respondents perceived the medical staff to have on their department was indicated to be significantly greater by the laboratory managers.

Perceptions of hospital atmosphere and group atmosphere did not vary significantly among the different managerial positions.

Hospital tension and stress and department tension and stress did not vary significantly among the positions. Hospital tension and stress was perceived highest by respondents from nursing and lowest by respondents from food service. Department tension and stress was highest in accounting followed by those in nursing. The lowest department tension and stress was in the respiratory and physical therapy departments.

The dimension of coordination and communication effectiveness included the following variables: hospital coordination and communication effectiveness and department coordination and communication effectiveness. Of these four variables, only perceived hospital communication

effectiveness varied significantly among the different managerial groups. Physical therapy respondents perceived hospital communication effectiveness significantly lower than did other groups. The director of volunteers' evaluation of hospital communication effectiveness was significantly high.

The dimension of task and relationships orientation did not vary significantly among the different managerial positions. However, it is important to note that with only one exception each of the sixteen groups indicated that their subordinate's relationships orientation was greater than their subordinate's task orientation; that their coworker's relationships orientation was greater than their coworker's task orientation; and that their superior's relationships orientation was greater than their superior's task orientation. This indicates that throughout the entire hospital, a relationships orientation is quite prevalent.

In conclusion, we should note that many significant differences were found among the different managerial positions. The one dimension which varied significantly in all respects was technology. This indicates that the technology used in various departments to complete their task differs to such an extent that different types of managerial behavior are required in the various departments. Other variables differing significantly among the various managerial positions were: years in the health service industry, education, number of subordinates, influence of the medical staff on the department, desired influence of the medical staff on the

department and perceived hospital communication effectiveness. We may conclude that these variables of the 32 variables considered best explain differences among the sixteen managerial positions considered in this analysis.

An Analysis of the Sixteen Managerial Positions

Administrators, Associate and Assistant Administrators.

The positions of administrator, associate and assistant administrator displayed many elements in common. Respondents in these positions had significantly high levels of education and significantly high scores for a related type of technology. Both of these positions appear to call for a high relationships orientation and a low task orientation in their managerial behavior. These respondents perceived above average levels of tension and stress to exist in the hospital. Also, they perceived normal hospital tension and stress to be somewhat greater than the average respondent did. They also perceived hospital coordination and communication effectiveness to be lower than did the average respondent. It is surprising to observe that administrators desired for the medical staff to exert a stronger influence on the hospital and on their department than they perceived to currently exist. A slight difference existing among the two groups was that in most instances the administrator's perception of the task and relationships orientation of their superiors, coworkers and subordinates were average or below while the

associate and assistant administrator's perceptions of their superiors, coworkers and subordinates task and relationships orientations were above the average values for these variables. Thus, in most instances, associate and assistant administrators assumed that their superiors, coworkers and subordinates were both friendlier and harder working than did the administrator.

Accounting. The position of chief accountant, or comptroller, differed from other positions in that respondents from this position had significantly fewer years of experience in their present position, in their hospital and in the health service industry. The perceived and desired influence of the medical staff was significantly below the average in this department. These respondents described their department and the hospital as having significantly greater tension and stress than did the average respondent. Their perceptions of normal hospital tension and stress and normal department tension and stress were considerably higher than the average respondent's perceptions. Accountants were the only group of respondents to describe the task orientation of their subordinates to be greater than the relationships orientation of their subordiantes.

Personnel Manager. The position of personnel manager was distinctive in that respondents holding this position had spent considerably less years in their present positions, years in their hospital and years in the health services

industry. These respondents' perceptions of the influence and desired influence of the medical staff on their department was significantly lower than other respondents. They perceived hospital tension and stress significantly higher than other respondents did and also considerably higher than what they believed normal tension and stress would be. These individuals rated their department higher on coordination effectiveness than did any other group of respondents, yet they perceived hospital communication effectiveness somewhat lower than other respondents did.

Director and Assistant Director of Nursing. The director and assistant director of nursing differed from other respondents in the following respects: (1) they had spent considerably more years in the health services industry, (2) they perceived hospital tension and stress as higher than any other group did, (3) their perception of tension and stress in their department was somewhat above the average value, (4) they perceived their department's and the hospital's coordination and communication effectiveness to be poorer than did the average respondent, and (5) with only one exception they perceived the task and relationships orientations of their subordinates, coworkers and superiors to be greater than did the average respondent.

Respiratory Therapy. Directors of the respiratory departments were significantly younger and had less experience in the hospital and health services industry than

respondents from other positions. The amount of influence they desired for the medical staff to exert on their department was significantly higher than any other group. These individuals perceived tension and stress in the hospital to be lower than did any other group. Hospital coordination and hospital communication effectiveness were perceived to be somewhat more effective by those in this department than by the average respondent.

Physical Therapy. Respondents from physical therapy differed from other respondents in the following respects: (1) they described a significantly low relationships oriented type of technology, (2) they perceived a considerably low influence of the medical staff on their department and on the hospital, (3) their perception of their department's tension and stress was significantly less than the average perceived influence, (4) hospital communication was rated significantly lower by this group than by other groups, and (5) their perception of their superior's, coworker's and subordinate's task and relationships orientations were all lower than that of the average respondent indicating that they considered others in the hospital to be less motivated and less friendly than did the average respondent.

Laboratory. Laboratory directors perceived the influence of the medical staff on the hospital to be greater than did any other group of respondents. Their perception of the medical staff's influence on their department was

significantly high. They perceived hospital tension and stress as somewhat lower than did most of the other departments.

Radiology. The radiology department heads differed from other respondents in the following few respects: they perceived the medical staff to have a quite strong influence on their department and desired this influence to be reduced rather than increased, hospital tension and stress in the department was considered to be somewhat lower than in most other groups, and they described their department's coordination quite favorably.

Pharmacy. Respondents from the pharmacy department described their work as involving a high separated type of technology indicating that a low task orientation and probably a low relationships type orientation should be used in managing their position. Also, these individuals perceived the medical staff as having a very low influence on the hospital. This group of respondents, out of all respondents, had the "coldest" perception of hospital atmosphere. Hospital coordination effectiveness was perceived as somewhat less effective by this group than by almost all other groups.

Housekeeping and Laundry. The directors of housekeeping and laundry differed from other respondents in one rather dominant respect. The technology variables indicated that a task orientation and not a relationships orientation should be used by managers in this position. Not surprisingly, this

was one of the two departments which was described by respondents as having a colder climate than the hospital climate. It is significant to note that this group of respondents described tension and stress to be normally lower in their department than did any other group of respondents.

Engineering and Maintenance. Respondents from engineering and maintenance described their position similar to that of respondents from housekeeping in at least two significant respects. The technology of both positions exerted a strong influence to manage in a task oriented manner. Also, individuals from housekeeping and this position had significantly low levels of education. Of the sixteen groups of managers, the coldest perception of hospital atmosphere and department atmosphere was from respondents in engineering and maintenance. The engineering and maintenance respondents described their department's coordination as less effective than those from any other department did. Individuals in this position perceived their subordinates, coworkers and superiors to be both less task and less relationships oriented than did any other group of respondents. It appears that the director of engineering and maintenance is somewhat separated from the other groups in the hospital; is somewhat more task oriented and has a less favorable opinion of the hospital and its employees than most others.

Food Service (Dietary). The food service department appears to require a task oriented type manager just as the

housekeeping and engineering departments require. Respondents from the dietary department described hospital tension and stress to be lower than did any other group. It is interesting to note that they described hospital communication effectiveness somewhat lower than others did but hospital coordination effectiveness somewhat higher than other groups did. With the exception of their superior's task orientation, respondents from the dietary department regarded their superiors, coworkers and subordinates as somewhat less task and relationships oriented than the average respondent described them. This indicates that, in general, respondents from the dietary department regarded others in the hospital as less concerned with their work or relationships than did the average respondent.

Director of Volunteers. The director of volunteers appears to be a most unusual person who is significantly different from others in managerial positions in many respects. It should be noted that all nine of the respondents holding this title were of the same sex, female. The director of volunteers was significantly older, had significantly less education, and had a significantly larger number of subordinates than other respondents. These individuals described their technology as significantly high on both the separated and integrated types. Management theory indicates that both technologies should not occur in the same job. All one may conclude about this contradiction is that the job presents very conflicting demands on the respondent's managerial

behavior. These respondents scored well above the average for technology task orientation and technology relationships orientation. This indicates that both types of behavior are required at times in this position. The director of volunteers' desired for the medical staff to have a considerable influence on the hospital and for it to have a stronger influence on their department than it presently had. Also, the directors of volunteers were unique in that they described the hospital atmosphere and their department atmosphere more favorably, i.e., warmer, than did any other department. They perceive normal hospital tension and stress to be higher than did any other department. Respondents in this department rated their department's and the hospital's coordination effectiveness higher than any other group did. They also perceived hospital communication effectiveness to be significantly better than any other group did. Respondents in this position viewed their superiors, coworkers and subordinates to have a higher relationships orientation than did any other group. It is interesting to note that the director of volunteers' description of their subordinate's task orientation was below the average but their description of the task orientation of their supervisors and coworkers was above average. Considering that they manage volunteers, this might be expected. In conclusion, it appears that the director of volunteers is a very dedicated, enthusiastic, involved individual with a unique managerial position in the hospital.

Purchasing. In most respects respondents from purchasing did not differ significantly from other respondents. The only significant difference between this group and others was that its members had significantly less education. Contrary to respondents from other departments, those from purchasing perceived their group atmosphere as slightly "colder" than the hospital atmosphere. They also described their department communications as less effective than did any other group.

Medical Records. Respondents from the medical records area varied in several respects from those on other departments. Their perception of the influence of the medical staff of the department was significantly high and considerably above average for its influence on the hospital. This is not surprising because employees in this department do have considerable contact with the doctors. Like respondents from most other departments they would prefer for the medical staff to have less influence on their department. Descriptions of the technology in their positions indicate that a separated type of behavior would be most appropriate. That is, a person who uses both a low task and low relationships orientation and simply follows the rules would be preferred here. Respondents have indicated that above average levels of tension and stress would be expected in this department. One last characteristic of respondents from the medical records department was that they perceived hospital

communication effectiveness to be considerably poorer than most other respondents did.

Summary

In conclusion, we may say that managerial behavior did vary tremendously as a function of the type of work the manager and his subordinates performed. Some positions such as administrator, associate and assistant administrators appear to require a heavily relationships-oriented type of behavior while other positions such as housekeeping, engineering and food service exerted a strong influence to manage in a task-oriented manner. Perceptions of the influence and desired influence of the medical staff on the hospital and on the respondent's own department varied considerably. Some departments such as accounting exhibited high tension and stress, others such as respiratory and physical therapy exhibited very little. Differences in perceptions of the hospitals' coordination and communication effectiveness were found to exist. One can only conclude that a hospital is not simply a distinct entity but rather is composed of distinct subgroups, each with their own characteristics and expectations.

Relationships Among the Variables

Introduction

A statistical analysis of relationships among the variables was performed in order to gain a better understanding

of how and to what extent the variables were interrelated. A more thorough understanding of how the variables are related to one another will provide information useful in improving the managerial effectiveness of Oklahoma hospitals. For instance, if it is found that coordination and communication effectiveness are positively associated with a relationships orientation and negatively associated with a task orientation among most hospitals, then a hospital experiencing difficulties in these areas might rely more heavily on a relationships orientation.

As the major dimensions of the theoretical model related to characteristics of a group or organization rather than to characteristics of an individual respondent, hospitals were used as the unit of analysis in this section. For instance, when correlating two variables such as hospital atmosphere and hospital coordination effectiveness we are testing: did those hospitals with a warmer atmosphere tend to exhibit more effective coordination? Using individuals as the unit of analysis, we would simply be asking: did those individuals who described a warmer hospital atmosphere also perceive more effective hospital coordination? Which is not the purpose of this analysis. This implies we are not measuring the impact of variables such as hospital atmosphere, superior's relationships orientation, etc., until the group (in this case, the hospital) perceptions of that variable are utilized. The following quotation by Stogdill and Shartle (59, p. v) should further clarify the meaning of this concept:

> Thus, leadership is regarded as a relationship between persons rather than as a characteristic of the isolated individual. When the data for all the members of a group collected by these methods are combined and interrelated, they provide a means of studying leadership in terms of the structural and functional dimensions of organization.

Georgopoulos and Mann (18) also used the hospital as the unit of analysis and made rank order correlations across hospitals in their study of The Community General Hospital. For these reasons correlations between the variables were made using hospitals as the unit of analysis rather than individual respondents.

Using each hospital as the unit of analysis necessitated the calculation of 17 values for each variable. That is, for each variable an average value was calculated for each of the 17 hospitals. Table IV, used in the previous analysis of differences among hospitals, contains all of the mean values used in the following analysis.

Spearman rank order correlations (9, p. 245) were utilized to obtain the following information for each pair of variables: (1) whether the variables were associated with or independent of each other; (2) the degree of relationship, i.e., how closely the two variables were related; (3) the significance of the relationship, i.e., the probability of the relationship occurring by chance; and (4) the direction of the relationship, i.e., was the relationship a positive or negative one? A positive relationship implies that as one variable increases the other variable also

increases. A negative relationship indicates that as one variable increases the other variable decreases.

As correlational coefficients were used in the following analysis, a brief explanation is now in order. Correlations are usually used as a convenient way of expressing in numerical form the degree of proportional relationship existing among two variables. Correlations vary between a +1.00 and a -1.00. They are usually between +1.00 or -1.00, very seldom at +1.00 or -1.00. A correlation of +1.00 indicates a perfect positive relationship; i.e., as one variable increases the other variable increases in direct proportion to it. A correlation of -1.00 indicates a perfect negative relationship; that is, as one variable increases the other variable decreases in direct proportion to the increase in the first variable. A correlation of .00 indicates that the two variables are not related and are completely independent of each other. The closer a correlation is to +1.00 or -1.00 the stronger the degree of relationship existing among the two variables is and the more accurate one variable is as a predictor of the other.

The following analysis offers the level of significance of the relationship found between the two variables, thus an explanation is needed. The closer the level of significance is to .00, the more confident we are in assuming the observed relationship was not due simply to chance. We would hope many of the relationships observed will have a "high" level of significance; i.e., close to .00. This implies they are

quite unlikely to have occurred by random chance. Usually a level of significance of .05 or less, i.e., closer to .00, is regarded as statistically significant. A level of significance of .05 indicates simply the probability of making an error in assuming the observed relationship was not due to chance.

It should be taken into consideration that while the existence of a correlation might imply causality it certainly does not prove it. The correlation shows only the extent to which two variables were found to be associated together. We may sometimes be describing associations among variables which may in part be due to the presence of other variables. For instance, a high negative correlation between hospital atmosphere and hospital tension and stress might imply but does not "prove" that one is caused by the other. Perhaps both variables are related to superior's task orientation which effects both hospital atmosphere and hospital tension and stress.

