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THE PREVALENCE AND CERTAIN SOURCES OF TEACHER STRESS
AMONG ELEMENTARY SCHOOL TEACHERS

East Tennessee State University

Ed.D. 1981

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THE PREVALENCE AND CERTAIN SOURCES OF TEACHER
STRESS AMONG ELEMENTARY SCHOOL TEACHERS

A Dissertation

Presented to

the Faculty of the Department of Supervision and Administration
East Tennessee State University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by

Emma Lorraine C. Turner

August, 1981

APPROVAL

This is to certify that the Advanced Graduate Committee of

EMMA LORRAINE C. TURNER

met on the

8th day of July, 19 81.

The committee read and examined her dissertation, supervised her defense of it in an oral examination, and decided to recommend that her study be submitted to the Graduate Council and the Dean of the School of Graduate Studies in partial fulfillment of the requirements for the degree Doctor of Education.

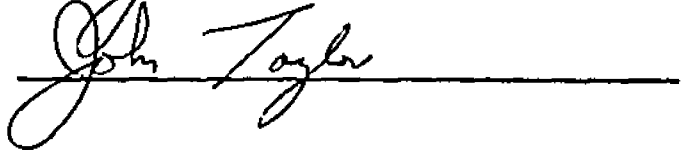


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Signed on behalf of
the Graduate Council



Dean, School of Graduate Studies

ABSTRACT

THE PREVALENCE AND CERTAIN SOURCES OF TEACHER STRESS AMONG ELEMENTARY SCHOOL TEACHERS

by

Emma Lorraine C. Turner

The problem of this study was to determine the prevalence and certain sources of stress among elementary school teachers (grades kindergarten through six), and the relationship of stress to certain selected teacher factors.

This study followed the ex post facto design which attempted to determine if certain teacher factors affected the way in which teachers responded to the questionnaire regarding the prevalence and sources of stress perceived. The Teacher Stress Questionnaire was selected to assess the prevalence and certain sources of stress of elementary teachers regarding sex, age, length of time in the teaching profession, length of time in the present teaching position, number of years of formal preparation for the teaching profession, the grade level taught, length of time since taking course work, amount of professional reading accomplished per week, number of hours spent working on school items outside of school hours, and the number of days absent due to illness in the preceding school year.

The differences showing significance in the study supported the following conclusions.

1. Rural teachers experienced more stress and different sources of stress than urban teachers in the surveyed geographical area.

2. Grades taught and teaching experience did not appear to be significant factors in the amount or sources of stress reported by teachers.

3. Gender did not appear to be a factor in the amount of stress reported by teachers. However, female teachers tended to perceive one source of stress, time pressures, as more stressful than male teachers.

4. Age did not appear to be a factor in the amount of stress reported by teachers. However, teachers, ages thirty and above, reported Category B, poor working conditions, as more stressful than younger teachers.

5. Professional preparation for the teaching profession and the length of time in the present position did not appear to be significant factors in the amount or sources of stress reported by elementary teachers.

6. The number of hours spent working on school items outside of school hours and the length of time since taking course work did not appear to be significant factors in the amount of stress reported by elementary teachers.

7. The teachers who did more professional reading per week reported significantly less stress than those teachers who accomplished zero through one hour of professional reading per week.

8. Teachers with higher absenteeism due to illness reported more stress than those teachers with lower absenteeism due to illness.

9. Teachers exhibited frequency of physical and mental symptoms of stress comparable to the amount of stress reported.

Elementary teachers in the urban and rural areas are experiencing stress in the teaching environment. Urban and rural teachers in the surveyed geographical area do report differences in the amounts and sources of stress. Certain teacher characteristics, such as the amount of professional reading accomplished per week and higher absenteeism due to illness, make a difference in the amount of stress reported by elementary teachers. Teachers also are exhibiting some mental and physical symptoms of stress.

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There are many whom I want to acknowledge for their contribution to this study. I would like to express my deepest gratitude to Dr. Charles W. Burkett, doctoral committee chairman and dissertation director, for his guidance and understanding throughout the duration of this study. In addition, I sincerely appreciate the assistance of the other doctoral committee members, Dr. William T. Acuff, Dr. William L. Evernden, Dr. Clyde L. Orr, and Dr. John Taylor.

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I would like to give special recognition to my parents, Frazier J. and Mary M. Cochran, who instilled within me the value of an education and independence. Last, but not least, I feel deeply indebted to my husband, Wiley (Ike), for his consideration, encouragement, and support.

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Chapter 1

INTRODUCTION

Psychological stress is not only a serious occupational hazard with adverse consequences for the teacher's health, well-being, and career, but it may also affect the classroom environment, the teaching process, and the attainment of educational objectives.¹ Michael Daley suggested that job stress may be functional in its early stages because it represents a challenge to the worker, therefore increasing motivation and productivity. However, when frustration and tension increase or persist over a long period, the effects of burnout begin to appear. A high percentage of the worker's energy is then devoted to managing stress.²

Theoretically, the world of work has great potential for offering individuals enrichment, challenge, and self-development.³ This is particularly true for the teaching profession. However, with the increased responsibilities teachers must assume, the knowledge explosion, the mobility of society, the change of societal attitudes, the communication gap, and the idea of pluralism in the governance of

¹Richard Needle and others, "Teacher Stress: Sources and Consequences," Journal of School Health, L (February, 1980), 96.

²Michael Daley, "Preventing Worker Burnout in Child Welfare," Child Welfare, LVII (July-August, 1979), 444.

³Thomas Sergiovanni and Robert Starrat, Emerging Patterns of Supervision: Human Perspectives (New York: McGraw-Hill, 1971), p. 127.

schools, teachers are beginning to report more stress and anxiety. In many instances, teachers experiencing stress report job dissatisfaction, intention to leave the profession, and feelings of frustration and exhaustion, as indicated by Chris Kyriacou and John Sutcliffe.⁴

Other manifestations of stress may be identified as physical or behavioral. Kenneth Lamott maintained that an increasing number of diseases and disorders have been found to be related to stress. He argued that a person may be struck down by infectious diseases only when he/she is in a state of stress.⁵ The ultimate evidence of stress is visible in the syndrome known as burnout, sometimes referred to as battle fatigue or combat neurosis. Characteristics of burnout may include physical diseases, disruption of personal or professional life, destructive feelings of emotional stress, loss of concern and detachment, and a deterioration of the quality of teaching.⁶

Thomas Sergiovanni and Robert Starrat asserted that the human organization which exists within any school determines the effectiveness of that school organization.⁷ By satisfying teacher needs and improving the quality of working conditions, the supervisor/administrator can provide opportunities for a better working atmosphere and a healthier

⁴Chris Kyriacou and John Sutcliffe, "Teacher Stress and Satisfaction," Educational Research, XXI (February, 1971), 89-96.

⁵Kenneth Lamott, Escape From Stress (New York: G. P. Putnam's Sons, 1974), p. 10.

⁶Debbie Walsh, "Classroom Stress and Teacher Burnout," Phi Delta Kappan, LI (December, 1979), 253, citing Dr. Alfred Block and Dr. Christina Maslach.

⁷Sergiovanni and Starrat, p. 9.

mental attitude. The supervisor/administrator can help staff personnel identify stressors and discover adequate coping responses, thereby increasing the opportunity for personal development as well as organizational development.

Research indicates that stress affects teachers in the rural locations as well as in the urban locations; however, a special area of concern in this study was to determine whether rural teachers are experiencing as much stress or different sources of stress as urban teachers. Certain teacher related factors were also investigated because they also appear to affect the way in which teachers perceive the sources and the amount of stress which they experience.

The Problem

Statement of the Problem

The problem was to determine the prevalence and certain sources of stress among elementary school teachers (grades kindergarten through six), and the relationship of stress to selected teacher factors.

Hypotheses

The following hypotheses were formulated:

H₁: Urban elementary teachers will report a significant difference in the amount of stress from rural elementary teachers.

H₂: Urban elementary teachers will report a significant difference in the sources of stress from rural elementary teachers.

H₃: Teachers in grades four through six will report a significant difference in the amount of stress from those teachers of grades kindergarten through third.

H₄: Teachers in grades four through six will report a significant difference in the sources of stress from those teachers of grades kindergarten through third.

H₅: Teachers with less than five years of experience will report a significant difference in the amount of stress from those teachers with experience of five years or more.

H₆: Teachers with less than five years of experience will report a significant difference in the sources of perceived stress from those teachers with experience of five years or more.

H₇: Teachers with zero through four years of experience, five through ten years of experience, and over ten years of experience will report a significant difference in the sources of perceived stress.

H₈: Elementary male teachers will report a significant difference in the amount of stress from elementary female teachers.

H₉: Elementary male teachers will report a significant difference in the sources of perceived stress from elementary female teachers.

H₁₀: Younger teachers, ages twenty through thirty, will report a significant difference in the amount of stress from older teachers, ages above thirty.

H₁₁: Younger teachers, ages twenty through thirty, will report a significant difference in the sources of stress from older teachers, ages above thirty.

H₁₂: Teachers, ages twenty through thirty years, thirty-one through forty-five years, and over forty-five years will report a significant difference in the sources of perceived stress.

H₁₃: Teachers who have taught in their present positions three years or less will report a significant difference in the amount of stress from those teachers who have taught more than three years in their present positions.

H₁₄: Teachers who have taught in their present positions three years or less will report a significant difference in the sources of perceived stress from those teachers who have taught more than three years in their present positions.

H₁₅: Teachers who have taught in their present positions zero through three years, four through ten years, and over ten years will report a significant difference in the sources of perceived stress.

H₁₆: Those teachers who have had more formal preparation for the teaching profession, that is, Master's Degree level or above, will report a significant difference in the amount of stress from those teachers who have only a Bachelor's Degree.

H₁₇: Those teachers who have had more formal preparation for the teaching profession, that is, Master's Degree level or above, will report a significant difference in the sources of stress from those teachers who have only a Bachelor's Degree.

H₁₈: Those teachers who have pursued professional development within the last year will report a significant difference in the amount of stress from those teachers who have not pursued professional development within two years or more.

H₁₉: Those teachers who do more professional reading, that is, two hours or more a week, will report a significant difference in the amount of stress from those teachers who do less than two hours of professional reading a week.

H₂₀: Those teachers who spend more than ten hours a week outside of school hours working on school items will report a significant difference in the amount of stress than those teachers who spend less than ten hours a week outside of school hours working on school items.

H₂₁: Those teachers with higher absenteeism due to illness, that is, four days or more in one year, will report a significant difference in the amount of stress which they perceive from those teachers who have a lower rate of absenteeism due to illness, that is, less than four days in one year.

H₂₂: There will be a positive correlation between the frequency of each symptom of stress and the total amount of stress reported by all teacher respondents.

Significance of the Study

A review of the literature revealed that many surveys have been conducted to determine the amount and sources of stress and/or anxiety of school teachers in urban and suburban locations. However, few specific studies have been found which investigated the prevalence and sources of stress and/or anxiety among rural school teachers. Many studies have included teachers from varying grade levels; this study involves only elementary level teachers, grades kindergarten through six.

Jack Dunham defended the position that there are two main types of common stress responses among teachers. The first is frustration, and is associated with headaches, stomach upsets, sleep disturbances, hypertension, and body rashes. The second is anxiety, and is

associated with feelings of inadequacy, loss of confidence, confusion in thinking, and occasionally panic. Prolonged stress can even lead to emotional exhaustion. Dunham argued that absenteeism, including truancy and sickness absences, leaving teaching, and early retirement are forms of withdrawal associated with situations which become too stressful to tolerate.⁸

Stress and its effects impair a teacher's ability to operate at his/her optimal efficiency. Tom Cox and Clare Bradley categorized the effects and cost of stress into the following six sections: (1) subjective effects (anxiety, aggression, apathy), (2) behavioral effects (accident proneness, emotional outbursts), (3) cognitive effects (inability to make decisions and concentrate, frequent forgetfulness), (4) physiological effects (increased blood and urine catecholamines and corticosteroids, increased heart rate and blood pressure), (5) health effects (asthma, coronary heart disease, skin rash), and (6) organizational effects (absenteeism, job dissatisfaction, poor productivity).⁹

The supervisor/administrator is instrumental in the development and evaluation of the teaching-learning environment and its processes. In order for that person to provide leadership conducive to a positive and productive school climate, he/she must be cognizant of teacher needs and concerns. The success of any school activity is largely

⁸Jack Dunham, "Stress Situations and Responses," Stress in Schools, ed. National Association of Schoolmasters (Hemel Hempstead, England: National Association of Schoolmasters, 1976), pp. 19-47.

⁹Tom Cox and Clare Bradley, Stress and Health, ed. Tom Cox (Baltimore: University of Chicago Press, 1978), p. 92.

determined by the well-being, skill, and motivation of the human side of the school, according to Sergiovanni and Starrat.¹⁰

If the school success variables are dependent upon how well the school administration manages the human organization, the administrator/supervisor could benefit from the examination and assessment of tension, anxiety, and stress which exist in school personnel. By being able to delineate the sources, effects, and duration of stressors, he/she could initiate activities enabling the staff to learn how to cope effectively with stress. Thus, school success variables would be enhanced.

Assumptions

1. Awareness of the sources and amount of stress which teachers are experiencing would make a difference in the way in which supervisors/administrators would operate their schools.
2. Within the review of the literature for this study, it was assumed that studies dealing with anxiety were directly related to the studies dealing with stress.
3. Teachers reported perceived stress and stressors honestly.
4. No relationships existed between the returning of the questionnaires and the characteristics being measured.

Limitations

1. The testing instrument was a self-reporting questionnaire form.
2. The data gathered were limited to a one-time response.

¹⁰Sergiovanni and Starrat, p. 9.

3. There was a limited amount of time, two days, available for teachers to respond to the questionnaire.

4. The study was limited to reported stress of 272 elementary school teachers in the cities of Johnson City, Kingsport, Elizabethton, and Bristol, Tennessee, Norton and Bristol, Virginia, and in the counties of Sullivan, Washington, Unicoi, and Carter in Tennessee, and Washington, Scott, Wise, Tazewell, and Dickenson in Virginia.

