

## INFORMATION TO USERS

The most advanced technology has been used to photograph and reproduce this manuscript from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book. These are also available as one exposure on a standard 35mm slide or as a 17" x 23" black and white photographic print for an additional charge.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

# U·M·I

University Microfilms International  
A Bell & Howell Information Company  
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA  
313/761-4700 800/521-0600



**Order Number 9005809**

**An investigation of the relationships among leadership styles,  
occupational stress, and Type A behavior of principals**

**Bradford, Norman Charles, Jr., Ed.D.**

**The University of North Carolina at Greensboro, 1989**

**Copyright ©1989 by Bradford, Norman Charles, Jr. All rights reserved.**

**U·M·I**  
300 N. Zeeb Rd.  
Ann Arbor, MI 48106



AN INVESTIGATION OF THE RELATIONSHIPS AMONG  
LEADERSHIP STYLES, OCCUPATIONAL STRESS,  
AND TYPE A BEHAVIOR OF PRINCIPALS

by

Norman Charles Bradford, Jr.

A Dissertation Submitted to  
the Faculty of the Graduate School at  
The University of North Carolina at Greensboro  
in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

Greensboro  
1989

Approved by

  
\_\_\_\_\_  
Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Dissertation Adviser C. M. Aduella

Committee Members James Runkel  
Joseph E. Boyson  
Edwin D. Bee

March 23, 1959  
Date of Acceptance by Committee

March 23, 1959  
Date of Final Oral Examination

© 1989 by Norman Charles Bradford, Jr.

## ABSTRACT

BRADFORD, JR., NORMAN CHARLES, Ed. D. An Investigation of the Relationships Among Leadership Styles, Occupational Stress, and Type A Behavior of Principals. (1989) Directed by Dr. Charles Achilles. 169pp.

Principals experience many pressures as they perform their daily duties. They are involved with teachers, parents, students, and members of the community. They must motivate, discipline, counsel, and direct activities. Their leadership styles, behavioral characteristics, and abilities to deal with stress are important in their roles as administrative and instructional leaders of the school. This study investigated the relationships among leadership styles and effectiveness, degree of occupational stress, and Type A behavioral characteristics of principals.

The Leader Effectiveness and Adaptability Description-Self, the Administrative Stress Index, and the Behavior Activity Profile were mailed to 56 Middle, Junior, and High school principals in Western North Carolina. Surveys from 51 principals (91%) were returned.

The Spearman rho and the Pearson  $r$  correlation procedures were used to determine the degree of relationship among variables in the study. Six null hypotheses were proposed. Statistical analyses of the hypotheses were obtained by using the Statistical Package for Social Sciences-X.

An analysis of the data produced these important findings:

- 1) Principals experienced less task-based stress as their dominant leadership style moved from Style 1 toward Style 3.
- 2) Principals experienced more conflict-mediating stress as their leadership effectiveness/adaptability increased.
- 3) Principals demonstrated no significant relationships between Type A behavior and leadership styles

or effectiveness/adaptability. 4) Type A principals experienced higher task-based stress. 5) Principals demonstrated a decrease in Type A behavior as years of administrative experience increased.

The following conclusions were drawn based upon the analysis of the data: 1) Principals should be made aware of the high levels of task-based stress and the consequences of work overload. 2) A stronger use of participatory and delegating leadership styles may help reduce stress. 3) Stress management training programs should be developed for principals and conflict resolution and stress reduction techniques emphasized. 4) Principals who are high in Type A behavior should be identified and should periodically receive medical examinations. 5) Beginning principals should be required to attend district level support group meetings.

## TABLE OF CONTENTS

	Page
LIST OF TABLES .....	vi
CHAPTER	
I. INTRODUCTION .....	1
Presentation of the Problem .....	1
Purpose of the Study .....	3
Definitions .....	4
Hypotheses .....	7
Significance of the Study .....	7
Limitations .....	9
Delimitations .....	9
II. REVIEW OF RELATED LITERATURE .....	11
Introduction .....	11
Leadership and Theory .....	12
Task and Relations Oriented Theories .....	14
The Ohio State Studies .....	14
Douglas McGregor .....	15
Blake and Mouton .....	16
Situational Oriented Theories .....	17
Tannenbaum and Schmidt .....	18
Fiedler Contingency Model .....	19
Vroom and Yelton Contingency Model .....	20
House and Mitchell Path-Goal .....	23
Hersey and Blanchard .....	26
Research Studies on Principal's Leadership Style .....	30
Occupational Stress .....	34
Introduction .....	34
Definitions of Stress .....	35
Stress and the Individual .....	36
Sources of Organizational Stress .....	38
Effects of Stress on Employees .....	42
Stress and the Managerial Grid .....	48
Research Studies on Stress and Administrators .....	51
The Nature of Type A Behavior .....	56
Introduction .....	56
Type A Behavior and Stress .....	58
Type A Behavior and Health Problems .....	60
Research Studies on Type A-B Behavior .....	64
Summary .....	69

CHAPTER	Page
III. DESIGN AND METHODOLOGY .....	72
Introduction .....	72
Population .....	72
Instruments .... ..	73
Research Design .....	81
Data Collection .....	81
Data Analysis .....	82
IV. DATA ANALYSIS AND DISCUSSION .....	86
Introduction .....	86
Demographic Data .....	87
Results of Analysis of the LEAD-Self .....	87
Results of Analysis of the Administrative Stress Index .....	92
Results of Analysis of the Behavior Activity Profile .....	95
Testing of the Hypotheses .....	99
Discussion .....	118
V. SUMMARY AND CONCLUSIONS .....	131
Summary .....	131
Conclusions .....	135
Recommendations .....	137
BIBLIOGRAPHY .....	140
RESUME .....	150
APPENDIX A. SURVEY INSTRUMENTS .....	151
APPENDIX B. SURVEY LETTERS .....	164
APPENDIX C. PERMISSION LETTERS .....	167

LIST OF TABLES

Table	Page
1. Frequency Distribution by Years of Administrative Experience: Western North Carolina Middle, JHS, and HS Principals, 1987-88 ..	88
2. Frequency Distribution by Age Group: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	89
3. Frequency Distribution of Dominant Leadership Styles: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	90
4. Mean Scores on Dimensions of Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	94
5. Mean Scores on Dimensions of Occupational Stress: North Carolina Elementary, Middle and HS Principals, 1984-85 .....	96
6. Frequency Distribution of Type A/B Behavior: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	98
7. Spearman Correlation Scores of Leadership Styles and Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	101
8. Spearman Correlation Scores of Leadership Effectiveness and Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	103
9. Spearman Correlation Scores of Leadership Styles and Type A Behavior: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	106
10. Spearman Correlation Scores of Leadership Effectiveness and Type A Behavior: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	108
11. Pearson Correlation Scores of Type A Behavior and Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	110
12. Pearson Correlation Scores of the Dimensions of Type A Behavior and Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	112
13. Spearman Correlation Scores of Leadership Styles, Occupational Stress, and Type A Behavior with Years of Administrative Experience: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	114

14. Spearman Correlation Scores of Leadership Styles, Occupational Stress, and Type A Behavior with Age: Western North Carolina Middle, JHS, and HS Principals, 1987-88 .....	116
15. Summary of Significant Correlation Coefficients for Ho1, Ho2, Ho5, and Ho6: Western North Carolina Middle, JHS, and HS Principals 1987-88 .....	117

## Chapter 1

### Introduction

#### Presentation of the Problem

The principal is important to the development of a quality school program. A successful principal possesses exceptional leadership ability and is capable of handling stressful situations. The many daily problems which face a principal are often overwhelming; therefore, it is essential that the principal be able to recognize stress and deal with it in a satisfactory manner (Williamson & Campbell, 1987). Blumberg (1985) described the superintendent's job as a never-ending task overload and information glut. The principal's job is much the same. If stress causes a principal to lose effectiveness as a problem solver, the principal cannot provide optimum leadership within the school setting.

Pierruci (1985) was able to determine a correlation between elementary school principals' leadership effectiveness scores and their burnout potential. Another study (Thompson, 1985) indicated that there was a connection between perceived stress and burnout among high school principals. In The Managerial Grid and Stress Blake and Mouton (1980) suggested that a relationship existed between leadership styles and stress, and that individuals with certain leadership styles were more prone to develop either physical or psychosomatic illnesses. Culligan and Sedlacek (1980) argued that certain people, by the nature of their

personalities or behaviors, were more susceptible to stress-related diseases. Friedman and Rosenman (1974) found that the incidence of coronary disease in extreme Type A men was three times that observed in Type B men. They defined Type A behavior as

characterized by individuals who are engaged in a relatively chronic struggle to obtain an unlimited number of poorly defined things from their environment in the shortest period of time, and, if necessary against the opposing forces of other things or persons in the environment (p. 31).

These individuals often demonstrated excessive competitiveness, constant impatience, feelings of insecurity, aggressiveness, free floating hostility, and extreme concern about number of accomplishments. The opposite type of behavior, Type B, is a relaxed, unhurried, mellow, satisfied style. The Type B person may also be interested in progress and achievement but tends to flow with the stress of life rather than constantly struggling against it (Jenkins, Zyzanski, Rosenman, 1971).

The principal who cannot cope effectively with stress is unable to deal effectively with the overwhelming demands of the job. If leadership style and Type A behavior do correlate with the amount of stress experienced by the principal, principals with high levels of stress may be taught methods to help them achieve more flexible leadership styles (Blake & Mouton, 1980). They may also learn to change personal behaviors in order to cope more successfully with problems which they experience. Additional research needs to be conducted to determine what relationships exist among the leadership styles of the principal, the degree of stress the principal experiences, and Type A behavioral characteristics of the principal.

It is important to the health and well being, as well as the leadership ability of the school principal, to explore this issue.

I believe that principals approach problems differently and that, when they experience similar high stress situations, they do not handle or cope with them in the same way. An awareness of various types of occupational stressors and a knowledge of leadership styles and behavioral characteristics can help administrative leaders to establish plans for stress reduction. Behavior can be changed when one understands how one acts and the alternatives which are available.

#### Purpose of the Study

Principals experience many pressures as they perform their daily duties. They are involved with teachers, parents, students, and members of the community. They must motivate, discipline, counsel, and direct many varied activities. Their leadership styles, behavioral characteristics, and abilities to deal with stress are important in their roles as administrative and instructional leaders.

This study investigates the relationships among leadership styles and effectiveness, degree of occupational stress, and Type A behavior of principals in Western North Carolina. The study addresses the following research questions:

1. What is the relationship between leadership styles of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and occupational stress, as measured by the Administrative Stress Index ?
2. What is the relationship between leadership effectiveness or

adaptability of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and occupational stress, as measured by the Administrative Stress Index ?

3. What is the relationship between leadership styles of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and Type A behavior, as measured by the Behavior Activity Profile ?

4. What is the relationship between leadership effectiveness or adaptability of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and Type A behavior, as measured by the Behavior Activity Profile ?

5. What is the relationship between Type A behavior of principals, as measured by the Behavior Activity Profile and principals' occupational stress, as determined by the Administrative Stress Index ?

6. What are the relationships among leadership styles, leadership effectiveness and adaptability, occupational stress, and Type A behavior, with years of administrative experience, and with age of principals?

#### Definitions

This study uses the following operational definitions.

1. Administrative Stress Index (ASI)

An index which is used to determine the level and kind of stress which is being experienced by administrators in their job environment (Gmelch, 1982).

## 2. Behavior Activity Profile (BAP)

A diagnostic instrument that assesses Type A behavior providing respondents with information on attitudes exhibited in various situations (Matteson & Ivancevich, 1981).

## 3. Coping Mechanisms

Effective or ineffective methods of dealing with stressful situations. Effective methods allow the individual to function at a high level.

## 4. Leadership Effectiveness/Adaptability

The degree to which the leader is able to employ an appropriate leadership style to meet situational demands, as measured by the LEAD-Self (Hersey & Blanchard, 1988).

## 5. Leader Effectiveness and Adaptability Description-Self

(LEAD-Self)

An instrument designed to measure an individual's self-perception of three aspects of leader behavior which include style, style range, and style adaptability or effectiveness (Hersey & Blanchard, 1973).

## 6. Leadership Style

The consistent behavior pattern exhibited by the leader in his attempts to influence the activities of others, as measured by the LEAD-Self (Hersey & Blanchard, 1988).

## 7. Occupational Stress

The amount of stress a person experiences due to the demands of his/her job, as measured by the ASI and its subtests.

## 8. Stress

The response elicited when the environmental demands placed upon the individual increase and/or the ability to react effectively to these

demands decreases. Stress is "the general demand for adaptation to unique environmental challenges." (Selye, 1976, p. 3)

#### 9. Stress Management

The individual's method of coping with stress in a manageable way. It evolves through the development of good mental and physical health.

#### 10. Stressor

A demand made by the internal or external environment that upsets a person's balance and for which restoration is needed (Matteson and Ivancevich, 1987).

#### 11. Stress Reduction

Techniques which an individual may use to help reduce the amount of stress he/she is experiencing. This includes participation in activities which strengthen the mind and body. These allow the individual to energize his/her system.

#### 12a. Type A Behavior

Friedman and Rosenman (1974) define Type A personality behavior pattern as "an action-emotion complex that can be observed in any person who is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time, and against the opposition of other things or persons." (p. 31)

#### b. Type B Behavior

According to Price (1982), Type B personality behavior pattern involves not being overly ambitious and having restraint. There is a relative absence of Type A behavior characteristics.

#### c. Type A/B Behavior

For the purpose of this study Type A or Type B behavior is

operationally defined as an individual's score on the BAP.

### Hypotheses

Given the research questions defined in the Purpose of the Study, the following hypotheses are expressed in the null form:

1. There is no significant correlation between principals' leadership styles and occupational stress.
2. There is no significant correlation between principals' leadership effectiveness/adaptability and occupational stress.
3. There is no significant correlation between principals' leadership styles and Type A behavioral characteristics.
4. There is no significant correlation between principals' leadership effectiveness/adaptability and Type A behavioral characteristics.
5. There is no significant correlation between principals' Type A behavioral characteristics and occupational stress.
6. There is no significant correlation between leadership styles, leadership effectiveness or adaptability, occupational stress, and Type A behavior, with years of administrative experience, and with age of principals.

### Significance of the Study

It is a fact of life for principals in the North Carolina Public Schools that they are going to be involved in stressful activities on a daily basis. Continued stress on the job can contribute to health problems, problems at home with spouse and children, a decrease in

leadership ability, and an overall lower functioning level (Culligan & Sedlacek, 1980). This can cause the principal's performance to diminish or can lead to a job change. This is an unfortunate situation, and the educational field suffers when these incidents occur.

Leadership style, degree of perceived stress, and Type A/B behavioral characteristics are important to the principal achieving a high level of effectiveness. The issue of stress is not simple; it is a complex problem. Saffer (1984) reported that most researchers have only looked at symptoms and causes; they have not explored individual leadership style and behavioral characteristics. Stress must be viewed as multidimensional. Previous studies have indicated that administrators have perceived more than 70% of the stress in their lives to be job-related. Saffer (1984) emphasized the importance of studying why some administrators succumb to illness in stressful times and others do not.

A study of the interactions of leadership style, occupational stress, and Type A behavior can add new knowledge to the educational field and can provide information which may be useful in developing stress-reduction training programs for administrators. These programs could be individualized to each administrator's leadership style and personal needs. Many administrators have not developed a conceptual framework on which to base their specific leadership styles. Others are unaware of their own unique behavioral characteristics and how they affect their leadership ability. Additionally, many have not evaluated themselves regarding the amount of stress which they experience.

Quality inservice training programs which can examine stress and the school administrator's leadership role can be developed for school systems. The results of this study may contribute to the development of this type of program, which should help to modify the occupational stress levels of principals.

#### Limitations

This study is limited to the educational setting and school administrators comprise the population of the study. The list of schools in the North Carolina Education Directory--1987-1988 served as a resource for principal's names and school addresses. The accuracy of this study is dependent upon the degree to which the respondents honestly answered the survey questions. Since the individual's responses to stress were given at a specific time, their responses may have been influenced by a recent stressful event or by a stress-free period.

While the results may have value and applicability to other school systems, circumstances and events which exist in other school systems may contribute to different results within these systems.

#### Delimitations

This study investigates leadership style, occupational stress, and Type A behavior in public school principals. It is delimited to all 56 principals who were administrators (May, 1988) in middle schools, junior high schools, or high schools in Western North Carolina, specifically Region 8 as defined by the North Carolina Education

Directory . The population includes 16 middle school, 8 junior high, and 32 high school principals. Assistant principals or principals of private and parochial schools are not included in this study.

Survey forms were mailed to 56 principals. The study is delimited to the principal's responses to questions on the Leader Effectiveness and Adaptability Description-Self (LEAD-Self), the Behavior Activity Profile (BAP), and the Administrative Stress Index (ASI), and to specific demographic data about the principals.

## Chapter Two

### Review of Related Literature

#### Introduction

This chapter presents a review of the literature on leadership theory, occupational stress, and Type A behavioral characteristics. Particular emphasis is given to the research as it relates to educational and managerial settings. Selected task and relations oriented and situational-oriented leadership theories are discussed. Current research using these models is reviewed. Occupational stress is defined and reviewed in terms of its effect upon the employee and organization. Its theoretical relationship to leadership style is emphasized. Type A behavioral characteristics are introduced and their effects on employee stress are discussed.

Owens (1981) describes the characteristics of theory in the following way, "theory may properly be viewed as a thought process, a way of thinking about reality to better understand that reality and to describe it more accurately" (p. 43). He further proposes that theory can serve some very useful functions: 1) It can help to organize our knowledge into a systematic, orderly body. 2) It can provide a guide to researchers. 3) It can help predict probable consequences of actions. 4) It can help to explain phenomena of organizational behavior that would be incomprehensible without theory.

Theory is often difficult to apply to practice in the educational

field and disappointment occurs from excessively high expectations. School administrators generally see themselves as people of action or "doers." They sometimes view the research scholar as one who does not have to face the consequences of idealistic views of reality. Griffith (1959) states, "theory is not a philosophy, which would deal with values; it is the best and most accurate mental picture of how an organism works" (p. 96). Leadership theory, stress theory, and Type A behavioral theory have been researched and developed through many different studies. According to Owens (1981) in order to develop a theory one must gather facts, develop concepts, propose hypotheses, and verify that these hypotheses support a theory. The theory itself may then give rise to hypotheses that can be tested. This process will strengthen or cast doubt on the theory.

This study investigates the relationships among leadership style and effectiveness, occupational stress, and behavioral characteristics of principals. Leadership theory, stress theory, and Type A behavioral theory have contributed to the hypotheses which are presented in this paper.

#### Leadership and Theory

Effectiveness in educational organizations cannot be attributed to any single factor, but leadership is what gives an organization its vision and its ability to translate that vision into reality (Bennis and Nanus, 1985). Sergiovanni (1973) says that the nature and quality of leadership are readily amenable to improvement. Leadership has been defined by many researchers, but Bennis and Nanus (1985) best define

the difference between management and leadership.

Managing means to bring about, to have charges or responsibility for, while leading is influencing, guiding in direction, course, or action. Managers are people who do things right and leaders are people who do the right thing. A leader's perspective is vision oriented (p. 21).

According to Owens (1981) leadership is a highly dynamic relationship between an individual and other members of a group in a specific environment. Leadership traits are not as important as the kinds of things the leader does. The focus is not so much upon leadership as upon the way in which the leader behaves and exercises influence. Through an analysis of leader behavior the elements of leadership can be studied, learned, and practiced.

Examining leadership as a set of behaviors resulted in the development of two dimensional theories of leadership. Hoy and Miskel (1982) state that a wide range of possible leader behaviors, as proposed by Chester Barnard, Ralph Stogdill, David Bowers, Stanley Seashore, and others, can be collapsed into two dimensions. The leadership style of specific leaders is a combination of task-oriented behavior and people-oriented behavior. These two concerns, task versus relationship, are the foundation for examining leadership styles. Some labels which have been used to describe these two dimensions include autocratic and democratic, authoritarian and equalitarian, employee-oriented and production-oriented (Hersey and Blanchard, 1969). Various leadership theories have been developed using the two dimensional concept. The Ohio State Studies, Douglas McGregor's Theory, and Blake and Mouton's Managerial Grid are introduced in order to examine two dimensional leadership behavior. The two-dimensional

theories were later expanded to include situational variables. These leadership theories are called multi-dimensional or situational theories and several are introduced following the presentation of the two-dimensional concept.

### Task and Relationship Theories

#### The Ohio State Studies

One of the best known leadership inquiries is the Leader Behavior Description Questionnaire (LBDQ) studies started at Ohio State University in the 1940's. Originally developed by John Hemphill and Alvin Coons, it was later refined by Andrew Halpin, B. J. Winer, and Ralph Stogdill (Hoy and Miskel, 1982). The LBDQ measures two basic dimensions of leader behavior which are initiating structure and consideration.

Initiating structure includes any leader behavior that delineates relationships between the leader and the subordinates. The leader may seek to establish well-defined patterns of organization, channels of communication, and methods of procedure. Consideration includes leader behavior that indicates friendship, trust, warmth, interest, and respect in the relationship between the leader and members of the work group (Owens, 1981).

An individual may score above or below the mean in both initiating structure and consideration. Therefore, four leadership styles are possible. These can be represented by the following quadrants using the LBDQ dimensions: Quadrant I leaders are high in consideration and initiating structure; Quadrant II leaders are low in consideration and

high in initiating structure; Quadrant III leaders are low in consideration and low in initiating structure; Quadrant IV leaders are high in consideration and low in initiating structure.

School administrators are generally most effective when they score high on both dimensions of leader behavior (Quadrant I). Leaders in Quadrant III, weak on both dimensions, tend to be highly ineffective. They suffer from a lack of leadership and there is general chaos in the work situation (Hoy and Miskel, 1982).

#### Douglas McGregor

Management theorist Douglas McGregor (1960) developed a theoretical model relating to the management of human enterprises after studying Maslow's hierarchy of human needs. McGregor labels managers who show their negative beliefs about people "Theory X" managers, and those who generally had positive feelings about the nature of human beings "Theory Y" managers. He theorized that the day-to-day behavior of the immediate superior clearly communicated his or her basic assumptions about human nature to subordinates. The authoritarian leader, who decides and tells, has a Theory X orientation toward followers. The participative leader, who permits followers to operate freely, holds a Theory Y perspective.

McGregor's research concluded that Theory Y managers were generally more successful than Theory X managers in helping the organization reach its ultimate goals. McGregor gathered data in industrial settings and found that departments manned by Theory Y managers had higher output, less waste, higher profits, fewer labor problems, less turnover, and more innovation than did departments of

Theory X managers. Mattaliano (1972) applied McGregor's principles to educational enterprise and found that Theory Y leadership was much preferred by teachers. Creative people often challenge the existing order, and a balance of creativity and order is necessary for an organization to flourish.