Correlations Among Hospitals

Simple rank order correlations across the hospitals showed that many of the variables were highly and significantly related to one another. Not all of the original 32 variables considered earlier in this chapter were used in this analysis because many of them should not differ across hospitals or it would simply be illogical to compare them. Background variables were omitted because they were designed

to obtain information to be used primarily on an individual, certainly not a hospital basis. Technology variables were omitted because, when regarded as organizations, the hospitals should exhibit approximately the same type of work. Departmental measures were omitted because they were designed to obtain differences among departments not hospitals. For these reasons, those variables will not be found in the following discussion of correlations between the variables.

A positive correlation of .64, which was significant at the .01 level, was found between the perceived influence of the medical staff on the hospital and the desired influence of the medical staff on the hospital. This relationship might be interpreted to mean that respondents used the perceived influence of the staff on the hospital as a basis from which to judge how much influence they felt should exist. However, there can be little question but that respondents from hospitals with a greater influence of the medical staff also desired for the medical staff to have a stronger influence than did other respondents. These two variables did not correlate significantly with other variables.

Correlations of hospital atmosphere are provided in Table VIII. It may be observed that hospital atmosphere displayed a positive correlation with the following variables: superior's relationships orientation, hospital coordination effectiveness and hospital communication effectiveness. That is, a warmer hospital atmosphere was associated with higher amounts of these variables.

TABLE VIII

CORRELATIONS AMONG HOSPITALS OF HOSPITAL ATMOSPHERE WITH OTHER VARIABLES

Variable	Correlation	Level of Significance*
Superior's Relationships Orientation	+.57	.02
Subordinate's Relationships Orientation	+.48	.05
Hospital Coordination Effectiveness	+.47	.06
Hospital Communication Effectiveness	+.46	.07
Superior's Task Orientation	-.60	.01
Hospital Tension and Stress	-.52	.04
Subordinate's Task Orientation	-.39	.13
Coworker's Task Orientation	-.38	.15

*Usually a significance level less than .05, i.e., .07, is not regarded as statistically significant. A few correlations are provided which, although they are not statistically significant, it was believed would be of value in better understanding the relationships among the variables.

Superior's task orientation, hospital tension and stress, subordinate's task orientation and coworker's task orientation were all negatively related with hospital atmosphere. This indicates that as the hospital atmosphere becomes increasingly warmer, we would expect less superior's task orientation and less coworker's task orientation. Of course, smaller amounts of task orientation might be resulting in the warmer climate. These relationships are what we would expect to find because higher levels of task orientation frequently result in greater organizational stress and a colder organizational climate.

Correlations of hospital tension and stress with other variables are provided in Table IX.

TABLE IX

CORRELATIONS AMONG HOSPITALS OF HOSPITAL TENSION AND STRESS WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Coworker's Task Orientation	+.57	.02
Superior's Task Orientation	+.56	.02
Subordinate's Task Orientation	+.48	.05
Hospital Coordination Effectiveness	-.58	.02
Hospital Atmosphere	-.52	.04
Hospital Communication Effectiveness	-.42	.10

The correlations of hospital tension and stress with other variables indicate that higher levels of hospital tension and stress are quite significantly associated with higher levels of task orientation. It may also be observed that tension and stress in the hospital was significantly negatively associated with hospital coordination effectiveness and hospital atmosphere and also negatively associated with hospital communication effectiveness. That is, higher amounts of tension and stress were associated with poorer coordination and communication and a colder climate in most hospitals. These results indicate that hospitals with higher task orientation usually are experiencing poorer coordination and communication and perhaps a colder climate. Thus a high task orientation in hospitals might very well be undesirable. Anticipated normal hospital tension and stress did not correlate significantly with any of the other variables.

Correlations of hospital coordination effectiveness with other variables are provided in Table X. These correlations indicate that hospital coordination effectiveness is positively and significantly associated with hospital communication effectiveness and hospital atmosphere and also positively associated with a superior's relationship orientation. Thus we would expect better hospital coordination effectiveness to accompany both better hospital communication effectiveness and warmer hospital atmospheres. Hospital coordination effectiveness was also highly and significantly negatively related with hospital tension and stress. Superior's and

subordinate's task orientations were also negatively associated with hospital coordination effectiveness. It may be concluded that, in general, better hospital coordination effectiveness was found in those hospitals with less tension and stress and lower task orientations. This indicates that a higher relationship orientation and lower task orientation contributes to better coordination in the hospital.

TABLE X

CORRELATIONS AMONG HOSPITALS OF HOSPITAL COORDINATION EFFECTIVENESS WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Hospital Communication Effectiveness	+.83	.00*
Hospital Atmosphere	-.47	.06
Superior's Relationship Orientation	+.42	.10
Hospital Tension and Stress	-.58	.02
Coworker's Task Orientation	-.48	.05
Superior's Task Orientation	-.43	.10
Subordinate's Task Orientation	-.39	.13

*The stated level of significance of .00 does not mean that the observed relationship could not have occurred by chance but rather that a larger number was rounded to .00, in this instance, .0002.

Correlations of hospital communications effectiveness with other variables are provided in Table XI. These results suggest that hospital communication effectiveness is positively and quite significantly associated with hospital

coordination effectiveness and a superior's relationships orientation. That is, better hospital communications effectiveness, with few exceptions, was found in the hospitals with better coordination effectiveness and a higher superior's relationship orientation. Also, hospital communications effectiveness was positively associated with hospital atmosphere.

TABLE XI

CORRELATIONS AMONG HOSPITALS OF HOSPITAL COMMUNICATIONS EFFECTIVENESS WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Hospital Coordination Effectiveness	+.83	.00
Superior's Relationship Orientation	+.60	.01
Hospital Atmosphere	+.46	.07
Hospital Tension and Stress	-.42	.10

A negative relationship was suggested between hospital communications effectiveness and hospital tension and stress. These results imply that better hospital communications effectiveness is associated with a higher superior's relationships orientation and less tension and stress. Of course, we would expect hospital communication and coordination effectiveness to be positively and closely related, which was found.

Correlations of superior's task orientation with other variables are provided in Table XII. These correlations indicate that superior's, coworker's and subordinate's task orientations are all positively and quite significantly related. Apparently, task orientation in a hospital is a function, not just of superiors but also of coworkers and subordinates whose task orientation closely approximates that of their superiors.

TABLE XII

CORRELATIONS AMONG HOSPITALS OF SUPERIOR'S TASK ORIENTATION WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Subordinate's Task Orientation	+.78	.00
Coworker's Task Orientation	+.73	.00
Hospital Tension and Stress	+.56	.02
Hospital Atmosphere	-.60	.01
Hospital Coordination Effectiveness	-.43	.10

The strong positive correlations of superior's task orientation with hospital tension and stress implies rather strongly that superior's task orientation frequently results in greater tension and stress in the hospital. The negative correlation of superior's task orientation with hospital atmosphere and hospital coordination effectiveness implies that increasing amounts of superior's task orientation

results in a colder hospital atmosphere. These relationships suggest that a strong task orientation in hospitals is not desirable.

Correlations of coworker's task orientation with other variables are provided in Table XIII.

TABLE XIII

CORRELATIONS AMONG HOSPITALS OF COWORKER'S TASK ORIENTATION WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Subordinate's Task Orientation	+.93	.00
Superior's Task Orientation	+.73	.00
Hospital Tension and Stress	+.57	.02
Hospital Coordination Effectiveness	-.48	.05

As previously mentioned, the task orientation of coworkers is positively and significantly related to the task orientation of superiors and subordinates. This indicates simply that most of the hospitals which had a higher coworker's task orientation also had higher superior's and subordinate's task orientation. The positive and significant correlation of coworker's task orientation with hospital tension and stress again indicates that higher levels of task orientation are associated with higher levels of tension and stress. The negative correlation of coworker's task orientation with coordination effectiveness implies that

higher levels of task orientation are associated with poorer coordination effectiveness in the hospital.

Correlations of subordinate's task orientation with other variables are provided in Table XIV.

TABLE XIV

CORRELATIONS AMONG HOSPITALS OF SUBORDINATE'S TASK ORIENTATION WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Coworker's Task Orientation	+.93	.00
Superior's Task Orientation	+.78	.00
Hospital Tension and Stress	+.48	.05
Hospital Atmosphere	-.39	.13
Hospital Coordination Effectiveness	-.39	.13

As expected, subordinate's task orientation correlated positively and significantly with superior's and coworker's task orientation. Also, a high positive correlation with tension and stress was found. This lends further support to the idea that increased amounts of task orientation also increase tension and stress. Although the relationships were not statistically significant, subordinate's task orientation appears to be negatively related with hospital atmosphere and hospital communication effectiveness.

Correlations of superior's relationships orientation with other variables are provided in Table XV.

TABLE XV

CORRELATIONS AMONG HOSPITALS OF SUPERIOR'S RELATIONSHIPS ORIENTATION WITH OTHER VARIABLES

Variable	Correlation	Level of Significance
Hospital Communications Effectiveness	+.60	.01
Hospital Atmosphere	+.57	.02
Subordinate's Relationship Orientation	+.47	.06
Coworker's Relationship Orientation	+.47	.06
Hospital Coordination Effectiveness	+.42	.10

In contrast to the negative relationships found between task orientation and hospital atmosphere and hospital coordination effectiveness, a relationships orientation shows a positive association with these variables. Both hospital atmosphere and hospital communication effectiveness were positively and significantly related with a superior's relationships orientation indicating that a greater relationships orientation would help hospital communication effectiveness. As might be expected, the superior's relationships orientation was positively associated with subordinate's and coworker's relationships orientation.

The coworker's relationships orientation was closely associated only with the superior's relationships orientation. As expected, the relationship was positive and nearly statistically significant, i.e., .06.

The subordinate's relationships orientation correlated positively and significantly with hospital atmosphere. The subordinate's relationships orientation did not correlate significantly with any other variables. However, it did show a positive correlation of .47 with superior's relationships orientation which was nearly statistically significant, i.e., .06.

Summary

Rank order correlations across the hospitals showed that many of the variables were highly and significantly related to one another. Rather strong support was found for the

contention that a relationships orientation might profitably be relied on somewhat more heavily in the hospitals than a strong task orientation. In most instances, a relationships orientation was positively and significantly associated with a warmer hospital atmosphere, with less tension and stress, better coordination and better communications in the hospitals. In contrast to this, a task orientation was usually associated with a colder hospital atmosphere, greater tension and stress and poorer hospital coordination and communication. The task orientation of superiors, coworkers, and subordinates was found to be positively and usually significantly related. Likewise, the relationships orientation of superiors, coworkers and subordinates were positively and usually significantly related. This indicates that task orientation and relationships orientation are characteristics of the hospital in general and not simply a characteristic of one classification of respondents in the hospital, such as superiors.

The task orientation and relationships orientation dimensions were not significantly nor even closely related to each other among the various hospitals. This is important in that it implies that a higher relationships orientation in the hospital would not necessarily have to be made at the "expense" of a lower task orientation.

In conclusion, we may say that rather strong support was found for the contention that the general climate of the hospital, viewed as an organization, should be somewhat relationships oriented.

Summary

This chapter provided a descriptive and interpretative analysis of the data. Parts of the chapter were devoted to the following areas: (1) results from the Management Style Diagnosis Test, (2) differences among the hospitals, (3) differences due to hospital size, (4) differences among various managerial positions in the hospitals, and (5) interrelationship among the variables.

The Management Style Diagnosis Test results were used to provide a descriptive analysis of the respondents in general and also of selected managerial positions. A dominant, more effective style of developer and a dominant, less effective style of missionary were found. Results from the test indicated that the respondents were quite effective and considerably more relationships oriented than task oriented.

A statistical analysis comparing independent measures of situational elements basic to Reddin's theory of leadership styles with the results from the Management Style Diagnosis Test was made. Results from this analysis were disappointing, indicating that the test did not adequately discriminate among the respondents. It was concluded that at least in this research, the results of the Management Style Diagnosis Test should not be heavily relied on.

In order to obtain a better understanding of how the seventeen hospitals in the study differed, mean averages were computed for each hospital for each variable. The seventeen mean averages for each variable were then compared using

analysis of variance to determine which variables differed significantly among the hospitals. The hospitals were found to differ significantly in terms of the following variables: years experience in the hospital, education, technology relationships orientation, perceived influence of the medical staff on the hospital, hospital atmosphere, group atmosphere, hospital tension and stress, all task orientation variables, and most relationships orientation variables. These variables should first be taken into consideration when attempting to explain differences of managerial behavior among hospitals.

The hospitals were placed into four size categories, ranging from small to large, depending on their bed size and number of full-time equivalent personnel. The following variables differed significantly among the four size categories: education, group atmosphere, hospital tension and stress, department coordination effectiveness and coworker's task and relationships orientation. Respondents from hospitals in the small size category tended to have less education, less tension and stress and to perceive a warmer atmosphere. The greatest tension and stress was found in medium and large size hospitals. The largest hospitals exhibited both the highest task orientation and the highest relationships orientation. Department coordination effectiveness was perceived to be poorest in medium sized hospitals.

Respondents from the various hospitals were placed into sixteen different managerial positions existing in the hospitals. The positions ranged from administrator to

department heads, such as nursing, laboratory, housekeeping, engineering, etc. The positions were found to differ significantly in terms of many of the variables considered. All of the technology measures used in this study differed significantly among the various positions. This provided strong support for the contention that different types of managerial behavior should be used, depending on one's position in the hospital. Results indicated that administrators and associate administrators do rely heavily on a relationships orientation in their work; while those in charge of housekeeping, engineering, and food service are somewhat more task oriented in their management. Variables other than technology differing significantly among the various positions were: age, education, years experience in the health services industry, number of subordinates, influence and desired influence of the medical staff on the respondent's department, and perceptions of hospital communication effectiveness. Administrators and associate and assistant administrators had the highest education; while respondents from housekeeping, engineering, and the director of volunteers had the lowest education. Respondents from medical records and the laboratory indicated that the medical staff had considerable influence over their department; while those from personnel management and accounting indicated that the medical staff had very little influence on their department's activities. A brief analysis of each of the managerial positions and their particular characteristics was provided.

Spearman rank order correlations were performed between selected variables among the hospitals. For example, using the hospital as the unit of analysis, a statistical technique was employed to determine if those hospitals having greater tension and stress also tended to be the same hospitals that had warmer or colder hospital atmospheres. Findings of the correlational analysis among the hospitals were: (1) those hospitals with a higher task orientation tended to be the same hospitals with greater tension and stress, poorer coordination and communication effectiveness, and a colder climate; and (2) those hospitals with a higher relationships orientation tended to be the same hospitals that had less tension and stress, more effective coordination and communications, and a warmer atmosphere. Implications of this analysis were that hospitals, when viewed as an entity, might rely somewhat more heavily on a relationships orientation than a task orientation.