Definitions of Terms

Amount of Stress

The amount of stress or the extent to which teachers feel stress is measured in this study as a self-reported Likert scale consisting of five parts: not at all stressful, mildly stressful, moderately stressful, very stressful, and extremely stressful.

Anxiety

Anxiety is a state of having uncomfortable feelings of apprehension, tension, and dread.¹¹

Burnout

Burnout is the emotional exhaustion resulting from the strain of failure to cope with perceived stresses.¹²

¹¹Anthony J. Vattano, "Self-Management Procedures for Coping with Stress," Social Work, XXII (March, 1978), 114.

¹²Christina Maslach, "Job Burnout: How People Cope," Public Welfare, XXXVI (Spring, 1978), 56-58.

Coping Procedures

Coping procedures are any responses to external life strains which serve to prevent, avoid, or control stress.¹³

Role Conflict

Role conflict may be the result of conflicts due to a discrepancy between the patterns of expectations attached to a given role and the patterns of need dispositions of the role incumbent or from multiple but conflicting expectations for the same role.¹⁴

Rural Areas

Rural areas are defined in this study as those counties of Sullivan, Washington, Unicoi, and Carter in Tennessee, and Washington, Scott, Wise, Tazewell, and Dickenson in Virginia.

Stress

Stress is the organism's response to changing conditions, consisting of a pattern of physiological and psychological reactions, both immediate and delayed.¹⁵

Stressors

Stressors are the specific agents or things that cause the condition of stress.

¹³Leonard Pearlin and Carmi Schooler, "The Structure of Coping," Journal of Health and Social Behavior, XIX (March, 1978), 20.

¹⁴Thomas Sergiovanni and Robert Starrat, Emerging Patterns of Supervision: Human Perspectives (New York: McGraw-Hill, 1971), p. 34.

¹⁵Judith Rabkin and Elmer L. Struening, "Life Events, Stress, and Illness," Science, CXCIV (December, 1976), 1014.

Symptoms of Stress

The symptoms of stress are the factors which are caused by the presence of stressful conditions. These symptoms include being nervous, tense, tearful, panicky, depressed, anxious, and frustrated, and are referred to as symptoms of stress in this study.

Teacher Stress

Teacher stress may be defined as "a response by a teacher of a negative effect (such as anger, anxiety, or depression) accompanied by potentially pathologic physiological changes as a result of the demands made upon the teacher in his role as a teacher."¹⁶

Tension

Tension is a state of mental or nervous strain, often accompanied by muscular tautness.

Urban Areas

Urban areas are defined in this study as the cities of Johnson City, Kingsport, Elizabethton, and Bristol, Tennessee, and the cities of Norton and Bristol, Virginia.

Those definitions which do not have sources cited are definitions derived from the composition of the material of this study, and do not have known external sources which have the same definition.

¹⁶Chris Kyriacou and John Sutcliffe, "Teacher Stress: A Review," Educational Review, XXIX (November, 1977), 299.

Organization of the Study

The study was organized into five chapters. Chapter 1 contains an introduction to the study, statement of the problem, research hypotheses, significance of the study, assumptions of the study, and limitations of the study. Definitions of terms and the organization of the study are also included.

A review of the related literature is presented in Chapter 2.

Methodologies used in the study are contained in Chapter 3.

An analysis of the findings of the study is included in Chapter 4.

Chapter 5 includes the summary, conclusions, implications, and recommendations of the study.

Chapter 2

REVIEW OF RELATED LITERATURE

Introduction

Studies relating to this investigation were reported in this chapter. Stress is an integral and inescapable part of human life. It can be good as well as bad. However, as external stresses are becoming more and more severe, it is reasonable to assume that when people consistently report feelings of stress in their working lives, both their work and well-being may be affected. These studies concerning anxiety and stress served as a background for the present study of reported stress among elementary school teachers.

In order to identify pertinent studies on anxiety and stress, bibliographies and references of major works were reviewed. In addition, an Educational Resources Information Center (ERIC) search was conducted through the library at East Tennessee State University.

Anxiety

Some individuals seem to have minimal tolerance for stress and others cope with situations which would overwhelm most people, as found by Anthony J. Vattano.¹ Although each person's ability to handle stress depends on a variety of personal and situational factors, everyone who encounters stress is said to experience anxiety.

¹Anthony J. Vattano, "Self-Management Procedures for Coping With Stress," Social Work, XXII (March, 1978), 114.

Maladaptive Anxiety

Anxiety is a basic human element that accompanies stress, and may be evidenced by uncomfortable feelings of apprehension, tension, and dread. Limited amounts of anxiety may be necessary and helpful in certain situations. However, when anxiety is chronic or overwhelming, it can be maladaptive and incapacitating. It is this dysfunctional type that is of concern in the following studies.²

Incidences and Sources of Anxiety

The earlier studies in the review of literature contained many references to anxiety, anxiety-related causes, and the concerns of teachers. Latter studies (in the 1970's and 1980's) referred to stress and stressors as the primary components of study.

The incidence of anxiety among teachers received considerable attention since the turn of the Twentieth Century. F. P. Hicks, in a survey of 600 teachers in 1933, found that 17 percent were "unusually nervous" and another 11 percent suffered from nervous breakdowns.³ L. Peck, also in 1933, found that 33 percent of a sample of 110 female teachers suffered from nervous symptoms.⁴ H. B. Randall

²Vattano, p. 114.

³F. P. Hicks, The Mental Health of Teachers (New York: Cullman Ghertner, 1933), cited by Thomas J. Coates and Carl Thorensen, "Teacher Anxiety: A Review with Recommendations," Review of Educational Research, XLVI (Spring, 1976), 160.

⁴L. Peck, "A Study of the Adjustment Difficulties of a Group of Women Teachers," Journal of Educational Psychology, XXVII (September, 1933), 401-416.

reported that 10 percent of teacher absences of ten days or more were reportedly due to "nervous conditions" in 1951.⁵

The Department of Classroom Teachers, a branch of the National Education Association, reported in 1938 that 37.5 percent of their nationwide sample of 5,150 teachers indicated they were seriously worried and nervous.⁶ In 1951, 43 percent of a sample of 2,200 teachers reported that they were working under considerable strain and tension.⁷ Of 2,290 teachers surveyed in 1967, 16.2 percent responded that they were working under considerable strain. Another 61.7 percent of the sample reported that they were working under moderate strain.⁸

In 1969, Frances Fuller conceptualized the concerns of teachers as a developmental progression. The preteaching phase is characterized by concerns with self, and the later teaching phase is characterized

⁵H. B. Randall, "Health is for Teachers, Too," NEA Journal, XL (October, 1951), 467-468.

⁶National Education Association, Department of Classroom Teachers, Fit to Teach: A Study of the Health Problems of Teachers (Washington, D. C.: NEA, Department of Classroom Teachers, 1938), cited by Thomas J. Coates and Carl Thorensen, "Teacher Anxiety: A Review with Recommendations," Review of Educational Research, XLVI (Spring, 1976), 161.

⁷National Education Association, "Teaching Load in 1950," Research Bulletin, XXIX (51), 3-50, cited by Thomas J. Coates and Carl Thorensen, "Teacher Anxiety: A Review with Recommendations," Review of Educational Research, XLVI (Spring, 1976), 161.

⁸National Education Association, "Teacher's Problems," Research Bulletin, XLV (1967), 116-117, cited by Thomas J. Coates and Carl Thorensen, "Teacher Anxiety: A Review with Recommendations," Review of Educational Research, XLVI (Spring, 1976), 161.

by concerns with students and their educational growth and with personal performance.⁹

Stress

There is little doubt that the phenomenon of job stress does exist. The human and organizational consequences of job stress are serious in terms of human, organizational, and economic costs. Teacher stress, in its various forms, can help teachers to meet educational challenges and present them with opportunities to receive great personal satisfaction and to acquire professional growth. However, according to the American Federation of Teachers' Educational Issues Department, when teachers attempt to meet school-related problems without the necessary resources, stress can produce a completely opposite effect, leaving the teacher frustrated and angry instead of satisfied.¹⁰ If the cycle of failure is left unchecked and allowed to repeat over a period of time, "teacher burnout" can result.

Environmental and Individual Stress

Although the term "stress" has been widely used, there has been little consensus as to how the term should be defined. Two usages of the term stress have been distinguished by Chris Kyriacou and John Sutcliffe: The first defines stress in terms of the stimulus

⁹Frances Fuller, "Concerns of Teachers: A Developmental Conceptualization," American Journal of Educational Psychology, XXVII (1933), 401-416.

¹⁰American Federation of Teachers Educational Issues Department, "Learning to Survive in the Classroom," American Educator, (Summer, 1980), p. 26.

characteristics of the environment, and conceptualizes stress as pressure exerted by the environment on an individual. These pressures include work overload, role conflict/ambiguity, and poor working conditions. The second defines stress as a state or response pattern displayed by an individual, and conceptualizes stress as something that happens within the individual.¹¹

James Manuso proposed nine major occupational stressors in corporate life which caused stress in its workers. These included:

. . . work overload or stagnation, ambiguity in tasks, extreme role conflict or little conflict, extreme amounts of responsibility, particularly for people, negative competition, constant change and daily variability or deadening stability, on-going contact with stress carriers, or social isolation, an organizational climate which encourages containment of emotional reaction and ego identification with the organization, and interaction of career opportunity with management style.¹²

Similarly, Kyriacou and Sutcliffe proposed these factors as being important in the extent to which the demands made upon a teacher results in teacher stress: (1) the degree of role conflict or role ambiguity involved, (2) the degree to which the teacher perceives that he/she is unable to meet the demands made upon him/her, (3) the degree to which the teacher's ability to meet the demands is impaired by poor working conditions, (4) the degree to which the demands are new or unfamiliar, and (5) the degree to which the teacher is already experiencing stress

¹¹Chris Kyriacou and John Sutcliffe, "A Model of Teacher Stress," Educational Studies, IV (March, 1978), 1-2.

¹²James Manuso, "Executive Stress Management," The Personnel Administrator, XXIV (November, 1979), 24.

resulting from sources outside his/her role as a teacher.¹³ In addition, Richard Needle and others have added these factors as being instrumental in stress-related situations--relationships with co-workers and his/her organizational role.¹⁴

Needle and others hypothesized that teacher stress arises from the discrepancy between the teacher's needs, values, and expectations on the one hand, and occupational rewards or job demands and the capacity of the worker to meet the requirements on the other.¹⁵ For example, he stated that teachers are attracted to their occupations because they perceive their role as being an essential catalyst of the student effort and learning. Then, they find that student misbehavior, time pressures, and interpersonal conflicts prevent them from realizing what it is they desire from their job--actual teaching--and, consequently, experience stress. Needle also theorized that stress may occur from the consequences of low-level rewards or the absence of occupational rewards.¹⁶

In order to incorporate both terms of the use "stress," the stimulus characteristics of the environment and the response pattern displayed by an individual, Chris Kyriacou and John Sutcliffe have

¹³Chris Kyriacou and John Sutcliffe, "Teacher Stress: A Review," Educational Review, XXIX (November, 1977), 299.

¹⁴Richard Needle and others, "Teacher Stress: Sources and Consequences," Journal of School Health, L (February, 1980), 96.

¹⁵Needle and others, p. 96.

¹⁶Needle and others, p. 96.

developed a model of teacher stress.¹⁷ From this model, the two conceptualized this definition of teacher stress:

. . . may be defined as a response of negative effect (such as anger or depression) by a teacher usually accompanied by potentially pathogenic physiological and biochemical changes (such as increased heart rate or release of adrenocorticotrophic hormones into the bloodstream) resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to this self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat.¹⁸

The model of teacher stress developed by Kyriacou and Sutcliffe, shown in Figure 1, distinguishes between potential occupational stressors (Box 1) and actual occupational stressors (Box 3). Potential occupational stressors, the objective aspects of a teacher's job such as too much work or high noise levels, will only result in teacher stress (Box 5) if the teacher views these as a threat to his/her self-esteem or well-being (Box 2). The appraisal of the demands made upon a teacher will depend on the interaction between the teacher's individual characteristics (Box 7) and the teacher's perception of the demands made upon him/her. Coping mechanisms (Box 4) are introduced to deal with actual occupational stressors by the individual. Teacher stress is primarily conceptualized as a response of negative effect, such as anger or depression, which is usually accompanied by other phenomena which may be regarded as response correlates of teacher stress (Box 5). These response correlates may be psychological, physiological, or behavioral. The pathogenic nature of the physiological and biochemical

¹⁷Kyriacou and Sutcliffe, "A Model of Teacher Stress," pp. 2-5.

¹⁸Kyriacou and Sutcliffe, "A Model of Teacher Stress," p. 2.