#### Blake and Mouton---Managerial Grid

Blake and Mouton (1964) presented an attitudinal model which focused on management. Their model is largely based on the Ohio State Studies, and it used the dimensions of concern for production and concern for people. Their theory of administrative behavior utilizes a grid to describe basic managerial behavioral patterns. Production is defined as units of physical output that can be measured. The units can be classified as completed products, volume of sales, or services delivered. Concern for people is defined as concern for personal commitment, accountability based on trust, self-esteem and friendship.

The managerial grid consists of nine vertical and nine horizontal lines, or a total of eighty-one squares. The intersecting lines are numbered one through nine horizontally and vertically. The horizontal axis indicates concern for people and the vertical axis concern for production. The number "one" on each axis represents minimum concern and the number "nine" maximum concern. The resulting squares are described numerically and 1,1; 9,1; 5,5; 1,9; and 9,9 are identified as commonly observed patterns.

The grid is helpful in identifying the alternatives available to an administrator for improving his effectiveness as a leader. The grid may be used as a basis for self-diagnosis by those participating in

leadership training. Of the array of possible patterns, it is noteworthy to discuss the five most commonly observed. The 1,1 pattern describes an administrator who "goes through the motions" and has little concern for people or production. The 9,1 pattern depicts the administrator who has little concern for subordinates and an intense concern for "getting things done." The 5,5 pattern describes an administrator who sticks to the middle of the road and is moderately concerned with production and morale. The 1,9 pattern is characteristic of an administrator who wants to make people happy and hopes that things will get done. Finally, the 9,9 pattern strongly reflects Douglas McGregor's Theory Y orientation, which proposes that committed personnel will share a common stake in the organization and develop relationships of trust and respect.

Blake and Mouton make it clear that in their view, the 9,9 pattern of leadership is likely to yield optimum results in most organizations. This means that the organization will be effective in achieving its goal and maintaining a high level of morale. Blake and Mouton present one of the best two-dimensional leadership models. It is clear, easy to understand, and provides a theoretical framework applicable to the work setting.

#### Situational Theories

An extension of the two-dimensional theories of leadership came about with the development of the multi-dimensional approach. The multi-dimensional approach considers certain situational variables in the leadership model. It has also been called situational leadership

theory. The development of Tannenbaum and Schmidt's continuum, Fiedler's contingency model, Vroom and Yetton's contingency model, House and Mitchell's Path-Goal Theory, and Hersey and Blanchard's Situational Leadership Theory will be discussed as examples of multi-dimensional leadership theory.

#### Tannenbaum and Schmidt

Tannenbaum and Schmidt (1958) noted that leadership styles could be organized from boss centered to subordinate centered. They were the first to differentiate among administrative styles through the leadership behavior continuum. One direction of the continuum represents the boss centered or traditional authoritarian style which is task centered. The other direction of the continuum represents the democratic subordinate-centered manager who uses a non-directive approach and is concerned about human relations. Various combinations of administrative styles exist between the two extremes. The degree of authority exercised by the administrator, along with the amount of freedom granted to subordinates determines a particular pattern of administrative style on the continuum.

Seven possible leadership styles ranging from boss-centered to subordinate-centered are as follows: 1) The manager makes the decision and announces it. 2) The manager "sells" the decision. 3) The manager presents ideas and invites questions. 4) The manager presents a tentative decision subject to change. 5) The manager presents the problem, gets suggestions, and then makes a decision. 6) The manager defines the limits and requests the group to make a decision. 7) The manager permits the group to make decisions within prescribed limits.

The continuum model was modified by Tannenbaum and Schmidt (1973) during the 1970's. The newer model placed emphasis upon factors or forces which the manager must consider in deciding how to manage. These important situational factors are forces in the manager, forces in the subordinates, and forces in the situation. In order to achieve an appropriate and effective leadership style, managers must understand the interdependence of these forces. The successful leader is one who is able to behave appropriately in the light of these perceptions. If direction is in order, he or she is able to direct, and if considerable participative freedom is called for, he or she is able to provide such freedom. Tannenbaum and Schmidt maintain that leaders must be insightful, flexible, and able to adapt to different situations in the work place.

#### Fiedler's Contingency Model

One of the earliest situational theorists was Fiedler (1965). He began looking at leadership styles with a multi-dimensional approach rather than a two-dimensional approach. Multi-dimensional approaches have also been called situational or contingency theories of leadership. Fiedler's theory recommends the arrangement of tasks and situations to accommodate leader styles rather than changing styles to fit situations.

He identified three major situational variables. The interplay of these variables determines whether a given situation is favorable or unfavorable to a leader. They are 1) leader-member relations; 2) the degree to which the task at hand is structured; and 3) the leader's position power. A situation's favorableness to the leader is dependent

upon the degree to which the situation enables the leader to exert his influence over the group. By dividing these three dimensions, Fiedler devises a list of eight leadership octants or situations. These combinations can be grouped into very favorable, intermediate favorable, and unfavorable categories (Fiedler, 1967).

Fiedler developed the Least Preferred Co-Worker Scale (LPC) to determine if a person is a task-oriented or a relationship-oriented leader. Leaders who are critical of their least preferred co-worker are task-oriented leaders and those who are supportive are relationship oriented leaders. Task-oriented leaders tend to be most effective in situations that are either highly favorable or highly unfavorable to the leader. Relationship-oriented leaders function best in situations of moderate favorableness to the leader. The favorableness of the situation is determined by the amount of influence the leader has over the group (Fiedler, 1967).

The basic postulates of the contingency model are: 1) Leadership style is determined by the needs the individual seeks to satisfy in the leadership situation. 2) The effectiveness of the group's performance is contingent upon the appropriate matching of the leader's style and the situation's favorableness. To be effective the leader must have influence in the situation (Hoy and Miskel, 1982).

#### Vroom and Yetton

Vroom and Yetton's Contingency Leadership Model was developed in the 1970's. This model demonstrates that the appropriate leadership style varies with the situation and that a leader can learn to recognize the requirements of a situation and tailor his/her style to

meet these requirements (Vroom,1976).

They expand on Fiedler's model of leadership which suggests the appropriateness of different leadership styles in the context of various situational contingencies. The Vroom and Yetton model prescribes a best leadership style as does Blake and Mouton, but it can be described as a normative model because it tries to tie appropriate leader behavior to specific contingencies (Vroom and Yetton, 1973).

Vroom and Yetton's contingency model assumes that (1) situational variables such as followers, time, and job demands interact with (2) the leader's personal attributes such as experience and communication skills and result in (3) leader behavior such as a directive style of leadership which influences (4) organizational effectiveness. Organizational effectiveness is further influenced by other situational variables outside the control of the leader (Hersey and Blanchard, 1988).

Three tables are important in the Vroom-Yetton contingency model: the Table of Problem Situational Issues, the Decision Process Flowchart, and the Table of Managerial Decision Styles. In order to use the Vroom-Yetton contingency model the leader must first diagnose the situational variables using the Table of Problem Situational Issues. After diagnosing the situational variables the manager works through the Decision Making Flowchart in order to match the situation with one of the five appropriate leadership styles. The manager may then use the Table of Managerial Decision Styles for a description of the appropriate style that is best for solving the problem (Hersey and Blanchard, 1988).

According to Vroom (1976) an analysis of the situation using the Table of Problem Situational Issues begins with "yes" or "no" to the following questions:

- A. Does the problem possess a quality requirement?
- B. Do I have sufficient information to make a high-quality decision?
- C. Is the problem structured?
- D. Is acceptance of the decision by subordinates important for effective implementation?
- E. If I were to make the decision myself, am I reasonably certain that it would be accepted by my subordinates?
- F. Do subordinates share the organizational goals to be attained in solving this problem?
- G. Is conflict among subordinates likely in preferred situations?

Next, the Decision Process Flowchart allows the manager to select a decision-making style appropriate to the problem situation. These styles are explained in The Table of Managerial Decision Styles. It consists of five leadership styles and describes each decision process with the use of a code that fits into the Decision Process Flowchart. Vroom and Yetton (1973) list the five leadership styles as follows:

#### Autocratic Process

AI. The manager solves the problem himself using whatever information is available.

AII. The manager obtains any necessary information of a specific nature from his subordinates before making the decision himself.

#### Consultative Process

CI. The manager shares the problem with relevant subordinates

individually, getting their ideas and suggestions before making the decision.

CII. The manager shares the problem with members as a group at a meeting, then decides.

#### Group Process

GII. The manager, acting as chairperson at a meeting of the group, shares the problem with the group and facilitates efforts of the group to reach consensus on a group decision. The manager does not try to "sell" a decision or manipulate the group.

The effective leader as portrayed by the normative model is neither universally autocratic nor universally participative but utilizes either approach in response to the demands of a situation. Above all, the leader is flexible, has developed a strong value system, and has a repertoire of skills necessary to execute effectively each of the decision processes (Vroom, 1976).

#### House and Mitchell

The Path-Goal Theory is a contingency approach to leadership which was developed by House and Mitchell and refined during the 1970's (House and Mitchell, 1974). The Path-Goal Model builds upon concepts presented in the Ohio State Leadership Studies and the Expectancy Model of motivation. While the Ohio State Model indicated that both the dimensions of initiating structure and consideration were important for the effective leader, the Expectancy Model focused on the effort-performance and goal-satisfaction (reward) linkages (Hersey and Blanchard, 1988).

According to House and Mitchell (1974) the theory is designated

Path-Goal because it focuses on how leaders influence their subordinates' perceptions of work goals, personal goals, and paths to goal attainment. They believe that leaders are effective when they enhance the leader acceptance, subordinate satisfaction, and motivational levels and effective performance of their subordinates. House (1971) proposed that the motivational functions of the leader consist of increasing personal payoffs to subordinates for work-goal attainment, and making the path to these payoffs easier by clarifying goals and increasing opportunities for personal satisfaction.

Based upon the findings of the Ohio State studies the Path-Goal Model incorporates four specific styles of leader behavior that motivate subordinates. The four styles of leader behavior are: 1) directive leadership, 2) supportive leadership, 3) participative leadership, and 4) achievement-oriented leadership. In Style 1, the directive leader tends to tell followers what is expected of them, give them specific guidance, maintain definite standards of performance, and ask group members to follow standard rules. This style is best suited for situations in which subordinate role ambiguity exists. It reduces ambiguity and increases job satisfaction among subordinates. Style 2, the supportive leader, shows concern for the well-being and needs of subordinates. They are friendly and approachable and treat members as equals. Their style may reduce subordinate anxiety, increase subordinate self-esteem, effort, and job satisfaction when tasks are dissatisfying, frustrating, or stressful to subordinates. Style 3, the participative leader, consults with subordinates and take their opinions into consideration before making a decision. This style of

leadership is best employed when the subordinate's task is by nature ambiguous and unstructured.

Role clarity, effort, and job satisfaction increase as the subordinate's suggestions become a part of the decision-making process. Style 4, the achievement-oriented leader, sets challenging goals and expects subordinates to perform at their highest level. Subordinates who are performing unstructured ambiguous tasks perform well when this leadership style is used (House and Mitchell, 1974).

House and Mitchell propose that if followers are performing highly structured tasks, the most effective leadership style is one which is high on supportive (relationship) behavior and low on directive (task) behavior. When followers are performing relatively unstructured tasks a leadership style high on task behavior and low on relationship behavior would be most effective. (Hersey and Blanchard, 1988).

Two important intervening variables are considered in the Path-Goal Model and these relate to the way leader behavior affects subordinate effort and satisfaction. The first, effort performance expectancy, refers to the worker's consideration of the chance that a given effort level will result in completion of the task. The second, performance reward expectancy, refers to the worker's consideration that successful completion of the task will lead to a desirable or undesirable outcome. Valence refers to the desirability of each outcome. A minimum or maximum effort will be exerted depending upon the influence of these expectancies and valences (House, 1971).

House (1971) also suggests that the effects of leader behavior on subordinates' motivation and satisfaction are influenced by two

situational moderator variables. These include (1) personal characteristics of subordinates as they strive to accomplish work goals and job satisfaction, and (2) environmental pressures and demands.

One personal characteristic is locus of control. Individuals with an internal locus of control respond well to a participation style of leadership, while those with an external locus of control respond more favorably to directive behavior. A second personal characteristic of subordinates is how they perceive their own ability. The higher the level of ability relative to task demands, the less subordinates will accept directive leader behavior.

Environmental contingency factors include the tasks which must be performed, the formal authority system, and the norms of the work group. The environmental variables may stimulate subordinates, constrain behavior, or provide rewards for achieving desired performance. When the leader properly analyzes the intervening variables and uses the appropriate leadership style, production levels will be higher and employee job satisfaction will increase. Subordinate effort and satisfaction is the end result in the Path-Goal Theory.

#### Hersey and Blanchard

Situational Leadership Theory (Hersey and Blanchard, 1988) adds an effectiveness dimension to the task-relationship two-dimensional model developed in the Ohio State Studies. Hersey and Blanchard propose the third dimension to be the environment in which the leader is operating. They state that the readiness level of group members in the environment is a critical factor that determines leadership style. Readiness is

seen in terms of a specific task to be performed. The question is "In terms of what is to be done, what is the readiness level of the group?"

Hersey and Blanchard use the terms "task behavior" and "relationship behavior" to describe concepts similar to the Consideration and Initiating Structure Concepts of the Ohio State Studies. They also use the four basic leader behavior quadrants developed in the two-dimensional models: high task and low relationship (S1); high task and high relationship (S2); low task and high relationship (S3); and low task and low relationship (S4). An added dimension is the readiness level of followers. When the readiness level of followers is low, the effective leadership style will emphasize task and place less emphasis on relationship. A gain or increase in readiness is possible.

Essentially, Situational Leadership Theory contends that (a) the readiness level of participants can be increased over time; and (b) as the readiness level of participants increases, the effective leadership style will be characterized by a decrease in task-oriented behavior and an increase in relations-oriented behavior. Hersey and Blanchard feel there is no one best way to influence people.

Four basic leadership styles are telling (S1), selling (S2), participating (S3), and delegating (S4). They correspond to the four basic leader behavior quadrants of the two dimensional model. The appropriate leadership style corresponds to the readiness level of the follower. Readiness is how ready a person is to perform a particular task. In most cases there are at least two leadership styles in the effective range. At the same time there are one or two styles that are

clearly in the less effective range. The "shorthand" symbols S1, S2, S3, and S4 apply only to effective leadership styles. If the style is ineffective, the reference will be to a quadrant number Q1, Q2, Q3, or Q4. Most appropriate leadership styles for follower readiness are as follows (Hersey and Blanchard, 1988, p.180):

R1---low readiness	S1 high, S2 2nd, Q3 3rd, Q4 low probability
R2---low to moderate readiness	S2 high, S1 2nd, S3 3rd, Q4 low probability
R3---moderate to high readiness	S3 high, S2 2nd, S4 3rd, Q1 low probability
R4---high readiness	S4 high, S3 2nd, Q2 3rd, Q1 low probability

Implicit to Situational Leadership Theory is the idea that the leader should assess the readiness level of the follower and help to develop his/her readiness level. This development is done by adjusting leadership behavior through the four styles. Managers must be consistent with subordinates. Consistency is using the same style for all similar situations and varying the style appropriately as the situation changes.

Several instruments have been developed by Hersey and Blanchard to help managers determine their leadership style. The Leader Effectiveness and Adaptability Description-Self and the LEAD-Other were designed to measure three aspects of leader behavior: 1) style, 2) style range, and 3) style adaptability. The LEAD-Self measures self-perception of how an individual behaves as a leader. The LEAD-Other reflects the perceptions of a leader's subordinates, superiors, and associates. Style range indicates the extent to which

leaders are able to vary their style. Style adaptability is the degree to which they are able to vary their style appropriately to the demands of a given situation. Style range is not as relevant to effectiveness as style adaptability; a wide style range will not guarantee effectiveness.

In summary, leadership style is important to the effectiveness of the leader because it determines how the leader will approach certain tasks and ultimately what kinds of things the leader will do. An effective leadership style allows one to turn his visions into reality. In searching for the most effective leadership style various theories have been developed. Both two-dimensional and multi-dimensional theories have been discussed. The two-dimensional theories of McGregor, the Ohio State Studies, and Blake and Mouton emphasize one best style of leadership. Multi-dimensional or situational theories take into account the many different situations with which a leader is confronted. The situational or contingency theories of Tannenbaum and Schmidt, Fiedler, Vroom and Yetton, Mitchell and House, and Hersey and Blanchard emphasize the necessity for flexibility in leadership style. The effective leader must be able to correctly use the appropriate style to fit the situation. Therefore, style adaptability is very important. In order to gain a deeper understanding of leadership style, it is important to review research which has been conducted on the use of leadership styles. For the purpose of this study research concerning leadership style and stress or burnout will also be reviewed.

### Research Studies on Principal's Leadership Styles

Empirical studies show a mixed result on what is the best leadership style. Orr (1980) investigated the leadership styles of middle school principals. All middle school principals in Delaware, New Jersey, and Pennsylvania were asked to complete the Hersey and Blanchard Leader Effectiveness and Adaptability Description-Self questionnaire and a demographic data sheet. Several research hypotheses were stated and analyzed by use of Chi square, analysis of variance, and t tests. Major conclusions of the study were: 1) leadership styles Q2 and Q3 on the LEAD-Self were the predominant styles utilized by middle school principals. Leadership style Q4 was never used as a dominant style and Q1 was rarely used. 2) The predominant use of leadership styles Q2 and Q3 indicates an overwhelming reliance on relation oriented behavior. 3) Effective leadership style was used.

Edman (1982) analyzed leadership styles of school principals as perceived by both self and others. The LEAD-Self, LEAD-Other, Leader Behavior Description Questionnaire (LBDQ), and an Internal-External Scale for locus of control were used with a population sample of 28 principals and 435 teachers in the elementary schools of San Diego County, California. Significant major findings were: 1) elementary school principals were perceived as exhibiting high task/high relationship behavior on the LEAD and high initiating structure/high consideration behavior on the LBDQ in a majority of school situations; 2) principals gave themselves higher ratings on LEAD effectiveness than they received from teachers; 3) the I-E Scale continuum showed

one-third of the teachers to be on the external control side. These teachers gave more favorable LBDQ effectiveness ratings to high task principals than to high relationship principals, indicating their need for external control.

Another study (Telb, 1982) appears to have different results regarding elementary teachers' perceived leadership style of the principal. The teachers were requested to respond to seven problem situations as if they were the principal. A panel of judges matched the forced-choice responses with the following leadership style labels: Laissez Faire, Participating, Autocratic, and Democratic. Of 490 responses, 328 were identified as usable for the study and were assigned leadership styles. Responses of the remaining 162 respondents who chose a situation-oriented approach to leadership were not included in the statistical analysis. Results indicated that 67 per cent of the 328 usable responses were assigned the autocratic leadership style. Telb concluded that the majority of elementary teachers perceived their principal's style to be autocratic. However, results may have been less significant if the 162 situational-oriented responses had not been discarded.

Harris (1987) analyzed the responses of chief executive officers, and company presidents to the LEAD-Self and an organizational environment test. Results showed that leaders were likely to adopt Style 2, selling, as their dominant style. However, the leaders' perception of their organization's environment indicated a need for a manager-as-developer approach. Harris stated that Style 3, participating, or Style 4, delegating, would be more appropriate based

upon the leaders assessment of situational demands. Harris felt that leader's often received reinforcement for having all the answers (Style 1), or at least being asked for input (Style 2).

Gorman (1975) and Gilbert (1981) conducted studies on leadership style and stress in school principals. Gorman (1975) used the Leader Behavior Description Questionnaire and the State-Trait Anxiety Inventory to examine the relationship between leadership styles and anxiety level in 80 school principals. Statistical results using the Kendall Tau C rank order test indicated a negative relationship between anxiety levels reported by principals and the two dimensions of leader behavior. In a similar study (Gilbert, 1981) examined the relationship between leadership styles as perceived by principals and teachers and occupational stress as perceived by principals. The LEAD-Self, LEAD-Other, and the Occupational Stress Questionnaire were used to assess leadership style and stress. Usable data were returned from 186 teachers and 34 principals from the Saskatoon Public School System in Canada. Lower mean scores on occupational stress were displayed by the following: 1) principals who were perceived as possessing a wide style range (three styles of leadership); 2) principals with dominant style 3, low task/high relationship; and 3) high style adaptability principals as perceived by teachers. Gilbert recommended further research into leadership styles and occupational stress.

Piercucci (1985) compared burnout levels and leadership characteristics of principals. He surveyed 300 elementary school principals in California using the Maslach Burnout Inventory and the LEAD-Self. Pearson correlation analysis indicated no significant

difference in leadership styles when principals were grouped by their burnout levels.

Researchers sought to investigate the relationships among leadership styles or adaptability, stress, and job satisfaction. Schriesheim and Murphy (1976) used the Leader Behavior Description Questionnaire , the State-Trait Anxiety Scale , and the Minnesota Satisfaction Questionnaire in their research. The sample consisted of 54 respondents in geographically dispersed units of a national black social services organization. The results indicated that in a relatively relaxed and less stressful work environment, leader consideration will enhance subordinate satisfaction and performance, but that under high pressure and stressful conditions, leader structure will be more helpful.

In a second study, Henson (1984) used the LEAD-Other, the Administrative Stress Index , and the Job Diagnostic Survey to investigate the leadership adaptability of superintendents and the resultant role-based stress and job satisfaction of building principals. A random sample of 200 elementary and secondary principals was used. Results indicated a low negative correlation between role-based stress and leadership adaptability. Job satisfaction decreased as role-based stress increased, and greater job satisfaction was experienced when superintendents exhibited more flexibility in leadership style.

Results of studies appear to be clear regarding most favored leadership styles and in comparing stress with leadership styles. Style 2, selling, which is high relationship and high task, and Style

3, participating, which is high relationship and low task, appear to be the most favored leadership styles of principals and other administrators (Orr, 1980; Edman, 1982; Harris, 1987). Principals appear to experience less stress if they demonstrate a wide range of styles, emphasize relationship, and possess high style adaptability (Gilbert, 1981; Henson, 1984).

## Occupational Stress

### Introduction

The stereotype of the harried executive is the most common image that comes to mind in discussing workplace stress. Leaders in business and industry are popularly considered susceptible to stress and disease. According to Koff, Laffey, Olsen, and Cichon (1981) principals are exposed to similar pressures. Using the Administrative Events Stress Inventory, they found that common causes of principal's stress centered around staff management problems such as staff reduction, teacher dismissal, teacher evaluations, and interpersonal conflicts. Conflict situations with superiors, parents, or students were also very stressful for principals. Principals frequently cited two main factors which led to "low stress" schools. These included the size of the school, with smaller being less stressful, and the amount of involvement from parents, students, and teachers.