CHAPTER V

SUMMARY

Due to large expenditures on health care and the rapidly rising costs of hospital care, a great deal of attention has been focused on the efficiency with which hospital care is provided. To a major extent, the efficiency with which hospital care is provided is dependent upon the managers who are involved in the provision of this care. A survey of the literature revealed that very little research has been conducted regarding the managerial behavior existing in hospitals and the factors upon which it is contingent. Due to these facts and the extremely complex technology existing in hospitals, a more thorough understanding of the demands made on different managers in hospitals was needed.

The purpose of this study was to obtain a more thorough understanding of hospital managerial behavior than currently existed. Accomplishment of the purpose of the study led to the consideration of several important subobjectives. These were: (1) to describe the management styles of managers in Oklahoma hospitals and the management styles ordinarily found in the selected managerial positions within the hospitals; (2) to determine how Oklahoma hospitals differ and what variables account for significant differences among the hospitals;

(3) to determine if managerial behavior in the hospitals varies as a function of hospital size; (4) to determine if managerial behavior varies among different managerial positions in the hospitals; and (5) to discuss relationships among the variables which are useful in explaining the behavior of managers.

Overview of the Study

The study involved a review of the literature on leadership and managerial behavior in hospitals. Based on the literature review, a theoretical model, composed of seven basic dimensions believed to be pertinent to managerial behavior in hospitals, was developed. The seven dimensions of the theoretical model were: (1) background information, (2) technology--a measure of how the manager's subordinate's work influences the manager's behavior, (3) hospital and department atmosphere, (4) influence of the medical staff, (5) coordination and communication effectiveness, (6) task orientation, and (7) relationships orientation. The purpose of the theoretical model was to provide a framework useful in the gathering, analysis and interpretation of the data.

The study involved over 300 respondents from seventeen community hospitals in Oklahoma. Hospitals included in the study ranged in bed size from approximately 50 to 600 beds. Only department heads and those holding administrative positions such as administrator, comptroller, or personnel manager were invited to participate. Approximately 18

respondents from each hospital participated. Two research instruments were utilized, the Management Style Diagnosis Test developed by Reddin (50) and a nine-page questionnaire developed by the researcher. The Management Style Diagnosis Test was used to obtain a measure of the management style of the respondents. The questionnaire was designed to obtain measures of each of the dimensions of the theoretical model. The research instruments were administered in the field by the researcher at each of the seventeen hospitals surveyed.

After the data was gathered and tabulated, a descriptive and interpretative analysis of the data was performed. Statistical techniques used in the analysis were analysis of variance and Spearman rank order correlations. The descriptive and interpretative analysis was devoted to the following areas: (1) results from the Management Style Diagnosis Test, (2) differences among the hospitals, (3) differences due to hospital size, (4) differences among various managerial positions in the hospitals, and (5) relationships among the variables.

Results from the Management Style Diagnosis Test were used to describe the management style of respondents in general and of respondents holding generally recognized positions in the hospitals. Also, a statistical analysis relating independent measures of situational elements basic to Reddin's theory of leadership styles with the results of the Management Style Diagnosis Test was performed.

To understand better how the seventeen hospitals included in the study differed, mean averages were compiled for each hospital for each variable. Then, taking each variable individually, the seventeen mean averages, one for each hospital, were compared using analysis of variance techniques to determine which variables differed significantly among the hospitals.

The hospitals were placed into four size categories ranging from small to large, depending on their bed size and number of full-time equivalent employees. An analysis similar to that used to analyze differences among hospitals was used to determine which variables differed significantly among the size categories.

In a separate analysis, respondents from the various hospitals were placed into sixteen different managerial positions existing within the hospitals. After the respondents were placed into these various managerial categories, a statistical analysis was performed to see how respondents from the positions differed and what variables differed significantly among them. In addition, a brief analysis of each of the managerial positions was provided.

Spearman rank order correlations were performed between selected variables among the mean averages of the hospitals on each of these variables. This analysis provided information on how the variables were related to one another from hospital to hospital.

Important Findings

The most important findings of the research related to the following six areas: (1) the usefulness of the theoretical model for analyzing hospital managerial behavior; (2) what the style profiles of the managers were, and most important, what the less effective management styles were; (3) how the hospitals differed; (4) how the hospitals differed among size categories; (5) how situational demands of and expectations of respondents from various managerial positions differed; and (6) relationships discovered among the variables.

All of the dimensions of the theoretical model made important contributions to the study. The background dimension of the model provided a much clearer picture of the respondents participating in the study. The technology dimension was particularly useful in exploring differences among the managerial positions considered. The dimension of the influence of the medical staff was of value for exploring differences among the hospitals and departments. The dimensions of organizational climate, tension and stress, and coordination and communication were found to vary considerably among the hospitals and departments indicating that these dimensions were quite useful in the study. The task and relationships orientation dimensions made an important contribution toward explaining differences among the hospitals.

Results from the Management Style Diagnosis Test indicated that a predominant effective leadership style of

developer existed and that a predominant less effective leadership style of missionary existed. Results from the test were well accepted by the respondents and corresponded rather closely with other findings of the research. Most respondents were found to have a heavy relationships orientation, some to such an extent that it hindered their managerial effectiveness. In accordance with other measures in the study, the Management Style Diagnosis Test results indicated that the administrators and associate and assistant administrators were quite relationships oriented while those from departments such as accounting, engineering and housekeeping were somewhat more task oriented. However, empirical support for the Management Style Diagnosis Test results was found to be weak indicating that in this research the test did not adequately discriminate among the respondents. We can conclude only that in this study the test results should not be heavily relied upon as a measure of leadership behavior in all parts of the hospital.

Variables which differed considerably among hospitals were: perceived influence of the medical staff on the hospital, hospital atmosphere, hospital tension and stress and perceived task orientation. Knowledge of which variables differ among the hospitals will allow administrators to compare more realistically their hospital's performance with that of other hospitals.

Variables which distinguished best among the different hospital size categories were level of education, hospital

atmosphere and department coordination effectiveness. Respondents from the small hospitals had the least education; while respondents from the largest hospitals had the highest level of education. The warmest hospital atmosphere was found in small hospitals. Department coordination effectiveness was rated lower in the largest hospitals. These differences indicate that managers in hospitals of different size categories do have significantly different backgrounds and perceptions of the hospitals in which they work.

The various managerial positions differed significantly in terms of many of the variables. All of the technology variables used in the study differed significantly among the positions. This provided strong support for the contention that different types of managerial behavior should be used depending on one's position in the hospital. Results indicated that administrators and associate and assistant administrators should rely heavily on a relationships orientation in their work; while those in housekeeping, engineering and food service should be somewhat more task oriented in their management. Many other significant differences such as perceptions of hospital coordination and communication effectiveness, department climate, and the perceived and desired influence of the medical staff were found among the different managerial positions.

Findings of rank order correlations between the variables among the hospitals were: (1) those hospitals with a higher task orientation tended to be the same hospitals with

greater tension and stress, poorer coordination and communication effectiveness, and a colder climate; and (2) those hospitals with a higher relationships orientation tended to be the same hospitals that had less tension and stress, more effective coordination and communications, and a warmer atmosphere. These findings suggest that the general climate in hospitals is affected by the degree of relationships orientation in the hospitals.

Significance of the Findings and Recommendations

The recognition that the demands of various managerial positions in the hospital differ tremendously, in terms of their influence on managerial behavior, should prove to be of significant value. That is, certain departments such as accounting, housekeeping, food service and engineering exert a strong influence on their members to manage in a task oriented manner while other positions such as the administrators and associate and assistant administrators exert an influence on those holding these positions to manage in a relationships oriented manner. With information of this type hospital administrators will have a much better understanding of the types of behavior their managers should be using, enabling administrators to more efficiently manage their hospital. Also, administrators should find enlightening information regarding how those managers from distinct managerial positions ordinarily view selected aspects of hospital

operations. With this information hospital managers can better predict and take into consideration the behavior of their subordinates. For example, respondents from certain positions such as the director of volunteers normally view the hospital atmosphere as warm, while the supervisors of the pharmacy department tend to perceive the hospital as being cold. Knowledge of where the hospital climate is most favorable should be quite useful to the administrator in gaining acceptance for his proposals and policies.

Hospital coordination and communication was viewed as being effective by personnel directors and somewhat less effective by directors of physical therapy. Knowledge such as this may indicate where attention should be directed when attempting to improve coordination and communication in the hospital. While directors of nursing tend to desire lower levels of medical staff influence in the hospital, supervisors of respiratory therapy seek higher levels of medical staff influence. Administrators should take this information into consideration when making decisions involving the influence of the medical staff.

Recognition of the uniquely different needs, expectations and perceptions of respondents from different departments in the hospital will allow the administrator to make necessary compensations when managing. When normative information of these perceptions is developed for respondents from each department the hospital administrator may more accurately predict the consequences of alternative managerial

actions and to choose those actions which will more efficiently accomplish organizational objectives. Only with this information can he take into consideration and recognize the unique characteristics of his hospital. That is, the administrator needs to know what managerial behavior normally exists in the industry and what is unique in his hospital. This study clearly makes a contribution in the provision of such data.

Results of the study indicating which variables differ substantially among hospitals will help direct administrators' attention to specific areas when they wish to compare their hospital's performance with that of other hospitals. Also, knowledge of how hospitals' managerial behavior differs will aid administrators in determining their own hospital's unique characteristics. Certainly much of the work performed in hospitals is comparable among hospitals. For example, a department such as the laboratory performs approximately similar functions regardless of which hospital it is in. The same could be said for other departments such as housekeeping, radiology and food service. The statement, or excuse, "but my hospital is different" should become more limited in its application as additional knowledge about managerial behavior is developed. Admittedly hospitals are different but it is the opinion of the researcher that they do not differ to such an extent that their managerial behavior cannot be assessed and meaningfully compared. The differences found among hospitals associated with hospital size

should not be overlooked because with this information officials in the hospital industry will have a more thorough understanding of their industry and be able to better interpret the significance of existing differences.

It would also be of value and considerable interest to managers in hospitals to know what demands their particular job makes on their behavior and how it might likely affect their perceptions of the hospital. Many of the respondents were quite interested in just how they should be managing. Again, this study has provided basic information of this nature. It might not be uncommon for the administrator or other managers in the hospital to expect others to manage in the same manner that they do. When expected behavior from other managers is not observed these managers are often perceived to be either not interested in or perhaps incapable of doing a good job, even though they are behaving in the manner necessary to most efficiently accomplish the unique demands of their position. Such unwarranted assumptions create unnecessary tension and stress and tend to inhibit effective coordination and communication. Information provided in this study should result in more realistic expectations of the appropriateness of the managerial behavior exhibited in various positions throughout the hospital.

Based on the findings of the research and discussions with hospital administrators and managers, the following recommendations can be made:

(1) administrators should further take into consideration the manner in which situational elements influencing managerial behavior and management styles differ among the various departments in the hospital. The previous analysis of managerial positions and the style profiles developed should be of considerable help in achieving this objective;

(2) administrators should recognize and take into account the fact that respondents from the various departments in the hospital hold different perceptions of the hospital and the people in it. Dissemination of this information to all managerial levels would facilitate coordination and communication in the hospital;

(3) administrators should become more aware of why their hospital differs from normative data of other comparable hospitals and the resulting managerial behavior attributable to such deviations;

(4) administrators should take into consideration the costs of using too high a task orientation, and the benefits of emphasizing a high relationships orientation in their hospital, recognizing, of course, that certain managerial positions utilize and probably require a task oriented type of management.

Only administrators were mentioned in the above recommendations because they are best able to make use of the findings of this research. In essence, the researcher is suggesting

that hospital administrators need to assess and compare the managerial behavior in their hospital with that of other hospitals and once this has been done to ascertain why their hospital differs and the implications of identified differences.

It appeared to the researcher that the hospitals participating in this study were utilizing contemporary management practices. However, a more universal application of basic management concepts throughout all levels in the hospital is needed.

Further research could quite profitably be directed toward developing norms of managerial behavior for each of the generally recognized positions existing in hospitals. Also, a clearer understanding of the influence of hospital size on managerial behavior in hospitals is needed. Future research demonstrating causal relationships between managerial behavior and levels of hospital efficiency should prove to be of considerable value.

Behavioral scientists should not overlook the fact that hospitals provide an ideal laboratory in which to apply and advance the theory of organizational and managerial behavior. In few, if any, other industries may we find comparable organizations which equal the complexity and diversity of hospitals. It appears that hospitals are only now becoming concerned with behavioral science techniques. Certainly they stand to profit considerably from the application of these techniques.

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APPENDIX A

INITIAL CONTACT LETTER SENT TO HOSPITAL ADMINISTRATORS

Dear Mr. _____:

We would like to invite you to participate in a study that we are conducting in the College of Business Administration at Oklahoma State University concerning the management styles of those individuals holding managerial positions in hospitals. It is anticipated that approximately twenty hospitals in Oklahoma will participate in this study. The research has already been conducted in several Oklahoma hospitals with favorable results.

Objectives of the research are: (1) to analyze management styles currently being used, (2) to obtain some indication of how effective such styles are perceived to be and (3) to identify potential training and development needs.

The results will be of value to the participating hospitals and the hospital industry in general by identifying existing patterns of administration and common areas in which future training and education may prove beneficial. Participating hospitals will be provided information allowing them to compare their hospital's data against the normative data of all participating hospitals. Individual managers will benefit from the study through an increased understanding of the manner in which they manage.

The study will require approximately two hours of participating administrator's, associate, and assistant administrator's time. During this period of time, these individuals would take a Management Style Diagnosis test and complete a brief questionnaire.

Of course, all information gathered will be confidential and no hospital or individual will be identified with any of the data provided.

Mr. Nix will telephone you shortly to answer any questions you may have concerning this study and identify your interest in participating in this study.

Sincerely,

Ralph F. Catalanello
Associate Professor of
Administrative Sciences

David E. Nix
Instructor of
Administrative Sciences

RFD:DEN:jbs

APPENDIX B

THE BASIC QUESTIONNAIRE

A STUDY OF MANAGEMENT STYLES AND SITUATIONAL ELEMENTS AFFECTING THEM IN OKLAHOMA HOSPITALS

by

David E. Nix
Department of Administrative Sciences
College of Business Administration
Oklahoma State University

Questionnaire

Information given by you will be kept strictly confidential and in no way will specific individuals or hospitals be identified.

Instructions

I. The study is divided into two basic parts which are:

   A. A questionnaire designed to obtain information which might affect the manner in which you manage. This will take about 35 minutes to complete.