CHARACTERISTICS OF THE INDIVIDUAL TEACHER

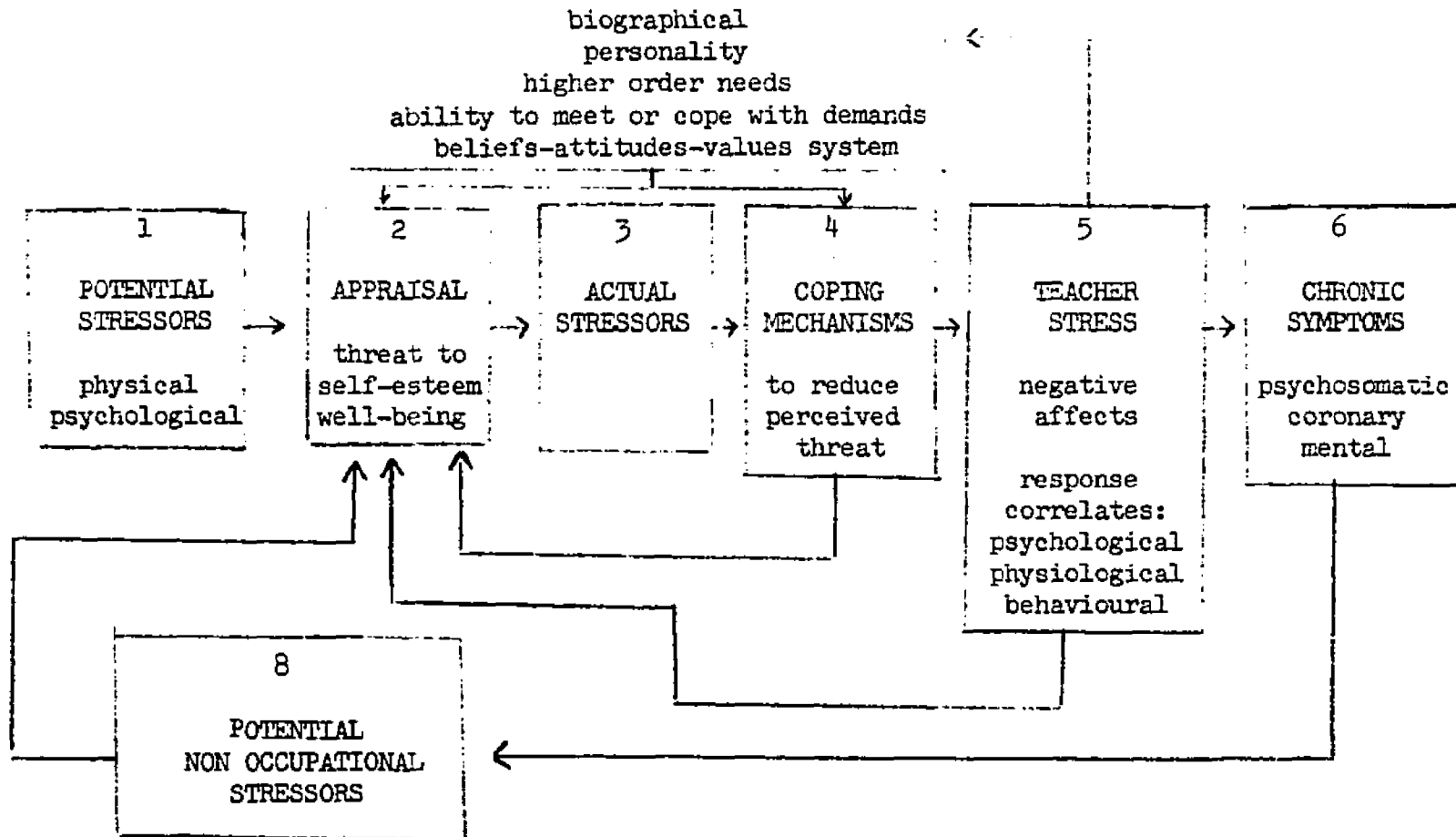


Figure 1. A Model of Teacher Stress

changes that accompany teacher stress may lead to psychosomatic symptoms, coronary heart disease, and mental ill health (Box 6).¹⁹

Incidences and Sources of Stress

Earlier studies concerning stress were prevalent among student teachers. Frances Fuller and Jane Parsons found that sources of stress among student teachers in 1973 were primarily concerns over teaching competence and performance, children's behavior and discipline, relations with the master teacher, and scheduling.²⁰ In the same report, Parsons and Fuller also noted that the following were the basic sources of stress of practicing teachers: interactions with children, problems with time, interactions with administrators and parents, and inadequate resources and materials.²¹

Herbert T. Olander and Mary Elizabeth Farrel reported in 1976 the results of a questionnaire given to 967 teachers in the public elementary schools in Pittsburg, Pennsylvania. Of the eighteen areas, the teachers had the least difficulty with relationships with principals, and the most difficulty with materials of instruction and discipline and control.²²

¹⁹Kyriacou and Sutcliffe, "A Model of Teacher Stress," pp. 2-5.

²⁰Frances Fuller and Jane Parsons, "Current Research on the Concerns of Teachers" (paper presented to the annual meeting of the American Educational Research Association, Chicago, 1972), p. 14.

²¹Fuller and Parsons, p. 13.

²²Herbert Olander and Mary Elizabeth Farrel, "Professional Problems of Elementary Teachers," Journal of Teacher Education, XXI (Spring, 1970), 227.

Alfred Alschuler and others reported in 1977 that most teachers are in a constant state of mild to extreme stress. Of thirteen categories, teachers consistently reported the following two as being most stressful, interruptions that disturb class and discipline problems.²³ Also in 1977, Jack Dunham maintained that one of the major stress situations to teachers in England was the disturbing behavior of pupils.²⁴

As reported by Kryiacou and Sutcliffe in 1977, a survey of 590 teachers in the United Kingdom was conducted by W. G. Rudd and S. Wiseman. The postal questionnaire results indicated these main sources of professional dissatisfaction: (1) teacher's salaries, (2) poor human relations among staff, (3) inadequacies of school buildings and equipment, (4) teaching load, (5) teacher training, (6) large classes, (7) feelings of inadequacy as a teacher, and (8) status of the profession in society.²⁵

Leanna Landsmann isolated three major areas of health concern in a survey of teachers in 1978. The results included stress and tension, physical environment in school, and diet, weight, and exercise. Seventy-five percent of the teachers surveyed said that 4.5 days of

²³Alfred Alschuler and others, "Social-Literacy: A Discipline Game Without Losers," Phi Delta Kappan, LVII (March, 1977), 606-609.

²⁴Jack Dunham, "The Effects of Disruptive Behavior on Teachers," Educational Review, IX (June, 1977), 181.

²⁵Chris Kyriacou and John Sutcliffe, "Teacher Stress: A Review," Educational Review, XXIX (November, 1977), 300, citing W. G. Rudd and S. Wiseman, "Sources of Dissatisfaction Among a Group of Teachers," British Journal of Educational Psychology, XXXII (1962), 275-291.

absenteeism per person in the last year were related to stress or tension.²⁶

In response to the Teaching Stress Events Inventory sent out in a Chicago Teacher's Union newsletter in March, 1978, 4,934 forms were returned and usable for data analysis. Priority concerns pinpointed by David Cichon and Robert Koff in this survey were managing disruptive children, management tensions, doing a good job, and pedagogical functions.²⁷

John Pratt reported feelings of stress of 124 primary school teachers were analyzed in an attempt to determine causes and effects in northern England in 1978. Results showed that stress arose from five main areas: a general inability to cope with teaching problems, non-cooperative children, aggressive children, concern for children's learning, and staff relationships.²⁸

In 1979, Dennis Sparks reported from an inservice meeting in Wayne County, Michigan the items which teachers identified as the sources of work-related stress. They were limited feelings of control or power in the work setting, interpersonal relationships in the work environment, and role conflicts.²⁹ Another survey in 1979, done by the

²⁶ Leanna Landsmann; "Warning to Principals: You May Be Hazardous to Your Teacher's Health," National Elementary Principal, XCVII (March, 1978), 69-72.

²⁷ David Cichon and Robert Koff, "Stress and Teaching," NASSP Bulletin, LXIV (March, 1980), 91-104.

²⁸ John Pratt, "Perceived Stress Among Teachers: The Effects of Age and Background of Children Taught," Educational Review, XXX (February, 1978), 3-14.

²⁹ Dennis Sparks, "A Biased Look at Job Satisfaction," The Clearing House, LII (May, 1979), 447-449.

New York State United Teacher's Research and Educational Services, found that respondents offered the following two items as the most stress-producing factors in schools today: (1) managing disruptive children, and (2) incompetent administration or lack of administrative support.³⁰

Steven A. Jameson cited two surveys done in 1979 which confirmed the results of earlier studies. The American Academy of Family Physicians conducted a survey of teachers, executives, physicians, government workers, and secretaries to find out how many reported on-the-job stress. Sixty-three percent of the responding teachers indicated that they felt stress on the job. An increased work load was the main source of stress indicated by 38 percent. The Massachusetts Teacher's Association surveyed some of its members to find out what they considered the most stressful events at work. The most frequently cited causes of stress were disruptive students and the increased administrative/paperwork load for the high school teachers, and for the elementary school teachers the lack of preparation time and public pressure were cited in 45 percent of those surveyed.³¹

Factors Affecting Stress and Anxiety

Stress and illness caused by stress in ordinary human experience is almost never caused by exposure to stressors alone; other factors

³⁰New York State United Teacher's Research and Educational Services, "Teacher Stress Survey," New York State United Teacher's Information Bulletin, November, 1979.

³¹Steven A. Jameson, "Distress Signals," School and Community, LXVI (February, 1980), 17-19.

that influence those stressors and their impact must be considered. Judith Rabkin and Elmer L. Struening contended that these stressors may be grouped in three broad categories: characteristics of the stressful situation, individual biological and psychological attributes, and characteristics of the social support system available to the individual that serve as buffers.³²

Role Conflict

The need for clarity is a general need of various occupational groups. The degree of role conflict or role ambiguity has been shown to be directly related to job-induced tension and anxiety and propensity to leave the organization and inversely related to job satisfaction and attitudes, according to Robert Miles.³³ He stated that a particular role requirement may be unrelated to stress, but when added to other role requirements placed on a person may significantly increase the level of stress experienced.³⁴

Many of the roles assigned to teachers are mutually exclusive. An example given by Susan Edgerton is this: While expected to operate in the executive capacity as a supervisor (directive and critical), the teacher is also expected to be a counselor (supportive, advisory,

³²Judith G. Rabkin and Elmer L. Struening, "Life Events, Stress, and Illness," Science, CXCIV (December, 1976), 1018.

³³Robert Miles, "Role Requirements as Sources of Organizational Stress," Journal of Applied Psychology, LXI (February, 1976), 172.

³⁴Miles, p. 172.

and oriented toward the pursuit of knowledge).³⁵ These roles are inherently contradictory, continually in conflict.

Levin Halpert, in a study of student teachers at UCLA in 1967, indicated that there may be two specific stress factors rather than one general stress factor: One is related to the physical manifestations of stress, and the other is related to doubt and uncertainty about the self in the teacher role or ambiguity about how to function in the classroom as a teacher.³⁶ Sex appeared to be a factor in stress reported by student teachers. Student teachers who reported high stress also reported a decreased interest in teaching as a career.³⁷

In a paper presented to the American Research Association in April, 1979, Nathalie Gehrke maintained that role conflicts do not go away after the first year of teaching.³⁸ She asserted that multiple roles influence the teacher's enactment of the teacher's role, and that married teachers experience greater conflicts, female teachers experience greater conflicts, and changes within the teacher role caused greater conflicts.³⁹

³⁵Susan Edgerton, "Teachers in Role Conflict: The Hidden Dilemma," Phi Delta Kappan, L (September, 1977), 121.

³⁶Levin Halpert, "A Study of the Sources, Manifestations, and Magnitude of Stress Among Student Teachers at UCLA," Dissertation Abstracts International, XXVII (November, 1966-February, 1967), 2359-A.

³⁷Halpert, p. 2359-A.

³⁸Nathalie J. Gehrke, "A Grounded Theory Study of Teacher Role Personalization" (paper presented at the annual meeting of the American Educational Research Association, San Francisco, California, April, 1979).

³⁹Gehrke.

In a survey in Wayne County, Michigan, teachers identified role conflicts as one of the sources of their work-related stress.⁴⁰

Sub-Group Characteristics

Cichon and Koff reported in the survey of Chicago teachers in 1978 that no significant differences were found between sub-groups.⁴¹ Regardless of sex, age, race, or type of school teachers, they seemed to perceive stress associated with teaching in highly similar ways. Corresponding with this survey were two conducted by Kryiacou and Sutcliffe, in which they maintained that there was little association between self-reported teacher stress and biographical characteristics of teachers.⁴²

Survey and questionnaire results recently have indicated that biographical characteristics do have an effect upon the amount and sources of stress perceived by elementary school teachers. The respondents of the New York Teacher Stress survey in 1979 found the following items to be significant in their reportings of perceived stress. Urban elementary teachers and urban high school teachers indicated higher stress, with urban teachers indicating three times more stressful items as rural teachers and two times more items than suburban teachers. The thirty-one through forty year-old teachers

⁴⁰Dennis Sparks, "A Biased Look at Job Satisfaction," The Clearing House, LII (May, 1979), 447.

⁴¹David Cichon and Robert Koff, "Stress and Teaching," NASSP Bulletin, LXIV (March, 1980), 91-104.

⁴²Chris Kyriacou and John Sutcliffe, "Teacher Stress, Prevalance, Sources, and Symptoms," British Journal of Educational Psychology, XLVII (June, 1978), 159.

appeared to be under greater stress, the forty-one through fifty year-old teachers reported half as many items as being stressful, and the over fifty teachers reported fewer items as being stressful.⁴³

Kyriacou and Sutcliffe also altered their opinions after a questionnaire survey of 218 teachers in sixteen medium-sized mixed comprehensive schools in England. They investigated the association between self-reported teacher stress and three response correlates of teacher stress; job satisfaction, absenteeism, and intention to leave teaching. Results indicated that self-reported teacher stress was negatively associated with job satisfaction and positively associated with the intention to leave teaching. They also thought that biographical characteristics appeared to moderate these relationships, although there is no clear interpretation of how the effects of moderator variables occur.⁴⁴

Other Factors Affecting Stress

The reported feelings of 124 primary school teachers were analyzed in an attempt to discover causes and effects by John Pratt in England in 1978. Financial deprivation in the home background was found to be positively and highly significantly related to the incidence of perceived stress among teachers of all but the very youngest children; among those teaching the more deprived, stress increased with the age of the children taught. A positive association was also found between

⁴³New York State United Teacher's Research and Educational Services, November, 1979.

⁴⁴Chris Kyriacou and John Sutcliffe, "Teacher Stress and Satisfaction," Educational Research, XXI (February, 1971), 89.

the amount of stress recorded and illnesses, as measured by the General Health Questionnaire.⁴⁵

In a questionnaire of 130 comprehensive school teachers in England, occupational stress as indicated by a self-report measure was found to be positively associated with the teacher's generalized belief in external control over reinforcement. That is, individuals who believe reinforcement is the result of luck, chance, fate, the action of powerful others, or is essentially unpredictable are more likely to appraise their environment as threatening and, hence, may experience greater stress.⁴⁶

A study of inner-city high school teachers and their reported feelings of stress was done by Forrest W. Parkay in 1979 in an attempt to determine the relationship of personality traits and teaching style to environmental stress. He found that certain traits are indicative of teaching styles that emerge in response to anxiety-provoking environmental conditions. Three groups of teaching styles emerged in this study: Group A teachers who experienced much stress were cold, practical, struggling, frustrated, and ineffective; Group B teachers who experienced low level stress were ethical, enterprising, flexible, innovative, and efficient; and Group C teachers who experienced little stress were liberal, task-oriented, strong, satisfied, open, and humane. Parkay maintained that Group A teachers assumed this teaching style

⁴⁵John Pratt, "Perceived Stress Among Teachers: The Effects of Age and Background of Children Taught," Educational Review, XXX (February, 1978), 3-14.