Gmelch and Swent (1981) proposed that the problem with being a principal or a manager in any organization was that too many responsibilities were accepted that evolved into overdemanding roles. These roles may be that of controller, motivator, persuader,

disciplinarian, firefighter, preserver of the culture, specialist, and parent surrogate. The principal virtually becomes a role prisoner. Using the Administrative Stress Index they found that five of the top ten stressors plaguing principals concerned their control over time. These stressors included telephone interruptions, meetings, heavy work loads, completing reports, and participating in activities beyond normal work hours. In an attempt to understand the stress experienced by principals and managers it is important to examine the concept of stress and how it effects individuals.

#### Definitions of Stress

According to Matteson and Ivancevich (1987) the word stress means so many different things to so many different people that it has been described as the most imprecise word in the scientific dictionary. The classic definition of stress is by the eminent researcher Hans Selye (1975). He states, "Stress is a nonspecific response of the body to any demand made upon it" (p. 2). There have been innumerable elaborations upon this basic definition. In an occupational setting Matteson and Ivancevich (1987) view stress as "an adaptive response, moderated by individual differences, that is a consequence of any action, situation, or event that places special demands upon a person" (p. 10). This allows one to view stress as the response a person makes to identify stimulus conditions (actions, situations, events) as stressors, focusing attention on the aspects of the work environment that are potential stress producers.

### Stress and the Individual

Stressors will not always place the same demands on all people. Starting a new job assignment, changing bosses, or being evaluated by the boss does not make a special demand upon all individuals. Beehr and Bhagat (1985) emphasize the role of three factors in determining when sufficient demands may cause employee stress. These factors are importance, uncertainty, and duration. First, the more important or significant the event to the person, the more potential for stress. Second, a lack of clarity about what might happen causes uncertainty and stress. Knowing a negative result may be less stressful than not knowing what will happen. Often "anticipatory stress" is associated with worrying about what might happen. Finally, duration is important because the longer demands are placed upon an individual, the more cumulative stress they experience.

Quick and Quick (1984) propose that the stress response is often accompanied by various degrees of strain. They define individual strain as "the degree of physiological, psychological, and/or behavioral deviation from an individual's normal functioning resulting from a stressful event or series of events" (p. 5). Strain is exhibited in the various common behavioral, psychological, and medical disorders such as insomnia, depression, and cardiovascular disease. The same demands will cause different degrees of stress and strain for different individuals. What is negatively stressful for one individual may not be at all stressful for another and may even become a positive motivator.

Selye (1975) identified a rather predictable sequence of responses

to a stressor. He termed the responses the "general adaptation syndrome (GAS)". There are three stages to the GAS: the alarm reaction, the resistance stage, and the exhaustion stage. The alarm reaction is the immediate and fairly predictable psychophysiological response to stress. It has also been called the fight or flight response. Increased heart rate, rapid breathing, increased blood pressure, perspiration, increased alertness, and nervousness may occur. The second stage of the GAS is the resistance stage in which the immediate response to stress has enabled the individual to adapt to the stressor. The third stage of exhaustion is reached when the alarm reaction is elicited too intensely and too frequently over an extended period without an effective outlet.

It is at the stage of exhaustion where manifestations of individual strain occur. These may include behavioral changes such as increased cigarette smoking or accident proneness, psychological effects such as depression or marital discord, and medical consequences as the onset or worsening of heart disease and diabetes.

It would be easy to conclude that stress is always bad and the ideal state of affairs is the absence of stress. However, this is not the case because stress is a neutral term. Matteson and Ivancevich (1987) state that stress is an adaptive response that places special demands on us, but it is neither good nor bad, harmful nor beneficial. To live is to experience stress and life is a series of adaptive responses to external situations. Selye (1975) developed the word eustress, and it refers to stress that is good or that which produces a positive outcome. While eustress can bring about intrinsic

satisfaction, a negative or maladaptive reaction to a stressor can result in distress. Gmelch (1982) gives examples of the three faces of stress (p. 4):

Distress (Negative)	Stress (Neutral)	Eustress (Positive)
worry	change	challenge
anxiety	conflict	progress
fear	deadlines	improvement
trauma	ambiguity	success

If an employee experiences too much stress it often causes problems to develop within the organization. Therefore, it is important to understand specific types of organizational stress and how organizational stress develops.

#### Sources of Organizational Stress

Work fulfills a number of basic human needs. Stress may arise when there is a failure to satisfy these needs or when there is a perceived threat to their satisfaction. The reactions of individuals to stressors represent a major psychological and medical problem. Executive stress costs billions of dollars a year in loss of work days, in- and out-patient treatment, impaired motivation, poor decision making, loss of creativity, accidents, drug abuse, alcoholism, and death (Beech, Burns, Sheffield, 1982).

Matteson and Ivancevich (1987) define a stressor as a demand made by the internal environment that upsets a person's balance and for which restoration is needed. Virtually any event, situation, or person, even the individual himself, can be a stressor. Individuals experience stress when they are unable to maintain homeostasis because

of internal or external stressors. Adversity can surface when stressors in the work environment provoke excessive or disruptive stress responses in employees.

While stress is an individualized experience, there are a variety of demands which serve as stressors for groups of individuals. Quick and Quick (1984) list four major categories of organizational stressors. These include task demands, role demands, the physical setting, and interpersonal demands. They correspond closely to those identified by Beech, Burns, Sheffield (1982) which include problems of workload, occupational frustration, occupational change, and other work stressors. Work can have an adverse effect upon the physical and mental health of an employee, and it is important to understand the role of typical organizational stressors. The major categories of stressors which make up the Administrative Stress Index (Gmelch, 1982) that is used in this study are worthy of discussion. These include role-based stress, task-based stress, boundary-spanning stress, and conflict-mediating stress.

#### Role-Based Stress

There are a number of components of role-based stress. These include role ambiguity, role conflict, poor communications, and problems of bureaucracy. When these occur occupational goals may be blocked or inhibited, and stress reactions may result.

Role ambiguity is a state in which a person has inadequate information to perform his role. The individual may be unclear about job objectives and work procedures. Confusion may exist as to what others expect from him. He may not know precisely how he fits into the

organization and lines of accountability may be unclear. There may be a lack of feedback on his performance (Adams, 1980). Ambiguity poses the greatest threat when it is chronic. Such conditions can result in elevated blood pressure, depressed moods, lowered self esteem, decreased job satisfaction (Matteson & Ivancevich, 1987).

Role conflict exists when the job of the individual contains roles or responsibilities which may directly conflict with each other. There may be conflicting job demands, differences of opinion by superiors, or problems related to formal requirements of the role and the individual's own desires, goals, or values. Role conflict is most commonly seen in middle managers who find themselves trapped between top-level management and lower-level management. The stress caused by role conflict can result in job dissatisfaction and can lead to high blood pressure, elevated cholesterol counts, and heart disease (Beech, Burns, Sheffield, 1982).

Two other important sources of role based stress are poor communications and bureacratic structure within the organization (Beech, Burns, Sheffield, 1982). Poor communication is the most frequently reported single source of frustration in companies. Frustration may result if the only communication channel open is in the downward direction from top management. Effective communication can help to lessen occupational frustration caused by bureacracy. Communication must flow up from lower levels and horizontally from department to department.

#### Task-Based Stress

Task-based stress most often results from chronic overload. It

occurs when over an extended period of time the job demands are such as to exceed the individual's perceived ability to meet the demands (Matteson and Ivancevich, 1987). Overload may be of two different types: quantitative or qualitative. When the individual perceives that there is too much work to do in a given period of time, a condition of quantitative overload exists. Chronic time urgency can lead to overarousal with the consequence that the cardiovascular system may be adversely affected (Friedman and Rosenman, 1974). Qualitative overload occurs when the individual feels that he does not have the technical or intellectual competence to complete the job. The work may demand continuous concentration, innovation, and meaningful decisions. Consequences of this type of stressor are emotional and mental fatigue, gastrointestinal disorders and headaches (Beech, Burns, and Sheffield, 1982). Both quantitative overload and qualitative overload frequently occur in management and administrative positions. McClelland (1961) declared that quantitative overload was prevalent in our achievement-oriented society.

#### Boundary-Spanning Stress

Some jobs require individuals to work with people in other departments or organizations, and as a result they must cross an organizational boundary in the process. Boundary spanning activities are inherently stressful for individuals. They must often deal with diverse organizations and maintain frequent and long-term relations with people in other organizations. Many times they are evaluated with very precise and exact performance measures in contrast to their dynamic and complex environments. Exchanges and transactions across

external and internal boundaries will cause stress for individuals involved in such activities (Quick and Quick, 1984).

#### Conflict-Mediating Stress

In many organizations managers are involved in resolving conflicts among employees or with the public. Principals often mediate conflicts among teachers, students, and parents. Establishing good public relations in these instances is very important and requires exceptional leadership skills. Constant conflict can result in stress for both management and employees and can cause lower productivity within the organization (Quick and Quick, 1984). Effective communication is important in handling conflict and in reducing the stress associated with it.

#### Effects of Stress on Employees

Negative health consequences of stress are probably experienced more frequently at work than anywhere else (Matteson and Ivancevich, 1987). Individuals spend a great amount of time in job and career related activities. Many employee difficulties that affect health and performance originate in, or are compounded by, stressors at work. Matteson and Ivancevich (1987) distinguish between infectious and chronic diseases. An infectious disease is one that is caused by a specific, and usually identifiable, pathogen or microorganism, such as polio, measles, and typhoid fever. A chronic disease is of a more extended duration, usually does not involve a microorganism, and is noncommunicable. Examples are heart disease and cancer. Stressors play a role as contributing agents in many chronic diseases.

Since a person's body does not adapt perfectly to every stressor it encounters, the degree of imperfection is frequently such that illness is a by-product. Selye (1976) has observed that the so-called diseases of adaptation are not the direct result of some external agent as infection, but rather they are the consequences of the body's imperfect attempt to meet the threat posed by one or more external agents. The diseases of adaptation are sometimes referred to as "postponable" diseases, suggesting that people can exercise a great deal of control over many of them if they elect to do so. Since they are partially brought on by an individual's life style, in many cases they can be postponed indefinitely by giving the proper attention to prevention.

According to Quick and Quick (1984), when an individual's stress response is elicited too intensely or too frequently and the individual is unable to find a suitable outlet, the result is distress. The manifestation of distress varies with the individual and may include behavioral, psychological, and medical consequences. The impact of distress on mental and physical well-being can be substantial. The extreme result can be sudden death from suicide or stress-induced cardiac arrhythmia.

Bieliaskas (1982) developed a full stress-illness paradigm. Bieliaskas cautioned of the complexity that has become evident in examining variables of stressors, mediating factors, stress and coping (p. 91):

## STRESSOR----MEDIATING FACTORS----STRESS----- COPING

Appraisal	Unsuccessful Illness
Individual Resources	Successful
Social Support	

Behavioral consequences or changes which may accompany rising levels of stress include increased absenteeism, cigarette smoking, greater alcohol and drug abuse, accident proneness, violence, and appetite change. Each of these behavioral changes can have an important impact upon health (Quick and Quick, 1984).

Closely related to the behavioral consequences of distress are the psychological effects. Some of the major problems which are psychological in nature are family problems, sleep disturbances, sexual dysfunction, depression, conversion reactions, and the "burnout" syndrome. Burnout refers to a pattern of exhaustion one experiences when subject to unavoidable pressures at the same time that there do not appear to be available sources of satisfaction (Adams, 1980).

While the behavioral and psychological effects of organizational stress are in themselves immense, they may in turn have a potentially more devastating and irreversible effect on an individual's medical health and physiological well-being. These are the diseases of adaptation, and combined empirical research studies as well as skilled clinical observations have confirmed the association between a wide range of stressors and serious physical disease. As the body prepares to defend itself against a threat or to avoid a threat, three systems are most directly involved: the cardiovascular, the digestive, and the muscular (Beech, Burns, and Sheffield, 1982). These three systems

immediately respond to the stressors. There is an increase in the blood supply, primarily to the heart and muscles; and there is an increase in the heartrate. The blood pressure is elevated while adrenalin and a related hormone, noradrenalin, is released in the blood supply from the adrenal glands. Concurrently, the absorption of food from the digestive system is reduced while energy-producing substances, such as sugar and fats, are released to meet a need for an increased energy supply. The muscular system becomes activated, ready to meet challenge. The respiratory system may be affected in that the respiration rate increases. Almost every system in the body is involved to some extent (Morse-Furst, 1979).

Afflictions which are frequently labeled as diseases of adaptation are listed by Matteson and Ivancevich (1987). These include hypertension, heart disease, blood vessel disease, rheumatic and rheumatoid arthritis, inflammatory diseases of the skin, kidney diseases, peptic ulcers, allergic and hypersensitivity diseases, nervous and mental diseases, cancer, diabetes, asthma, headaches, backaches, and various digestive diseases. These diseases have been found to be caused or worsened by stressful events. Quick and Quick (1984) state that early studies of strictly job-related stress concentrated primarily on heart disease and peptic ulcer diseases, but there now is a growing evidence that the same relationship exists between organizational stress and disease that exists between other life stressors and disease. Both organizational stress and other sources have cumulative effects upon the development of these illnesses. Stress cannot be said to be the sole cause of any of these diseases,

because genetics, biological development, and other factors influence the appearance and course of these diseases. However, stress plays an important role in hastening the appearance and worsening the impact of the disease.

The relationship between stress and some of the diseases of adaptation are worthy of further examination. The leading causes of death in the United States in 1978 were heart disease (37.8%), cancer (20.6%), and strokes (9.1%), followed by accidents (5.5%). The top three causes of death can be stress related (Quick and Quick, 1984). The most important of all stress-related diseases are those of the cardiovascular system. Numerous conditions influence the likelihood that a person may develop a heart condition or die from a heart attack. The most important are family history of heart disease, smoking, hypertension, blood lipids (cholesterol and triglycerides), Type A personality, and diabetes. Lack of exercise and poor diet may also be contributing factors. Except for family history, all of these factors are related or potentially related to stress (Bielauskas, 1982). Stress produces changes in almost every aspect of cardiovascular functioning and seems to be one of the most important factors in the development of chronically high blood pressure or hypertension. By chronically elevating blood pressure, stress can also set off conditions that can lead to strokes or heart attacks. A surge of pressure can often cause an artery to break and cause a stroke. Cholesterol levels are predictors of cardiac risk, and these levels appear to be related to stress. Friedman, Rosenman, and Carroll (1958) studied tax accountants and found that as the deadline for filing

federal income tax returns approached, their cholesterol levels increased. The general increase in heart disease in the last fifty years has been related to the stresses and challenges of an increasing complex civilization.

Friedman and Rosenman (1974) termed a set of behaviors as "Type A coronary-prone behavior pattern." This behavior pattern is defined as "an action-emotion complex that can be observed in any person who is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time, and, if required, to do so against the opposing effects of other things or persons" (Friedman & Ulmer, 1984, p. 31). Friedman and Rosenman (1974) conducted research on 3411 men, aged 39-59 years, and found that within the 39-49 age group, 85 percent of those who developed coronary heart disease were originally diagnosed as having Type A personalities. Many young executives shape their behavior into the Type A pattern as they feel its characteristics are necessary for success in the business world.

Cardiovascular disease is the most prominent of the stress-related diseases, but cancer is another important disease which is believed to be related to stress. Matteson and Ivancevich (1987) propose that the chances of an individual developing cancer depends on two factors. The first is how quickly malignance occurs in the body. The second is how well the body's immune system works or how effective the white blood cells are. They propose that during chronic stress periods the hormone cortisol burns up protein that would have gone into making new white blood cells. The white blood cell count drops and the body becomes less capable of fighting off abnormalities. Cancer has a psychosomatic

link with stress because changes in mental states can trigger a change in an individual's physiological conditions and weaken the system, impair immunity, and allow cancer to gain a hold. Morse and Furst (1979) believe that cancer has many possible causes, a large number of which are unknown. The relationship of stress to cancer is less well understood than that of stress to heart disease.

Gastrointestinal diseases are also common among executives. Stress can alter the balance of digestive enzymes and acids in the stomach as well as the thickness of the mucus lining. Stress is not the only cause of gastrointestinal disorders which may be caused by allergies or other physical problems. However, the peptic ulcer has often been referred to as "executive wound." Doctors often prescribe rest and relaxation as an aid in helping an individual with a peptic ulcer (Matteson and Ivancevich, 1987).

#### Stress and The Managerial Grid

As the tempo and pressures of our modern society increase, stresses, strains, and tensions are often revealed in emotions and feelings. Blake and Mouton (1980) conducted a study of 275 people who died suddenly and found that sudden death occurred within minutes or hours of a major event in the person's life. There were four main categories of death. The most common, about 53%, involved disruption of a close human relationship or the anniversary of the loss of a loved one. The second category, 37%, included situations of danger while the third, 6%, included instances of loss of self-esteem and status as well as disappointment or defeat. The fourth, 4%, included death at moments

of triumph, recognition, or reunion. Blake and Mouton proposed that this evidence supported the fact that subjective mental states do interact with the body and produce either healthy or diseased individuals. They believed that faulty patterns of dealing with stress could lead to mental and physical illness.

Selye (1976) proposed that stress attacks the weakest system of the body, such as the cardiovascular, digestive, or muscular system, and breaks it down. This is the general or nonspecific theory of psychosomatic illness. The opposite formulation is the specificity theory. The part of the body that becomes ill is particular to the character of stress. Therefore, certain patterns of stress predispose to cardiovascular problems while others lead to digestive or muscular disorders. Blake and Mouton (1980) feel that the specificity hypothesis is the more fruitful from a research point of view. They used the managerial grid to analyze the relationship between various illnesses and individual leadership characteristics. The Grid aids in understanding the way people approach conflicts, strains, and tensions and how particular ways of coping with stress are faulty. Grid styles consist of the belief systems of an individual and the way in which the person reacts to things and people. Patterns of attitude and behavior predispose people to a wide range of illnesses and diseases. Leadership styles can be related to different somatic illnesses. Once these patterns are identified, steps can be taken to prevent them, to intervene before illness strikes, or to avoid recurrence of illness.

The relationship of Blake and Mouton's leadership theory to the specificity theory of stress-related disorders is important. They

propose that certain stress-related disorders correspond to the five main leadership styles or patterns on the managerial grid (Blake and Mouton, 1980). These five patterns are numerically described as 9,1; 1,9; 1,1; 5,5; and 9,9. Leaders are primarily viewed as having one dominant style although they may have a back up style.

Managers with a 9,1 orientation have a high concern for production and a low concern for people. They push to control situations and often come out strong and overwhelm others. Stress becomes a problem for them when they cannot achieve success because their win-lose tactics cannot be employed. Many are workaholics and Type A individuals. Stress-related illnesses include hypertension, heart disease, migraine headaches, alcoholism, suspicion, and possible suicide. To accept illness is likely to be viewed as failure.

Managers with a 1,9 orientation have a low concern for production and a high concern for people. They often try to avoid conflict and promote good relations at the expense of their own opinions. They fear being rejected and say things others want to hear. They are subject to stress when engaging in activities where rejection is high and their need for love and approval cannot be satisfied. Hypochondriasis, asthma, diabetes, colitis, and masochism are often stress-related illnesses.

Resignation often occurs in 1,1 managers who have a low concern for production and people. Managers using this style may be indifferent to almost any activity and often do not reveal opinions, attitudes, or ideas. Stress occurs when conflict avoidance will not work and they are trapped and compelled to take a position. They may

experience helplessness and hopelessness, cancer, tuberculosis, and/or premature death.

An intermediate degree of concern for production and an equal concern for people is characteristic of the 5,5 managerial orientation. These managers often try to meet people with different ideas halfway but tend to feel unsure and anxious under pressure. They may be seen as active but shallow thinkers, seeking to impress others and not promoting their own philosophy. Stress arises when there are no benchmarks for action and the social environment becomes unpredictable and unstable. They may suffer from chronic anxiety, the self-identity crisis of "Who am I," and ulcers (Blake and Mouton, 1980, p.102).

Finally, Blake and Mouton promote the 9,9 managerial orientation as the most effective style. Managers display a high concern for people to be productive and a high concern for people to have rewarding experiences. They are open and friendly but command respect from others. They listen keenly and seek out ideas different from their own. It is important to them to identify reasons for conflict and to seek underlying causes. Being resilient and versatile, 9,9 managers possess a solid sound character and respond well to stress. Additional qualities of these individuals include rich friendship patterns, few emotional problems, good health, and a long life.

#### Research Studies on Stress and Administrators

Various studies on stress and school administrators have been conducted. Foster (1986/1987) used the Administrative Stress Index to identify and quantify the various work-related stressors experienced by

principals in Kentucky. A demographic data sheet also accompanied the ASI. Three of the top five stressors were in the category of "Administrative Constraints". These included "complying with state, federal, and organizational rules and policies," "feeling I have to participate in school activities outside normal working hours," and "feeling I have a heavy workload that I cannot finish during the normal work day." Current physical health was determined as an important demographic variable.

In a similar study Savery and Detuik (1986) analyzed perceived stress among principals in Western Australia. Role overload and role conflict were identified as major stressors for primary and secondary school principals. About 25% of the principals had suffered from medically diagnosed hypertension in the past 12 months, compared to 7.5% of an Australian population sample of males and females in the 25 to 64 age group.

Feitler and Tokar (1986) evaluated stress in elementary, middle, and high schools. They proposed that principals in highly bureaucratic high schools should exhibit less stress than principals in less bureaucratic elementary schools. Although not statistically significant, the opposite trend was found. High school administrators reported a higher level of stress than their elementary and middle school counterparts.

Bishop (1986/1987) collected data from 214 administrators in Duval County School System in Florida using the Administrative Stress Index. The purpose of the study was to investigate differences between district-level administrators' and school based administrators'

perceptions of occupational stress. Bishop compared four occupational stress factors in relationships to type of employment, position held, age, sex, race, marital status, and number of years administrative experience. Multiple regression analyses of the data indicated a significant difference in perception of stress between school-based and district-level administrators. More stress was experienced at the school-based level. The type of environment, district-level or school-based administration, was the only significant demographic variable common to all four occupational stress factors.

Dilworth (1984/1985) sought to identify stress symptoms in school administrators and to investigate stress factors and coping mechanisms. A questionnaire was administered to a random stratified sample of 64 San Francisco Bay area school administrators. Stress symptoms were reported by 98 percent of the sample, and included tenseness, anger, coffee-drinking, frustration, worry, anxiety, and job dissatisfaction. The most stressful factors were reported to be personnel administration, time-work constraints, and expectations of others. Recommended stress management techniques were good planning and outside interests.

Salah and Kashmeeri (1987) explored the relationship between job related stress and job dissatisfaction in school administrators in Saudi Arabia. Professional interactions, involving conflicts with students, parents, and superiors, and a lack of physical facilities were two significant sources of job distress. Statistical analysis of the data indicated that areas of job distress were correlated with job dissatisfaction. Generally, the Saudi administrators experienced

distress similar to that of school administrators in the United States.