   B. A test which is designed to give some indication of the manner in which you manage. The test usually takes about 30 minutes to complete.

II. Your test will be scored and an interpretation of the results will be made personally for you by the researcher on the same day you take the test.

III. It is recognized that many of the questions deal with complex subjects, however, there are no right or wrong answers so please answer all the questions.

IV. If you want to modify or explain your responses to any of the questions, simply jot a note in the margin.

QUESTIONNAIRE

I. GENERAL INFORMATION

1. Your present position or title is _____.

2. Your age is _____.

3. For approximately how many years have you been in your present position? _____

4. How many years have you worked in this hospital? _____

5. How many years have you worked in the health services field? ___

6. Check highest level of education attained:

_____ Less than High School _____ Some Graduate Training

_____ High School Diploma _____ Master's Degree

_____ Bachelor's Degree _____ Other, Please Specify _____

7. The number of subordinates that you directly supervise is _____.

II. QUESTIONS ABOUT THE TYPE OF WORK YOUR SUBORDINATES ARE INVOLVED IN

Using the scale provided, please indicate the extent to which you feel each of the following statements apply to your subordinates by circling one of the five numbers provided at the end of each question.

Not at all	= 1
Slightly	= 2
Moderately	= 3
Considerably	= 4
To a great extent	= 5

1. The subordinates are required to think rather than to act. (1, 2, 3, 4, 5)

2. The subordinates' work and work method follow established procedures. (1, 2, 3, 4, 5)

3. The subordinates' work is in and of itself interesting, motivating, or attractive. (1, 2, 3, 4, 5)

4.	Subordinates are required to be personally committed to their own individual tasks to achieve effectiveness standards.	(1, 2, 3, 4, 5)
5.	The subordinates' tasks are simple to perform.	(1, 2, 3, 4, 5)
6.	The position makes high skill or judgment demands on the individual subordinate.	(1, 2, 3, 4, 5)
7.	Each subordinate has discretion over his own effectiveness standards.	(1, 2, 3, 4, 5)
8.	Each subordinate can select the method, tools, or approach he wishes to use.	(1, 2, 3, 4, 5)
9.	Substandard work by an individual subordinate is not immediately detected.	(1, 2, 3, 4, 5)
10.	Each subordinate must develop new methods and ideas to perform his own work.	(1, 2, 3, 4, 5)
11.	The degree to which the subordinates are required to use physical effort.	(1, 2, 3, 4, 5)
12.	The subordinates know less about the task than does the manager.	(1, 2, 3, 4, 5)
13.	Unplanned and unanticipated events might occur which require corrective action by the manager.	(1, 2, 3, 4, 5)
14.	The subordinates frequently need to be given directions.	(1, 2, 3, 4, 5)
15.	The subordinate's performance is measurable, and the impact of remedial actions taken by the manager can be evaluated.	(1, 2, 3, 4, 5)
16.	The subordinates must talk with each other to complete their tasks.	(1, 2, 3, 4, 5)
17.	The subordinates must depend on each other in meeting their own effectiveness standards.	(1, 2, 3, 4, 5)
18.	Subordinates must depend on each other in meeting their own effectiveness standards.	(1, 2, 3, 4, 5)
19.	More than one effective solution is possible; the relative effectiveness of these solutions is difficult to measure but improved by interaction.	(1, 2, 3, 4, 5)

20. The manager must talk with the subordinates as a group for them to complete their tasks. (1, 2, 3, 4, 5)

III. QUESTIONS ABOUT THE INFLUENCE OF THE MEDICAL STAFF

Using the scale provided, please indicate the extent to which you feel each of the following statements apply to your job by circling one of the five numbers provided at the end of each question.

Very Little	= 1
Some	= 2
A Moderate Amount	= 3
A Considerable Amount	= 4
A Great Deal	= 5

1. In general, how much influence do you think (the medical staff) has on how this hospital as a total organization functions--on how it is run and how it operates? (1, 2, 3, 4, 5)

2. In general, how much influence do you think (the medical staff) has on how your department, as a whole, functions--on how it is run and how it operates? (1, 2, 3, 4, 5)

3. In general, how much influence do you think (the medical staff) should have on how this hospital as a total organization functions--on how it is run and how it operates? (1, 2, 3, 4, 5)

4. In general, how much influence do you think (the medical staff) should have on how your department, as a whole, functions--on how it is run and how it operates? (1, 2, 3, 4, 5)

IV. QUESTIONS ABOUT THE ATMOSPHERE IN YOUR HOSPITAL AND IN YOUR DEPARTMENT

Think of the general atmosphere of your hospital and then rate your hospital on each of the following scales.

Please make only one mark per scale and mark each scale.

1. Friendly :___:___:___:___:___:___:___:___: Unfriendly
2. Accepting :___:___:___:___:___:___:___:___: Rejecting
3. Frustrating :___:___:___:___:___:___:___:___: Satisfying
4. Ineffective :___:___:___:___:___:___:___:___: Effective
5. Unenthusiastic:___:___:___:___:___:___:___:___: Enthusiastic

6. Productive :___:___:___:___:___:___:___:___: Nonproductive
7. Warm :___:___:___:___:___:___:___:___: Cold
8. Uncooperative :___:___:___:___:___:___:___:___: Cooperative
9. Supportive :___:___:___:___:___:___:___:___: Hostile
10. Interesting :___:___:___:___:___:___:___:___: Boring
11. Unsuccessful :___:___:___:___:___:___:___:___: Successful

Think of the general atmosphere of your Department and then rate your department on each of the following scales.

Please make only one mark per scale and mark each scale.

1. Friendly :___:___:___:___:___:___:___:___: Unfriendly
2. Accepting :___:___:___:___:___:___:___:___: Rejecting
3. Frustrating :___:___:___:___:___:___:___:___: Satisfying
4. Ineffective :___:___:___:___:___:___:___:___: Effective
5. Unenthusiastic:___:___:___:___:___:___:___:___: Enthusiastic
6. Productive :___:___:___:___:___:___:___:___: Nonproductive
7. Warm :___:___:___:___:___:___:___:___: Cold
8. Uncooperative :___:___:___:___:___:___:___:___: Cooperative
9. Supportive :___:___:___:___:___:___:___:___: Hostile
10. Interesting :___:___:___:___:___:___:___:___: Boring
11. Unsuccessful :___:___:___:___:___:___:___:___: Successful

V. QUESTIONS REGARDING STRESS IN YOUR DEPARTMENT AND HOSPITAL

Using the scale provided, please indicate the extent to which you feel each of the following statements apply to your job by circling one of the five numbers provided at the end of each question.

Very Little	= 1
Some	= 2
A Moderate Amount	= 3
A Considerable Amount	= 4
A Great Deal	= 5

1. In general how much tension and stress do you believe there is in your hospital? (1, 2, 3, 4, 5)

2. In general how much tension and stress do you believe would normally exist in a hospital such as yours? (1, 2, 3, 4, 5)

3. In general how much tension and stress do you think there is in your department? (1, 2, 3, 4, 5)

4. In general how much tension and stress do you believe would normally exist in a department such as yours? (1, 2, 3, 4, 5)

VI. QUESTIONS REGARDING COMMUNICATIONS IN YOUR DEPARTMENT AND HOSPITAL

Using the scale provided, please indicate the extent to which you feel each of the following statements apply to your job by circling one of the five numbers provided at the end of each question.

Very Poorly	= 1
Poorly	= 2
Normally	= 3
Well	= 4
Very Well	= 5

1. In general how well do you feel activity is coordinated in your department? (1, 2, 3, 4, 5)

2. In general how well do you feel activity is coordinated in your hospital? (1, 2, 3, 4, 5)

3. In general how effective do you perceive communications within your department to be? (1, 2, 3, 4, 5)

4. In general how effective do you perceive communications within your hospital to be? (1, 2, 3, 4, 5)

VII. QUESTIONS REGARDING HOW YOU PERCEIVE YOUR SUPERIORS, COWORKERS, AND SUBORDINATES

For each of the following questions, please circle the number which best represents the behavior being described. For each of the following twenty questions you should circle three numbers, that is: one number describing the behavior of your superiors, one number describing the behavior of your coworkers and one number describing the behavior of your subordinates.

Please use the following key:

Never	= 1
Seldom	= 2
Occasionally	= 3
Often	= 4
Always	= 5

		Please answer in regard to: Superiors	Coworkers	Subordinates
1.	They urge the group to beat its previous record.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2.	They look out for the personal welfare of group members.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3.	They do little things to make it pleasant to be a member of the group	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4.	They keep the group working up to capacity.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5.	They keep the work moving at a rapid pace.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6.	They stress being ahead of competing groups.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7.	They treat all group members as their equals.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8.	They drive hard when there is a job to be done.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9.	They give advance notice of changes.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10.	They push for increased production.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

		Please answer in regard to: Superiors	Coworkers	Subordinates
11.	They encourage overtime work.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
12.	They are friendly and approachable.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
13.	They are willing to make changes.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
14.	They ask the members to work harder.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
15.	They put suggestions made by the group into operation.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
16.	They keep to themselves.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
17.	They refuse to explain their actions.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
18.	They needle members for greater effort.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
19.	They permit the members to take it easy in their work.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
20.	They act without consulting the group.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Thank you for your cooperation.

Please start on the Management Style Diagnosis Test.

AFTER YOU HAVE COMPLETED THE MANAGEMENT STYLE DIAGNOSIS TEST, PLEASE FILL IN THE FOLLOWING INFORMATION:

The unadjusted raw scores from your Management Style Diagnosis Test (page one, line 5) are:

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

G. _____

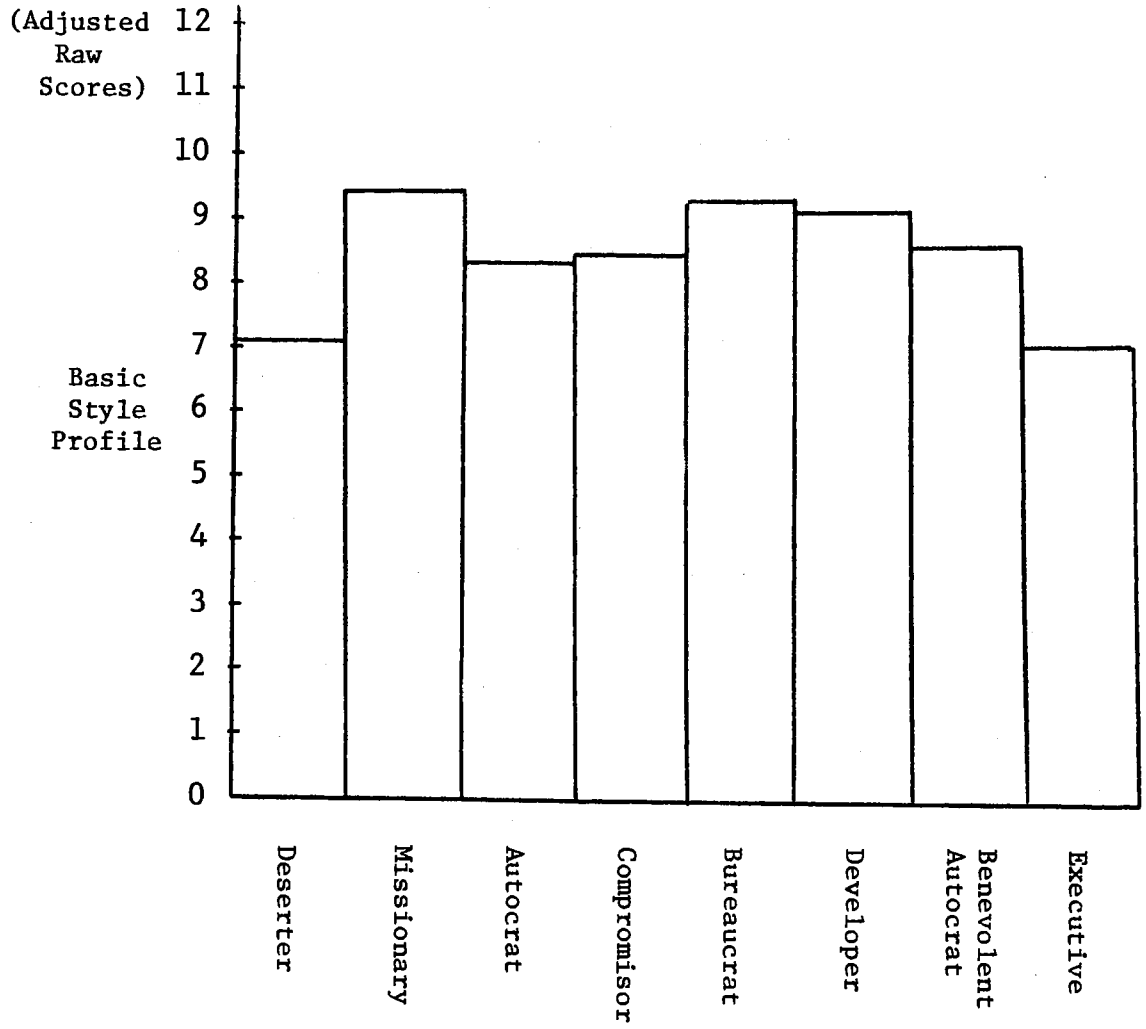
H. _____

APPENDIX C

PROFILES OF THE VARIOUS MANAGERIAL POSITIONS CONSIDERED

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF ADMINISTRATOR



Task Orientation 1.53

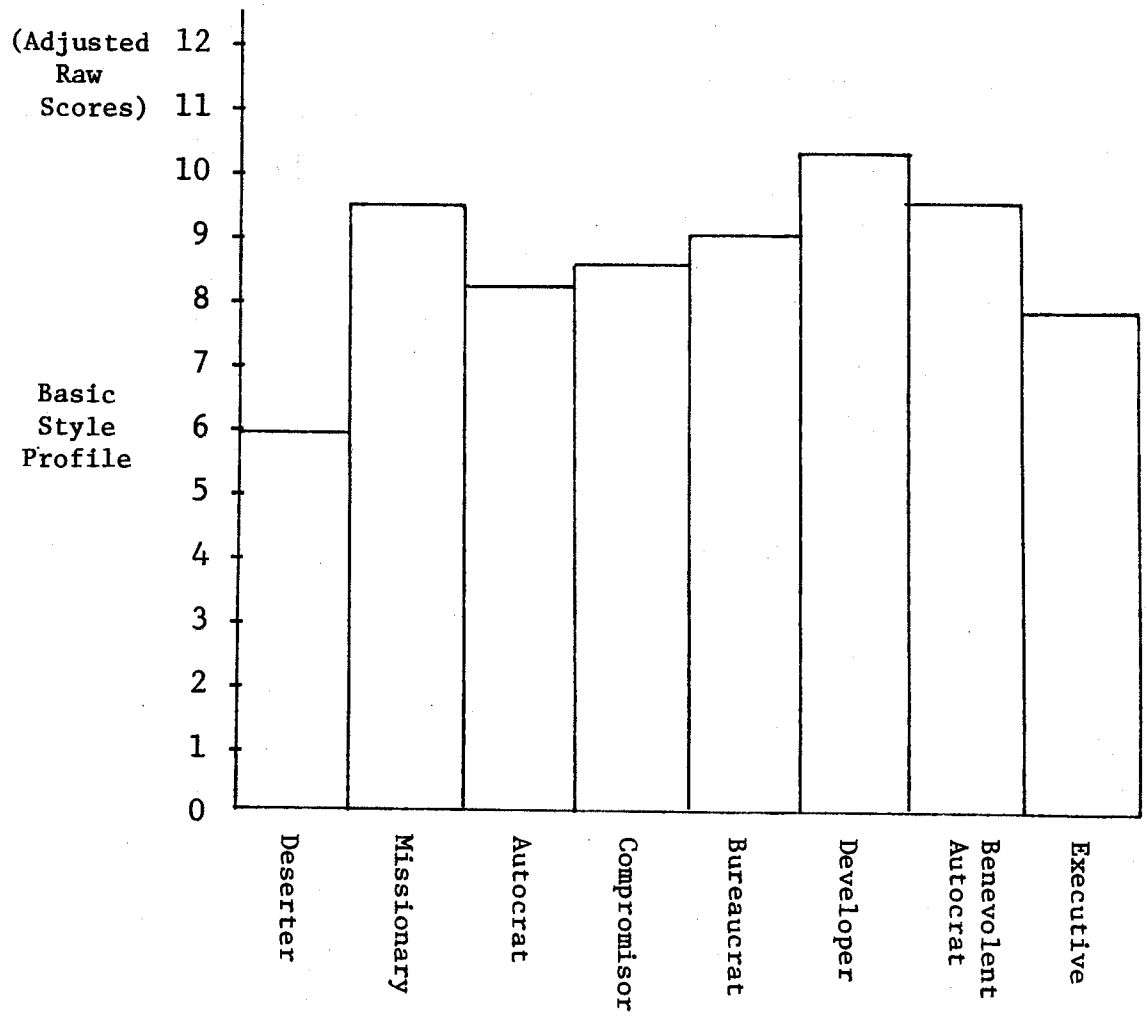
Relationships Orientation 2.07

Effectiveness* 2.02

n = 9

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION
FOR THE SUBTITLE OF ASSOCIATE AND
ASSISTANT ADMINISTRATORS



Task Orientation 1.80

Relationships Orientation 2.57

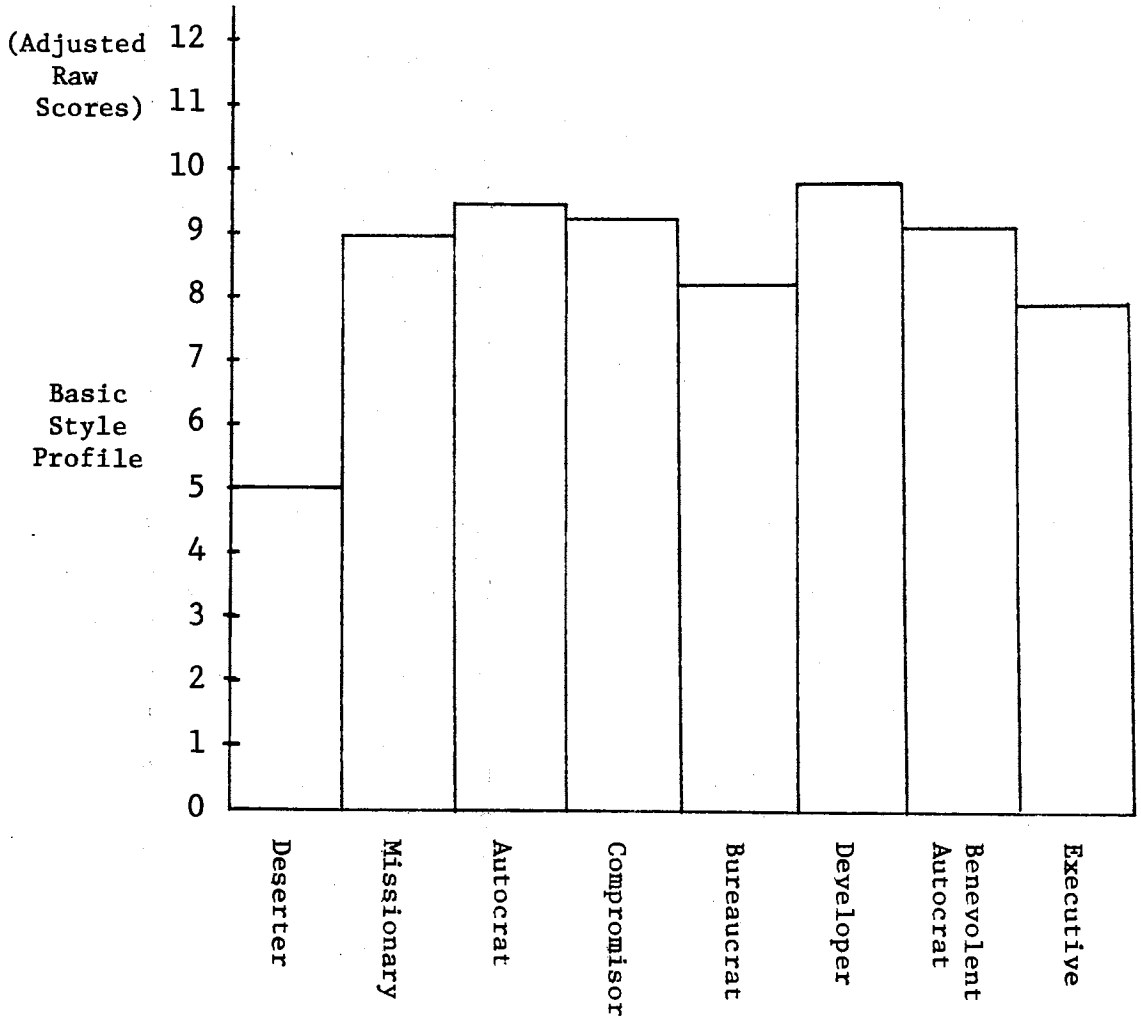
Effectiveness* 2.84

n = 26

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF ACCOUNTANT



Task Orientation 2.63

Relationships Orientation 2.86

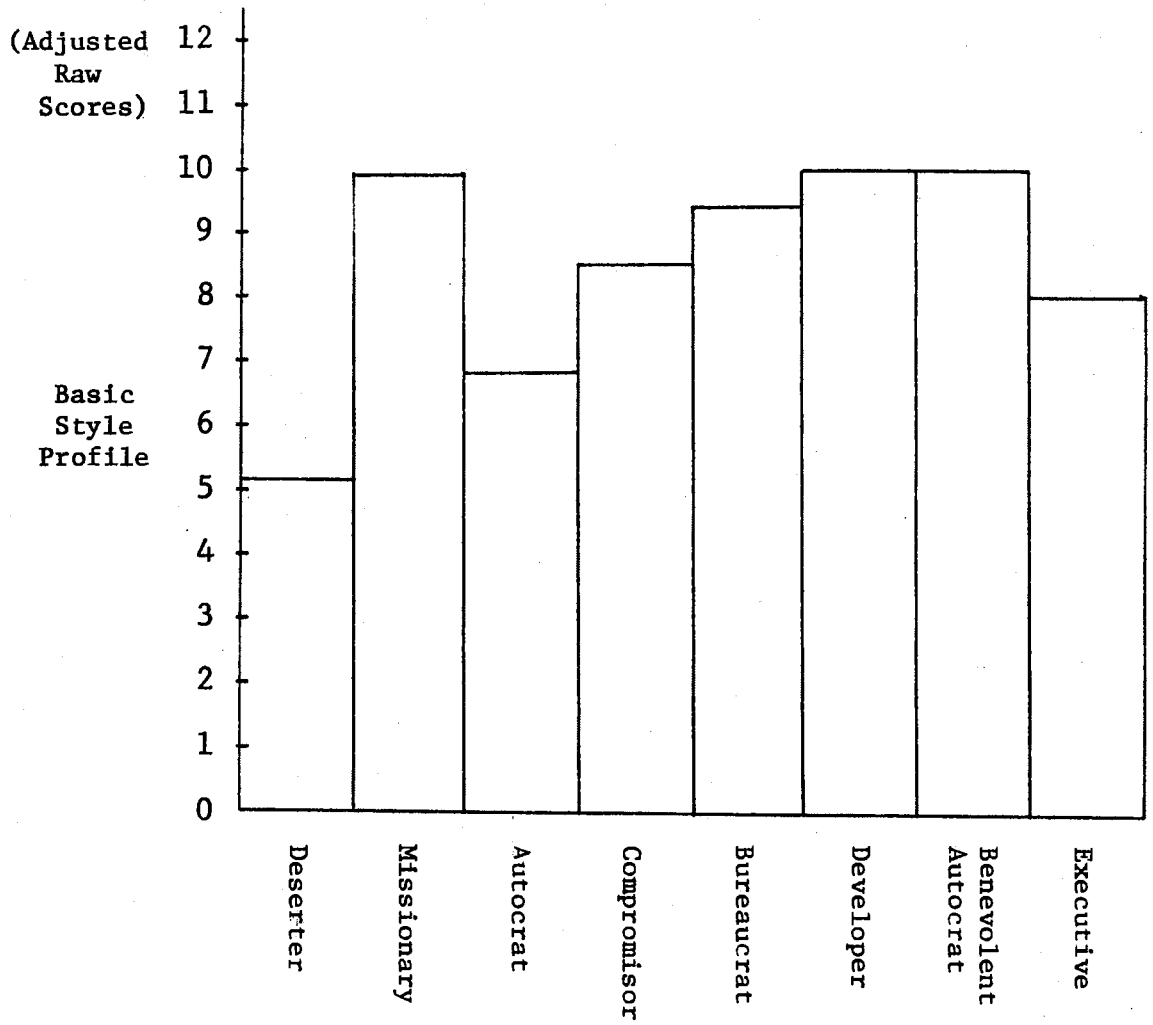
Effectiveness* 2.45

n = 12

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF PERSONNEL MANAGER



Task Orientation 1.69

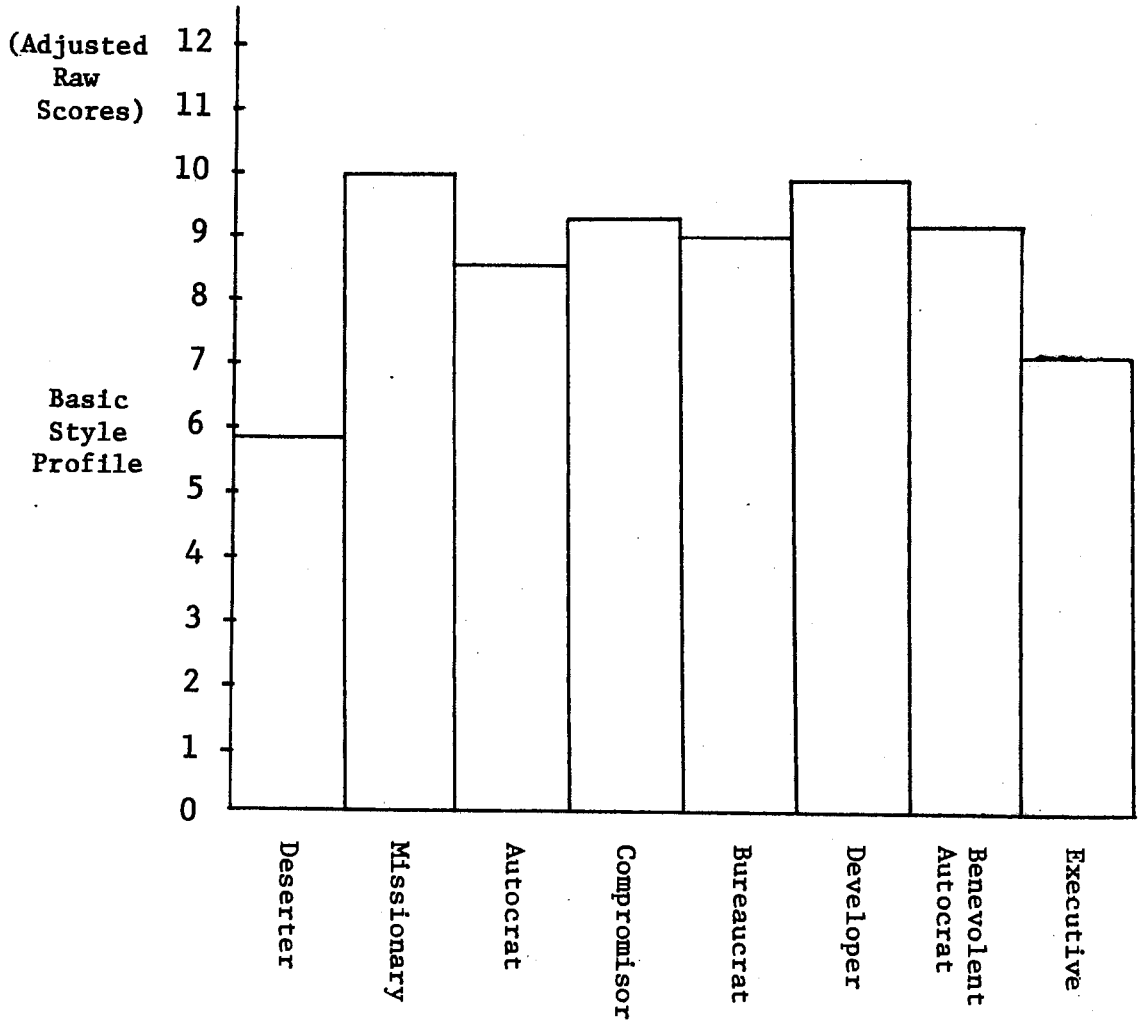
Relationships Orientation 3.02

Effectiveness* 3.20

n = 11

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION
FOR THE SUBTITLE OF DIRECTOR AND
ASSOCIATE DIRECTOR OF NURSING