⁴⁶Chris Kyriacou and John Sutcliffe, "A Note on Teacher Stress and Locus of Control," Journal of Occupational Psychology, LIII (September, 1979), 227-228.

at great cost to themselves and to students, while Group B and Group C teachers promoted positive teacher-student relationships and growth of students.⁴⁷

Stress Related to Health Problems

Continuing stress can result in serious health problems among teachers. In a statement to the United States House of Representatives Sub-Committee on Elementary, Secondary, and Vocational Education concerning occupational stress among teachers, Marsha Berger, Vice President at large of the Providence Teacher's Union, cited several surveys conducted during the past several years by the American Federation of Teachers and its state and local affiliates that indicated occupational stress is an extensive problem among teachers.⁴⁸ A survey of more than one thousand teachers conducted by the Portland Federation of Teachers during 1979 obtained the following results: More than half of the teachers surveyed (53 percent) reported they had experienced physical illness which they believed was related to stress in their work and more than one-fifth (21.1 percent) reported they had experienced mental illness related to work stress.⁴⁹ A survey conducted by the New York State United Teachers during 1979 drew

⁴⁷Forrest W. Parkay, "Inner-City High School Teachers: Relationships of Personality Traits and Teaching Style to Environmental Stress," Urban Education, XIV (January, 1980), 1-16.

⁴⁸Marsha Berger, "Occupational Stress Among Teachers" (a statement presented before the United States House of Representatives Sub-Committee on Elementary, Secondary, and Vocational Education, February 6, 1980).

⁴⁹Berger.

responses from more than four thousand New York teachers. Forty-one percent reported having experienced illness related to classroom stress.⁵⁰

Others have also reported some relationship between stress and ill health. John Pratt cited results of a positive and significant relationship between high scores on the Teacher Event Stress Inventory and ill health as measured by the General Health Questionnaire scores.⁵¹ The correlation between stress and the General Health Questionnaire totals was $r = 0.41$ ($P 0.001$) and an analysis of variance in the stress scores for three classes of General Health Questionnaire scores showed highly significant differences.⁵²

A nationwide survey conducted by Instructor magazine found that a majority of the seven thousand teachers responding to the question "Is teaching hazardous to your health?" felt the answer was "yes."⁵³ About 87 percent of the respondents indicated that there were "chronic health hazards" stemming from teaching. Another 27 percent felt they had personally developed "chronic health problems," such as headaches, allergies, hypertension, and colds as a result of teaching, while 40 percent said that they took perscription drugs to treat the health related problems developed as a result of the hazards of teaching.⁵⁴

The Chicago Teachers Union survey indicated that approximately 50 percent of the respondents reported that they experienced physical

⁵⁰Berger.

⁵¹Pratt, p. 3.

⁵²Pratt, p. 3.

⁵³R. C. Newell, "Teacher Stress," American Teacher, December, 1979/January, 1979, p. 16, citing Instructor Survey Results.

⁵⁴Newell, p. 16.

illness as a result of on-the-job stress. According to Cichon and Koff, principal researchers in this study, "Teachers reported experiences of physical assault, confrontations with colleagues and administrators, horrendous working conditions, and various stress related illnesses such as colitis, hypertension, sleeplessness, and ulcers."⁵⁵

Alfred M. Bloch, M.D., studied 253 classroom teachers including 158 women and 95 men from Los Angeles inner-city schools. All of the teachers were victims of varying degrees of psychological stress and physical trauma; these teachers had experienced actual assault or the threat of assault in inner-city schools. Most experienced varying degrees of physical complaints such as gastrointestinal disorders, respiratory disorders, headaches, cardiovascular disorders, musculo-skeletal disorders, and skin disorders.⁵⁶

Of the 1,282 teachers who responded to a Learning article concerning burnout, 93 percent said that they had experienced feelings of burnout. Many teachers talked of psychic and physical damage resulting from burnout: nervous breakdowns, depression, prolonged exhaustion, colitis, constant headaches, and stomach ailments.⁵⁷

Formal characteristics of stressful events that have been found to influence illness onset include their magnitude, intensity,

⁵⁵David Cichon and Robert Koff, "Stress and Teaching," NASSP Bulletin, LXIV (March, 1980), 91.

⁵⁶Alfred M. Bloch, "Combat Neurosis in Inner-City Schools," American Journal of Psychiatry, CXXXV (October, 1978), 1189-1192.

⁵⁷"Readers Report on the Tragedy of Burnout," Learning, April, 1979, p. 76.

duration, unpredictability, and novelty.⁵⁸ Another critical factor in evaluating the impact of stressful events is the individual's perception of them. Such perception depends on personal characteristics within two broad categories of variables; one, personal factors including intelligence, verbal skills, morale, personality type, past experience, and a sense of mastery over one's fate, and two, demographic characteristics which include age, education, income, and occupation.⁵⁹ Another broad set of mediating variables affecting stressful events consists of the buffers and supports accessible to the individual in his social environment. Three specific categories are particularly important in this area: social isolation, social marginality, and status inconsistency.⁶⁰

In addition, Stephen Aaron Douglas confirmed with his dissertation about teachers that much of what is being reported as time off for "physical illness" is the result of personal and environmental stress.⁶¹ He found that role conflict, years of teaching experience, summer job, inner-city vs. suburban school, academic degree, and job satisfaction among other variables were found to be predictors of absenteeism.⁶²

⁵⁸Judith G. Rabkin and Elmer L. Struening, "Life Events, Stress, and Illness," Science, CXCIV (December, 1976), 1018.

⁵⁹Rabkin and Struening, p. 1018.

⁶⁰Rabkin and Struening, p. 1018.

⁶¹Stephen Aaron Douglas, "Social-Psychological Correlates of Teacher Absenteeism: A Multi-Variate Study," Dissertation Abstracts International, XXXVII (May-June, 1977), 7034-A.

⁶²Douglas, p. 7034-A.

Summary

The literature reviewed in this chapter primarily dealt with the incidences and sources of occupational stress among teachers. This chapter introduced a model of teacher stress, and the summary of the research completed in the areas concerning teacher stress.

Within the context of the chapter, it was pointed out that earlier studies referred to anxiety and concerns of teachers, while the latter studies (1970's and 1980's) referred to occupational stress and stressors.

Although there are actual stressors which affect the way the individual teacher operates in his/her capacity, there are also potential occupational stressors, physical and psychological, which are the objective levels of a teacher's job such as high noise levels. These potential occupational stressors will only result in teacher stress if the teacher views these as a threat to his/her self-esteem or well-being. The characteristics of the individual teacher, the teacher's perception of the demands made upon him/her, and the coping mechanisms of the individual all are instrumental in the appraisal and actions taken to encounter stressors, actual or potential. The response correlates of teacher stress may be psychological, physiological, or behavioral, and may lead to physical, psychosomatic, or mental illness.

The literature review revealed that little research had been completed dealing specifically with the amount and sources of stress reported by rural teachers. Also, the way in which individual characteristics of teachers affects the amount and sources of stress reported has not been clearly investigated or described.

Chapter 3

RESEARCH METHODOLOGY AND INSTRUMENTS

Introduction

This chapter contains the research design, the selection of the sample, the procedures followed in gathering the data, and a description of the instrument used in this study. In addition, an explanation is given of the procedures for scoring the instrument and of the techniques followed in the analysis of the various data.

Research Design

Much ex post facto research must be done in psychology, sociology, and education simply because many research problems in the social sciences and education do not lend themselves to experimentation, although many of them do lend themselves to controlled inquiry of the ex post facto kind.¹ Fred N. Kerlinger stated:

Ex post facto research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables.²

This study followed the ex post facto design. The design involved the collection of data using the Teacher Stress Questionnaire

¹Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart, and Winston, 1973), p. 392.

²Kerlinger, p. 379.

with an attempt to determine if certain teacher factors affected the way in which teachers responded to the questionnaire in the prevalence and sources of stress perceived. Also, there was an attempt to determine if the frequency of stress symptoms were significantly related to the amount of stress reported by teachers. In an ex post facto design, the researcher can not always assume a simple causative relation between independent and dependent variables. If the predicted relationship is observed, this does not necessarily mean that the variables studied are causally related.³

Selection of the Sample

Prior to randomly selecting schools for this study, six cities and ten counties in the regions of East Tennessee and Southwest Virginia were identified as the population area from which the selection was to be made. This selection area was considered to be manageable because it was within approximately a fifty mile radius of the Tri-Cities, and within a reasonable driving distance.

Initial contact was made with the superintendents of schools in each of the sixteen selected school systems. An explanation of the nature and intent of the study was made to each superintendent along with a request for permission to use the randomly selected schools from his school system. Permission was received verbally from each superintendent to do the study, with the exception of one superintendent who chose not to participate in the study. Therefore,

³Bruce W. Tuckman, Conducting Educational Research (New York: Harcourt, Brace, Javanovich, 1978), p. 148.

only fifteen school systems were the target regions. A letter explaining the intent of this study confirmed the telephone conversation to each superintendent.

Using a random number table, two elementary schools from each of the fifteen systems were selected, with the exception of Norton City, which has only one elementary school. The principals of each of the twenty-nine schools were contacted and were given an explanation of the study. Again, by using the random number table, twelve teachers, grades kindergarten through six, were chosen from each of the twenty-nine schools to respond to the questionnaire. In the event that a school did not have twelve teachers, all teachers in the grades kindergarten through six were asked to respond to the questionnaire from that particular school.

Two alternate schools were chosen from each school system in the event that the principal of a school chose for his teachers not to participate. No names were placed on any of the questionnaires. No school was identified by name, and no school system was identified by name. Code letters were used to differentiate data among urban and rural schools.

Gathering the Data

A designated person went to each of the twenty-nine randomly selected schools and distributed the prepackaged, prelabeled questionnaire forms including an envelope in which to place the answered questionnaire. Teachers were instructed to complete the questionnaire including some teacher characteristic questions and a

frequency of symptoms form. The entire package consisted of a form letter, two pages of teacher characteristics, the questionnaire itself, and a consent form required by the East Tennessee State University Human Subjects Committee. The selected teachers were given two days to complete the questionnaire, and a designated time was specified for the pick-up of the completed questionnaires (see Appendix A).

Statistical Analysis Procedures

The hypotheses in this study were stated in the research form, which states the expectations of the researcher in positive terms. It identifies the variables or conditions, which in causal relationships will be advanced to account for the results and is often derived from a theory.⁴ For the purpose of statistical treatment, however, the null form for each hypothesis was tested. The null hypothesis asserts that there is no significant difference between population means, and that any difference found is unimportant and incidental.

The data from the completed questionnaires were transferred to computer punch cards and were statistically analyzed at East Tennessee State University.

The t-test was used to analyze the difference in Hypotheses 1, 3, 5, 8, 10, 13, 16, 18, 19, 20, and 21 concerning the amount of stress. In Hypotheses 2, 4, 6, 9, 11, 14, and 17, the t-test was used to determine differences between teachers' responses to sources of stress in Categories A, pupil misbehavior, B, poor working conditions, C, time

⁴Stephen Issacs and William Michael, Handbook in Research and Evaluation (San Diego: Robert Knapp, 1971), p. 142.

pressures, and D, poor school ethos. Hypotheses 7, 12, and 15 required the Newman-Keuls Procedure and the analysis of variance (ANOVA) to analyze differences in the sources of stress in Categories A, B, C, and D. In Hypothesis 19, the Spearman Correlation Coefficient was used to analyze significant relationships between the frequency of each symptom of stress and the total amount of stress reported by all respondents.

In all cases involving statistical differences and relationships, the minimum acceptable level of significance was .05 level.

Instrument

The Teacher Stress Questionnaire, as developed by Chris Kryiacou and John Sutcliffe, was administered to the randomly selected teachers to measure the prevalence and certain sources of stress perceived by elementary teachers in the upper East Tennessee and Southwest Virginia regions (see Appendix B).⁵

The Teacher Stress Questionnaire consisted of four sections. The first section requested teacher characteristic information regarding sex, age, length of time in the teaching profession, length of time in the present teaching position, number of years of formal preparation for the teaching profession, the grade level taught, length of time since taking course work, amount of professional reading accomplished per week, number of hours spent working on school items outside of

⁵Chris Kryiacou and John Sutcliffe, "Teacher Stress, Prevalence, Sources, and Symptoms," British Journal of Educational Psychology, XLVIII (June, 1978), 160.

school hours, and the number of days absent in the preceding school year due to illness. The format of this section consisted of multiple choice class divisions.

The second section of the questionnaire consisted of fifty-one items regarding sources of stress which the teachers were asked to rate in response to the question "As a teacher, how great a source of stress are these factors to you?" on a five-point scale labeled 'no stress,' 'mild stress,' 'moderate stress,' 'much stress,' and 'extreme stress.' On this scale, 'no stress' was rated 1, 'mild stress' was rated 2, 'moderate stress' was rated 3, 'much stress' was rated 4, and 'extreme stress' was rated 5. Each of these fifty-one items was grouped into one of four categories of stress, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos. The teachers' responses were analyzed according to these four categories of stress which are explained in detail in Chapter 4.

The third section asked teachers to rate their response to the question "In general, how stressful do you find being a teacher?" on a five-point scale labeled 'not at all stressful,' 'mildly stressful,' 'moderately stressful,' 'very stressful,' and 'extremely stressful.' This scale consisted of labeling 'not at all stressful' as 1, 'mildly stressful' as 2, 'moderately stressful' as 3, 'very stressful' as 4, and 'extremely stressful' as 5. Each response was scored as such for statistical purposes.