Another issue of concern has been stress and burnout in school administrators. Thompson (1985/1986) used the Administrative Stress Index , the Maslach Burnout Inventory , and a coping scale to determine if stress, and consequently burnout, was a major problem for principals in North Carolina. Highest sources of stress centered around task-based roles associated with the daily operation of a school. Male principals, high school principals, and principals of large schools, perceived that they experienced more burnout than did female principals, middle or elementary principals, or principals of small schools. Physical exercise was the main stress-reduction activity used by principals.

Dunn (1981) examined the relationship between stress and burnout in a study of elementary school principals in Santa Clara County. The Oregon School Administrators Stress Survey and the Maslach Burnout Inventory (MBI) were sent to 262 principals. Demographics of sex, age, and marital status were included. Results showed that administrative constraints were considered by principals to be the most stress-producing aspect of their jobs. These included complying with policy, telephone interruptions, meetings and a heavy work load. Other items of concern were supervising and evaluating staff, student discipline, decision making affecting lives of teachers, and using personal time for school activities. Female principals were found to experience or perceive more stress than their male counterparts.

With reference to the MBI, principals indicated that they felt a high degree of emotional exhaustion but also reported a sense of

personal accomplishment from their jobs. Only one coping method that was frequently used related to less stress or burnout. This method was to change one's strategy of attack on work.

Tung (1980) sought to compare the occupational stress profiles of male versus female educational administrators to determine whether there were significant differences in their profiles. Tung sent the Administrative Stress Index to 1855 school administrators in the state of Oregon. There were 1156 usable questionnaires returned and approximately 9.3% (108) of these were from female respondents. Statistical treatment was by one-way analyses of variance and results indicated that female administrators experienced substantially lower levels of self-perceived occupational stress than their male counterparts. These results were similar to Thompson (1985/1986) who found that female principals perceived less burnout than male principals or high school principals. However, female principals are generally at the elementary level. Tung's results conflict with Dunn (1981) who found that female principals experienced or perceived more stress than their male counterparts.

Jick and Mitz (1985) reviewed 19 organizational and psychological studies on sex differences in the work place. They found that women tended to report higher rates of psychological distress and that men were more prone to severe physical illness. Working women typically maintain major responsibility for the home and family and more often than men bear the burdens of role overload and role conflict. However, various studies have indicated that women tend to seek help more often than men and to use social networks more effectively.

In summary, school-based administrators, especially high school principals, experienced the highest stress (Thompson, 1985/1986; Feitler & Tokar, 1986). Role overload or task-based stress was often in the areas of administrative complaints and time-work constraints (Foster, 1987; Thompson, 1986/1987; Savery & Detuik, 1986; Dunn, 1981). Role conflict stress involved handling conflicts within the school setting and was also a source of distress for principals (Saleh & Kashmeeri, 1987; Savery & Detuik, 1986). Principals indicated that they experienced a high degree of emotional exhaustion but they did not feel that burnout was extreme (Thompson, 1986/1987; Dunn, 1981). The studies showed conflicting results as to differences in the amount of stress experienced by males and females.

### The Nature of Type A Behavior

#### Introduction

Stress often results from external conditions that individuals have no control over, but stress is also due to the way one responds to stressful demands. Some people respond well to pressure and are labeled "stress resistant" or optimal performers. Others have difficulty responding to pressure, and their behavior contributes to the amount of stress they perceive (Matteson & Ivancevich, 1987).

Perhaps the most widely discussed personal characteristic contributing to stress at work in recent years has been Type A versus Type B behavior pattern. Friedman and Ulmer (1984) define Type A behavior as "an action emotion complex that can be observed in any person who is aggressively involved in a chronic, incessant struggle to

achieve more and more in less and less time, and if required to do so against the opposing efforts of other things and persons" (p.31). The Type A personality is dominated by covert insecurity of status and hyperaggressiveness, or both. These perpetuate the struggle to achieve which brings about a third personality characteristic, the sense of time urgency. As the struggle continues, easily aroused anger may turn into free-floating hostility. Finally, if the struggle continues long enough it may lead to a tendency toward self-destruction (Friedman and Rosenman, (1974).

Jenkins, Zyzanski, and Rosenman (1971) define Type B behavior as a relaxed, unhurried, mellow, satisfied state. The Type B person may also be interested in progress and achievement, but tends to flow with the stream of life rather than constantly struggling against it. In contrast, Jenkins, Zyzanski, and Rosenman (1971) state that Type A behavior is an overt behavioral syndrome or style of living characterized by extremes in competitiveness, striving for achievement, aggressiveness (sometimes repressed), impatience, restlessness, hyperalertness, explosiveness of speech, tenseness of facial muscles, and feelings of being under pressure of time and under the challenge of responsibility. Persons having this pattern are often so deeply committed to their vocation or profession that other aspects of their lives are relatively neglected. Not all aspects of this syndrome or pattern need to be present for a person to be classified as possessing it. Different kinds of situations evoke maximal reactions from different persons.

### Type A Behavior and Stress

According to Jenkins, Zyzanski, and Rosenman (1971) it is important to distinguish Type A behavior from the concept of stress. The term "stress" has a variety of meanings. It may refer to a noxious stimulus or painful event, the reaction of alarm, discomfort, or pain in response to an environmental insult. In contrast, the coronary-prone behavior pattern is neither a stressor situation nor a distressed response. Rather, it is a style of overt behavior with which some people respond to life's situations, either pleasant or troubling, where some element of challenge is perceived to be present.

The origins and development of Type A behavior have been studied by Rosenman and Friedman (1974). They believe that one of the most important influences fostering status insecurity is the failure of Type A persons in infancy and very early childhood to receive unconditional love, affection, and encouragement from one or both parents. Type A's compensate for low self-esteem by superachievement and hyperaggressiveness. They "motorize" their anxieties away through a variety of actions. As Type A behavior increases a sense of time urgency becomes more observable. As the perilous, senseless drive continues it is accompanied by a diminishing capacity to give or receive affection and an unconscious urge to self-destruct may increase.

A popular theoretical view of Type A behavior is Glass's (1977) view that Type A individuals are extremely threatened by a loss of control over environmental events and are therefore constantly striving to maintain control. Research cited by Glass suggests that Type A

individuals tend to work close to their ultimate levels of endurance on all tasks, even on easy ones that do not require such expenditure of effort. However, when faced with an uncontrollable task, Type A individuals tend to "give up" more easily than others.

Hypothetically, this is because they cannot accept the possibility of losing control. Glass points out that Type A behavior is not an all-pervasive factor; rather, it appears in the face of stressors that threaten the individual's control. Thus, Type A behavior can be viewed as a way of coping with stress. One of the costs of such an adaptation appears to be heart disease.

Cooper and Payne (1978) recognize Type A not as a static personality trait nor as a stress reaction but instead as a style of behavior with which some persons habitually respond to circumstances that arouse them. Burish (1980) considers Type A behavior a function of both the individual and the environment. Thus, Type A individuals are more likely to exhibit this behavior pattern in challenging, competitive environments and, correspondingly, challenging competitive environments are more likely to produce or attract Type A individuals. Sales (1969) goes beyond the idea that Type A behavior is a conditioning variable that increases the perception of stress at work. He proposes that the Type A person possesses certain personality traits as impatience, ambition, competitiveness, and aggressiveness which cause self-selection into jobs that entail greater exposure to stressors. These individuals are much like the proverbial warhorse, relishing the smell of battle.

Price (1982) proposed that Type A represents a striving for social

approval and material gain that is symptomatic of a deeper core of beliefs and fears acquired through social learning. Price's view points to the notion that in western societies there is a drive to sustain three primary beliefs, which in turn generate fears that promote Type A behavior. The three primary beliefs are that one must constantly prove oneself, that no universal moral principles exist, and that there is an insufficient supply of everything. The corresponding fears are: first, fear of insufficient worth; second, fear that good may not prevail; and third, fear of insufficient supply. Therefore, Type A behavior is an attempt to prove oneself by attaining scarce resources valued by society.

Caplan (1975) studied job demand and workers' health in 23 occupations. With respect to Type A behavior pattern, college administrators and family physicians scored highest. The findings on college administrators are consistent with earlier studies of professors and administrators in academic settings. According to a review of structured interviews done by Friedman and Ulmer (1984), 70% of corporate chairmen were Type A, 60% of bank presidents were Type A, and 55% of university presidents were Type A. Another survey which Friedman and Rosenman (1974) conducted with 1,100 male federal postal employees revealed Type A behavior in 75% of them. Employee rewards and opportunities often encourage Type A behavior patterns.

#### Type A Behavior and Health Problems

In the United States and other industrialized nations cardiovascular diseases are the principal causes of death. The annual

death rate from these diseases in the United States in 1986 was approximately one million persons. More than 50 percent of the American deaths in 1986 were from cardiovascular diseases. Heart disease is responsible for an annual loss of more than 135 million work days, and billions of dollars are spent annually in disability payments and medical bills (Matteson and Ivancevich, 1987).

Estimates by Friedman and Rosenman (1974) indicated that 50 percent of the population in the United States are Type A, 40 percent Type B, and 10 percent have traits of both. They found that Type A's have more than twice the rate of heart disease as individuals who did not exhibit the Type A behavior pattern. This was done in a research study of 3500 healthy men over an eight-year period. The study is now known as the Western Collaborative Group Study. Individuals were interviewed to determine Type A or Type B behavior and given a test for the amount of cholesterol carried in the low-and-high-density lipoproteins in the blood.

The Framingham Heart Study (Haynes and Feinleib, 1982) examined the association between Type A behavior and coronary heart disease. Both white-collar and blue-collar men and women were identified as Type A or Type B with the Framingham Scale. They also had medical exams to insure that they were free of coronary heart disease. After eight years results indicated that Type A behavior was an independent predictor of coronary disease in both men and women who were 46 to 64 years old.

Friedman and Rosenman (1974) tried to impress on people that healthy personality and behavior patterns were vital to a healthy

heart. They did not ignore probable causes of heart disease such as diet, cigarette smoking, physical activity, heredity, obesity, nor did they minimize such causes as diabetes or hypertension. To illustrate healthy personality and behavior patterns Friedman and Rosenman (1958) did a six-month (January to June) study with a group of accountants. As the tax deadline approached in mid-April, and greater time pressures overtook them, the accountants' level of serum cholesterol rose. A month or so later, when the pressure was off, their cholesterol level fell. Friedman and Rosenman state that the cholesterol change could have only been due to their emotional stress, because food intake, smoking, and exercise habits remained constant.

Blake and Mouton (1980) categorize managers with a 9,1 leadership orientation as being typical Type A individuals. The 9,1 manager has a low concern for people and a high concern for production. This type of manager strives to master, control, and dominate. Primary emphasis is placed on willpower, and an exaggerated fear of failure leads to a must win attitude. Blake and Mouton state that a basic correlation between characteristics typical of an excessive degree of 9,1 orientation and heart disease have been widely reported. The 9,1 managerial orientation corresponds to Hersey and Blanchard's (1988) leadership style 1, and fits the description of Friedman and Rosenman's (1974) Type A individual.

Culligan and Sedlacek (1980) describes the consequences of having the traits of the Type A individual. The Type A's response to stress is almost always the flight or fight response. Therefore, the Type A person is constantly in a state in which the sympathetic flow is

supplying an excessive amount of catecholamines (chemicals activated by stress). These cause an increased level of blood cholesterol, a decreased ability to clear the blood of this cholesterol, a prediabetic state, and an increased tendency for the platelets and fibrinogen (clotting elements of blood) to fall out and settle onto the walls of the veins and arteries. As the veins and arteries become clogged, the heart has to work harder to circulate blood throughout the body. Eventually the arteries will become so clogged that the heart will fail.

Lecker (1978) suggests ways to increase an individual's capacity to cope with stress. First, reduce the quantity and/or difficulty of the tasks that confront you; second, reduce the time pressure you are under to complete the tasks; third, increase your coping skills through reeducation. Chesney and Rosenman (1985) suggest strategies for modifying Type A behavior. Self observation is the first step. It teaches patients to recognize the impatience and frustrations they experience and to keep a log of these. Patients then make a commitment or contract to change certain adverse daily behavior patterns. It is also good for patients to be encouraged to select and watch a model who can carry out the behavior they desire. Methods of dealing with hostility can be discussed with patients, and they can role-play their new behaviors in a supportive environment. Training in deep muscle relaxation, facilitated by biofeedback, is also very useful.

Managers need to become more aware of Type A behavior and what can be done about it in the work setting. Matteson and Ivancevich (1987) believe that the most promising avenue is to work on the components of

Type A behavior. For example, programs can be set up to modify hostility/anger, time urgency, and to develop stress coping skills. When the organization ignores the components of Type A behavior in its employees, the organization will pay in terms of employee illness, premature health problems, and high health care insurance premiums. Efforts should not necessarily be made to change the Type A employee to Type B but to reduce in severity and intensity some of the toxic components of the Type A pattern.

#### Research Studies on Type A-B Behavior

Research studies on Type A-B behavior and employees focus on the stress responses elicited, the occupational stress experienced by Type A individuals, and the effects of stress upon their health.

Toppins (1986) investigated the relationships between leadership styles and personality (patterns of core strengths) of school administrators. The LEAD-Self and LEAD-Other were used to assess leadership style, and the Bipolar Inventory was used to determine core strengths. Core strengths included thinking or risking, practical or theoretical thinking, and dependent or independent risking. No significant relationships were found when the data was statistically analyzed using the chi-square technique. Leadership Style 2, selling, was the preferred style of 82% of the principals. The findings suggested a lack of evidence that leadership styles are related to personality.

Woolley (1983) studied occupational stress among community college administrators. He sought to investigate the degree of influence that

Type A behavior and the quality of interpersonal relationships at work had on perceived sources and intensities of psychological and physiological stress and coping mechanisms. The Bortner Short Rating Scale for Pattern A Behavior was used to measure the degree of Type A behavior. Both the intensity of perceived stress and the intensity of psychological responses to stress were significantly influenced by both Type A behavior and the quality of interpersonal relationship at work. Neither Type A nor interpersonal relationships at work had any influence upon choice of coping techniques.

Caplan and Jones (1975) studied Type A behavior as a conditioner of the effects of quantitative workload and role ambiguity on anxiety, depression, resentment, and heart rate among 73 males. These males were users of a main computer at a large university which was being shutdown for a move to a new facility. The shutdown occurred at the end of an academic term. Quantitative workload was very high at this time. Ambiguity existed as a result of having to decide how to complete the work most efficiently in the short time that remained. Results of this study indicated that the relationship between workload and anxiety was greatest in Type A individuals. A similar, but less significant trend also appeared for the effects of anxiety on heart rate. Role ambiguity had a low positive correlation with anxiety, depression, and resentment. Feelings of anxiety were more highly associated with ambiguity and workload than were feelings of resentment and depression.

Principals from 74 secondary schools in New Jersey completed scales to measure job stressors, role conflict, ambiguity, overload,

and powerlessness (Travlos, 1984/1985). Teachers completed scales to measure thrust behavior of the principals. Thrust behavior was defined as the principals' attempt to motivate teachers through personal example. Personal characteristics, including Type A behavior were also examined to determine their association with the job stressors. Data were analyzed through correlation coefficients, t tests, and multiple regression. Of the personal characteristics examined, only Type A behavior was related to three of the four job stressors: conflict, overload, and powerlessness. The thrust behavior of the principal was not related to any of the job stressors.

Matteson, Ivancevich, and Smith (1984) examined the relationship of Type A behavior to job performance and satisfaction among sales personnel. They administered the Framingham Type A Scale , the Minnesota Satisfaction Questionnaire , and a check list of health complaints to 355 life insurance agents. Three company indices of sales performance were used as performance measures. The researchers proposed that Type A sales professionals, as opposed to Type B's, would perform better and report more job satisfaction. The stereotype of Type A individuals in many respects is similar to that of the successful salesperson. Surprisingly, results indicated no significant relationship between Type A behavior and job performance, and no significant relationship between Type A behavior and job satisfaction. Type A individuals did report greater than 50% more health problems than Type B's. This was in spite of the fact that Type A's have a tendency to deny health problems and suppress symptoms (Glass, 1977).

Jamal (1985) conducted a study relating to Type A behavior and job

performance. The researcher examined Type A and Type B differences in job performance, psychosomatic complaints, and career progression among white collar employees in a Canadian manufacturing organization. Employees returned 218 (62%) of the questionnaires. Type A and Type B behavior patterns were assessed with the nine-item Sales' Type A Scale. Job performance was assessed from supervisors confidential ratings of employees. Psychosomatic complaints were assessed by use of a four-item scale. The results of the study indicated that Type A's were rated lower on quality of performance and had more psychosomatic complaints than Type B's. No difference was found in Type A's or Type B's quantity of performance or the promotions they obtained during the past five years. Type A's were rated higher than Type B's on the amount of effort exerted on the job. Jamal expresses a note of caution about the conclusions of this study. He questions the validity of the Sales Type A Scale in comparison to the structured interview, Jenkins Activity Survey, or the Behavior Activity Profile. He defends its use because of time constraints and other practical considerations.

Thomas (1986) assessed Type B behavior, stress, and health status in 98 adults. Results indicated that Type B's were more likely than Type A's to hold internal locus of control beliefs and to view life as a joy. Type B's reported significantly less stress due to daily hassles, less pressure about having "too many things to do", and less job dissatisfaction. Type B's had better general health than Type A's, fewer days ill during the past year, and fewer physician and hospital visits.

Stube and Werner (1985) explored the belief that Type A's had a

greater need to control and were often unwilling to delegate responsibility. By refusing to use the resources of others, Type A's may increase their job demands and workloads resulting in more job stress. Stube and Werner used the Jenkins Activity Survey with 160 male undergraduates to determine Type A or Type B student characteristics. On an initial 20-trial reaction-time task, Type A and Type B men received feedback about their own performance and about that of a partner. During a replication of the task in which only one person could work on any one trial, Type A's relinquished fewer trials to their partners than did Type B's, particularly when the partner had exhibited a superior initial performance. Attribution data indicated that Type A's were less convinced than Type B's of their partner's ability.

Suinn and Bloom (1978) treated seven subjects who were identified by the Jenkins Activity Survey as Type A individuals with three weeks of Anxiety Management Training. Seven additional subjects with Type A behavior served as a control group. Results indicated that treated subjects showed significant reductions in the hard-driving or competitive component of pattern A behavior. Significant differences were not obtained for the Type A or B total score. There was no evidence of a statistically significant reduction in blood pressure or cholesterol. The authors caution that the sample was small and that the subjects' posttest scores showed some pattern A traits and did not show a complete changeover to pattern B characteristics.

From the studies which have been reviewed, some important assumptions can be made regarding Type A individuals. Type A employees

react more intensely to stress and perceived stress than Type B employees (Woolley, 1983; Caplan & Jones, 1975; Travlos, 1984; Thomas, 1986). Researchers found no significant differences in Type A's and Type B's quantity of performance on the job. Type A's were rated higher on effort exerted, and Type B's higher on quality of performance. Type A's reported more health problems than Type B's (Matteson, Ivancevich, & Smith, 1986; Jamal, 1985; Thomas, 1986). Type A's have a greater need to control and are less likely to delegate authority than Type B's (Blake & Mouton, 1980; Caplan & Jones, 1975; Stube & Werner, 1985). Glass (1977) indicated that Type A's were more likely to give up when faced with an uncontrollable task. Suinn and Bloom (1978) stated that Type A behavior was difficult to change, and it was best to attempt to change specific components of the behavior.

#### Summary

The literature on leadership theory, occupational stress, and Type A-B behavioral characteristics as they apply to individuals in educational and managerial settings was investigated in this chapter. Both two-dimensional and multidimensional theories of leadership were discussed. In the two dimensional theories the dichotomy which exists between task-oriented and relationship oriented approaches was elaborated upon as a key element of these theories. The multidimensional theories expanded the task-relations two dimensional concept to include important situational factors, such as the nature of the job setting, the readiness of the employee, the necessity of flexibility in leadership style, and the importance of style

adaptability.

Leaders in education and business are popularly considered susceptible to stress and disease. In order to reduce organizational stress, potential work environment stressors must be identified. According to Matteson and Ivancevich (1987) adversity can surface when stressors in the work environment provoke excessive or disruptive stress responses in employees. Role-based, task-based, boundary spanning, and conflict-mediating stress are major categories of organizational stress (Gmelch, 1982). These can lead to diseases of adaptation and may involve the cardiovascular, the digestive, or muscular system (Beech, Burns, Sheffield, 1986). Blake and Mouton (1980) used the managerial grid to analyze the relationship between various illnesses and individual leadership characteristics. The Grid aids in understanding how people approach conflicts, strains, and tensions and how particular ways of coping with stress are faulty. Leadership styles can be related to different somatic illnesses. Research has indicated that high school principals experience a higher degree of stress than do elementary principals (Fietler and Tokar, 1986; Thompson, 1985/1986).

Type A behavior may be categorized as one of the most important personal characteristics contributing to stress at work. Type A is also called coronary-prone behavior pattern and is an overt behavior style which is characterized by competitiveness, aggressiveness, impatience, and being under the pressure of time limits (Matteson and Ivancevich, 1987). Estimates by Friedman and Rosenman (1974) indicate that 50% of the population in the United States is Type A and that Type

A's have twice the rate of heart disease. Blake and Mouton (1980) categorize managers with a 9,1 orientation as being typical Type A individuals. Although Type A individuals believe they are getting more work done, studies indicate that no differences have been found in quantity of work produced by Type A's and Type B's. Type's B's were rated higher on quality of performance. Type A's have more health problems and have toxic elements in their personalities which can cause turmoil in an organization (Matteson and Ivancevich, 1987; Jamal, 1985).

### Chapter III

#### Design and Methodology

##### Introduction

The design and methodology chapter of this study includes five sections: Population, Instrumentation, Research Design, Data Collection, and Data Analysis.

##### Population

The population of principals to be used was generated from The Educational Directory of North Carolina--1987-88 and included all middle school, junior high, and senior high principals in Region 8. This population included principals of 16 middle schools, 8 junior high schools, and 32 high schools in Western North Carolina. The participants included 53 male and 3 female principals. These 56 middle, junior, and secondary school principals were chosen because they usually had a larger number of students and teachers and a wider array of extracurricular activities than principals of elementary schools. Since their organizations were more complex, more internal and external conflict was expected to exist in them than in elementary schools.

Travers (1966) states that in solving local educational problems surveys are commonly conducted to cover every member of the designated population. In such cases there are no sampling problems, but there is

also no population to which results can be generalized.