Task Orientation 1.81

Relationships Orientation 2.73

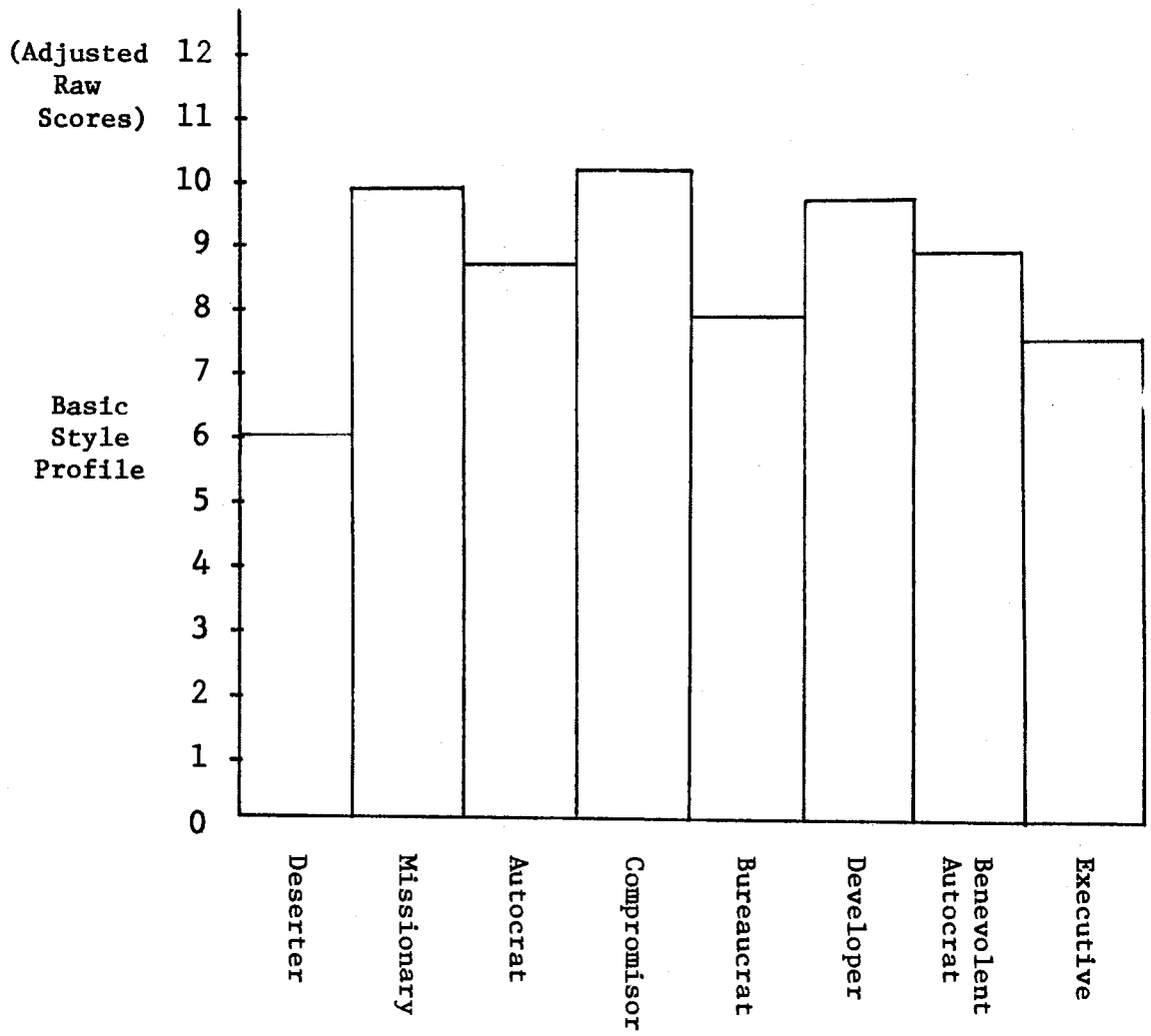
Effectiveness* 2.19

n = 34

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF RESPIRATORY THERAPY



Task Orientation 2.05

Relationships Orientation 3.08

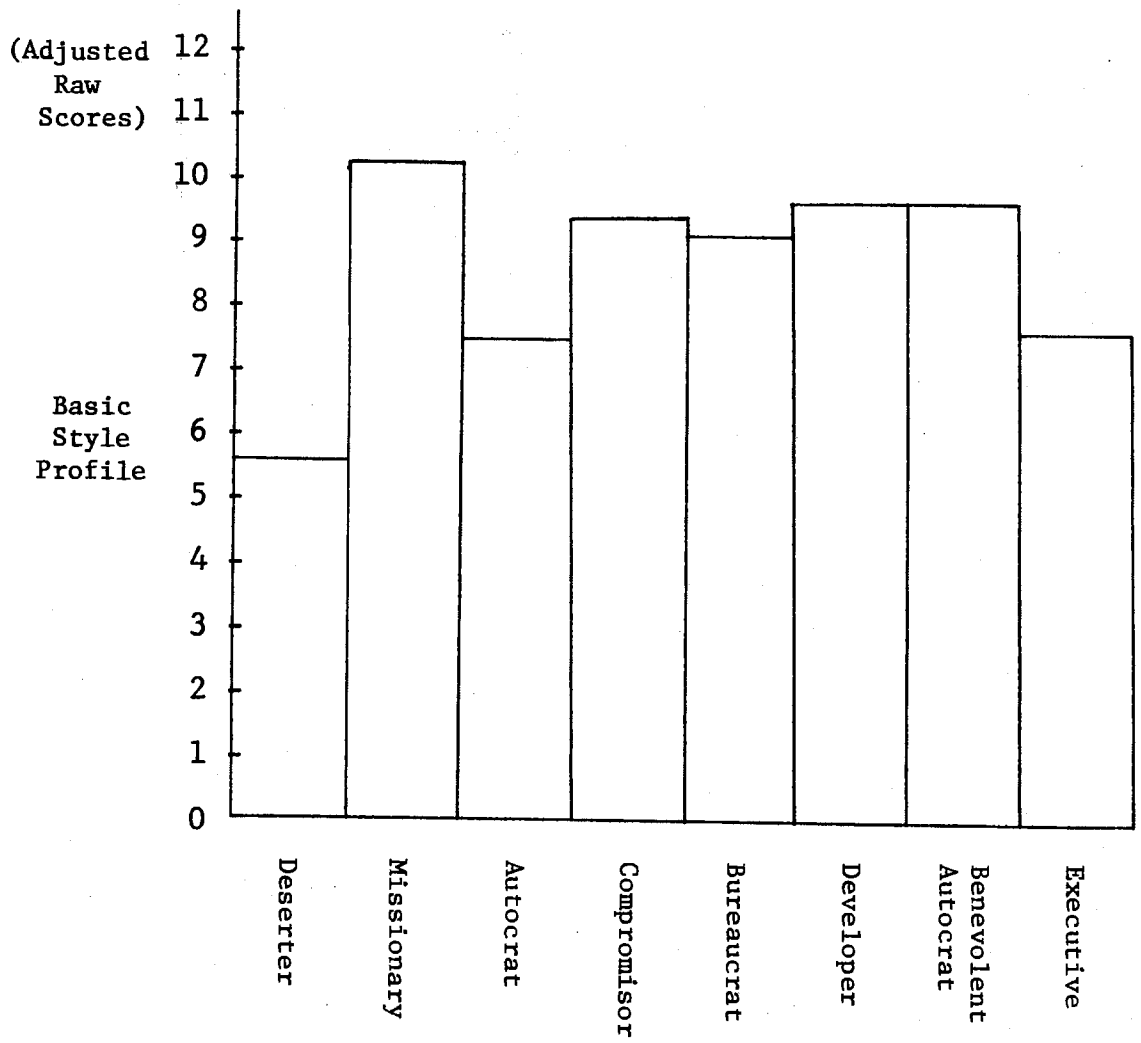
Effectiveness* 1.78

n = 8

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF PHYSICAL THERAPY



Task Orientation 1.57

Relationships Orientation 3.20

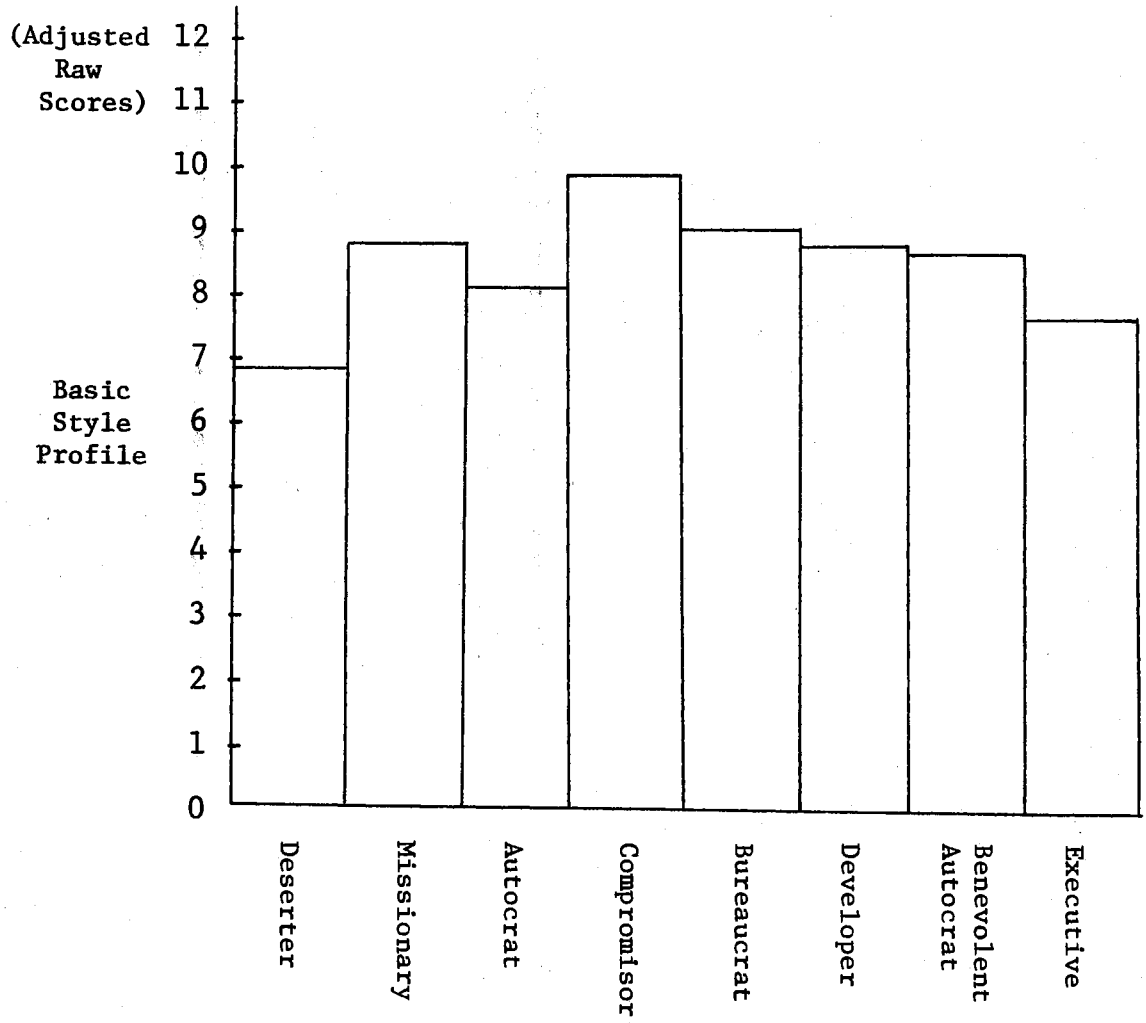
Effectiveness* 2.71

n = 9

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF LABORATORY



Task Orientation 1.96

Relationships Orientation 2.44

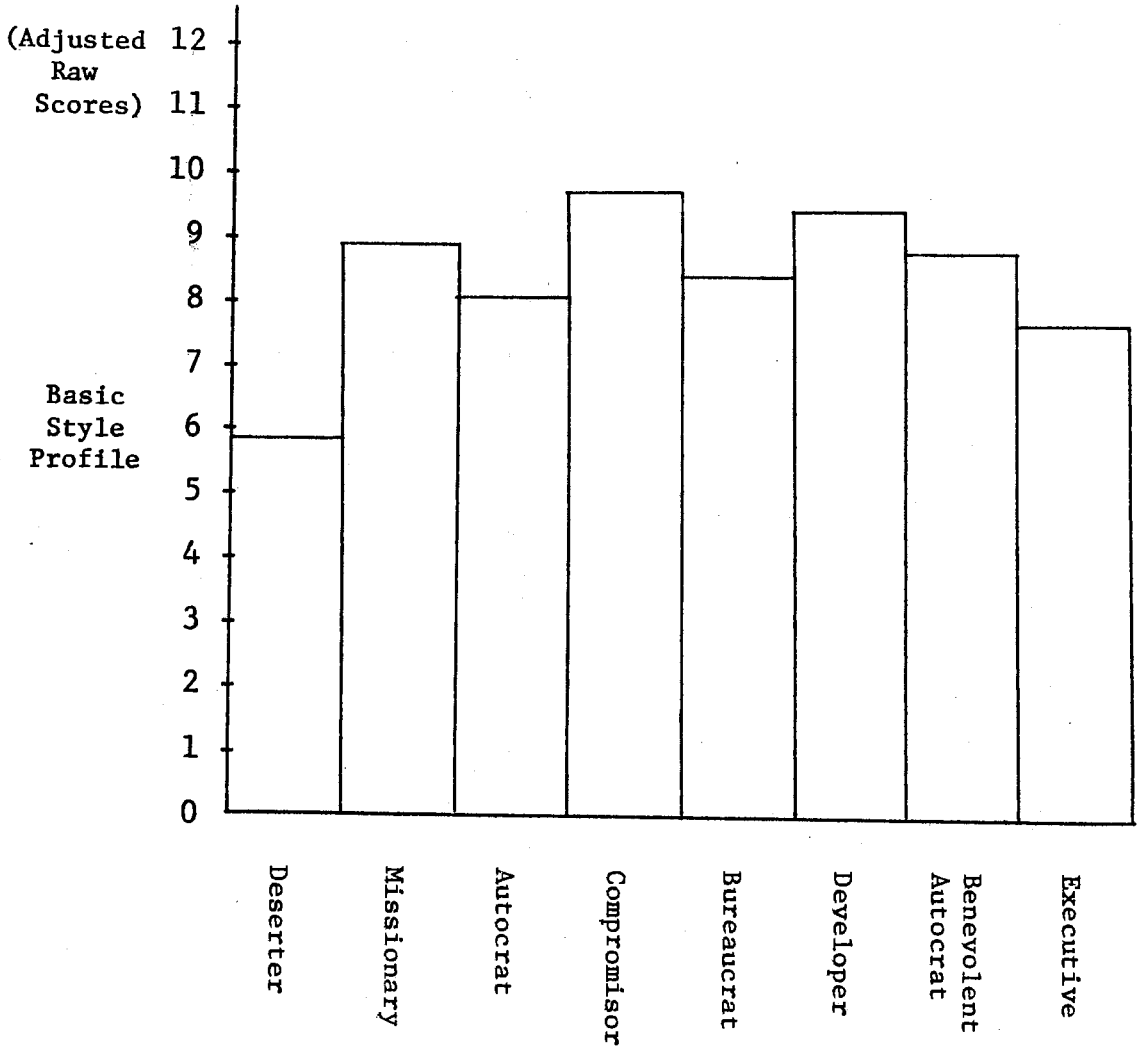
Effectiveness* 1.99

n = 17

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF RADIOLOGY



Task Orientation 2.09

Relationships Orientation 2.76

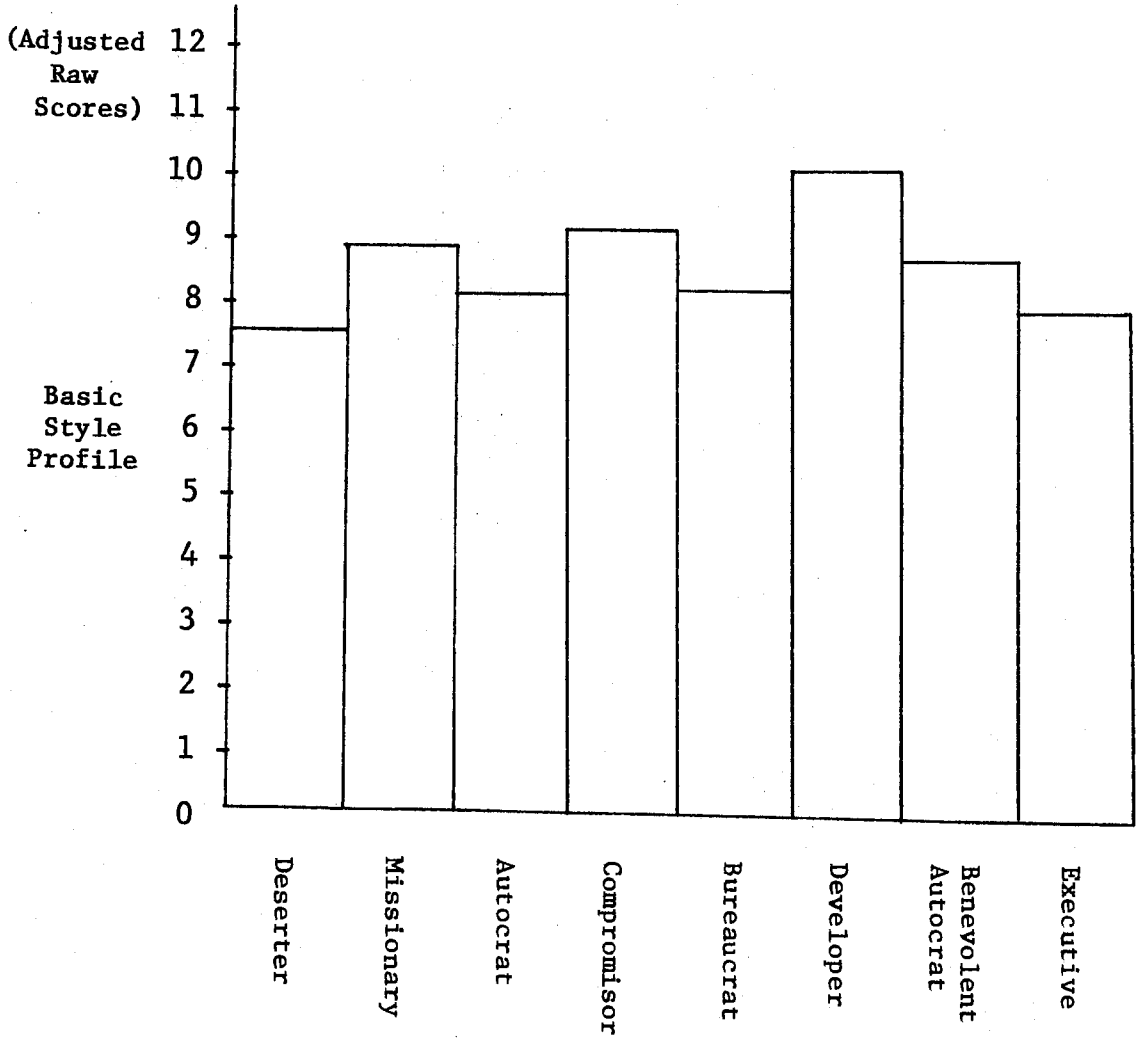
Effectiveness* 2.24

n = 21

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF PHARMACOLOGIST



Task Orientation 1.56

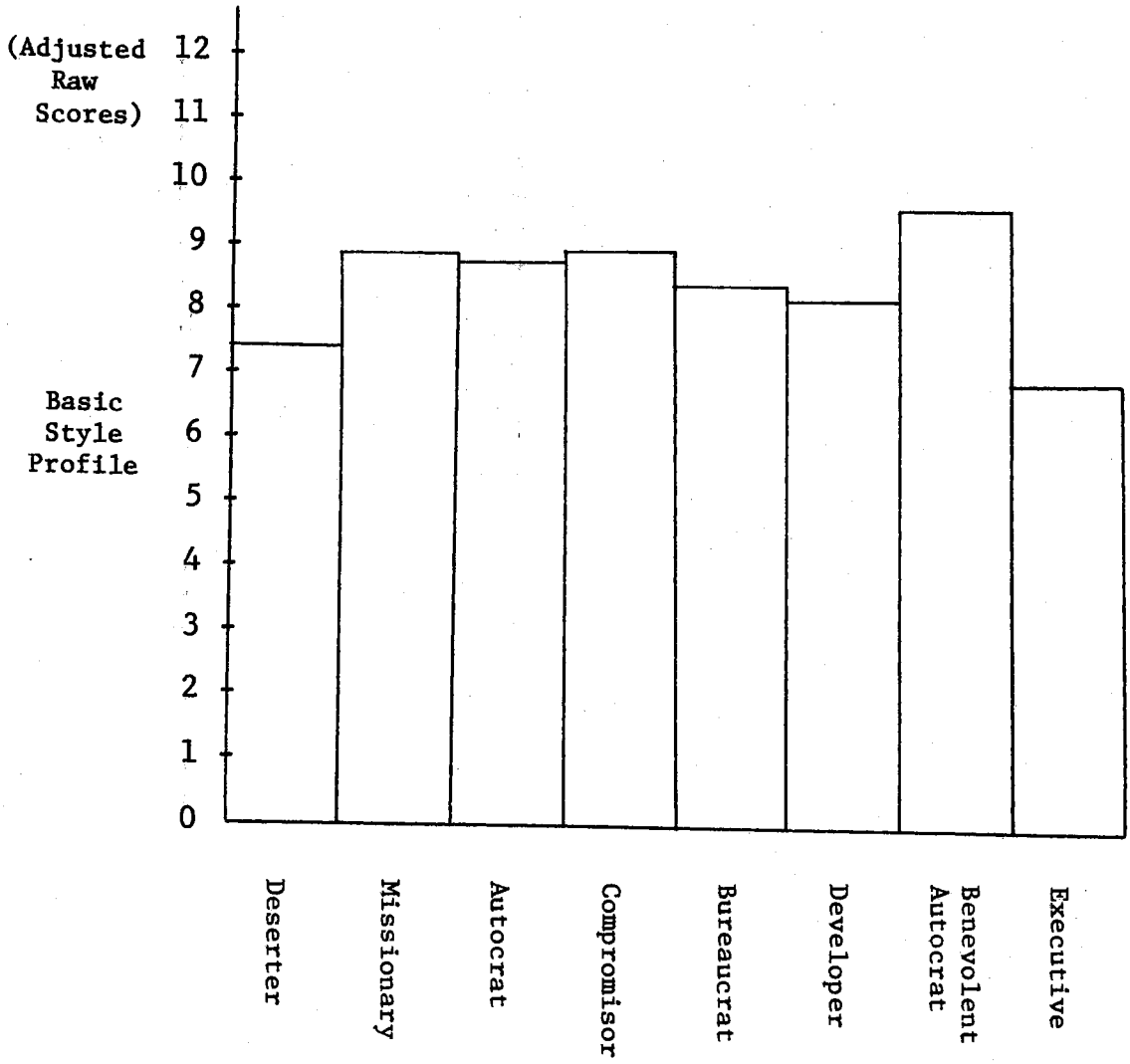
Relationships Orientation 2.42

Effectiveness* 2.13

n = 11