Finally, the fourth section consisted of seventeen items regarding symptoms of stress which teachers were asked to rate in response to the question "Please estimate how frequently during the school term you

feel in these ways" on a five-point scale labeled 'never,' 'rarely,' 'about once a week,' 'about once a day,' and 'many times a day.' On this scale, 'never' was rated as 1, 'rarely' as 2, 'about once a week' as 3, 'about once a day' as 4, and 'many times a day' as 5. The teachers' responses were scored as such for statistical purposes.

The items employed and the format of the questionnaire were developed by Chris Kryiacou and John Sutcliffe after extensive research. They reported:

The items used in the format of the questionnaire were developed following a review of the research literature, interviews with teachers, and two pilot studies. In particular, it should be noted that the sources and symptoms of stress employed as items in the questionnaire were largely those that have been spontaneously reported by teachers themselves.⁶

In a questionnaire survey of 130 comprehensive school teachers, the same researchers, Kryiacou and Sutcliffe, used the question "In general, how stressful do you find being a teacher?" to ask the teachers to respond on a five-point scale labeled 'not at all stressful,' 'mildly stressful,' 'moderately stressful,' 'very stressful,' and 'extremely stressful.' According to Kryiacou and Sutcliffe:

The response to this question was used as the measure of self-reported teacher stress, and has been employed successfully in previous research establishing its concurrent validity.⁷

⁶Kyriacou and Sutcliffe, "Teacher Stress, Prevalence, Sources, and Symptoms," p. 160.

⁷Chris Kyriacou and John Sutcliffe, "A Note on Teacher Stress and Locus of Control," Journal of Occupational Psychology, LII (September, 1979), 227.

Chapter 4

DATA ANALYSIS AND INTERPRETATION

Introduction

The data analysis and interpretation are presented in this chapter. Tables with statistical data and significance levels are presented with each hypothesis. Data were gathered and treated to test the hypotheses set forth in Chapter 1. These hypotheses were tested to determine the prevalence and certain sources of stress among elementary school teachers (grades kindergarten through six), and the relationship of stress to selected teacher factors.

Presentation of the Data

The teachers in the Upper East Tennessee and Southwest Virginia areas are experiencing stress according to the results of this questionnaire. Table 1 shows the percentage distribution and mean for the total number of teachers responding to the question, "In general, how stressful do you find being a teacher?"

Approximately 1 percent of the teachers found teaching not at all stressful, approximately 26 percent found teaching mildly stressful, approximately 42 percent found teaching moderately stressful, approximately 25 percent found teaching very stressful, and only 5 percent found teaching extremely stressful. The mean was 3.046 for all respondents.

Table 1
Percentage Distribution and Mean of Total Responses
of Teachers Concerning Amount of Stress

Percent of Teachers Responding to Questionnaires						
Not at all Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful	N	Mean
1.19	26.40	41.76	24.90	4.98	262	3.046

Hypothesis 1. Comparison of
Amount of Stress Between
Urban and Rural Elementary
Teachers

The hypothesis "urban elementary teachers will report a significant difference in the amount of stress than rural elementary teachers" was tested in the null form. Table 2 shows the percentage distribution and means of both urban and rural teacher responses.

Approximately 36 percent of the rural teachers reported teaching as very stressful or extremely stressful as compared to approximately 20 percent of urban teachers reporting teaching as very stressful or extremely stressful. The t-test was used to determine differences between the scores. The t-test showed 2.82, which was significant at the .005 level. The results appear to indicate that rural elementary teachers are experiencing more stress than urban elementary teachers in the surveyed areas. Based on these findings, the null hypothesis was rejected for Hypothesis 1.

Table 2

Percentage Distribution, t-Test Results, and Level of Significance
of Urban-Rural Response on Amount of Stress

Location	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
Urban	2.90	32.35	45.09	16.66	2.90	102	2.852	2.82	.005*
Rural	1.20	22.60	39.60	30.18	6.28	160	3.168		

* $p \leq .05$

Hypothesis 2. Comparison of
Sources of Stress Between
Urban and Rural Elementary
Teachers

The hypothesis "urban elementary teachers will report a significant difference in the sources of stress than rural elementary teachers" was tested in the null form. For comparison, the sources of stress were divided into four categories: Category A contained those sources of stress which related to pupil misbehavior, Category B contained those sources of stress which related to poor working conditions, Category C contained those sources of stress related to time pressures, and Category D contained those sources of stress related to poor school ethos. Figure 2 shows the fifty-one sources of stress divided into components which constitute Categories A, B, C, and D.

The data analysis for Hypothesis 2, the comparison of the sources of stress in urban and rural teachers, is shown in Table 3.

Within Category A, pupil misbehavior, rural teachers appeared to perceive this source more stressful than urban elementary teachers. The t-value was 3.08, and was significant at the .002 level. Within Category B, poor working conditions, rural teachers appeared to perceive this source more stressful than urban elementary teachers, also. The t-value was 4.86, and was significant at the .001 level. Within Category C, time pressures, rural teachers appeared to perceive this source more stressful than urban elementary teachers. The t-value was 3.25, and was significant at the .001 level. Within Category D, poor school ethos, rural teachers appeared to perceive this source as more stressful than urban elementary teachers. The t-value was 4.30, and was significant at the .001 level. The null hypothesis was rejected

Figure 2

Category A - Pupil Misbehavior

<u>Item No.</u>	<u>Source of Stress</u>
29	Noisy pupils
11	Difficult classes
41	Difficult behavior problems
42	Pupils' impolite behavior
35	Individual pupils who continually misbehave
20	Pupils' non-acceptance of teacher's authority
26	Pupils' general misbehavior
30	Maintaining class discipline
45	Generally high noise level
16	Pupils' poor attitudes to work
39	Pupils who show a lack of interest
10	Poorly motivated pupils
4	Constant monitoring of pupils' behavior
3	Punishing pupils
12	Trying to uphold/maintain values and standards
51	Pupils' general low ability
23	Inadequate disciplinary sanctions available
28	Groups of too wide an ability
47	Mixed ability groups
25	Pupils not on grade level

Category B - Poor Working Conditions

<u>Item No.</u>	<u>Source of Stress</u>
50	Poor career structure
34	Poor promotion opportunities
32	Inadequate salary
22	Shortage of equipment
27	Lack of recognition for good teaching
43	Lack of participation in decision-making
44	Large classes
9	Lack of recognition for extra work
31	Poor facilities
49	Too many periods actually teaching
17	Low status of the teaching profession
38	Covering lessons for absent teachers
46	Supervisory duties(e.g. playground, school meals)
40	Demands on after school time
24	Lack of effective consultation
47	Mixed ability groups

Figure 2 (continued)

Category C - Time Pressures

<u>Item No.</u>	<u>Source of Stress</u>
7	Not enough time to do the work
5	Too much work to do
1	Administrative work
36	Too much paperwork
2	Lack of time to prepare lessons
6	Pace of school day is too fast
8	Lack of time for marking
14	Responsibility for pupils (e.g. test scores)
40	Demands on after school time
37	Lack of time to spend with individual pupils
49	Too many periods actually teaching
33	No time to relax between lessons
21	Lack of time for further study

Category D - Poor School Ethos

<u>Item No.</u>	<u>Source of Stress</u>
15	Inadequate disciplinary policy of school
18	Lack of consensus on minimum standards
48	Attitudes and behavior of the principal
23	Inadequate disciplinary sanctions available
24	Lack of effective consultation
19	Attitudes and behavior of some other teachers
16	Pupils' poor attitudes to work
10	Poorly motivated pupils
9	Lack of recognition for extra work
12	Trying to uphold/maintain values and standards

for all four categories of the sources of stress for Hypothesis 2 based upon the statistical data presented. Urban teachers did report significantly different sources of stress in all four categories.

Table 3

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Urban and Rural Teachers

Category	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	Urban	105	2.556	3.08	0.002*
	Rural	167	2.838		
B. Poor Working Conditions	Urban	105	2.127	4.86	0.001*
	Rural	167	2.531		
C. Time Pressures	Urban	105	2.714	3.25	0.001*
	Rural	167	3.019		
D. Poor School Ethos	Urban	105	2.185	4.30	0.001*
	Rural	167	2.580		

* $p \leq .05$

Hypothesis 3. Comparison of Amount of Stress Between Teachers of Grades K-3 and 4-6

Hypothesis 3 stated that teachers in grades four through six will report a significant difference in the amount of stress than those

in grades kindergarten through three. Therefore, the null hypothesis was not rejected and based upon the statistical data, it appears that teachers in grades four through six did not perceive their sources of stress as significantly different from the teachers in grades kindergarten through three.

Table 5

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Teachers of Grades K-3 and Grades 4-6

Category	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	Grades K-3	157	2.690	0.92	0.356
	Grades 4-6	110	2.776		
B. Poor Working Conditions	Grades K-3	157	2.331	1.08	0.283
	Grades 4-6	110	2.424		
C. Time Pressures	Grades K-3	157	2.887	0.28	0.778
	Grades 4-6	110	2.914		
D. Poor School Ethos	Grades K-3	157	2.385	1.09	0.275
	Grades 4-6	110	2.487		

Hypothesis 5. Comparison of
Amount of Stress Between
Teachers With Less Than
Five Years of Experience
and Those With Experience
of Five Years or More

Hypothesis 5 stated that teachers with less than five years of experience will report a significant difference in the amount of stress than those teachers with experience of five years or more. Table 6 shows the percentage distribution, means, and the t-test results of the two groups of teachers, those with less than five years of experience and those with experience of five years or more.

The t-value was .93, indicating that there was not a significant difference in the amount of stress at the .05 level between those teachers with less than five years of experience and those teachers with experience of five years or more. Therefore, the null hypothesis, that there would be no significant differences, was not rejected.

Hypothesis 6. Comparison of
Sources of Stress Between
Those Teachers With Less
Than Five Years of
Experience and Those With
Experience of Five Years
or More

The hypothesis "teachers with less than five years of experience will report a significant difference in the sources of perceived stress than those teachers with experience of five years or more" was tested in the null form. Table 7 shows the results of the statistical analysis of each category of stress, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos, with the two

teachers of grades kindergarten through three. Table 4 gives the percentage distribution, mean, and t-test results for both groups of teachers, grades four through six and grades kindergarten through three.

Approximately 28 percent of the K-3 teachers reported teaching as mildly stressful, 41 percent reported teaching as moderately stressful, and 22 percent reported teaching as very stressful. The percentage distribution did not vary much between the two groups, with the 4-6 teachers reporting as follows: approximately 25 percent reported teaching as mildly stressful, 43 percent as moderately stressful, and 28 percent as very stressful. The t-value was 1.06, and was not significant at the .05 level. For Hypothesis 3, the null form was not rejected. Based upon these findings, the teachers in grades four through six did not report a significant difference in the amount of stress than teachers in grades kindergarten through three.

Hypothesis 4. Comparison of
Sources of Stress Between
Teachers of Grades K-3
and 4-6

Hypothesis 4 stated that teachers in grades four through six will report a significant difference in the sources of stress than those teachers of grades kindergarten through three. Table 5 shows the data analysis for Hypothesis 4.

The t-values for Category A, pupil misbehavior, Category B, poor working conditions, Category C, time pressures, and Category D, poor school ethos, did not show a significant difference in the sources of stress as perceived by teachers in grades four through six and teachers

Table 4

Percentage Distribution, t-Test Results, and Level of Significance
of Teacher Responses on Amount of Stress, Grades 4-6 and K-3

Grades Taught	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
Grades K-3	3.20	27.56	41.00	21.79	6.41	151	2.99	1.06	.291
Grades 4-6	0.00	25.49	43.10	28.40	2.90	106	3.11		

Table 6

Percentage Distribution, t-Test Results, and Level of Significance
of the Amount of Stress Between Teachers with Less Than Five
Years of Experience and Those with Experience of
Five Years or More

Years of Experience	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
0-4 Years	0.00	28.00	50.00	22.00	0.00	49	2.940	0.93	0.355
Over 5 Years	2.34	26.22	39.10	25.98	6.28	213	3.070		

groups of teachers, those with less than five years of experience and those with experience of five years or more.

Table 7

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Teachers With Less Than Five Years of Experience and Those With Experience of Five Years or More

Category	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	5 years or over	221	2.721	0.37	0.711
	less than 5 years	51	2.764		
B. Poor Working Conditions	5 years or over	221	2.364	0.55	0.581
	less than 5 years	51	2.424		
C. Time Pressures	5 years or over	221	2.884	0.76	0.446
	less than 5 years	51	2.976		
D. Poor School Ethos	5 years or over	221	2.429	0.06	0.950
	less than 5 years	51	2.422		

The t-values showed no statistical significant differences in Categories A, B, C, or D between the two groups. Therefore, Hypothesis 6 was not rejected in the null form, and it seems from this analysis that years of experience does not affect the sources of stress reported by elementary teachers.

Hypothesis 7. Comparison of Sources of Stress Between Those Teachers With 0-4 Years of Experience, 5-10 Years of Experience, and Over 10 Years of Experience

Hypothesis 7 stated that teachers with 0-4 years of experience, 5-10 years of experience, and over 10 years of experience will report a significant difference in the sources of perceived stress. The individual groups of data for years of experience, 0-4 years, 5-10 years, and over 10 years were statistically analyzed for differences. Table 8 shows the results of the statistical analysis of each category of stress.

Table 8

The Comparison of Individual Groups of Data With Sources of Stress as Measured by the Newman-Keuls Procedure and ANOVA

Categories of Sources of Stress	N, Mean Scores, F-Ratio, and Level of Significance of Individual Groups of Data for Years of Experience				
	Years of Experience			F	p
	Over 10 Years	0-4 Years	5-10 Years		
A. Pupil Misbehavior	2.684	2.764	2.766	0.399	0.671
B. Poor Working Conditions	2.297	2.424	2.447	1.428	0.242
C. Time Pressures	2.862	2.903	2.976	0.369	0.692
D. Poor School Ethos	2.324	2.422	2.559	2.682	0.070

The Newman-Keuls procedure and the analysis of variance were used to analyze the groups with Categories A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos. There were no significant differences shown between the groups; therefore, the null form of Hypothesis 7 was not rejected. Years of experience in the teaching profession does not appear to affect the sources of stress perceived by elementary teachers.