Responses from 51 of the population of 56 principals should be large enough for statistical analysis. According to Gay (1981), at least 30 subjects are needed to establish either the existence or nonexistence of a relationship in a correlational study. Ary, Jacobs, and Razavich (1985) state that correlational studies do not require large samples. If a relationship exists it can be assumed that it will be evident in a sample of 50 to 100.

#### Instruments

Three instruments were used in this study. These included the Leader Effectiveness and Adaptability Description-Self (Hersey and Blanchard, 1973, 1987), the Administrative Stress Index (Gmelch, 1982), and the Behavior Activity Profile (Matteson and Ivancevich, 1982). The LEAD-Self was chosen to measure predominant leadership style and effectiveness/adaptability. The ASI was chosen to measure the degree of stress perceived by principals, and the BAP was selected to determine Type A or B behavior. Appendix A contains copies of these instruments.

#### Leader Effectiveness and Adaptability Description-Self

The LEAD-Self can be used to assess a leader's self-perception of leadership style, style range, and style adaptability. This twelve item instrument was developed at the Center for Leadership Studies, Ohio University, by Hersey and Blanchard in 1973. It is presently being published and distributed commercially by University Associates.

Four leadership styles are identified with this instrument, and

they fit into Hersey's and Blanchard's Situational Leadership Model (1988). The Situational Leadership Model consists of four quadrants. Quadrant 1 represents a leader who uses a high task and low relationship style; quadrant 2, a leader who uses a high task and high relationship style; quadrant 3, a leader who uses a low task and high relationship style; and quadrant 4, a leader who uses a low task and low relationship style. The leader's dominant style indicates the approach that the leader would use to influence followers, and it is determined by the quadrant within which the majority of the leader's responses occur.

A leader's style range is determined by the leader's dominant style plus his supporting style or styles. A supporting style must be chosen at least twice on the LEAD-Self.

A third measurement is for style adaptability or leader effectiveness. The appropriateness of the leader's responses to the 12 situations of the LEAD-Self determine the effectiveness. The leader's effectiveness score may range from -24 to +24. Ineffective scores range from -24 to -1 and effective choices from +1 to +24.

For the purposes of this study, the leadership style and style effectiveness/adaptability measures will be used. The style range score will not be used in this study. A copy of the LEAD-Self and directions for scoring and interpreting the instrument is included in Appendix A.

#### Validity and Reliability of the LEAD-Self

Hersey and Blanchard (1973) report that the LEAD-Self was standardized on the responses of 264 managers, constituting a North

American sample. The managers ranged in age from 21 to 64, with 30 percent at the entry level of management, 55 percent being middle managers, and 14 percent at the high level of management.

Greene (1980) reported that with two administrations of the LEAD-Self across a six week period, 75 percent of the managers maintained their dominant style and 71 percent their alternate style. The contingency coefficients were both .71 and each was significant ( $p < .01$ ). Correlation with the adaptability scores was .69 ( $p < .01$ ). The LEAD-Self scores remained relatively stable across time.

The 12 item validities for the adaptability score ranged from .11 to .52, and 10 of the 12 coefficients (83 percent) were .25 or higher. Eleven coefficients were significant beyond the .01 level and one significant at the .05 level. Each response option met the operationally defined criterion of less than 80 percent with respect to selection frequency. Greene stated that additional studies have also deemed the LEAD-Self to be an empirically sound instrument.

#### Studies Using the LEAD-Self

The LEAD-Self (Hersey & Blanchard, 1973, 1987) has been used to measure the principal's self-perceptions of leadership behavior in various studies. Orr (1980) used the LEAD-Self to investigate the leadership styles of middle school principals in Delaware, New Jersey, and Pennsylvania. Edman (1982) analyzed the leadership styles of elementary school principals using the LEAD-Self and LEAD-Other. Styles 2 and 3 were the dominant styles of principals in both studies.

#### Administrative Stress Index (ASI)

The second instrument used was the Administrative Stress Index

(Gmelch, 1982). It determines what on-the-job stressors are perceived to be stressful by administrators. Designed by the Research and Field Studies Department of Washington State University, the ASI has been used in various studies concerning stress and educators. This instrument was developed from the 15 item index on Job Related Strain (Indik, Seashore, and Slesinger, 1964) and was supplemented with additional items suggested by a review of current school administrator publications and stress logs kept by 40 school administrators.

During development the pilot instrument was field tested for content validity and clarity with a group of 25 practicing administrators. After revision and a second pilot test with 20 administrators the final instrument consisted of 35 items. Out of these 35 items, 12 were retained from the index on Job Related Strain and 23 items evolved from incidents in stress logs and issues in current school administrator publications. Coefficients of internal consistency for the ASI are very high. The greatest amount of shared variance between any two factors is 14% (Factor 1 x Factor 2,  $r = 0.38$ ,  $r^2 = 0.14$ ), indicating that the factors are fairly independent of each other (Tung and Koch, 1980). The ASI utilizes a Likert-type format ranging from 1 (rarely or never bothers me) to 5 (frequently bothers me). Bradford (1989) obtained a reliability coefficient of 90.75 for internal validity when the results of the ASI were analyzed using the Cronbach Alpha Model.

The ASI has four interpretable dimensions. These dimensions of administrative stress were identified by analyzing the instrument with the principal components varimax rotation method. Tung and Koch (1980)

list the dimensions as follows: 1) Role-related stress is the administrator's role reactions and beliefs about his/her place in the organization. Such role expectations include preferences about what the person should do, what kind of person he/she should be, and how he/she should relate to others. 2) Task-based stress is stress experienced by the performance of such daily tasks as meetings and paperwork. The administrator's work rests heavily on interactions involving the telephone, scheduled and unscheduled meetings, memorandums, letter writing, and the compilation of reports. Personal contracts are continuous and hinder the administrator's ability to manage time. 3) Boundary-spanning stress is stress administrators feel when dealing with the environment outside their administrative control. Some examples are collective bargaining, community relations, dealing with regulatory agencies, and gaining support for the school's budget. 4) Conflict-mediating stress is inherent in mediating conflicts of all kinds, as between teacher and parent or between teacher and student. The administrator has responsibilities and obligations to various groups within and outside the organization. The interests and demands of these groups are often in conflict. The administrator has the primary responsibility for resolving conflicts and is often expected to be all things to all people. 5) Other stress is a separate category developed from stress related questions not fitting a particular dimension. Additional stressful duties for the principal may include evaluating staff members, unreasonable pressure for better job performance, speaking in front of groups, and making decisions that effect the lives of others.

Individuals may evaluate their administrative stress level by their total stress score or with dimensional subscores. If the ASI is used with a group, each individual's total stress score or dimensional subscores can be compared with other member's scores. The ASI also has a section which requests demographic information about the principal. Appendix A of this study includes a copy of the Administrative Stress Index and directions for interpreting and scoring the instrument. Appendix B contains survey letters to accompany the ASI. Appendix C contains a copy of a letter from Dr. Gmelch granting permission to use the ASI in this study.

#### Studies Using the Administrative Stress Index

The Administrative Stress Index has been used to study job-related stress as perceived by administrators in various studies. Henson (1984) used the ASI to help explore the relationship between superintendent leadership adaptability, principal role-based stress, and job satisfaction. Thompson (1985/1986) studied stress and burnout in principals and used the ASI to measure stress. Foster (1986/1987) identified the various work-related stressors experienced by principals of secondary schools in Kentucky, using the ASI. In a recent study, Williamson and Campbell (1987) used the ASI to determine the specific and most important sources of stress in a random sample of 400 high school principals.

#### The Behavior Activity Profile (BAP)

The third instrument used is the Behavior Activity Profile (BAP). According to Matteson and Ivancevich (1982) the BAP is designed to provide individuals with information concerning the characteristic

behavior or attitude style they exhibit in a number of situations. The BAP measures what has been called Type A behavior, which is sometimes referred to as coronary-prone behavior pattern. Friedman and Rosenman (1974) first identified a cluster of emotional and behavioral traits which seemed to appear frequently in individuals suffering from coronary heart disease. Type A behavior pattern is now widely acknowledged as a legitimate risk factor in heart disease. Research suggests that the behavior pattern may be associated with a variety of other stress-related health problems as well.

The Behavior Activity Profile was developed from a pool of 39 items which were found in structured interviews to relate to Type A behavior. Three hundred individuals were administered a written test using these items. Items with the highest ratings were used with a second group of individuals and twenty-one items were retained in the Behavior Activity Profile. Matteson (1987) reported that the Behavior Activity Profile has been correlated with the Framingham Type A Scale at .55 level and that none of the Type A instruments correlate very highly with each other. Lee, King, and King (1987) reported similar findings in a study they conducted on the validity of questionnaires in measuring Type A behavior pattern. They evaluated four instruments which purported to measure Type A behavior and obtained moderate correlations of .51 to .54. Bradford (1989) obtained a reliability coefficient of 96.69 for internal validity when the results of the BAP were analyzed using the Cronbach Alpha Model.

The 21 questions on the BAP are set up in a semantic differential scale format. Matteson and Ivancevich state that it has been completed

by over 5,000 managers and has been factor analyzed to yield four scores: (1) a total Type A score, ranging from 21 to 147; (2) a hard-driving/competitive score, ranging from 7 to 49; (3) an impatience score, ranging from 7 to 49; and (4) a job involvement score ranging from 7 to 49. These categories are similar to those of the Jenkins Activity Survey except that the BAP has an administrator's advantage---it takes less time to complete and is easier to score. Total BAP raw scores are converted into percentile ranks for both males and females by using a percentile distribution scale which is available. On the total Type A score which ranges from 21-147, the higher the number above 87, the stronger the Type A tendencies. The lower the number below 82, the stronger the Type B tendencies. Scores of 82 to 87 indicate a combination Type A/B behavior. A copy of the BAP and directions for scoring and interpreting the instrument are included in Appendix A. A letter from Dr. Matteson granting permission for its use is in Appendix C.

#### Studies Using Self-Report Type A Questionnaires

In the early 1960's, the most common method of assessing Type A behavior was the structured interview. The Jenkins Activity Survey (Jenkins, Zyzanski, & Rosenman, 1971) was one of the first self-report methods developed. Price (1982) indicated that the JAS self-measure correlated highly with the structured interview. Matteson and Ivancevich (1984) used the Behavior Activity Profile to assess the relationship of Type A behavior to performance and satisfaction among sales personnel. Wooley (1983) used the Type A Bortner-Short Rating Scale in a study concerning occupational stress and college

administrators.

#### Research Design

The leadership style and leadership adaptability of middle, junior, and high school principals in Western North Carolina was assessed with the Leader Effectiveness and Adaptability Description-Self. The amount of stress which the principals perceived was evaluated with the Administrative Stress Index. Each principal's Type A or B behavior was determined by the Behavior Activity Profile.

A survey design was used. The population included all (56) middle, junior, and high school principals in Western North Carolina, described as Region 8 in The Educational Directory of North Carolina--1987-88. A copy of each instrument was mailed to selected principals. Principals were asked to return the instruments in a self-addressed, stamped envelope contained in their packet of materials. It is difficult to gain a full sense of social processes in natural settings through the use of surveys. However, according to Babbie (1983), the standardization of data represents a special strength of survey research.

#### Data Collection

Data were collected by the survey method. A cover letter and copies of the Leader Effectiveness and Adaptability Description-Self, the Administrative Stress Index, and the Behavior Activity Profile were mailed to the 56 principals in middle, junior, and high schools in Western North Carolina. The population was comprised of fifty-three

males and three females. The instruments sent to the principals were numbered for record keeping purposes. The principals were assured that individual responses would be kept in strict confidence, and that only group results would be reported.

All packets were mailed in May, 1988. Each principal was instructed to return the completed forms in a stamped, self-addressed envelope contained in the packet. Two weeks after the initial mailing a revised cover letter was mailed as a follow-up. Additional copies of the LEAD-Self, the ASI, and the BAP accompanied the follow-up letter. Copies of the instruments are contained in Appendix A, and copies of the cover letters are included in Appendix B. If responses to the second mailing were not received within two weeks, a personal note and additional copies of the instruments were sent to each principal in a final attempt to collect the data. Fifty-one surveys (91%) were returned.

#### Data Analysis

The independent variables in this study included the following:

- 1) The principal's leadership style, which was determined by the Leader Effectiveness and Adaptability Description-Self. The LEAD-Self has four dominant leadership styles which include: a) S1-telling -- high task and low relationship, b) S2-selling -- high task and high relationship, c) S3-participating -- high relationship and low task, and d) S4-delegating -- low task and low relationship.
- 2) The principal's leadership effectiveness/adaptability which was determined by an effective or ineffective score on the LEAD-Self.

Effective scores ranged from +24 to +1 and ineffective scores range from -24 to -1.

3) The principal's Type A or B behavior which was determined by responses on the Behavior Activity Profile. Total scores range from 21-147. Scores of 87 or higher demonstrate Type A tendencies and scores of 82 or lower demonstrate Type B tendencies. Scores of 82 to 87 demonstrate a combination of Type A or B traits. Subtests include a hard-driving competitive score, an impatience score, and a job involvement score. Scores on each subtest have a range of 7 to 49.

4) Demographic data about the principal which included number of years of administrative experience and age.

The dependent variables in the study were the principals' scores on the Administrative Stress Index. The ASI has five interpretable dimensions. These include role related stress, task-based stress, boundary-spanning stress, conflict mediating stress, and other stress. The instrument utilizes a Likert-type format ranging from 1 (rarely or never bothers me) to 5 (frequently bothers me). The principals' responses to each question on the ASI were added together for a total score. Lower scores represented smaller amounts of perceived stress and higher scores represented greater amounts of perceived stress. Subscores were also calculated for the five dimensions of occupational stress.

Gay (1981) states that correlational research involves collecting data in order to determine whether and to what degree, a relationship exists between two or more quantifiable variables. According to Gay a smaller number of carefully selected variables is much preferred to a

larger number of carelessly selected variables in a relationship study. More confidence can be placed in the significant correlation coefficients which are found because they are more likely to represent true relationships. Degree of relationship is expressed as a correlation coefficient which is computed based on two sets of scores. The correlation coefficient provides an estimate of how closely two variables are related. A coefficient near +1.00 reflects a strong positive relationship, and a coefficient near -1.00 reflects a strong negative relationship. A coefficient near zero reflects little or no relationship. A significant correlation does not necessarily show causation and cannot be interpreted in this manner.

There are a number of different methods of computing a correlation coefficient. The appropriate method depends upon the scale of measurement represented by the data. The rank-order correlation coefficient, or Spearman rho, and the product-moment correlation coefficient, or Pearson  $r$ , are used to determine the degree of relationship between variables in this study.

Fopham and Sirotnik (1973) stated that the Spearman rank-order correlation coefficient could be employed to determine the degree of relationship between two ordinally measured variables. However, it can also be used with interval data. If only one of the variables to be correlated is in rank order, then the other variable to be correlated must be expressed in terms of ranks to enable the use of the Spearman rho technique (Gay, 1981). This is a non-parametric procedure which is comparable to the parametric Pearson product-moment correlation procedure.

The hypotheses were stated in the null form. Hypotheses 1, 2, 3, 4, and 6 were analyzed for degree of relationship with the Spearman rho. These hypotheses were rejected or not rejected on the basis of the .05 level of significance. Cates (1985) states that the .05 level means there are only 5 chances in 100 that the difference which was rated as significant could have occurred by chance. Researchers generally use the .05 level of significance to minimize the likelihood of making a Type I error, since such a level sets a rigorous standard for results to attain significance. A Type I error occurs when the researcher rejects the null hypothesis in favor of the research hypothesis when, in fact, any difference between or among the groups occurred by chance.

Hypothesis 5 was analyzed for degree of relationship with the Pearson product-moment correlation procedure. The Pearson  $r$  is the most appropriate measure of correlation when data are either interval or ratio scales. Like the mean and standard deviation, the Pearson  $r$  takes into account each and every score in both distributions (Gay, 1981). Hypothesis 5 was rejected or not rejected on the basis of the .05 level of significance.

Statistical analysis of the hypotheses was obtained by using the Statistical Package for Social Sciences-X. This statistical program was used in the Computer Services Center at the University of North Carolina at Greensboro and Asheville. Statistical applications resulted in obtaining frequency distribution data and Spearman rho and Pearson  $r$  correlation coefficients.

## Chapter IV

### Data Analysis and Discussion

#### Introduction

This study examined the leadership styles, degree of leadership effectiveness/adaptability, amount of perceived occupational stress, and Type A behavioral characteristics in middle school, junior high, and secondary school principals in Western North Carolina. Demographic data included years of administrative experience and age. Surveys were sent to 56 principals in 16 middle, 8 junior high, and 32 high schools in Western North Carolina. This chapter contains an analysis of the data collected from 51 completed survey packets containing the Leader Effectiveness and Adaptability Description-Self (LEAD-Self), the Administrative Stress Index (ASI), and the Behavior Activity Profile (BAP). These represented 91% of the original population and provided the data used in the statistical treatment and the testing of the hypotheses.

The results are presented in five sections: (a) demographic data about the principals, (b) the principals' responses to the LEAD-Self, (c) the principals' responses to the Administrative Stress Index, (d) the principals' responses to the Behavior Activity Profile, and (e) the testing of the hypotheses.

### Demographic Data on the Principals

The principals surveyed in this study provided demographic information about their numbers of years of administrative experience and their ages. Table 1 presents a frequency distribution of the principals' responses to years of administrative experience.

Nineteen principals (37.2%) had 11-15 years of administrative experience. Eleven principals (21.6%) had over 20 years of experience. Ten principals (19.6%) had 16-20 years experience, seven (13.7%) had 6-10 years experience, three (5.9%) had 1-2 years experience, and one (2%) had 3-5 years experience. A total of 40 principals (78.5%) had over 11 years experience.

Age was the second demographic characteristic requested from the principals. Table 2 presents a frequency distribution of the principals' responses to age.

Most principals, 25 (49%), were in the age range of 40 to 49. Nineteen of the principals (35.3%) were in the 50 to 59 age group. Seven principals (13.7%) were in the 30 to 39 age group, and only 1 (2%) was in the 60 and over group. Forty-three principals (84.3%) were in the 40 to 60 year age range.

### Results of the Analysis of the Lead-Self

#### Dominant Leadership Styles

Table 3 presents the principal's dominant leadership styles and the frequency and percentage of these styles as principals recorded them on the LEAD-Self.

Hersey and Blanchard (1988) defined dominant style as the style

Table 1

Frequency Distribution by Years of Administrative Experience: Western North Carolina Middle, JHS, and HS Principals, 1987-88

---

Experience	Frequency	Percentage
1- 2	3	5.9
3- 5	1	2.0
6-10	7	13.7
11-15	19	37.2
11-20	10	19.6
over 20	11	21.6
total	51	100.0

---

Table 2

Frequency Distribution by Age Group: Western North Carolina Middle, JHS, and HS Principals, 1987-88

Age	Frequency	Percentage
20-29	0	0
30-39	7	13.7%
40-49	25	49.0%
50-59	18	35.3%
60-over	1	2.0%
Total	51	100.0%

Table 3

Frequency Distribution of Dominant Leadership Styles: Western North Carolina Middle, JHS, and HS Principals, 1987-88

Leadership Style	Frequency	Percentage
Style 1 (high task-low relationship)	4	7.8
Style 2 (high task-high relationship)	26	51.0
Style 3 (low task-high relationship)	13	25.5
Style 4 (low task-low relationship)	0	0
Combination Styles:		
Styles 2&3	5	9.8
Styles 1&2	2	3.9
Styles 1&3	1	2.0
Total	51	100.0

for which the person has the most responses. Principals' highest numbers of responses were for Style 2, high task-high relationship, with 26 responses representing 51% of the total. Style 3, low task-high relationship, was the dominant style of 13 (25.5%) of the principals. Style 1, high task-low relationship, was the dominant style chosen by 4 (7.8%) of the principals, and Style 4, low task-low relationship, was not selected as a dominant style.

Principals who selected an equal number of responses for two styles presented the following combinations: Five (9.8%) of the principals reported that they used Style 2 and Style 3 equally, 2 (3.9%) of the principals reported that they used Style 1 and Style 2 equally, and 1 (2.0%) used Style 1 and Style 3 equally. Forty-three (86.1%) of the principals reported that they used either Style 2 or 3, or a combination of Style 2 and 3 as their dominant leadership style.

Orr (1980) employed the LEAD-Self to investigate the leadership styles of all middle school principals in Delaware, New Jersey, and Pennsylvania. Results indicated that leadership styles 2 and 3 were used by middle school principals 96.25% of the time. Style 1 was rarely used and Style 4 was never used. According to Hersey and Blanchard (1988) Styles 2 and 3 tend to be used by administrators who work with employees who have average levels of job readiness. Style 1 is best used with an individual or group low in readiness and needing direction. Style 4 is used when delegating to highly competent individuals or groups capable of working on their own. Styles 2 and 3 are never far from the appropriate intervention and are called "safe" styles. It is considered more "risky" to use Styles 1 and 4 because

they may be less appropriate if not applied properly to the situation.

#### Style Effectiveness/Adaptability

The degree to which principals are able to employ appropriate leadership styles to meet situational demands determines their style effectiveness or adaptability (Hersey & Blanchard, 1988). The leader's effectiveness score may range from -24 to +24. Ineffective scores range from -24 to -1 and effective choices from +1 to +24. The leader's effectiveness score was based upon responses to 12 situations on the LEAD-Self, with each situation having four alternative leader behaviors.

Principals' effectiveness/adaptability scores ranged from -1 to +18. Of the 51 completed questionnaires in the sample, only one principal had a score in the negative range. The mean style effectiveness/adaptability score for principals in this study was +9.56 and the mode was +10. Hersey and Blanchard (1988) report that based on a sample of over 20,000, 83% of the middle manager style adaptability scores were in the range of -6 to +6. The adaptability scores of principals in Western North Carolina demonstrate effectiveness in the use of properly matching leadership style with employee readiness.

#### Results of Analysis of the Administrative Stress Index

The Administrative Stress Index was designed to measure the occupational stressors that effect school principals (Gmelch, 1982). The ASI consists of 35 questions which are presented using a Likert-type scale ranging from 1, (rarely or never bothers me), to 5,

(frequently bothers me). Two questions on the ASI were not applicable to principals in Western North Carolina, since the state has no collective negotiations laws. These were "being involved in the collective bargaining process" and "administering the negotiated contract". Responses were not recorded as a part of this study. The remaining 33 questions on the ASI were used in this study.

The raw scores on the ASI (with 33 questions) could range from a low of 33 to a high of 165. Principals' scores ranged from 43 to 120. The mean score for principals in this group was 76 and the mode was 79. Total scores in this range indicate that on the average principals are occasionally bothered by the stress in their job. However, certain stressors were often more or less stressful than the average.