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION FOR THE SUBTITLE OF HOUSEKEEPING AND LAUNDRY



Task Orientation 2.24

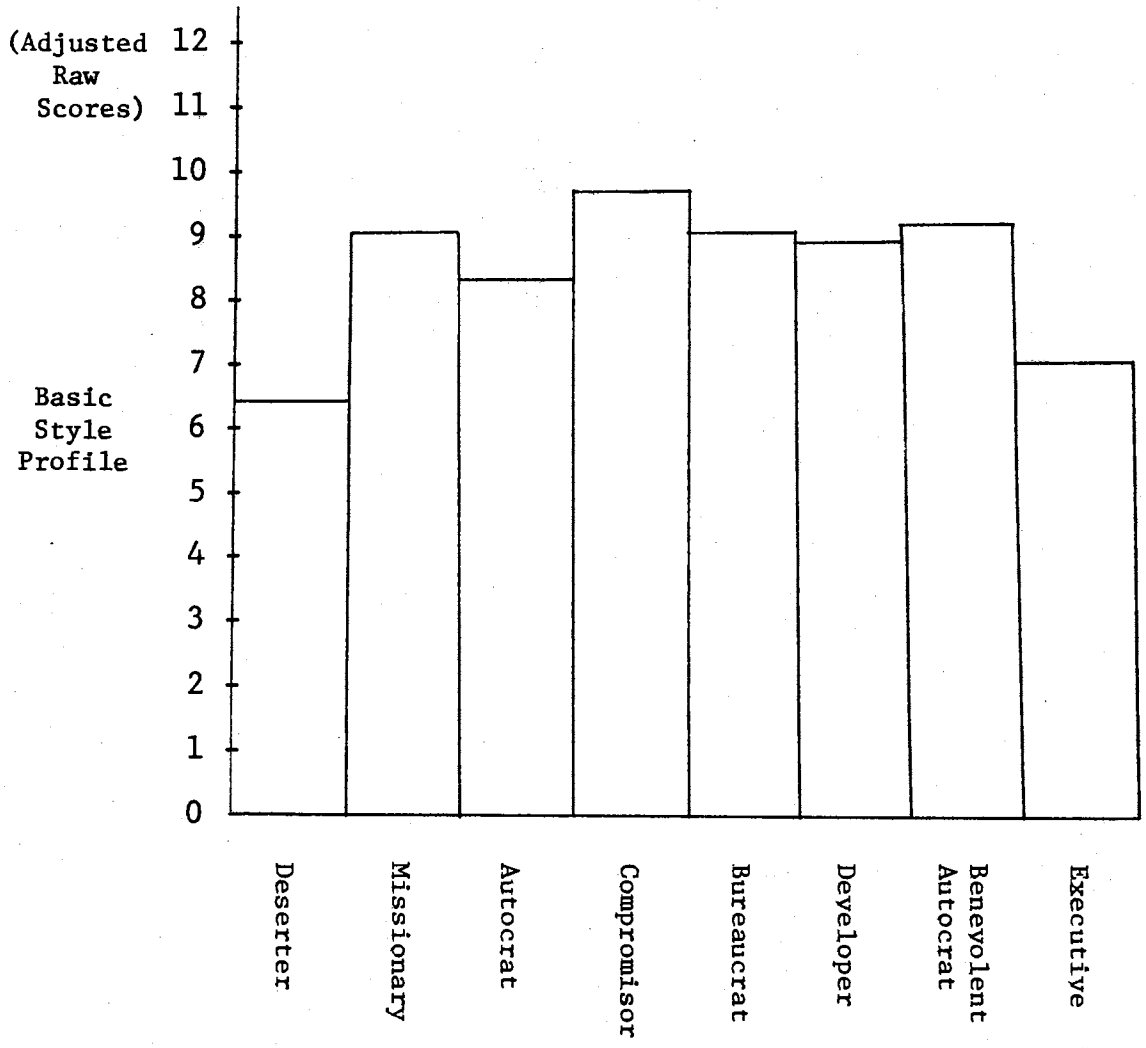
Relationships Orientation 1.79

Effectiveness* 1.71

n = 15

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION FOR THE SUBTITLE OF ENGINEER AND MAINTENANCE



Task Orientation 2.26

Relationships Orientation 2.33

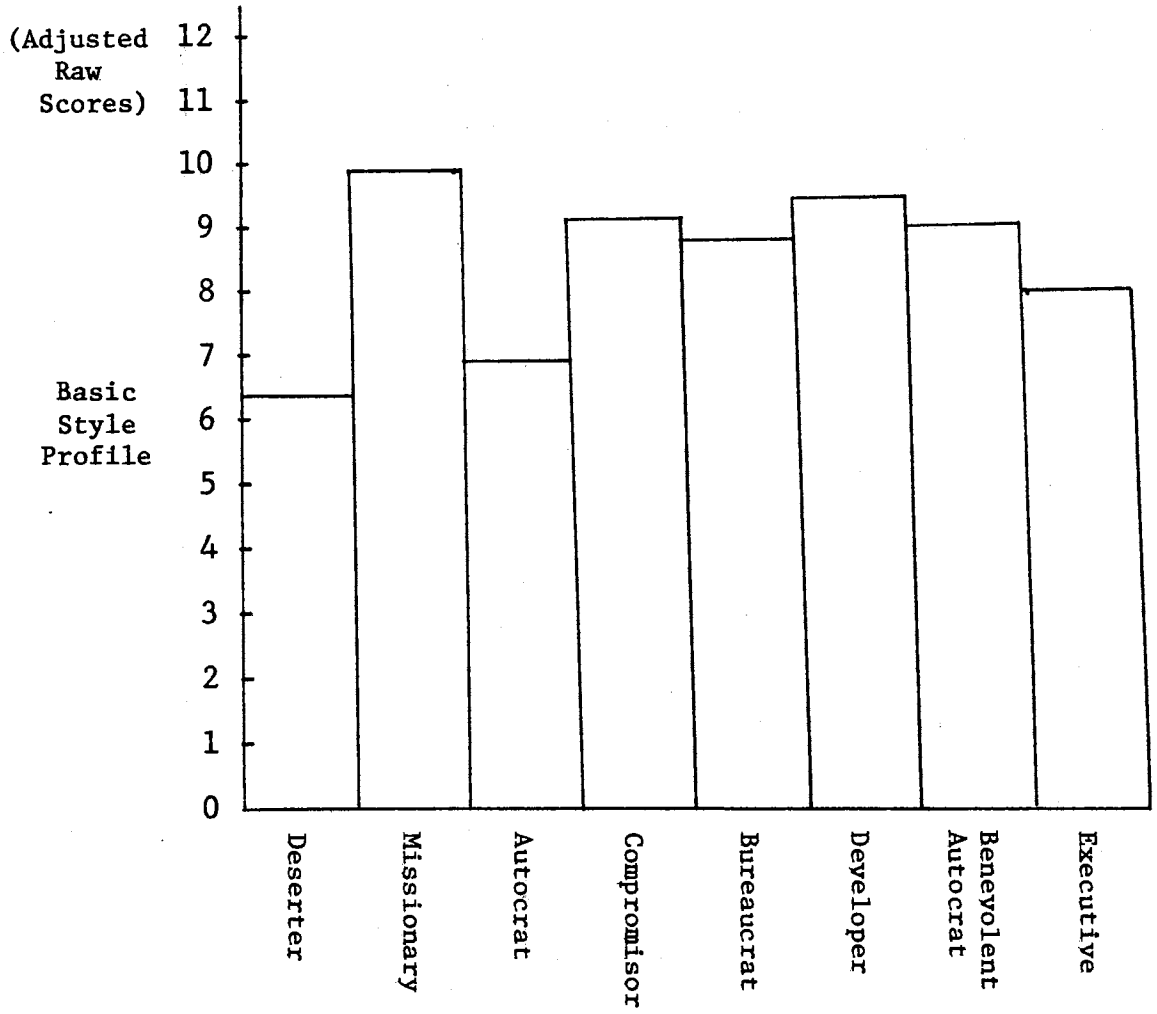
Effectiveness* 1.94

n = 16

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF FOOD SERVICE



Task Orientation 1.59

Relationships Orientation 2.89

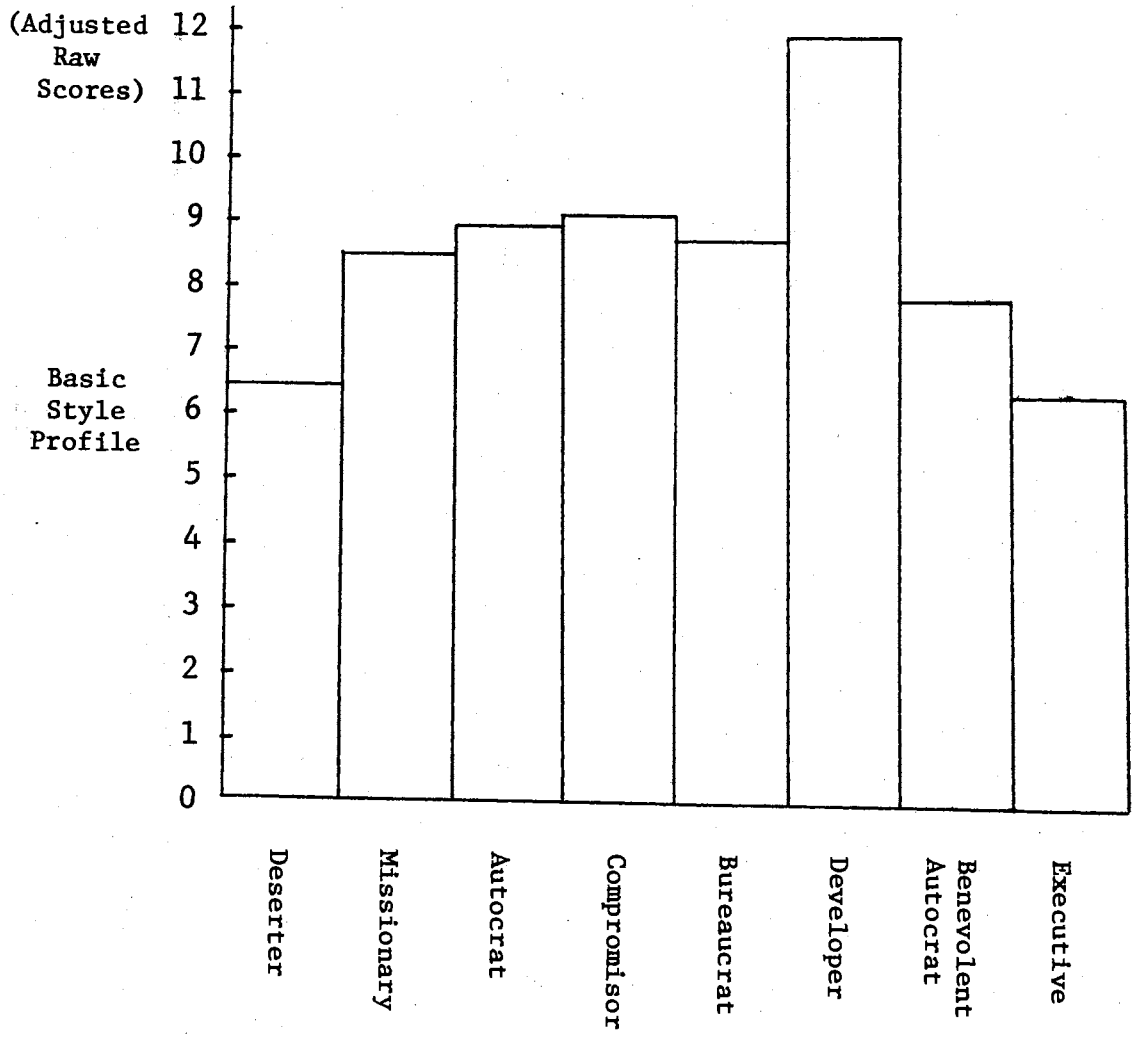
Effectiveness* 2.56

n = 14

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF DIRECTOR OF VOLUNTEERS



Task Orientation 1.07

Relationships Orientation 2.78

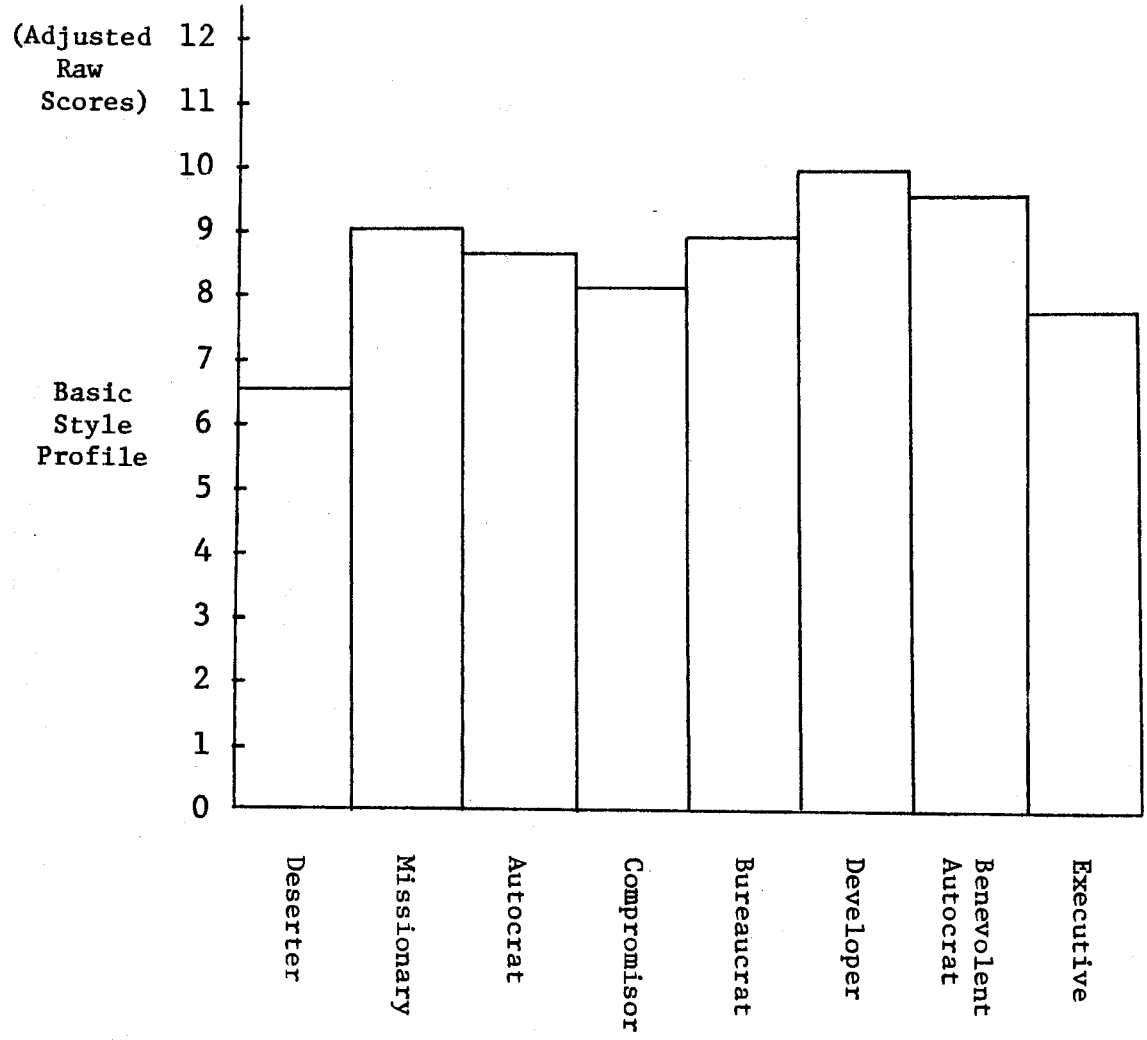
Effectiveness* 2.51

n = 9

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF PURCHASING



Task Orientation 1.68

Relationships Orientation 2.24

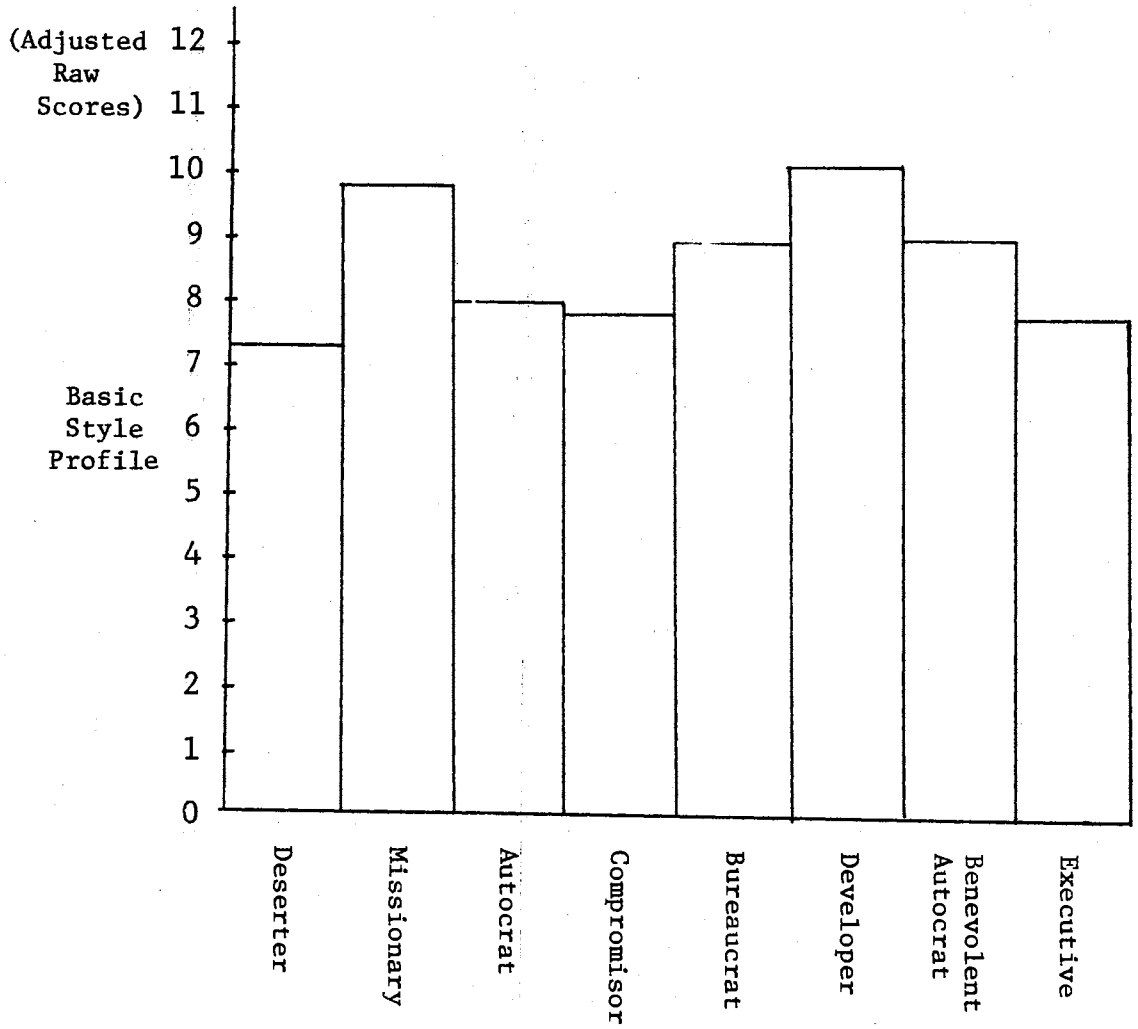
Effectiveness* 2.85

n = 15

*As indicated by the Management Style Diagnosis Test.

MANAGEMENT STYLE DIAGNOSIS TEST INFORMATION

FOR THE SUBTITLE OF MEDICAL RECORDS



Task Orientation 1.09

Relationships Orientation 2.46

Effectiveness* 2.78

n = 16

*As indicated by the Management Style Diagnosis Test.

VITA

David E. Nix

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN ANALYSIS OF MANAGERIAL BEHAVIOR IN OKLAHOMA HOSPITALS

Major Field: Business Administration

Biographical:

Personal Data: Born in Colorado Springs, Colorado, April 12, 1943, the son of Mr. and Mrs. Ben M. Nix.

Education: Graduated from Palmer High School, Colorado Springs, Colorado, in June, 1961; received the Bachelor of Arts degree in Business from Western State College of Colorado, Gunnison, Colorado, in 1967, with majors in business and social studies; received the Master of Arts degree from Western State College of Colorado, Gunnison, Colorado, in 1968, with a major in business; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in July, 1974.

Professional Experience: Accountant-Auditor, United States General Accounting Office, 1968-69; part-time instructor, Oklahoma State University, 1971-74.

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