Hypothesis 8. Comparison of
Amount of Stress Between
Male and Female Elementary
Teachers

Hypothesis 8 stated that elementary male teachers will report a significant difference in the amount of stress than elementary female teachers. The percentage distribution, means, and t-test results are located in Table 9.

Approximately 42 percent of the male teachers said that teaching was moderately stressful, and approximately 16 percent said that teaching was very stressful as compared to the female teachers who responded with the following percentages: approximately 25 percent said that teaching was mildly stressful, approximately 41 percent said that teaching was moderately stressful, approximately 26 percent said that teaching was very stressful, and 5 percent said that teaching was extremely stressful. The t-value for this data was 1.80, and was not significant at the .05 level. However, the statistical data indicated a trend toward a difference in the amount of stress perceived by male and female elementary teachers at a significance of 0.072. The null form of Hypothesis 8 was not rejected as a result of these findings.

Table 9

Percentage Distribution, t-Test Results, and Significance Level
of the Male and Female Response to the Amount of Stress

Sex	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
Male	0.00	42.10	42.10	15.78	0.00	20	2.700	1.80	0.072
Female	2.07	25.30	41.49	25.70	5.39	242	3.074		

Hypothesis 9. Comparison of Sources of Stress Between Male and Female Elementary Teachers

Hypothesis 9 stated that elementary male teachers would report a significant difference in the sources of perceived stress than elementary female teachers. Table 10 shows the statistical data of each category of the sources of stress, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos, with male and female elementary teacher responses.

Table 10

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Male and Female Teachers

Category	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	Male	21	2.445	1.82	0.069
	Female	251	2.753		
B. Poor Working Conditions	Male	21	2.265	0.76	0.440
	Female	251	2.385		
C. Time Pressures	Male	21	2.392	3.21	0.001*
	Female	251	2.944		
D. Poor School Ethos	Male	21	2.309	0.75	0.45
	Female	251	2.437		

* $p \leq .05$

The t-values show no statistically significant differences in Categories B, poor working conditions, and D, poor school ethos. The t-value shows no significant difference in Category A; however, the significance was 0.069, which indicates a trend toward a difference in the source of stress, pupil misbehavior, as perceived by male and female elementary teachers. The t-value in Category C, time pressures, indicates a significant difference in this source of stress at the .001 level. As a result of these findings, only one source, Category C, time pressures, seems to be a significant difference in reported male and female stress. Therefore, the null hypothesis was not rejected for Hypothesis 9 for Categories A, B, and D.

Hypothesis 10. Comparison of
Amount of Stress Between
Younger Teachers, Ages
20-30 and Teachers Ages
Above 30

Hypothesis 10 stated that younger teachers, ages twenty through thirty, will report a significant difference in the amount of stress than older teachers, ages above thirty. Table 11 shows the percentage distribution, means, and t-test results of the respondents.

There was little variation in the percentage distribution with teachers under thirty years of age reporting as follows: approximately 24 percent of teachers reported teaching as mildly stressful, 42 percent of teachers reported teaching as moderately stressful, and approximately 28 percent of the teachers reported teaching as very stressful. Approximately 23 percent of the teachers over thirty years of age reported teaching as mildly stressful, 42 percent reported teaching as moderately stressful, and approximately 23 percent reported teaching as very

Table 11
 Percentage Distribution, t-Test Results, and Significance Level
 of Those Younger Teachers, Ages 20-30 and
 Teachers Ages Above 30

Age	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
Ages - 20-30	1.20	24.09	42.16	27.70	4.80	85	3.118	0.90	0.369
Ages - over 30	2.54	22.88	41.52	22.90	4.23	177	3.011		

stressful. The t-value was 0.90, and was not significant at the .05 level. Based upon the data analysis and results, it appears that younger teachers, ages twentieth through thirty, do not report a significant difference in the amount of stress than older teachers, ages above thirty. The null form of Hypothesis 10 was not rejected.

Hypothesis 11. Comparison of
the Sources of Stress
Between Teachers Ages 20-30
and Ages Above 30

Hypothesis 11 stated that younger teachers, ages twenty through thirty, will report a significant difference in the sources of stress than older teachers, ages above thirty. The results of the statistical analysis of each category of stress, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos, with the two groups of ages are shown in Table 12.

The t-values for Category A, pupil misbehavior, and Category C, time pressures, showed no significant differences. However, the t-value for Category B, poor working conditions, was significant at the .05 level. The t-value for Category D, poor school ethos, was 1.81, indicating a trend toward a significant difference in this source of stress between the two age groups. Only one source, poor working conditions, was shown to be significantly different in the perceived stress of elementary teachers, ages twenty through thirty and those over thirty. The null form of Hypothesis 11 was not rejected for Categories A, B, and D.

Table 12

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Teachers Ages 20-30 and Ages Above 30

Category Variable	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	20-30 years	184	2.691	1.21	0.207
	over 30 years	88	2.808		
B. Poor Working Conditions	20-30 years	184	2.304	2.49	0.013*
	over 30 years	88	2.526		
C. Time Pressures	20-30 years	184	2.895	0.20	0.840
	over 30 years	88	2.915		
D. Poor School Ethos	20-30 years	184	2.371	1.81	0.072
	over 30 years	88	2.547		

* $p \leq .05$

Hypothesis 12. Comparison of the Sources of Stress for Ages 20-30, Ages 31-45, and Ages Over 45 Years

Hypothesis 12 stated that teachers whose ages are twenty through thirty years, thirty-one through forty-five years, and over forty-five years, will report a significant difference in the sources of perceived stress. The individual groups of data for ages, twenty through thirty years, thirty-one through forty-five years, and over forty-five years

were statistically analyzed. The Newman-Keuls procedure and analysis of variance was used to analyze the three age groups in Category A, pupil misbehavior, Category B, poor working conditions, Category C, time pressures, and Category D, poor school ethos. Table 13 shows the results of the Newman-Keuls procedure and analysis of variance with each category.

Table 13

The Comparison of Individual Groups of Data for Age With Sources of Stress as Measured by the Newman-Keuls Procedure and ANOVA

Categories of Sources of Stress	N, Mean Scores, F-Ratio, and Level of Significance of Individual Groups of Data for Years in Present Position				
	Years Taught in Present Positions			F	p
	Over 45	20-30 Years	31-45 Years		
A. Pupil Misbehavior	2.663	2.706	2.808	0.801	0.450
B. Poor Working Conditions	2.198	2.526	2.360	4.254	0.015*
C. Time Pressures	2.885	2.900	2.915	0.028	0.973
D. Poor School Ethos	2.292	2.412	2.547	2.156	0.118

* $p \leq .05$

There were no significant differences between the groups in Categories A, pupil misbehavior, C, time pressures, or D, poor school ethos. However, in Category B, poor working conditions, teachers in

the twenty through thirty age range seemed to perceive this source as significantly more stressful than the teachers in the forty-five years and over age range. The null form of Hypothesis 12 for Categories A, C, and D was not rejected.

Hypothesis 13. Comparison of
the Amount of Stress Between
Teachers Who Have Taught in
Their Present Positions
Three Years or Less and
Those Who Have Taught More
Than Three Years

Hypothesis 13 stated that teachers who have taught in their present positions three years or less will report a significant difference in the amount of stress than those teachers who have taught more than three years in their present positions. The percentage distribution, means, and t-test results are shown in Table 14.

Approximately 23 percent of those teachers who have taught zero through three years in their present positions reported that teaching was mildly stressful, 52 percent said that teaching was moderately stressful, and approximately 18 percent said that teaching was very stressful. Approximately 28 percent of those teachers who had taught more than three years in their present positions reported that teaching was mildly stressful, 36 percent said that teaching was moderately stressful, and approximately 28 percent said that teaching was very stressful. The t-value showed 0.03, and was not significant at the .05 level. The results tend to suggest that the length of time spent teaching in the present position does not affect significantly the

Table 14

Percentage Distribution, t-Test Results, and Level of Significance
of Teacher Responses on Amount of Stress, Those Who Have Taught
in Their Present Positions Three Years or Less and
Those Who Have Taught More Than Four Years

Reported Amount of Stress by Percent									
Years in Present Position	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful	N	Mean	t	p
0-3 years	1.20	22.89	51.80	18.07	6.00	83	3.048		
4 years or over	2.80	28.40	35.79	28.40	4.50	178	3.034	0.03	0.978

amount of stress reported by elementary teachers. Thus, the null form of Hypothesis 13 was not rejected.

Hypothesis 14. Comparison of Sources of Stress Between Those Teachers Who Have Taught Three Years or Less in Their Present Positions and Those Who Have Taught More Than Three Years

Hypothesis 14, "teachers who have taught in their present positions three years or less will report a significant difference in the sources of perceived stress than those teachers who have taught more than three years in their present positions," was tested in the null form. Table 15 shows the statistical analysis of the data for each category of the sources of stress, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos.

The t-values show no statistically significant differences in Categories A, B, C, or D between the two groups. However, in Category C, time pressures, with a t-value of 1.67, there is a trend toward those teachers teaching less than three years in their present positions to report this source as more stressful than those teachers teaching four years or more in their present positions. Consequently, Hypothesis 14 was not rejected in the null form for all Categories A, B, C, and D.

Table 15

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Those Teachers With Less Than Three Years in Their Present Position and Those With Four Years or Over in Their Present Positions

Categories	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	4 Years or over	186	2.742	0.45	0.654
	less than 3 years	85	2.698		
B. Poor Working Conditions	4 years or over	186	2.363	0.54	0.590
	less than 3 years	85	2.412		
C. Time Pressures	4 years or over	186	2.851	1.67	0.096
	less than 3 years	85	3.020		
D. Poor School Ethos	4 years or over	186	2.467	1.22	0.223
	less than 3 years	85	2.346		

Hypothesis 15. The Comparison of
the Sources of Stress Between
Those Teachers Who Have Taught
in Their Present Positions 0-3
Years, 4-10 Years, and Over
10 Years

Hypothesis 15, "teachers who have taught in their present positions zero through three years, four through ten years, and over ten years, will report a significant difference in the sources of perceived stress" was tested in the null form. The individual groups of data for length of time in the present position, zero through three years, four through ten years, and over ten years were statistically analyzed. The Newman-Keuls Procedure and analysis of variance were used to analyze the groups in Categories A, B, C, and D; the results are shown in Table 16.

There were no significant differences between the groups, and based upon this data, the null form of Hypothesis 15 was not rejected. Years taught in the present positions does not appear to be a significant factor in the sources of stress perceived by elementary teachers.

Hypothesis 16. Comparison of
Amount of Stress Between
Teachers With Only a
Bachelor's Degree and Those
With a Master's or Above

The hypothesis stated that "those teachers who have had more formal preparation for the teaching profession, that is, a Master's Degree level or above, will report a significant difference in the amount of stress than those teachers who have only a Bachelor's Degree," and was tested in the null form. Table 17 shows the percentage distribution, means, and t-test results of the responses of both groups of teachers, those

Table 16

The Comparison of Individual Groups of Data With
Sources of Stress as Measured by the
Newman-Keuls Procedure and ANOVA

Categories of Sources of Stress	N, Mean Scores, F-Ratio, and Level of Significance of Individual Groups of Data for Years Taught in Present Position				
	Years Taught in Present Position			F	p
	0-3 yrs.	over 10 yrs.	4-10 yrs.		
A. Pupil Misbehavior	2.698	2.706	2.760	0.210	0.8106
B. Poor Working Conditions	2.240	2.412	2.427	1.666	0.1909
C. Time Pressures	2.838	2.876	3.020	1.441	0.2384
D. Poor School Ethos	2.336	2.346	2.5352	2.225	0.1100

Table 17

Percentage Distribution, t-Test Results, and Level of Significance
of Teacher Responses on Amount of Stress,
Bachelor's Degree and Master's or Above

Preparation for Teaching Profession	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
Bachelor's Degree	2.46	26.60	42.85	24.10	3.90	203	3.004	1.56	0.121
Master's Degree	0.00	26.30	36.80	28.07	8.77	57	3.195		

with just a Bachelor's Degree and those teachers with a Master's Degree or above.

Approximately 27 percent of the teachers with a Bachelor's Degree reported teaching as mildly stressful, 43 percent reported teaching as moderately stressful, 24 percent as very stressful, and approximately 4 percent as extremely stressful. This is in comparison to those teachers with a Master's Degree or above reporting the following percentages: approximately 26 percent as mildly stressful, approximately 37 percent as moderately stressful, 28 percent as very stressful, and approximately 9 percent as extremely stressful. A t-test was used to determine differences between the scores. The t-test showed 1.56, which was not significant at the .05 level. The results appear to indicate that teachers with more formal preparation, Master's Degree level or above did not experience a significant difference in the amount of stress than those teachers with only a Bachelor's Degree. Based upon the data presented, the null hypothesis for Hypothesis 16 was not rejected.

Hypothesis 17. Comparison of
Sources of Stress Between
Teachers With Only a
Bachelor's Degree and Those
With a Master's or Above

Hypothesis 17 stated that those teachers who have had more formal preparation for the teaching profession, that is, Master's Degree level or above, will report a significant difference in the sources of stress than those teachers with only a Bachelor's Degree. Table 18 shows the statistical analysis of each category of stress; A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school

ethos, with the two groups of teachers, those with a Master's Degree or above and those teachers with only a Bachelor's Degree.

Table 18

The Comparison of the Sources of Stress in Category A, Pupil Misbehavior, Category B, Poor Working Conditions, Category C, Time Pressures, and Category D, Poor School Ethos Between Those Teachers With A Bachelor's Degree and Those With A Master's Degree or Above

Categories	Teacher Groups	N	Mean	t	p
A. Pupil Misbehavior	Bachelor's Degree	211	2.700	1.18	0.239
	Master's or above	61	2.828		
B. Poor Working Conditions	Bachelor's Degree	211	2.338	1.66	0.098
	Master's or above	61	2.505		
C. Time Pressures	Bachelor's Degree	211	2.875	1.05	0.296
	Master's or above	61	2.992		
D. Poor School Ethos	Bachelor's Degree	211	2.388	1.61	0.109
	Master's or above	61	2.564		

The t-values showed no statistical significant differences in Categories A, B, C, or D. However, the responses to Category B, poor working conditions, showed a tendency toward a difference with a t-value of 1.66 at .098 significance, and the responses in Category D, poor school ethos, showed a tendency toward a difference with the t-value

of 1.61 at .109 significance. As a result of these statistical results, Hypothesis 17 was not rejected in the null form.