The ASI measures five areas of occupational stress. These include role-related stress, task-based stress, boundary-spanning stress, conflict-mediating stress, and other stress (Gmelch, 1982). The first four of the top five stressors for principals in Western North Carolina were in the area of task-based stress and the fifth was in other stress. The top five stressors were as follows: 1) Meetings take up too much time, 2) Being interrupted frequently by telephone calls, 3) Trying to complete reports and other paperwork on time, 4) Feeling that I have to participate in school activities outside of normal working hours at the expense of my personal time, 5) Evaluating staff members performance.

Table 4 compares the mean scores of principals' responses on the five dimensions of stress. Mean scores could range from from 1 to 5. Task-based stress had the highest mean score of 2.69 when the

Table 4

Mean Scores on Dimensions of Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88. (n=51)

Dimensions of Stress	Mean Score
Task-based	2.69
Conflict-mediating	2.41
Boundary-spanning	2.33
Other stress	2.15
Role-based	2.08

principal's scores were compared on the five dimensions of stress. Following task-based stress principals rated the conflict-mediating dimension as the second highest category of stress with a mean score of 2.41. Principals perceived resolving parent/school conflicts, resolving differences between staff members, and handling student discipline problems as very stressful.

Thompson (1985/1986) found similar results in a study on stress and burnout of principals in North Carolina. Thompson's study included 304 elementary, middle, and high school principals. Twenty-two (7%) principals were located in the mountain region of North Carolina. Using the five stress dimensions of the Administrative Stress Index, Thompson obtained the mean scores presented in Table 5.

Thompson's study (1985/1986) found a slightly higher degree of stress in principals than did Bradford's (1989). The mean scores for task-based stress in the two studies was 2.75 and 2.69 respectively, and was the highest category of stress in both studies. Conflict-mediating stress was the second highest category of stress in both studies with mean scores of 2.67 and 2.41.

#### Results of Analysis of the Behavior Activity Profile

The Behavior Activity Profile (BAP) measures what has been called Type A behavior, which is sometimes referred to as coronary prone behavior pattern (Friedman & Rosenman, 1974). The BAP consists of 21 questions set up in a semantic differential scale format. The Type A scale ranges from 21-147. The higher the number above 87, the stronger

Table 5

Mean Scores on Dimensions of Occupational Stress: North Carolina Elementary, Middle, and HS Principals, 1984-85. (n=304)

Dimensions of Stress	Mean Scores
Task-based	2.75
Conflict-mediating	2.67
Other stress	2.33
Boundary-spanning	2.25
Role-based	2.17

the Type A tendencies; the lower the number below 82, the stronger the Type B tendencies. Scores of 82 to 87 indicate a combination of Type A/B behavior. Principals' scores on the BAP ranged from 40 to 121. The mean score for principals in this study was 88.94 and is within the Type A behavior range.

Table 6 shows the frequency and percentage of Type A and Type B behavior as reported by principals. Twenty-nine of the 51 (56.8%) principals reported that they were Type A individuals, while 11 (21.6%) indicated that they they were Type B, and 11 (21.6%) believed that they had a combination of Type A/B characteristics. A total of 40 (78.4%) of the principals possessed some Type A tendencies as shown by BAP responses. Friedman and Rosenman (1974) report that 50% to 70% of the population in the United States is Type A or exhibits at least some characteristics of Type A behavior. The 29 (56.8%) principals reporting Type A behavior are in the 50% to 70% range presented in Friedman and Rosenman's (1974) study on Type A behavior in the general population.

The BAP has three dimensions. These dimensions are 1) hard driving/competitiveness, 2) impatience, and 3) job involvement. Scores in each of these areas could range from 7 to 49. The principals had a mean score of 29.62 in hard driving/competitiveness, 33.33 in impatience, and 28.80 in job involvement. The impatience dimension of the BAP was highest (33.33). The BAP indicates that individuals who are impatient eat faster than others, hurry others along, and rush conversations. The overwhelming daily task-based demands placed upon principals may contribute to their higher scores on the impatience dimension.

Table 6

Frequency Distribution of Type A/B Behavior: Western North Carolina Middle, JHS, and HS Principals, 1987-88

Type of Behavior	Frequency	Percentage
Type A	29	56.8
Type B	11	21.6
Combination	11	21.6
Total	51	100.0

### Testing of the Hypotheses

The hypotheses were tested using the Spearman rank-order correlation coefficient or the Pearson product-moment correlation procedure. The method of analysis was determined by the type of data to be compared in each hypothesis. The Spearman rho was used to analyze the data in Ho1, Ho2, Ho3, Ho4, and Ho6 because the data appeared to ordinal with one score higher than the other. According to Ary, Jacobs, and Razavieh (1985) the Spearman rank-order correlation coefficient is a special case of the Pearson product-moment correlation procedure, and its formula is derived from the Pearson  $r$  formula. The Pearson  $r$  was used to analyze the data in Ho5 because the scores appeared to be interval data with equal distances between them. The Pearson  $r$  is based on the mean and standard deviation. Gay (1981) proposed that the Pearson  $r$  is the most stable measure of correlation.

In each hypothesis correlation coefficients were considered significant if their value was sufficient to attain the .05 level. The calculated probability of each hypothesis was compared to the .05 level of significance and the null hypothesis was rejected or not rejected based upon the results of this test and comparison.

(Ho1)

There is no significant correlation between principals' leadership styles and occupational stress.

The variables compared in the first hypothesis are leadership styles of principals as determined by the LEAD-Self and occupational stress as determined by the Administrative Stress Index . Hersey and

Blanchard (1988) proposed that the manager should move from a directive Style 1 toward a delegating Style 4 as the employee developed greater follower readiness. Readiness is determined by the ability and willingness of the employee to accomplish a specific task.

The first hypothesis was tested with a series of correlations. Table 7 presents the results of the Spearman rho correlation of leadership styles and occupational stress. A moderate but significant negative correlation was found between principals' scores on leadership styles and scores on task-based stress ( $r = -.2966$ ,  $p = .035$ ). A negative correlation between leadership styles and stress means that as the leadership style moves from a directive Style 1 toward a participating Style 3 the principal experiences less task-based stress. As a result of this finding, the first hypothesis as it related to the relationship between principals' leadership styles and task-based stress was rejected.

Task-based roles account for stress surrounding the performance of daily tasks such as attending meetings, taking phone calls, completing paperwork, and participating in many school activities outside of normal working hours. Gmelch (1982) states that personal contacts are continuous and hinder the administrator's ability to manage time.

In this study 86.1% of the principals reported that they used Style 2 or 3, or a combination of Styles 2 and 3, as their dominant leadership style. Styles 2 and 3 are considered to be "safe" styles, while Styles 1 and 4 are more "risky" because they are less appropriate if not applied properly to the situation (Hersey and Blanchard, 1988). Styles 2 and 3 are coaching and participating

Table 7

Spearman Correlation Scores of Leadership Styles and Occupational  
Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-88

Leadership styles and	r	p
occupational stress	-.2450	.083
Subscores		
role-based stress	-.1204	.400
task-based stress	-.2966	.035*
boundary-spanning stress	-.1497	.294
conflict-mediating stress	-.2172	.126
other stress	-.2299	.105

n=51

\*p<.05

styles. If the principal is involved or participates with others in completing daily tasks, he or she may more easily finish these tasks with less effort and stress than if working alone.

The correlation coefficients calculated for the relationships between the principals' leadership style scores and their scores for occupational stress,  $-.2450$ , role-based stress,  $-.1204$ , boundary-spanning stress,  $-.1497$ , conflict-mediating stress,  $-.2172$ , and other stress,  $-.2299$ , were not significant. As a result of these findings, the first hypothesis as it related to the leadership style scores and the scores on these categories of stress was not rejected. (Ho2)

There is no significant correlation between principals' leadership effectiveness or adaptability and occupational stress.

The variables compared in the second hypothesis are leadership effectiveness/adaptability as determined by the LEAD-Self and occupational stress as determined by the Administrative Stress Index .

The second hypothesis was tested with a series of correlations. Table 8 presents the results of the Spearman rho correlation of leadership effectiveness/adaptability and occupational stress. A significant, moderately strong, positive correlation was found between principals' scores on leadership effectiveness/adaptability and scores on conflict-mediating stress ( $r = +.3432$ ,  $p = .014$ ). A positive correlation between leadership effectiveness or adaptability and conflict-mediating stress indicates that as the leader's effectiveness and adaptability increase he/she experiences greater conflict-mediating stress. As a result of this finding, the second hypothesis as it

Table 8

Spearman Correlation Scores of Leadership Effectiveness and  
Occupational Stress: Western North Carolina Middle, JHS, and HS  
Principals, 1987-1988

Leadership effectiveness and	r	p
occupational stress	+.1292	.366
Subscores		
role-based stress	+.1352	.344
task-based stress	-.0210	.884
boundary-spanning stress	+.1576	.269
conflict-mediating stress	+.3432	.014*
other stress	+.0109	.940

n=51

\*p<.05

related to the relationship between principals' scores on leadership effectiveness or adaptability and scores on conflict-mediating stress was rejected.

Principals must mediate conflicts of all types. They may involve individuals inside and outside the school, as between teacher and student or between teacher and parent. The demands and interests of various groups are often different and make it impossible for the principal to satisfy everyone.

In this study principal's effectiveness/adaptability scores ranged from -1 to +18, with a mean leadership effectiveness/adaptability score of +9.56. Principals demonstrated effectiveness in properly matching leadership styles with employee readiness. A positive correlation between leadership effectiveness/adaptability and conflict-mediating stress demonstrates that effective and adaptable principals are dealing with conflict in their schools on a consistent basis, using their leadership skills to handle issues as they occur. Highly effective principals are adaptable and capable of dealing with various types of behavior. An increase in conflict-mediating stress means that effective principals are willing to take a leadership role in resolving conflicts.

The correlation coefficients calculated for the relationships between the principals' leadership effectiveness/adaptability scores and their scores for occupational stress, +.1292, role-based stress, +.1352, task-based stress, -.0210, boundary-spanning stress, +.1576, and other stress, +.0109, were not significant. As a result of these findings, the second hypothesis as it related to leadership

effectiveness/adaptability and these categories of occupational stress was not rejected.

(Ho3)

There is no significant correlation between principals' leadership styles and Type A behavioral characteristics.

The variables compared in the third hypothesis are leadership styles of principals, as determined by the LEAD-Self, and Type A behavior, as determined by the Behavior Activity Profile .

Table 9 presents the results of the Spearman rho correlation of leadership styles and Type A behavior. The null hypothesis was not rejected because the .05 level of significance was not attained between leadership styles and Type A behavior.

Forty-three (86.1%) of the principals in the study used either leadership style 2 or 3, or a combination of both, as their dominant style. Twenty-nine (56.8%) of the principals were Type A individuals, and 11 (21.6%) displayed a combination of Type A and B traits, resulting in 40 (78.5%) reporting some Type A tendencies.

A very low correlation of leadership styles and Type A behavior may indicate that Type A principals have successfully developed their leadership styles contrary to their desire to be competitive, impatient, or overly involved in their job. The role responsibilities of the principal often require individual competitiveness and a high level of job involvement. Competitiveness in the American society is often viewed as an admirable quality, and this perpetuates its acceptance in the occupational setting.

Table 9

Spearman Correlation Scores of Leadership Styles and Type A Behavior:  
Western North Carolina Middle, JHS, and HS Principals, 1987-1988

Leadership styles and	r	p
Type A behavior	-.1104	.440
Subscores		
hard-driving and competitive	+.0142	.921
impatience	-.1082	.450
job involvement	-.1088	.447

n=51

(Ho4)

There is no significant correlation between principals' leadership effectiveness or adaptability and Type A behavioral characteristics.

The variables compared in the fourth hypothesis are leadership effectiveness/adaptability as determined by the LEAD-Self and Type A behavior as determined by the Behavior Activity Profile .

Table 10 presents the results of the Spearman rho correlation of leadership effectiveness/adaptability and Type A behavior. The null hypothesis was not rejected because the .05 level of significance was not attained between leadership effectiveness or adaptability and Type A behavior.

In this study principals had a mean leadership effectiveness or adaptability score of +9.56, and this is well within the effective range of +1 to +24. Twenty-nine (56.8%) of the principals were Type A and a total of 40 (78.5%) demonstrated some Type A tendencies.

A low correlation of leadership effectiveness/adaptability and Type A behavior indicates that principals are equally effective and adaptable to situations, regardless of whether they are Type A or Type B individuals. In contradiction to this finding Stube and Werner (1985), and Suinn and Bloom (1978), support the idea that Type A individuals are often more rigid, controlling, and less flexible than Type B's, who are not as uptight and who perform in a much more relaxed manner.

The assumption may be made that Type A behavior does not generally reduce the effectiveness of principals. The principals in this study may have a knowledge of effective coping mechanisms and stress

Table 10

Spearman Correlation Scores of Leadership Effectiveness and Type A Behavior: Western North Carolina Middle, JHS, and HS Principals, 1987-1988

Leadership effectiveness and	r	p
Type A behavior	-.0510	.722
Subscores		
hard-driving and competitive	-.0279	.846
impatience	+.0085	.953
job involvement	-.1618	.257

n=51

reduction techniques and use these techniques in the form of physical or mental diversions for relaxation and self-control.

(Ho5)

There is no significant correlation between principals' Type A behavioral characteristics and occupational stress.

The variables compared in the fifth hypothesis are Type A behavior as determined by the Behavior Activity Profile and occupational stress as determined by the Administrative Stress Index. The Pearson  $r$  was selected to analyze the data because the scores on the BAP and the ASI appeared to be interval data with equal distances between them. The Pearson  $r$  is based on the mean and standard deviation.

The fifth hypothesis was tested with a series of correlations. Table 11 presents the results of the Pearson  $r$  correlation of Type A behavior and occupational stress. A moderate but significant positive correlation was found between principals' scores on Type A behavior and scores on task-based stress ( $r = +.2703$ ,  $p = .028$ ). A positive correlation indicates that as principals exhibit more Type A behavior, they experience a greater amount of task-based stress. As a result of this finding, the fifth hypothesis as it related to the relationship between principals' Type A behavior scores and scores on task-based stress was rejected.

Type A individuals as a group are more hard-driving and competitive, impatient, and heavily involved in their jobs (Friedman and Rosenman, 1974). Twenty-nine (56.8%) of the principals were Type A, and 40 (78.5%) showed some Type A tendencies. Task-based stress is caused by an overload of daily tasks, such as excessive meetings and

Table 11

Pearson Correlation Scores of Type A Behavioral and Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-1988

Type A behavior and	r	p
occupational stress	+.1797	.103
Subscores		
role-based stress	+.0699	.313
task-based stress	+.2703	.028*
boundary-spanning stress	+.1056	.231
conflict-mediating stress	+.0502	.363
other stress	+.1214	.198

n=51

\*p<.05

paperwork. Task-based stress was the highest dimension of occupational stress experienced by the principals in this study and in studies by Thompson (1985/1986) and Gmelch (1982).

The correlation coefficients for the relationships between principals' Type A scores and their scores for occupational stress,  $+0.1797$ , role-based stress,  $+0.0699$ , boundary-spanning stress,  $+0.1056$ , conflict-mediating stress,  $+0.0502$ , and other stress,  $+0.1214$ , were not significant. As a result the fifth hypothesis as it related to Type A behavior and these categories of stress was not rejected.

Table 12 presents the results of the Pearson  $r$  correlations for the three dimensions of Type A behavior and occupational stress. Moderate but significant positive correlations were found between the impatience dimension and overall occupational stress ( $r = +0.2610$ ,  $p = .032$ ), task-based stress ( $r = +0.3096$ ,  $p = .014$ ), and conflict-mediating stress ( $r = +0.2848$ ,  $p = .021$ ). Both task-based and conflict-mediating stress were rated as the two highest categories of stress by principals. It appears that Type A principals were expressing impatience in dealing with heavy daily task demands and in resolving issues involving conflict.

As a result of these findings, the fifth hypothesis as it related to the relationships between principals' scores on the impatience dimension of Type A behavior and scores on occupational stress, task-based stress, and conflict-mediating stress was rejected.

No significant correlations were found between the hard-driving and competitive and job involvement dimensions of Type A behavior and occupational stress or its subscores. The fifth hypothesis as it

Table 12

Pearson Correlation Scores of Dimensions of Type A Behavior and Occupational Stress: Western North Carolina Middle, JHS, and HS Principals, 1987-1988

	Dimensions of Type A Behavior					
	Hard-driving & competitive		Impatience		Job involvement	
	r	p	r	p	r	p
occupational stress	+0.0975	.248	+0.2610	.032*	+0.0922	.260
Subscores						
role-based stress	+0.0517	.359	+0.1540	.140	-.0251	.430
task-based stress	+0.1381	.167	+0.3096	.014*	+0.2213	.059
boundary-spanning stress	+0.1499	.147	+0.0956	.242	+0.0101	.472
conflict-mediating stress	+0.0028	.492	+0.2848	.021*	-.1378	.167
other stress	+0.0351	.403	+0.1504	.146	+0.1169	.207

n=51

\*p<.05

related to these relationships was not rejected.

(Ho6)

There is no significant correlation between the leadership styles, leadership effectiveness or adaptability, occupational stress, and Type A behavior, with years of administrative experience, and with age of principals.

Leadership styles and adaptability were determined by the LEAD-Self, occupational stress by the Administrative Stress Index , and Type A behavior by the Behavior Activity Profile . Forty (78.5%) of the principals had over 11 years of administrative experience.

Table 13 presents the results of the Spearman correlation of leadership styles and effectiveness, occupational stress, and Type A behavior with years of administrative experience. A moderate but significant negative correlation was found between principals' years of administrative experience and Type A behavior ( $r = -.2818$ ,  $p = .045$ ), and years of administrative experience and the hard-driving and competitive dimension of Type A behavior ( $r = -.3306$ ,  $p = .018$ ). A negative correlation between years of administrative experience Type A behavior means that as the principals' experience increases there is a decrease in Type A behavior. The hard-driving and competitive dimension of Type A behavior also decreases as years of administrative experience increases. As a result of these findings, the sixth hypothesis as related to the relationships between principals' years of administrative experience and scores on Type A behavior, and years of administrative experience and the hard-driving and competitive dimension of Type A behavior was rejected.

Table 13

Spearman Correlation Scores of Leadership Styles, Occupational Stress, and Type A Behavior with Years of Administrative Experience: Western North Carolina Middle, JHS, and HS Principals, 1987-1988

Administrative experience with	r	p
leadership style	+.1581	.268
leadership effectiveness	-.0141	.922
occupational stress	-.2243	.114
Subscores		
role-based stress	-.2694	.056
task-based stress	-.1866	.190
boundary-spanning stress	-.0946	.509
conflict-mediating stress	-.1782	.211
other stress	-.1680	.239
Type A behavior	-.2818	.045*
Subscores		
hard-driving and competitive	-.3306	.018*
impatience	-.1842	.196
job involvement	-.1206	.399

n=51

\*p<.05

This reduction in the Type A behavior of principals may result from their ability to learn how to deal with stressful situations or from learning stress management techniques. Physical exercise and various mental relaxation activities can help to reduce stress and Type A behavior (Matteson and Ivancevich, 1987).

No significant correlations were found between principals' years of administrative experience and leadership styles, leadership effectiveness, and occupational stress. The sixth hypothesis as it relates to these relationships was not rejected.

Forty-three (84.2%) of the principals were in the 40 to 60 age range, and 50 (98%) were in the 30 to 60 age range. Table 14 presents the results of the Spearman rho correlation of leadership styles and effectiveness, occupational stress, and Type A behavior with age.

No significant correlations were found between the principals' age and leadership styles and effectiveness, occupational stress, and Type A behavior. It can be assumed that none of these variables is strongly related to the principals' age. As a result of these findings, the sixth hypothesis was not rejected as it related to the age of principals.

Table 15 presents a summary of the of the significant correlation coefficients which attained the .05 level in null hypotheses 1, 2, 5, and 6.

Table 14

Spearman Correlation Scores of Leadership Styles, Occupational Stress, and Type A Behavior with Age: Western North Carolina Middle, JHS, and HS Principals, 1987-1988

Age with	r	p
leadership style	-.0394	.784
leadership effectiveness	-.0741	.605
occupational stress	-.0725	.613
Subscores		
role-based stress	-.2243	.114
task-based stress	-.0766	.593
boundary-spanning stress	+.0490	.733
conflict-mediating stress	-.0590	.681
other stress	-.0413	.773
Type A behavior	-.2000	.159
Subscores		
hard-driving stress	-.1875	.188
impatience	-.2346	.097
job involvement	+.0412	.774

n=51

Table 15

Summary of Significant Correlation Coefficients for Ho1, Ho2, Ho5,  
and Ho6: Western North Carolina Middle, JHS, and HS Principals,  
1987-88

Ho1		Leadership Styles			
	r	p			
task-based stress	-.2966	.035			
Ho2		Leadership Effectiveness			
	r	p			
conflict-mediating stress	+.3432	.014			
Ho5		Type A Behavior		Impatience Dimension	
	r	p	r	p	
occupational stress			+.2610	.032	
task-based stress	+.2703	.028	+.3096	.014	
conflict-mediating stress			+.2848	.021	
Ho6		Administrative Experience			
	r	p			
Type A behavior	-.2818	.045			
hard-driving/competitive	-.3306	.018			

n=51  
p<.05

### Discussion

The demographic data on the principals and their responses to the Leader Effectiveness and Adaptability Description-Self, the Administrative Stress Index, and the Behavior Activity Profile, provided important information about their patterns of behavior. The descriptive data on the principals and an analysis of the data relating to the hypotheses were discussed.

Frequency and percentage distributions of principals' responses to demographic data and to the instruments used in the study provided the following important descriptive information.

1) The demographic data collected on principals' years of administrative experience indicated that 11 (21.6%) of the principals had over 20 years of experience, and 18 (35.3%) of the principals were 50-59 years of age.

Because 21.6% of the principals had over 20 years experience, and 35.3% were 50-59 years in age, a large number of them will probably retire within the next few years. This means that a large number of new principals need to be trained for positions. Universities must strive to develop quality programs in Educational Administration in order to train new principals to assume leadership roles.

2) The leadership style of principals was determined by the LEAD-Self. Twenty-six (51%) of the principals listed leadership style 2, selling, as their dominant leadership style. Style 3, participating, was the dominant style of 13 (25.5%) of the principals. Five (9.8%) of the principals used Styles 2 and 3 equally. A total of 44 (86.1%) of the principals reported that they used either Style 2 or

3, or a combination of Style 2 and 3 as their dominant leadership style. Styles 2 and 3 are considered to be "safe styles" by Hersey and Blanchard (1988).

Orr (1980) found leadership Styles 2 and 3 to be the most frequently used leadership styles of principals. Edman (1982) and Harris (1987) stated that leadership style 2 is the most favored style of principals and managers. Harris recommended more use of leadership style 3. Effective leadership styles can be learned and should be taught to principals in administrative and leadership courses. In order for teachers to take part in the development of the school curriculum and other school policies, a stronger use of the participatory leadership approach (Style 3) may be necessary.