Hypothesis 18. Comparison of
Amount of Stress Between
Those Teachers Who Have
Pursued Professional
Development Within the Last
Year and Those Who Have Not
Pursued Professional
Development Within Two
Years or More

Hypothesis 18 stated that those teachers who have pursued professional development within the last year will report a significant difference in the amount of stress than those teachers who have not pursued professional development within two years or more. The percentage distribution, means, and t-test results are reported in Table 19.

The percentage distribution did not vary much between the two groups, with those teachers who have pursued professional development within the last year reporting as follows: approximately 26 percent said that teaching was mildly stressful, 39 percent moderately stressful, and 28 percent as very stressful. Those teachers who had not pursued professional development within two years or more indicated that teaching was stressful in the following percentages. Approximately 28 percent said that teaching was mildly stressful, approximately 44 percent reported teaching as moderately stressful, and 21 percent reported teaching as very stressful. The t-value was 0.62, and was not significant at the .05 level. Therefore, the null form of Hypothesis 18 was not rejected. The amount of stress as perceived by teachers who had pursued

Table 19

Percentage Distribution, t-Test Results, and Level of Significance
of Teachers' Responses (Those Who Have Taken Course Work Within
the Last Year and Those Who Have Not Pursued Professional
Development Within Two Years or More) of
Amount of Stress

Course Work Taken	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
Presently- 1 year	2.12	25.50	39.00	28.36	4.96	141	3.078	0.62	.0535
2 years and over	1.69	27.96	44.06	21.18	5.08	119	3.008		

professional development within the last year and those who had not pursued professional development within two years or more was not significantly different.

Hypothesis 19. Comparison of
Amount of Stress Between
Those Teachers Who
Accomplish 0-1 Hours of
Professional Reading Per
Week and Those Who
Accomplish Two Hours or
More Per Week

Hypothesis 19 stated that those teachers who do more professional reading, that is, two hours or more per week, will report a significant difference in the amount of stress than those teachers who do less than two hours of professional reading per week. The percentage distribution, means, and t-test results for the two groups are shown in Table 20.

Teachers who read one hour or less per week reported teaching as being stressful according to these percentages. Approximately 20 percent reported teaching as mildly stressful, 45 percent reported teaching as moderately stressful, and approximately 30 percent reported teaching as very stressful. Approximately 33 percent of those teachers who read two hours or more per week reported teaching as mildly stressful, and 21 percent reported teaching as very stressful. The t-value was 2.13, and was significant at the .05 level, indicating that teachers who do more professional reading per week perceived less stress. Thus, the null form of Hypothesis 19 was rejected.

Table 20

Percentage Distribution, t-Test Results, and Level of Significance
of Teachers' Responses (Those Who Accomplish 0-1 Hours of
Professional Reading Per Week and Those Who Accomplish
Two Hours or More Per Week) of Amount of Stress

Accomplished Professional Reading	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
0-1 hours	0.81	19.67	45.08	30.32	4.09	123	3.171	2.13	0.034*
2 hours or more	2.94	33.08	37.50	20.58	5.88	138	2.935		

* $p \leq .05$

Hypothesis 20. Comparison of
Amount of Stress Between
Those Teachers Who Spend
More Than Ten Hours a Week
Outside of School Hours
Working on School Items and
Those Who Spend Less Than
Ten Hours a Week Working on
School Items Outside of
School Hours

The hypothesis "those teachers who spend more than ten hours a week outside of school hours working on school items will report a significant difference in the amount of stress than those teachers who spend less than ten hours a week outside of school hours working on school items. Table 21 shows the percentage distribution, means, and t-test results for the two groups.

Those teachers working zero through ten hours outside of school hours on school items reported as follows: approximately 30 percent reported teaching as mildly stressful, 42 percent as moderately stressful, 20 percent as very stressful, and approximately 6 percent as extremely stressful. Approximately 24 percent of those teachers working eleven hours or over on school items outside of school hours reported teaching as mildly stressful, 41 percent as moderately stressful, 30 percent as very stressful, and approximately 4 percent as extremely stressful. The t-value was 1.02, and was not significant at the .05 level. Thus, Hypothesis 20 was not rejected in the null form.

Table 21

Percentage Distribution, t-Test Results, and Level of Significance of Teachers' Responses (Those Who Spend 0-10 Hours Working Outside of School Hours on School Items and Those Who Spend 11 Hours or More) With Amount of Stress

Reported Amount of Stress by Percent									
Hours Spent Outside of School Hours on School Items	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful	N	Mean	t	p
0-10 hours	2.36	29.90	41.70	19.68	6.29	127	2.984		
11 hours or over	1.50	23.66	41.20	29.77	3.80	133	3.097	1.02	0.309

Hypothesis 21. Comparison of
Amount of Stress Between
Teachers With Higher Rate
of Absenteeism Due To
Illness and Teachers With a
Lower Rate of Absenteeism
Due to Illness

Hypothesis 21 stated that those teachers with higher absenteeism due to illness, that is, four days or more in one year, will report a significant difference in the amount of stress which they perceived than those teachers who have a lower rate of absenteeism due to illness, that is, less than four days in one year. The percentage distribution, means, and t-test results are reported in Table 22.

Those teachers absent zero through three days due to illness reported teaching as being stressful as follows: approximately 26 percent reported teaching as mildly stressful, 46 percent as moderately stressful, 23 percent as very stressful, and approximately 2 percent as extremely stressful. Those teachers absent four or more days due to illness reported teaching as stressful in the following manner: approximately 28 percent as mildly stressful, 33 percent as moderately stressful, 29 percent as very stressful, and 10 percent as extremely stressful. The t-value was 2.20, and was significant at the .05 level. Based upon these findings, the null Hypothesis for 21 was rejected. It appears that those teachers who are absent more days due to illness also report a significantly greater amount of stress.

Table 22

Percentage Distribution, t-Test Results, and Level of Significance
of Teachers' Responses (Those Absent 0-3 Days and Those Absent
4 or More Days) of the Amount of Stress

Days Absent Due to Illness	Reported Amount of Stress by Percent					N	Mean	t	p
	Not At All Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful				
0-3 days	2.95	26.03	45.56	23.07	2.36	173	2.959	2.20	0.029*
4 or more	0.00	27.77	33.33	28.88	10.00	88	3.216		

* $p \leq .05$

Hypothesis 22. Comparison of the
Amount of Stress and the
Frequency of the Symptoms of
Stress in All Teachers'
Responses

Hypothesis 22 states that there will be a significant relationship in the amount of stress as perceived by the elementary teachers and the frequency of symptoms of stress as perceived by elementary teachers. Table 23 shows the Spearman Correlation Coefficients of each symptom of stress with the total amount of stress, and the significance levels of each.

All seventeen symptoms were found to have a significant positive relationship with the amount of stress reported by all respondents. Based upon these findings, Hypothesis 22 in the null form was rejected. These findings indicate that teachers who report stress are also reporting physical symptoms of stress and stressful situations.

Table 23

The Correlation of the Perceived Symptoms of
Stress and the Amount of Stress

Symptom	Correlation Coefficient	Significance
1. Nervous	0.4269	.001*
2. Headaches	0.4733	.001*
3. Loss of voice	0.4509	.001*
4. Tearful	0.4951	.001*
5. Frustrated	0.5512	.001*
6. Anxious	0.4617	.001*
7. Panicky	0.5241	.001*
8. Very tense	0.4694	.001*
9. Heart beating fast	0.2908	.001*
10. Acid in stomach	0.3779	.001*
11. Cold sweat	0.3989	.001*
12. Under stress	0.4072	.001*
13. Depressed	0.2332	.001*
14. Unable to cope	0.3907	.001*
15. Exhausted	0.3661	.001*
16. Increased blood pressure	0.3147	.001*
17. Very angry	0.3701	.001*

* $p \leq .05$

Chapter 5

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

Summary of Procedures

The primary purpose of this study was to determine the prevalence and certain sources of stress among elementary school teachers (grades kindergarten through six), and the relationship of stress to selected teacher factors. The study was conducted during the fall semester of 1980.

The Teacher Stress Questionnaire, consisting of four sections, was administered to randomly selected teachers in twenty-nine randomly selected schools within systems in upper East Tennessee and Southwest Virginia. The first section of the questionnaire requested teacher characteristic information, the second section consisted of fifty-one items regarding sources of stress, the third section consisted of a rating response to the question "In general, how stressful do you find being a teacher?," and the final section consisted of seventeen items regarding symptoms of stress which teachers were asked to rate.

A total of 272 teachers completed the Teacher Stress Questionnaire. Of this total, scores from all the 272 questionnaires were used for each hypothesis, except when a person chose not to answer a particular question.

In the statistical analysis procedures for Hypothesis 1, mean scores for the amount of stress reported by urban and rural teachers

were analyzed for significant differences with a t-test. For Hypothesis 2, mean scores for each of the categories of the sources of stress, Category A, pupil misbehavior, Category B, poor working conditions, Category C, time pressures, and Category D, poor school ethos, were analyzed with a t-test to determine significant differences in rural and urban teacher responses. Hypothesis 3 also required a t-test to determine significant differences in data for the amount of stress reported by teachers in grades four through six and kindergarten through three. The t-test was again utilized for Hypothesis 4 in the same manner as Hypothesis 2, analyzing for significant differences in the sources of stress reported by teachers in grades four through six and kindergarten through three.

The t-test was also used to determine significant differences in the amount and sources of stress as reported by teachers with less than five years of experience and those teachers with more than five years of experience, as stated by Hypotheses 5 and 6. Hypothesis 7 was analyzed with the Newman-Keuls Procedure and analysis of variance to determine differences in the sources of stress.

Hypotheses 8 and 9 were analyzed in a similar manner as Hypotheses 1 and 2, with the t-test being used to test for significant differences between male and female respondents on the amount and sources of stress.

The t-test was also used to determine significant differences in the amount and sources of stress as reported by teachers, ages twenty through thirty, and teachers, ages above thirty in Hypotheses 10 and 11. The Newman-Keuls Procedure and the analysis of variance were used for the sources of stress in Hypothesis 12.

Hypotheses 13 and 14 were analyzed in a similar manner as 10 and 11, with the t-test being used to determine significant differences between teachers who have taught in their present positions three years or less and those who have taught more than three years in their present positions. The Newman-Keuls Procedure and analysis of variance were used for the sources of stress in Hypothesis 15.

The t-test was used to determine significant differences in the amount and sources of stress reported by teachers with a Bachelor's Degree and those teachers with a Master's Degree or above in Hypotheses 16 and 17.

Hypothesis 18 required the t-test to determine significant differences in the amount of stress reported by teachers who have pursued professional development within the last year and those who have not pursued professional development within two years or more.

Hypotheses 19, 20, and 21 were all analyzed with the t-test. The t-test was used to determine significant differences in the amount of stress between those teachers who do more professional reading, that is, two hours or more per week, from those teachers who do less than two hours of professional reading per week in Hypothesis 19; it was used to determine significant differences in the amount of stress between those teachers who spend more than ten hours a week outside of school hours working on school items and those who spend less than ten hours a week outside of school hours working on school items in Hypothesis 20; and it was used to determine significant differences in the amount of stress reported by teachers with higher absenteeism due to illness, that is, four days or more in one year, and those who have a lower

rate of absenteeism due to illness, that is, less than four days in one year in Hypothesis 21.

In the statistical analysis procedures for Hypothesis 22, the Spearman Correlation Coefficient was used to analyze significant relationships between each symptom of stress and the total amount of stress.

Findings

From the results of the data analysis and interpretation, the following findings are reported. Findings are reported as they pertain to each hypothesis.

Hypothesis 1

Urban elementary teachers will report a significant difference in the amount of stress from rural elementary teachers.

A significant difference existed between the amount of stress reported by urban and rural teachers. The results appeared to indicate that rural elementary teachers are experiencing more stress than urban elementary teachers in the selected geographical areas.

Hypothesis 2

Urban elementary teachers will report a significant difference in the sources of stress from rural elementary teachers.

Significant differences were found in the sources of stress in each category, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos, according to the statistical analysis of the sources of stress reported by rural and urban elementary

teachers. Rural teachers reported each source as more stressful than urban teachers.

Hypothesis 3

Teachers in grades four through six will report a significant difference in the amount of stress from those teachers of grades kindergarten through three.

No significant difference existed between the amount of stress reported by teachers in grades four through six and teachers in grades kindergarten through three.

Hypothesis 4

Teachers in grades four through six will report a significant difference in the sources of stress from those teachers of grades kindergarten through three.

There were no significant differences in the sources of stress in any category, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos, according to the statistical analysis of the data. Therefore, it appears that teachers in grades four through six do not have significantly different sources of stress than teachers in grades kindergarten through three.

Hypothesis 5

Teachers with less than five years of experience will report a significant difference in the amount of stress from those teachers with experience of five years or more.

No significant difference was found in the amount of stress reported by teachers with less than five years of experience and those teachers

with experience of five years or more. Experience does not appear to be a determinant in the amount of stress perceived by elementary teachers.

Hypothesis 6

Teachers with less than five years of experience will report a significant difference in the sources of perceived stress from those teachers with experience of five years or more.

There were no significant differences in the sources of stress in any category A, pupil misbehavior, B, poor working conditions, C, time pressures, or D, poor school ethos, according to the statistical analysis of data. It appears that teachers with less than five years of experience did not have a significant difference in the sources of stress than those teachers with five or more years of experience.

Hypothesis 7

Teachers with zero through four years of experience, five through ten years of experience, and over ten years of experience will report a significant difference in the sources of perceived stress.

The Newman-Keuls and analysis of variance showed no significant differences between the groups, zero through four years of experience, five through ten years of experience, and over ten years of experience.