3) The leadership effectiveness or adaptability of principals was determined by the effectiveness/adaptability scores on the LEAD-Self which could range from -24 to +24. Principals effectiveness/adaptability scores in this study ranged from -1 to +18. Only one principal had a negative (-1) effectiveness/adaptability score. The mean effectiveness/adaptability score for principals was +9.56, and was sufficiently within the effective range. Principals generally employed leadership styles appropriate to situational demands.

Hersey and Blanchard (1988) reported that based on a sample of 20,000, 83% of the middle management style adaptability scores were in the range of -6 to +6.

4) The occupational stress perceived by principals was determined by the Administrative Stress Index . Scores could range from a low of

33 to a high of 165. The mean score for principals in this study was 76 and the mode was 79. On the average, principals were occasionally bothered by stress. Task-based stress and conflict-mediating stress were rated as the two highest categories of stress, with mean scores of 2.69 and 2.41 respectively.

Thompson (1985/1986) also found task-based stress and conflict-mediating stress to be the two highest categories of stress for North Carolina principals, with mean scores of 2.75 and 2.67 respectively.

5) The Type A behavior of principals was determined by the Behavior Activity Profile. Twenty-nine (56.8%) of the principals reported Type A behavioral characteristics. An additional 11 (22.6%) stated they had a combination of Type A/B characteristics. Forty (78.4%) displayed some Type A tendencies. Principals' subscores on the BAP indicated that principals reported stronger Type A behavior in the impatience dimension.

Friedman and Rosenman (1974) reported that 50% to 70% of the population in the United States were Type A; therefore, principals demonstrated characteristics similar to the general population.

An analysis of the data related to the six null hypotheses indicated a number of relationships between the variables. The Spearman rho was used in the analysis of null hypotheses 1, 2, 3, 4, and 6, and the Pearson r was used in the analysis of null hypothesis 5. Correlation coefficients were significant if they attained the .05 level. The data analysis yielded specific findings related to each hypothesis. These findings and their relationships to the findings

presented in the review of literature are discussed.

(Ho1)

There is no significant correlation between principals' leadership styles and occupational stress.

A moderate negative correlation at the .05 level of significance was established between leadership styles and task-based stress ( $r = -.2966$ ,  $p = .035$ ). A negative correlation between leadership styles and task-based stress means that as the leadership style moves from directive, Style 1, toward participating, Style 3, there is less task-based stress.

No significant correlations were found between principals' leadership style and occupational stress, role-based stress, boundary-spanning stress, conflict-mediating stress, and other stress.

The first hypothesis as it related to the relationship between principals' scores on leadership styles and scores on task-based stress was rejected. This finding is consistent with previous research on these topics. Blake and Mouton (1980) proposed that stress and stress-related disorders corresponded to leadership styles or patterns. They promoted the 9,9 managerial orientation as the most effective, stress-resistant style. Style's 3 and 4 of Hersey and Blanchard's Situational Leadership Model (1988) are closely related to the 9,9 managerial orientation of Blake and Mouton (1980). Managers with a 9,9 orientation have a high concern for people to be productive and a high concern for people to have rewarding experiences. Leadership styles can be taught and individuals can learn to change their styles.

Gorman (1975) found a negative correlation between anxiety levels

of principals and the task and relationship dimensions of leader behavior. In a similar study Gilbert (1981) stated that principals with dominant leadership style 3 had lower mean scores on occupational stress than Style 1 and 2 principals.

Task-based stress often results from quantitative and qualitative overload. Principals rated task-based stress as the highest category of occupational stress in this study and also in studies by Thompson (1985/1986) and Gmelch (1982).

(Ho2)

There is no significant correlation between principals' leadership effectiveness or adaptability and occupational stress.

A moderate positive correlation at the .05 level of significance was found between leadership effectiveness/adaptability and conflict-mediating stress ( $r = +.3432$ ,  $p = .014$ ). A positive correlation between leadership effectiveness or adaptability and conflict-mediating stress indicates that as the leader's effectiveness and adaptability increases he/she experiences greater conflict-mediating stress.

No significant correlations were found between leadership effectiveness/adaptability and occupational stress, role-based stress, task-based stress, boundary-spanning stress, and other stress.

The second hypothesis as it related to the relationship between principals' scores on leadership effectiveness or adaptability and scores on conflict-mediating stress was rejected. The mean leadership effectiveness/adaptability score in this study was +9.56, which is well above the range of -6 to +6, in which Hersey and Blanchard (1988) found

that 83% of twenty thousand middle managers scored.

Henson (1984) found a low negative correlation between role-based stress and leadership adaptability among superintendents and principals. Gilbert (1981) found lower occupational stress mean scores for principals perceived by teachers as having high style adaptability than for low style adaptability principals.

The results of this study are not consistent with Henson and Gilbert, because principals with high style adaptability have indicated that they experienced more conflict-mediating stress. It appears that highly adaptable principals varied their leadership styles appropriately to meet situational demands, they became more people oriented and more highly involved in resolving conflicts. Principals with high adaptability were willing to take a leadership role in resolving conflicts among teachers, students, and parents. Principals with low style adaptability may have attempted to avoid conflict by withdrawing or compromising their values. Adaptable principals have not necessarily stated that they felt more personal anxiety, but that they felt greater stress as a result of handling conflicts. While these principals may have felt stress as a result of being involved in conflict resolution, their leadership effectiveness or adaptability remained high.

(Ho3)

There is no significant correlation between principals' leadership styles and Type A behavioral characteristics.

No significant correlations were found between leadership styles and Type A behavior or between leadership styles and the categories of

hard-driving/competitive, impatience, or job involvement.

The null hypothesis was not rejected because the .05 level of significance was not attained between leadership styles and Type A behavior. Forty (78.5%) of the principals had either Type A or a combination of Type A and B traits. It is characteristic of the Type A individual to be competitive, impatient, and overly involved in their job.

Blake and Mouton (1980) categorized managers with extreme 9,1 orientations as typical Type A's, who are constantly concerned with number of accomplishments. These 9,1 leaders have a high concern for production and a low concern for people, and this orientation corresponds to Hersey and Blanchard's (1988) leadership style 1. Toppins (1986) conducted a related study which had different results. Toppins investigated the relationships between leadership styles and personality (patterns of core strengths) of school administrators. Core strengths included thinking or risking, practical or theoretical thinking, and dependent or independent risking. When the data were analyzed no significant relationships were found. The findings suggested a lack of evidence that leadership styles were related to personality.

Blake and Mouton (1980) emphasized the specificity theory of stress which states that certain patterns of stress, as Type A pattern, predispose to cardiovascular problems, digestive, or muscular disorders. In contrast, Selye (1976) proposed the general or nonspecific theory of psychosomatic illness. Selye stated that stress attacks the weakest system of the body and breaks it down. While

stress may be related to the dominant use of a specific leadership style, Blake and Mouton's specificity theory is not supported by the findings in this study. The job responsibilities of principals often promote Type A behavior because they must be competitive and highly involved in their jobs.

The results of the statistical analysis of this hypothesis may have been affected by the small number of leadership style 1 principals in the sample. While 56.9% of the principals were Type A, only 7 of 51 principals were leadership style 1, which corresponds to Blake and Mouton's 9,1 managerial orientation. Small sample size is a possible reason for nonsupport of the hypothesis. With caution, one may assume from the data analysis that principals have developed a variety of leadership styles, and that these styles are not related to Type A or B behavior. The analysis of the data did not allow the rejection of the null hypothesis.

(Ho4)

There is no significant correlation between principals' leadership effectiveness or adaptability and Type A behavioral characteristics.

No significant correlations were found between leadership effectiveness/adaptability and Type A behavior, or between leadership effectiveness/adaptability and the categories of hard-driving/competitive, impatience, and job involvement.

The null hypothesis was not rejected because the .05 level of significance was not attained between leadership effectiveness or adaptability and Type A behavior. In this study principals had a mean effectiveness/adaptability score of +9.56, which is well within the

effective range of +1 to +24.

Blake and Mouton (1980) described the 9,1 individual as having inflexible determination, a fear of failure, and a logic that equated winning as an end in itself. Stube and Werner (1985), and Caplan and Jones (1975) stated that Type A individuals were often more rigid, controlling, and less flexible than Type B individuals. Stube and Werner (1985) found that Type A's were often unwilling to delegate responsibility and that they may increase their own job demands and workloads. Glass (1977) pointed out that Type A behavior appeared in the face of stressors and could be viewed as a method of coping with stress. In contrast to these findings Matteson, Ivancevich, and Smith (1984) found no significant relationships between Type A behavior and job performance or between Type A behavior and job satisfaction. Jamal (1985) found no significant differences in Type A's and Type B's quantity of performance on the job. Type A's were rated higher on effort exerted, and Type B's higher on quality of performance.

According to the analysis of the data in this study there was no difference between the effectiveness and adaptability of Type A principals and Type B principals. Most of the previous research in this area does not agree with this finding. Therefore, it seems appropriate to question the validity of the Behavior Activity Profile as a measure of Type A behavior. The BAP was used because of its moderate length (21 questions), simple directions, and dimensional scores for hard-driving/competitiveness, impatience, and job involvement. The structured interview is the best method for assessing Type A behavior, but this method is most often used for counseling

purposes and was not feasible for this study. Matteson (1987) stated that the BAP has been correlated with the Framingham Type A Scale at the .55 level. Lee, King, and King (1987) conducted a validity study on four Type A instruments and obtained moderate correlations of .51 to .54. Bradford (1989) obtained a reliability coefficient of 96.69 for internal validity when the results of the BAP were analyzed using the Cronbach Alpha Model. The results indicate that moderate concurrent validity for the BAP has been established.

It appears that the BAP should measure Type A behavior accurately. The analysis of the data did not allow the rejection of the null hypothesis.

(Ho5)

There is no significant correlation between principals' Type A behavioral characteristics and occupational stress.

A moderate positive correlation at the .05 level of significance was found between Type A behavior and task-based stress ( $r = +.2703$ ,  $p = .028$ ). The fifth hypothesis as it related to the relationship between principals' scores on Type A behavior and scores on task-based stress was rejected. A positive correlation between Type A behavior and task-based stress indicates that as the principal exhibits more Type A behavior, he or she experiences a greater amount of task-based stress.

Research studies indicated that Type A individuals reacted more intensely to stress and perceived stress than Type B individuals (Travlos, 1984; Wooley, 1983; Caplan and Jones, 1975). Travlos (1984) found that Type A behavior was related to three different job

stressors. These included conflict, overload, and powerlessness. Glass (1977) pointed out that Type A behavior appeared in the face of stressors that threatened an individual's control. Thus, Type A behavior could be viewed as a method of coping with stress. According to Matteson and Ivancevich (1987) and Jamal (1985) Type A's have more health problems than Type B's, and have toxic elements in their personalities which cause turmoil in an organization. Stube and Werner (1985) stated that Type A individuals have a greater need for control and are often unwilling to delegate responsibility.

A moderate positive correlation at the .05 level of significance was also found between the impatience dimension of Type A behavior and overall occupational stress ( $r = +.2610$ ,  $p = .032$ ), task-based stress ( $r = +.3096$ ,  $p = .021$ ), and conflict-mediating stress ( $r = +.2848$ ,  $p = .021$ ). The fifth hypothesis as it related to the relationship between principals' scores on the impatience dimension of Type A behavior and scores on occupational stress, task-based stress, and conflict-mediating stress was rejected. It appears that Type A principals are expressing impatience in handling heavy daily task demands, and in resolving conflict in their schools.

Suinn and Bloom (1978) stated that Type A behavior is difficult to change, and that it is best to change specific components of the behavior. Provisions should be made to identify administrators with high Type A scores, and to allow them to attend workshops designed to help them to cope effectively with occupational stress.

No significant correlations were found among the dimensions of occupational stress and the hard-driving/competitive and job

involvement dimensions of Type A behavior.

(Ho6)

There is no significant correlation between the leadership styles, leadership effectiveness or adaptability, occupational stress, and Type A behavior, with years of administrative experience, and with age of principals.

A moderate negative correlation at the .05 level of significance was found between principals' Type A behavior and years of administrative experience ( $r = -.2818$ ,  $p = .045$ ), and between the hard-driving and competitive dimension of principals' Type A behavior and years of administrative experience ( $r = -.3306$ ,  $p = .018$ ). The sixth hypothesis as it related to the relationships among principals' scores on Type A behavior and scores on the hard-driving competitive dimension of Type A behavior with years of administrative experience was rejected. A negative correlation between Type A behavior and years of administrative experience means that as an administrator's experience increases there is a decrease in Type A behavior, especially the hard-driving competitive dimension.

Since Type A behavior is higher among principals with only a few years of administrative experience, support groups should be formed for these principals. The reduction of Type A behavior as years of administrative experience increase may be attributed to principals having become more confident and relaxed, and more knowledgeable about how to deal with stressful situations.

No significant correlations were found between years of administrative experience and leadership styles, leadership

effectiveness or adaptability, and occupational stress.

No significant correlations were found between the principal's age and leadership styles and effectiveness, occupational stress, and Type A behavior. None of these variables had a relationship to the principal's age. The sixth hypothesis was not rejected as it related to the age of principals.

## Chapter 5

### Summary, Conclusions, and Recommendations

#### Summary

Principals experience various types of job pressures as they perform their daily duties. They are involved with teachers, students, parents, and members of the community. They must motivate, discipline, counsel, and direct activities. It is often impossible for principals to make decisions which please everyone. In order to deal with the overwhelming demands of the job, principals must be able to deal effectively with stress and not let stress become an occupational hazard. Principals' leadership styles, behavioral characteristics, and abilities to deal with stress are important in their roles as administrative and instructional leaders of the school. Principals who are capable of dealing successfully with occupational stress will be much more effective leaders.

This study investigated the relationships among leadership styles and effectiveness, degree of occupational stress, and Type A behavioral characteristics of principals in Western North Carolina. The study addressed the following research questions which were posed as null hypotheses.

1. What is the relationship between leadership styles of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and occupational stress, as measured by the

Administrative Stress Index ?

2. What is the relationship between leadership effectiveness or adaptability of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and occupational stress, as measured by the Administrative Stress Index ?

3. What is the relationship between leadership styles of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and Type A behavior, as measured by the Behavior Activity Profile ?

4. What is the relationship between leadership effectiveness or adaptability of principals, as determined by the Leader Effectiveness and Adaptability Description-Self and Type A behavior, as measured by the Behavior Activity Profile ?

5. What is the relationship between Type A behavior of principals, as determined by the Behavior Activity Profile and principals' occupational stress, as measured by the Administrative Stress Index ?

6. What is the relationship between principals' leadership styles, leadership effectiveness or adaptability, occupational stress, and Type A behavior, with years of administrative experience, and age?

A survey design was used in the study. During May, 1988, a packet containing a cover letter, copies of the Leader Effectiveness and Adaptability Description-Self , the Administrative Stress Index , and the Behavior Activity Profile , was mailed to 16 middle, 8 junior, and 32 high school principals (56 total) in Western North Carolina. A total of 51 (91%) were returned.

The data for research questions 1, 2, 3, 4, and 6 were analyzed for degree of relationship with the Spearman rank-order correlation coefficient. Ho1, Ho2, Ho3, Ho4, and Ho6 were rejected or not rejected on the basis of .05 level of significance. The data for research question 5 was analyzed for degree of relationship with the Pearson product-moment correlation coefficient. Ho5 was rejected or not rejected on the basis of the .05 level of significance.

The analysis of the descriptive data related to the research questions yielded the following findings about principals' years of administrative experience and ages, leadership styles and effectiveness, perceived stress, and Type A or B behavior.

Eleven (21.6%) of the 51 principals in the study had over 20 years of administrative experience. Eighteen (35.3%) of the principals were 50-59 years of age.

On the Leader Effectiveness and Adaptability Description-Self 44 (86.1%) of the principals reported that they used either leadership style 2 or 3, or a combination of Style 2 or 3, as their dominant leadership style. The mean effectiveness/adaptability score was +9.56, and was sufficiently within the effective range.

Principals' responses on the Administrative Stress Index indicated that they were occasionally bothered by stress. The dimensions of task-based stress and conflict-mediating stress rated as the two highest categories of stress, with mean scores of 2.69 and 2.41 respectively.

Forty (78.4%) of the principals indicated on the Behavior Activity Profile that they possessed some tendencies of Type A behavior.

Twenty-nine (56.8%) were Type A, and 11 (21.6%) had a combination of Type A/B characteristics. Principals' highest scores on the dimensions of Type A behavior were on the impatience dimension.

An analysis of the data relating to the research questions which were posed as null hypotheses produced some very important findings. In research question 1, principals experienced significantly less task-based stress as their dominant leadership style moved from Style 1 toward style 3. Ho1 was rejected as it related to principals' leadership styles and task-based stress.

No significant correlations were found between the principals' leadership styles and occupational stress, role-based stress, boundary-spanning stress, conflict-mediating stress, and other stress.

In research question 2, principals experienced significantly more conflict-mediating stress as their leadership effectiveness or adaptability increased. Ho2 was rejected as it related to principals' leadership effectiveness or adaptability and conflict-mediating stress.

No significant correlations were found between leadership effectiveness or adaptability and occupational stress, role-based stress, boundary-spanning stress, and other stress.

In research question 3, principals demonstrated no significant relationships between Type A behavior and leadership styles. Ho3 was not rejected.

In research question 4, principals demonstrated no significant relationships between Type A behavior and leadership effectiveness or adaptability. Ho4 was not rejected.

In research question 5, Type A principals experienced

significantly more task-based stress than Type B principals. Ho5 was rejected as it related to Type A behavior and task-based stress, and as it related to the impatience dimension of Type A behavior and overall occupational stress, task-based stress, and conflict-mediating stress.

No significant correlations were found among the hard-driving/competitive and job involvement dimensions of Type A behavior and the dimensions of occupational stress.

In research question 6, principals demonstrated a significant decrease in Type A behavior as years of administrative experience increased. Ho6 was rejected as it related to Type A behavior and years of administrative experience.

No significant correlations were found between leadership styles and effectiveness or occupational stress and the principals' years of administrative experience.

No significant correlations were found among leadership styles and effectiveness, occupational stress, Type A behavior, and the age of the principal.

### Conclusions

The following conclusions are based upon the findings of the study:

1. The age and years of administrative experience of practicing principals indicated a need for universities to train more principals to take leadership roles in the schools of Western North Carolina as experienced principals begin to retire.

2. Principals should be made aware of the high levels of

task-based stress which they are likely to experience and the consequences of both quantitative and qualitative overload. Quantitative overload occurs when too much work is expected of the principal in a given period of time. Qualitative overload involves pressure from concentration, innovation, and making meaningful decisions.

3. Professional education programs and in-service programs for principals should emphasize the appropriate use of participatory and delegating leadership styles. The use of these styles may help to reduce the amount of task-based stress which this study indicates that principals experience.

4. Principals who effectively use leadership styles appropriate to changing situations are highly involved with people and issues in their schools. As a result they often become involved in the resolution of conflicts among students, teachers, and parents. Stress management training programs should be developed for principals and conflict resolution and stress reduction techniques should be emphasized.

5. Type A behavior appears to function independently of leadership style and effectiveness in principals. If principals wish to reduce Type A behavior they should concentrate on methods for alleviating Type A behavior rather than trying to adjust administrative styles.

6. Type A principals should be particularly cautious about task-based stress. Type A individuals often increase their own work load and create unrealistic job demands. Principals who are high in

Type A behavior should be identified and should periodically receive medical examinations.

7. Since beginning principals are more prone to exhibit Type A behavior, especially hard-driving/competitive behavior, they should be required to attend district level support group meetings. These support groups should emphasize stress management techniques.

#### Recomendations

The following recomendations are made based upon the research in this study and the review of literature. Recomendations are presented for university school administrator training programs, for local school districts, and for further research. Recommendations at the university level are as follows:

1. Universities should teach students who are training to be administrators about the use of effective leadership styles. Administrative stress needs to be studied and students' individual personality and behavioral characteristics explored. This instruction should help students to develop a better awareness of themselves and prepare them to be more highly effective administrators.

Recommendations at the local school district level are as follows:

2. School districts should conduct workshops designed to help the practicing administrator in the development of leadership qualities and in the exploration of managerial techniques compatible with the reduction of stress.

3. The principal should be included in district-level decisions that affect specific school sites. This should broaden the principal's personal leadership style, and promote teacher involvement in

decision-making within the schools.

4. Principals must learn to cope with task-based and conflict-mediating stress. These are the two highest categories of stress, and they are related to leadership styles, leadership effectiveness/adaptability, and Type A behavior. Stress management training programs should be developed with the objectives of providing stress management, time management, and stress reduction techniques for principals.

5. Provisions should be made to identify administrators with high Type A scores, and to allow them to attend workshops designed to help them to cope effectively with the specific components of Type A behavior. Glass (1977) points out that Type A behavior appears in the face of stressors that threaten an individual's control. Thus, Type A behavior can be viewed as a method of coping with stress.

6. Particular emphasis should be given to principals who have only a few years of administrative experience. Type A behavior is higher among these individuals. Principal support groups should be formed within the district and meeting time should be allowed.

Recommendations for further research are as follows:

7. A replication of this study should be conducted with a larger sample of principals. A different instrument should be used to measure Type A behavior, or an instrument should be used to measure the anger and hostility which is often expressed by Type A individuals. New research indicates that it may be expressed anger which causes cardiovascular disease.

8. A study should be done to assess the leadership styles and the

type and amount of stress that assistant principal's experience. Almost no research has been done in this area. The assistant principal functions in the role of a middle manager. He/she has responsibility for many tasks, but is dependent upon the principal to delegate the authority necessary to perform adequately in the role.

9. The relationship between the principal's leadership style and the principal's style of interpersonal interactions is worthy of being researched. A study should be conducted using the LEAD-Self and an instrument such as Porter's (1988) Strength Deployment Inventory . This inventory assesses the individual's motivational style under normal and stressful conditions. In Relationship Awareness Theory, Porter (1988) states that an individual's behavior can be explained by an awareness of the person's motives and goals. Porter views behavior as being consistent with what the individual finds gratifying in interpersonal interactions.

10. A study should be conducted to determine if the leadership styles and/or stress levels of principals relate to the job satisfaction and/or stress levels of teachers.

## Bibliography

- Adams, J. D. (Ed.). (1980). Understanding and managing stress. San Diego, California: University Associate.
- Anderson, C. S., & Nicholson, G. I. (1987). Instruction leadership--can it be measured validly? Who performs what functions? NASSP Bulliten, 71 (November), 28-40.
- Appley, M., & Trumbell, R. (Eds.). (1976). Psychological stress: Issues in research. New York: Appleton-Century-Crofts.
- Ary, D., Jacobs, L. C., & Razavieh, A. (1985). Introduction to research in education. New York: Holt, Rhinehart, and Winston.
- Babbie, E. (1983). The practice of social research. Belmont, Calif: Wadsworth.
- Beech, H. R., Burns, L. E., & Sheffield, B. F. (1982). A behavioral approach to the management of stress. New York: John Wiley and Sons.
- Beehr, T. A., & Newman, J. E. (1978). Job stress, employee health, and organization effectiveness: A facet analysis, model, and literature review. Personnel Psychology, 31, 665-699.
- Beehr, T. A., & Bhagat, R. S. (1985). Human stress and cognitions in organizations. New York: John Wiley and Sons.
- Bennis, W., & Nanus, B. (1985). Leaders-the strategies for taking charge. New York: Harper & Row.
- Bielianskas, L. A. (1982). Stress and its relationship to health and illness. Colorado: Westview Press.
- Bishop, B. M. (1987). Administrative stress: An investigation of the differences between district-level administrators' perceptions of occupational stress factors in a large urban school district (Doctoral dissertation, Auburn University, 1986). Dissertation Abstracts International, 42, 2383-A.
- Blake, R. R., & Mouton, J. S. (1964). The managerial grid. Houston, Texas: Gulf Publishing Company.
- Blake, R. R., & Mouton, J. S. (1980). Grid approaches to managing stress. Springfield, Ill: Charles C. Thomas.

- Blumberg, A. (1985). The school superintendent-living with conflict. New York: Teachers College Press.
- Bortner, R. W. (1969). A short rating scale as a potential measure of pattern A behavior. Journal of Chronic Diseases, 22, 87-91.
- Bradford, N. C. (1989). An investigation of the relationships among leadership style, occupational stress, and type A behavior of principals. Unpublished doctoral dissertation, UNC-Greensboro, 1989.
- Brown, B. B. (1984). Between health and illness. Boston: Houghton Mifflin Company.
- Burish, T. G. (1980). Type A/B behavioral patterns. In R. H. Woody (Ed.), Encyclopedia of clinical assessment (pp.244-256). San Francisco: Jossey Bass.
- Caplan, R. D., & Jones, K. W. (1975). Effects of workload, role ambiguity, and type A personality on anxiety, depression and heart rate. Journal of Applied Psychology, 60 (December), 713-719.
- Cates, W. M. (1985). A practical guide to educational research. Englewood Cliffs, New Jersey: Prentice-Hall.
- Chesney, M. A. & Rosenman, R. H. (1985). Strategies for modifying type A behavior. In A. Monat & R. Lazarus (Eds.), Stress and coping (pp. 322-329). New York: Columbia University Press.
- Cooper, C. L. & Marshall, J. (1980). White collar and professional stress. New York: John Wiley and Sons.
- Cooper, C. L. & Payne, R. (1978). Stress at work. New York: John Wiley and Sons.
- Cox, T. (1978). Stress. Baltimore: University Park Press.
- Culligan, M. J. & Sedlacek, K. (1980). How to avoid stress before it kills you. New York: Gramercy.
- Dilworth, H. (1985). Occupational stress and the school administrator (Doctoral dissertation, University of Southern California, 1984). Dissertation Abstracts International, 45, 3249-A.
- Dunn, L. H. (1981). Job burnout in santa clara county school principals and their perceptions of job related stressors (Doctoral dissertation, University of San Francisco, 1981). Dissertation Abstracts International, 42, 1584-B.

- Edman, R. H. (1982). A study of leadership behavior based on situational leadership theory as related to locus of control (Doctoral dissertation, Northern Arizona University, 1982). Dissertation Abstracts International, 43, 1764-A.
- Farkes, W. (1979). Leadership style---it all depends. NASSP Bulletin, 63 (March), 29-31.
- Fiedler, F. E. (1967). A theory of leadership effectiveness. New York: Mc Graw-Hill.
- Fiedler, F. E. (1965). Engineer the job to fit the manager. Harvard Business Review, 43.
- Feitler, F. C., & Tokar, E. B. (1986). School administrators and organizational stress: Matching theory, hunches, and data. The Journal of Educational Administration, 24 (2), 254-271.
- Fleming, R., Baum, A., & Singer, J. E. (1984). Toward an integrative approach to the study of stress. Journal of Personality and Social Psychology, 46, 939-949.
- Foster, F. L. (1987). Stress perception among Kentucky secondary school principals (Doctoral dissertation, University of Kentucky, 1986). Dissertation Abstracts International, 48, 265A.
- Friedman, M. and Rosenman, R. (1974). Type A behavior and your heart. New York: Alfred A. Knopf.
- Friedman, M. and Rosenman, R. & Carver, V. (1958). Changes in serum cholesterol and blood clotting time in men subjected to cyclic variation of occupational stress. Circulation, 17, 852-861.
- Friedman, M., and Ulmer, D. (1984). Treating type A behavior-and your heart. New York: Alfred A. Knopf.
- Gay, L. R. (1981). Educational research: Competencies for analysis and application. Columbia: Charles E. Merrill.
- Gilbert, M. W. (1982). A study of the relationship of school principals' leadership styles and occupational stress (Doctoral dissertation, University of Oregon, 1981). Dissertation Abstracts International, 42, 4224-A.
- Glass, D. C. (1977). Behavior patterns, stress, and coronary disease. New York: John Wiley and Sons.
- Gmelch, W. H. (1977). Beyond stress to effective management. Eugene, Oregon: Oregon School Study Council. (ERIC Document Reproduction Service No. ED 140 440)

- Gmelch, W. H. (1980). Administrative stress index. Washington State University: Research and Field Studies Department.
- Gmelch, W. H. (1982). Beyond stress to effective management. New York: John Wiley and Sons.
- Gmelch, W. H., & Swent, B. (1977). Stress at he desk and how to creatively cope. Eugene, Orgeon: Oregon School Study Council. (ERIC Document Reproduction Service No. ED 146 698)
- Gmelch, W. H., & Swent, B. (1981). Stress and the principalship: Strategies for self-improvement and growth. Thurst, 65 (December), 16-19.
- Goldberger, L., & Shlomo, B. (Eds.). (1982). Handbook of stress: Theoretical and clinical aspects. New York: Macmillian, The Free Press.
- Gorman, E. J. (1975). A study of the relationship between leader behavior and the anxiety levels of selected school principals (Doctoral dissertation, University of Connecticut, 1975). Dissertation Abstracts International, 4154-4155A.
- Gowler, D. & Legge, K. (1975). Managerial stress. New York: John Wiley and Sons.
- Greene, J .F. (1980). A summary of technical information about LEAD-Self. Escondido, Calif: Center for Leadership Studies.
- Griffith, D. E. (1959). Administrative theory. New York: Appleton-Century-Crofts.
- Gunderson, E. K. & Rahe, R. H. (Eds.). (1974). Life stress and illness. Springfield, Ill: Charles C. Thomas.
- Haynes, S. G. & Feinleib, M. (1982). Type A behavior and the incidence of coronary heart disease in the Farmingham Heart Study. Advanced Cardiology, 29, 85-95.
- Harris, E. (1987, November). Roadblocks to change: Effective behavior versus executive perceptions. (Report No. CS 505 750). Evansville, Ind: University of Evansville. (ERIC Document Reproduction No. ED 289 183)
- Henson, P. R. (1984). The relationship between perceived superintendent leadership adaptability, principal role-based stress, and job satisfaction (Doctoral dissertation, Washington State University, 1984). Dissertation Abstracts International, 45, 3496A.

- Hersey, P., & Blanchard, K. H. (1973, 1987). Leader effectiveness and adaptability description-self. San Diego, Calif: Learning Resources Corporation.
- Hersey, P., & Blanchard, K. H. (1969). Life cycle theory of leadership. Training and Development Journal, (May).
- Hersey, P., & Blanchard, K. H. (1988). Management of organizational behavior: Utilizing human resources (6th ed.). Englewood Cliffs, New Jersey: Prentice Hall.
- House, R. J. (1971). A path-goal theory of leader effectiveness. Administrative Science Quarterly, 16, 321-338.
- House, R. J. & Mitchell, T. R. (1974). Path-goal theory of leadership. Journal of Contemporary Business, (Autumn), 81-97.
- Hoy, W. K. & Miskel, C. G. (1982). Educational administration: Theory, research, and practice. New York: Van Nostrand.
- Indik, B., Seashore, S. & Slesinger J. (1964). Demographic correlates of psychological strain. Journal of Abnormal and Social Psychology, 69, 26-28.
- Jamal, M. (1985). Type A behavior and job performance: Some suggestive findings. Journal of Human Stress, 11, 60-68.
- Jenkins, C. D., Zyzanski, S. J., & Rosenman, R. H. (1971). Jenkins activity survey manual. New York: Psychological Corp.
- Jick, T. D. & Mitz, L. F. (1985). Sex differences in work stress. Academy of Management Review, 10, 408-420.
- Kearns, J. L. (1973). Stress in industry. London: Priory Press Limited.
- Klein, S. M. (1977). Workers under stress. Lexington: University Press of Kentucky.
- Knowles, H. P. (1970). Personality and leadership behavior. Seattle: Addison-Wesley.
- Koch, J. L., Gmelch, W., Tung, R., & Swent, B. (1982). Job stress among school administrators: Factorial dimensions and differential effects. Journal of Applied Psychology, 67 (February), 493-499.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., & Snoek, J. D. (1964). Organization stress: Studies in role conflict and ambiguity. New York: John Wiley and Sons.

- Koff, R. H., Laffey, J. M., Olsen, G., & Cichon, D. J. (1981). Executive stress and the school administration. NASSP Bulletin, 65 (December), 1-9.
- Lecker, S. (1978). The natural way to stress control. New York: Grosset and Dunlop.
- Lee, D. J., King, D. W., & King, L. A. (1987). Measurement of type A behavior pattern by self-report questionnaires: Several perspectives on validity. Educational and Psychological Measurement, 47, 409-421.
- Levinson, H. (1970). Executive stress. New York: Harper and Row.
- Manera, E., & Wright, R. E. (1981). Real job pressure: Knowing the difference between stress and challenge. NASSP Bulletin, 65, 10-15.
- Mattaliano, A. P. (1982). Theory X or theory Y--what is your style? NASSP Bulletin, 66 (October), 37-40.
- Matteson, M. T., & Ivancevich, J. M. (1982). Behavior Activity Profile. Houston: Stress Research Systems.
- Matteson, M. T., & Ivancevich, J. M. (1987). Controlling work stress. San Francisco: Jossey-Bass.
- Matteson, M. T., & Ivancevich, J. M. (1982). Type A and B behavior patterns and self-reported health symptoms and stress: Examining individual and organizational fit. Journal of Occupational Medicine, 24, 585-589.
- Matteson, M. T., Ivancevich, J. M., & Preston, C. (1982). Occupational stress, type A behavior, and physical well being. Academy of Management Journal, 25, 373-391.
- Matteson, M. T., Ivancevich, J. M., & Smith, S. V. (1984). Relation of type A behavior to performance and satisfaction among sales personnel. Journal of Vocational Behavior, 25, 203-214.
- McClelland, D. C. (1961). The achieving society. Princeton, New Jersey: Van Nostrand.
- McGregor, D. A. (1960). The human side of enterprise. New York: McGraw-Hill.
- Monat, A., and Lazarus, R. (1985). Stress and coping. New York: Columbia University Press.
- Morse, D. R. & Furst, M. L. (1979). Stress for success: A holistic approach to stress and its management. New York: Van Nostrand.

- Noursis, M. J. (1983). Spss-x, an introductory statistics guide. New York: McGraw-Hill.
- Orr, W. L. (1980). An investigation of the leadership styles of middle school principals in Delaware, New Jersey, and Pennsylvania (Doctoral Dissertation, Temple University, 1980). Dissertation International Abstracts, 41.
- Owens, R. G. (1981). Organizational behavior in education. Englewood Cliffs, New Jersey: Prentice Hall, Inc.
- Parasuraman, S., & Clark, M. A. (1984). Coping behaviors and manager's affective reactions to role stressors. Journal of Vocational Behavior, 24 (April), 179-193.
- Pargman, D. (1986). Stress and motor performance: Understanding and coping. New York: Movement Publications.
- Piercucci, R. P. (1985). Burnout levels and leadership characteristics of California elementary school principals (Doctoral dissertation, Brigham Young University, 1985). Dissertation Abstracts International, 46, 07A.
- Pillemer, D. B., & Light, R. J. (1980). Synthesizing outcomes: How to use research evidence from many studies. Harvard Education Review, 50 (2), 176-196.
- Popham, J. & Sirotnik, K. (1973). Educational statistics: Use and interpretation. New York: Harper and Row.
- Porter, E. H. (1988). Manual for administration and interpretation of the strength deployment inventory. Pacific Palisades, Calif: Personal Strengths Publishing, Inc.
- Price, V. R. (1982). Type A behavior pattern: A model for research and practice. New York: Academic Press.
- Quick, J. C. & Quick, J. D. (1984). Organizational stress and preventive management. New York: McGraw-Hill.
- Rhodewalt, F., Hays, R. D., Chemers, M. M., & Wysocki, J. (1984). Type A behavior, perceived stress, and illness: A person situation analysis. Personality and Social Psychology Bulletin, 10 (March), 149-159.
- Roscoe, J. (1985). Fundamental research: Statistics for the behavioral sciences. New York: Holt, Rinehart, and Winston.
- Rosenthal, R. (1978). Combining results of independent studies. Psychological Bulletin, 85, 185-193.

- Saffer, S. (1984). Stress and the educational administrator: A synthesis of dissertation research. (Report N. EA 016 966). New York: Hofstra University. (ERIC Document Reproduction Service No. ED 249 568)
- Sales, S. M. (1969). Organizational role as a risk factor in coronary disease. Administrative Science Quarterly, 14, 325-336.
- Salsh, M. A. & Kashmeeri, M. O. (1987). School administration: Factors associated with distress and dissatisfaction. Education, 108 (1), 93-102.
- Savery, L. K. (1986). The perceived stress levels of primary and secondary principals. The Journal of Educational Administration, 24 (2), 272-281.
- Schriesheim, C. A., & Murphy, C. J. (1976). Relationships between leader behavior and subordinate satisfaction and performance: A test of situational moderators. Journal of Applied Psychology, 61, 634-641.
- Selye, H. (1975). Stress without distress. New York: J. B. Lippincott.
- Selye, H. (1976). The stress of life. New York: McGraw Hill.
- Sergiovanni, T. J. (1973). Leadership behavior and organizational behavior. Notre Dame Journal of Education, 4 (1), 16.
- Speiser, L. B. (1980). Captain kirk, his leadership style as a model for principals. NASSP Bulliten, 64 (March), 105-109.
- Spielberger, C. D. & Sarson, I. G. (Eds.). (1977). Stress and anxiety (vol. 4). New York: John Wiley and Sons.
- Stellman, J. M. & Daum, S. M. (1973). Work is dangerous to your health. New York: Pantheon Books.
- Stube, M. J., & Werner, C. (1985). Relinquishment of control and the type A behavior pattern. Journal of Personality and Social Psychology, 48, 688-701.
- Suinn, R. M., & Bloom, L. J. (1978). Anxiety management for type A persons. Journal of Behavioral Medicine, 1, 25-35.
- Tannenbaum, R. & Schmidt, W. H. (1958). How to choose a leadership pattern. Harvard Business Review, 36 (March-April), 95-102.
- Tannenbaum, R. & Schmidt, W. H. (1973). How to choose a leadership pattern. Harvard Business Review, 51 (May-June), 163-175.

- Telb, J. A. (1982). The relationship between perceived leadership style of elementary school teachers and selected demographic factors (Doctoral dissertation, Bowling Green State University, 1982). Dissertation Abstracts International, 43 1006-A.
- Thomas, S. P. (1986, August). Type B: Cognitive/attitudinal characteristics, stress reactivity, and health status. (Report N. CG 020 095). Knoxville, Tenn: University of Tennessee. (ERIC Document Reproduction Service No. ED 289 262)
- Thompson, J. W. (1986). Stress and burnout: A comparison of principals in North Carolina school districts (Doctoral dissertation, UNC-Chapel Hill, 1985). Dissertation Abstracts International, 47, 1148A-1149A.
- Thoresen, C. E., Telch, M. J. , & Eagleston, J. R. (1981). Approaches to altering the type A behavior pattern. Psychosomatics, 22, 472-479.
- Toppins, A. D. (1986, November). Strengths and styles of school leaders: Is who they are how they lead? (Report No. EA 019 837). Alabama: University of Alabama. (ERIC Document Reproduction Service No. ED 289 262)
- Travers, R. M. (1966). An introduction to educational research (2nd ed.). New York: The Macmillian company.
- Travlos, A. L. (1985). Selected job stressors, job satisfaction, emotional exhaustion, and thurst behavior of the principal (Doctoral dissertation, Rutgers University, 1984). Dissertation Abstracts International, 45, 2349-A.
- Tung, R. L. (1980). Comparative analysis fo the occupational stress profiles of male versus female administrators. Journal of Vocational Behavior, 17 (December), 344-355.
- Tung, R. L. & Koch, J. L. (1980). School administrators: Sources of stress and ways of coping with it. In C. L. Cooper & J. Marshall (Eds.), White collar and professional stress (pp. 63-87), New York: John Wiley & Sons.
- Vroom, V. H. (1976). Can leaders learn to lead? Organizational Dynamics, 4 (Winter), 17-28.
- Vroom, V. H. (1973). Leadership and decisionmaking. Pittsburg: University of Pittsburg Press.
- Walter, J. E., Cadwell, S. J., & Marshall, J. (1980). Evidence for the validity of the situational leadership theory. Educational Leadership, 37, 618-621.

- Williamson, J. & Campbell, L. (1987). Stress in the principalship: What causes it? NASSP Bulletin, September, 109-112.
- Wolff, H. G., Stewart G., & Hans, C. C. (Eds.). (1950). Life stress and bodily disease. Baltimore: Williams & Wilkins Company.
- Woolley, F. J. (1983). Occupational stress among college administrators (Doctoral dissertation, University of Toronto, 1983). Dissertation Abstracts International, 48, 265A.

## RESUME

## EDUCATION

1970 University of North Carolina-Asheville  
B.A. History and Education

1977 Western Carolina University  
M.A. Guidance and Counseling

1984 Western Carolina University  
Ed.S. Curriculum and Instruction

1989 University of North Carolina-Greensboro  
Ed.D. Educational Administration

## EXPERIENCE

1966-68 Military Supply Specialist  
U.S. Army

1970-79 High School Social Studies Teacher  
of Emotionally Handicapped Students  
Highland Hospital-Duke University

1979-85 Guidance Counselor  
Enka High School

1985-88 Industry Education Coordinator  
Enka High School

1988-89 Director of Guidance Services  
Enka High School

## N.C. TEACHER CERTIFICATION AREAS

Social Studies

Severely Emotionally Handicapped  
Counselor

Industry Education Coordinator

School Administrator-Principal

APPENDIX A  
SURVEY INSTRUMENTS

PLEASE NOTE:

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

These include the survey instruments which are on pages 152-163.

APPENDIX B  
SURVEY LETTERS

THE UNIVERSITY OF NORTH CAROLINA

165

*Asheville Graduate Center*

PHILLIPS HALL

UNIVERSITY of NORTH CAROLINA at ASHEVILLE

ONE UNIVERSITY HEIGHTS

ASHEVILLE, NORTH CAROLINA 28804-3299

OFFICE OF THE DIRECTOR

TELEPHONE (704) 251-6099

May 16, 1988

Dear :

As a part of my doctoral study in educational administration at the University of North Carolina-Greensboro (Asheville program), I am writing a dissertation on leadership styles and their relationship to occupational stress.

I have chosen this research topic because of the tremendous job pressure which faces principals. You have been chosen to participate through a random selection process. All responses will be kept strictly confidential and only group results will be reported. All questionnaires are coded for record keeping purposes and do not require that your name be placed on them.

The three short questionnaires which I am asking you to complete are 1) the Leader Effectiveness and Adaptability Description instrument, 2) the Administrative Stress Index, and 3) the Behavior Activity Profile. These questionnaires were developed by professors who are currently teaching either business or education programs in major universities. It will only take about fifteen minutes to complete all of these instruments.

A stamped, self-addressed envelope is included in which you may return the completed forms. Please return the forms by May 30, 1988. Please allow me to thank you in advance for your time and cooperation. Your kind support is essential to this project.

Sincerely,

N. Charles Bradford  
Guidance Counselor

June 6, 1988

Dear

A few weeks ago I sent you a letter requesting your assistance in completing three questionnaires which relate to principal's leadership style and occupational stress. In order to complete my doctoral dissertation I need your input but have not yet received your response.

If you have not completed the questionnaires, please take a few minutes to do so. I have enclosed additional copies and a stamped, self-addressed envelope in which to return them to my home address. All responses will be held in strict confidence. Your name does not need to be recorded on the questionnaires as only group results will be reported.

Thank you very much for participating in this study. It is extremely important to me, and I greatly appreciate your time, effort, and assistance.

Sincerely,

N. Charles Bradford  
Guidance Counselor  
Enka High School

APPENDIX C  
PERMISSION LETTERS

## Washington State University

---

Department of Educational Administration and Supervision, Pullman, Washington 99164-2136

January 28, 1988

Mr. Charles Bradford  
322 Stratford Road  
Asheville, NC 28804

Dear Mr. Bradford:

Thank you for your recent telephone call requesting information on and permission to use the Administrative Stress Index. We hereby grant you permission to use the ASI in your research endeavors. Please find the enclosed copy of the ASI. Please include a copyright permission statement of the instrument. Our only request is that you share a summary of your research results with us.

Best of luck with your research.

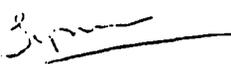
Kindest regards,

*Walt (ew)*

Walter H. Gmelch  
Chair

Enclosure

This is the letter Dr. Gmelch sends when he receives these requests. I hope the Index is a help to your study. Please call Dr. Gmelch in April if you have any questions.

Lynn Buckley   
Department Secretary



University of  
Houston

College of  
Business Administration  
4800 Calhoun Road  
Houston, Texas 77004  
713.749.3316

Department of  
Management

January 19, 1988

Mr. Charles Bradford  
Enka High School  
P.O. Box 579  
Enka, North Carolina 28728

Dear Mr. Bradford:

Thank you for your recent letter asking about the Behavior Activity Profile; thanks also for your kind words regarding "Controlling Work Stress".

I have enclosed a copy of the BAP for your examination. If you wish to use this instrument for non-commercial research purposes only, you have our permission to reproduce the number of copies needed for the study. There is no fee for research use; we do ask, however, that you send us a summary of study results in which the BAP was a part.

Best wishes to you with your dissertation research.

Sincerely,

A handwritten signature in cursive script that reads "Michael T. Matteson".

Michael T. Matteson  
Professor of Organizational Behavior