Hypothesis 8

Elementary male teachers will report a significant difference in the amount of stress from elementary female teachers.

No significant difference was found in the amount of stress reported by male teachers and female teachers. Therefore, gender does

not appear to be a determinant in the amount of stress perceived by elementary teachers.

Hypothesis 9

Elementary male teachers will report a significant difference in the sources of perceived stress from elementary female teachers.

There were no significant differences in the sources of stress in categories A, pupil misbehavior, B, poor working conditions, or D, poor school ethos for reported stress of male and female teachers. However, in Category A, the significance was at 0.069 level which indicates a trend toward a difference in this source of stress between male and female teachers, with females perceiving this as a greater source of stress than males. The statistical data for Category C, time pressures, does indicate a significant difference in this source of stress for male and female teachers, with female teachers perceiving this as a greater source of stress than males.

Hypothesis 10

Younger teachers, ages twenty through thirty, will report a significant difference in the amount of stress from older teachers, ages above thirty.

No significant difference was found in the amount of stress reported by teachers, ages twenty through thirty and teachers, ages above thirty. Therefore, age does not appear to be a significant determinant in the amount of stress perceived by elementary teachers in the specified geographical area.

Hypothesis 11

Younger teachers, ages twenty through thirty, will report a significant difference in the sources of stress than older teachers, ages above thirty.

There were no significant differences in the sources of stress in categories A, pupil misbehavior, C, time pressures, or D, poor school ethos, for reported stress of teachers, ages twenty through thirty and teachers, ages above thirty. In Category B, poor working conditions, teachers, ages above thirty, reported this source as more stressful than teachers, ages twenty through thirty. Also, in Category D, the significance was at the 0.072 level, which indicates a trend toward a difference in the source of stress between teachers, ages twenty through thirty, and teachers, ages above thirty.

Hypothesis 12

Teachers, ages twenty through thirty years, thirty-one through forty-five years, and over forty-five years will report a significant difference in the sources of perceived stress.

The Newman-Keuls and analysis of variance showed no significant differences between the groups in Categories A, pupil misbehavior, C, time pressures, or D, poor school ethos. However, in Category B, poor working conditions, teachers in the twenty through thirty age range seemed to perceive this source as significantly more stressful than the teachers in the forty-five years and over age range.

Hypothesis 13

Teachers who have taught in their present positions three years or less will report a significant difference in the amount of stress from those teachers who have taught more than three years in their present positions.

No significant difference was found in the amount of stress reported by teachers who have taught in their present positions three years or less and those teachers who have taught more than three years in their present positions.

Hypothesis 14

Teachers who have taught in their present positions three years or less will report a significant difference in the sources of perceived stress than those teachers who have taught more than three years in their present positions.

There were no significant differences in the sources of stress in categories A, pupil misbehavior, B, poor working conditions, C, time pressures, or D, poor school ethos, for reported stress of those teachers who have taught in their present positions three years or less and those teachers who have taught more than three years in their present positions.

Hypothesis 15

Teachers who have taught in their present positions zero through three years, four through ten years, and over ten years will report a significant difference in the sources of perceived stress.

The Newman-Keuls Procedure and analysis of variance showed no significant differences between the groups in any of the Categories of stress, A, pupil misbehavior, B, poor working conditions, C, time pressures, and D, poor school ethos. Years taught in the present positions does not appear to be a significant factor in the sources of stress perceived by elementary teachers.

Hypothesis 16

Those teachers who have had more formal preparation for the teaching profession, that is, Master's Degree level or above, will report a significant difference in the amount of stress from those teachers who have only a Bachelor's Degree.

No significant difference was found in the amount of stress reported by those teachers with a Master's Degree or above and those teachers with only a Bachelor's Degree.

Hypothesis 17

Those teachers who have had more formal preparation for the teaching profession, that is, Master's Degree level or above, will report a significant difference in the sources of stress from those teachers who have only a Bachelor's Degree.

There were no significant differences in the sources of stress in categories A, pupil misbehavior, B, poor working conditions, C, time pressures, or D, poor school ethos for reported stress of those teachers with a Master's Degree and above and those teachers with only a Bachelor's Degree. However, significance levels for Categories B and D

showed a tendency toward a difference in these sources for teachers with a Master's Degree and above, and those teachers with only a Bachelor's Degree.

Hypothesis 18

Those teachers who have pursued professional development within the last year will report a significant difference in the amount of stress from those teachers who have not pursued professional development within two years or more.

There was not significant difference in the amount of stress as reported by teachers who have pursued professional development within the last year and those teachers who have not pursued professional development within two years or more.

Hypothesis 19

Those teachers who do more professional reading, that is, two hours or more a week, will report a significant difference in the amount of stress from those teachers who do less than two hours of professional reading a week.

A significant difference existed in the amount of stress reported by those teachers who do more professional reading, that is, two hours or more per week, and those teachers who do less than two hours of professional reading per week. It appears that those teachers who do more professional reading per week report significantly less stress.

Hypothesis 20

Those teachers who spend more than ten hours a week outside of school hours working on school items will report a significant

difference in the amount of stress from those teachers who spend less than ten hours a week outside of school hours working on school items.

No significant difference was found in the amount of stress reported by those teachers who spend more than ten hours a week outside of school hours working on school items and those teachers who spend less than ten hours a week outside of school hours working on school items.

Hypothesis 21

Those teachers with higher absenteeism due to illness, that is, four days or more in one year, will report a significant difference in the amount of stress which they perceive from those teachers who have a lower rate of absenteeism due to illness, that is, less than four days in one year.

A significant difference existed in the amount of stress as reported by those teachers with higher absenteeism due to illness, that is, four days or more in one year, and those teachers with lower absenteeism due to illness, that is, less than four days in one year. It appears that the data indicates teachers who have higher absenteeism due to illness also report more stress.

Hypothesis 22

There will be a positive correlation between the frequency of each symptom of stress and the total amount of stress reported by all teacher respondents.

There were significant positive relationships between the frequency of each symptom of stress and the total amount of stress reported by all respondents. The frequency with which teachers are reporting physical

and mental symptoms of stress is relative to the amount of stress reported by the same respondents.

Conclusions

As was indicated by the findings, a large number of significant differences was not found. However, the following conclusions were supported by the findings in the study:

A. Rural teachers experienced more stress and different sources of stress than urban teachers in the surveyed geographical area.

B. Grades taught and teaching experience did not appear to be significant factors in the amount or sources of stress reported by teachers.

C. Gender did not appear to be a factor in the amount of stress reported by teachers. However, female teachers tended to perceive one source, time pressures, as more stressful than male teachers.

D. Age did not appear to be a factor in the amount of stress reported by teachers. However, teachers, ages thirty and above, reported Category B, poor working conditions, as more stressful than younger teachers.

E. Professional preparation for the teaching profession and the length of time in the present position did not appear to be significant factors in the amount or sources of stress reported by elementary teachers.

F. The number of hours spent working on school items outside of school hours and the length of time since taking course work did not appear to be significant factors in the amount of stress reported by elementary teachers.

G. The teachers who did more professional reading per week reported significantly less stress than those teachers who accomplished zero through one hours of professional reading per week.

H. Teachers with higher absenteeism due to illness reported more stress than those teachers with lower absenteeism due to illness.

I. Teachers exhibited frequency of physical and mental symptoms of stress comparable to the amount of stress reported.

Implications and Recommendations

The findings of this study provided a basis for several implications for school administrators, school teachers, and faculty members of higher educational institutions. Foremost, administrators, principals and central office personnel, should be aware that stress does exist among teachers, and that stress may cause a less effective teaching environment depending upon the duration and intensity of the stressors. Teacher stress is essentially a response syndrome mediated by an appraisal of threat to the teacher's self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat. Since research indicates that teachers with more positive self-concepts are more effective teachers, administrators should initiate actions to reduce stressful situations for teachers.

As a result of this study, it is recommended that a trinal program of action be taken to alleviate stressors and/or to help teachers to cope with the existing stressors. First, the teacher must assume responsibility for identifying stressors and the sources of stress. He/she must then change the source of that stress, or initiate a plan

of action to change behavior relating to that source of stress. Teachers must offer personal support for colleagues, improve their own skills through professional growth opportunities or in-service programs, and support professional organizations which petition proper channels for decreased class size, more educational materials, and job security.

The second part of this program of action must involve the administrators including principals and central office staff. The administrators must first be aware that stress does exist, and second, be prepared to offer in-service programs as well as psychological training to prepare people for stressful situations such as pupil misbehavior or violence in the classroom. Professional help should be made available to those teachers who are feeling extremely stressed or burned out. When administrators assist teachers in finding coping mechanisms, it will increase the effectiveness and professional satisfaction as well as the health and well-being of that teacher.

The third segment of the program of action includes colleges and universities. They must offer preservice programs which include personal coping skills for teachers and preparation for school administrators to recognize the need for such skills and a "human" environment within the school. Colleges and universities also must offer continuing education classes in coping skills and classroom management for teachers and administrators. Courses should be offered to teachers and prospective teachers to help them clarify their own needs and ways to satisfy those needs without hindering the teaching-learning environment.

Additional research is vitally needed not only to identify sources of stress, but to find relationships between the sources of stress and the sources and factors which cause them to be teacher stressors. Empirical research needs to be initiated concerning the effects of stress on teachers in performance of their professional duties, the relationships that exist between administrator stress, teacher stress, and student stress, and mediating variables such as personality type and teaching style that increase or decrease the amount of stress perceived by teachers.

It is further recommended that, in future studies dealing with teacher stress, data be collected over a much larger region. The results of such data could be applied to problems that may be much broader in scope.

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APPENDICES

APPENDIX A

INFORMED CONSENT FORM

East Tennessee State University
 Institutional Review Board
 Informed Consent Form

PRINCIPAL INVESTIGATOR: Lorraine C. Turner

TITLE OF PROJECT: The Prevalence and Certain Sources of Teacher Stress
 Among Elementary School Teachers

- 1) Indicated below are the (a) purpose of this study, (b) the procedures to be followed and (c) the approximate duration of this study:

The purpose of this study is to determine the prevalence and certain sources of stress among elementary school teachers. I will respond to your teacher stress questionnaire with the understanding that no names will be used in reporting your findings. The approximate time frame for responding to the questionnaire will be thirty to forty minutes.

- 2) Discomforts, inconveniences and/or risks that can be reasonably expected are:

None

- 3) I understand the procedures to be used in this study and the possible risks involved. All my questions have been answered. I also understand that while my rights and privacy will be maintained, the Secretary of the Department of Health, Education and Welfare does have free access to any information obtained in this study should it become necessary and I freely and voluntarily choose to participate. I understand that I may withdraw at any time without prejudice to me. I also understand that while East Tennessee State University does not provide compensation for medical treatment other than emergency first aid, for any physical injury which may occur as a result of my participation as a subject in this study, claims arising against ETSU or any of its agents or employees may be submitted to the Tennessee State Board of Claims for disposition to the extent allowable as provided under TCA Section 9-812. Further information concerning this may be obtained from the chairman of the Institutional Review Board.

Date

Signature of Volunteer

Date

Signature of Parents or Guardian
(when applicable)

12/1/80
Date

/s/ Lorraine C. Turner
Signature of Investigator

Date

Signature of Witness (if applicable)

APPENDIX B

TEACHER STRESS QUESTIONNAIRE

UNIVERSITY OF YORK

HESLINGTON, YORK, YO1 5DD

TELEPHONE 0904 59861

DEPARTMENT OF EDUCATION

17th July, 1980.

Dear Lorraine,

I enclose a copy of the questionnaire I used in the Brit. J. Educ. Psychol., 1978, study together with a summary of my PhD thesis.

You are welcome to adapt my questionnaire to suit your needs.

Yours sincerely,

Chris Kyriacou

Dr Chris Kyriacou

Questionnaire

This is a questionnaire on teacher stress and should take about fifteen minutes to complete. Please try to answer the questionnaire as accurately as possible. No name is required and the completed questionnaire will not be seen by anyone outside the person doing the research to ensure absolute confidentiality.

Please place a check (✓) in the appropriate boxes throughout the questionnaire.

1. Male ___
 Female ___

2. Age 20-30 years ___
 Age 31-45 years ___
 Age over 45 years ___

3. Check the length of time you have been in the teaching profession:
 - 0-4 years ___
 - 5-10 years ___
 - over 10 years ___

4. Check the length of time you have been in your present position:
 - 0-3 years ___
 - 4-10 years ___
 - over 10 years ___

5. Check the years of formal preparation which you have had for the teaching profession:
 - Bachelor's Degree ___
 - Master's Degree ___
 - Sixth Year Program or above ___

6. Check the grade level which you presently teach:

Kindergarten _____
First _____
Second _____
Third _____
Fourth _____
Fifth _____
Sixth _____

7. Check the length of time that has passed since you have taken course work:

presently-1 year _____
2-4 years _____
5 years or more _____

8. Check the amount of professional reading which you do each week, (an average):

0-1 hour _____
2-4 hours _____
5 hours or more _____

9. Check the number of hours which you spend working on school items outside of school (including hours spent at school before or after regular working hours):

0-10 hours _____
11-20 hours _____
21 hours or above _____

10. Check the number of days you were absent in the school year preceding this one due to illness:

0-3 days _____

4-10 days _____

11 days or above _____

11. As a teacher, how great a source of stress are these factors to you?

	No Stress	Mild Stress	Moderate Stress	Much Stress	Extreme Stress
1. Administrative work					
2. Lack of time to prepare lessons					
3. Punishing pupils					
4. Constant monitoring of pupils' behavior					
5. Too much work to do					
6. Pace of school day is too fast					
7. Not enough time to do the work					
8. Lack of time for grading					
9. Poorly motivated pupils					
10. Lack of recognition for extra work					
11. Difficult classes					

	No Stress	Mild Stress	Moderate Stress	Much Stress	Extreme Stress
12. Trying to uphold/ maintain values and standards					
13. School too large					
14. Responsibility for pupils (e.g. test scores)					
15. Inadequate disciplinary policy of school					
16. Pupils' poor attitudes about work					
17. Low status of the teaching profession					
18. Lack of consensus on minimum standards					
19. Attitudes and behavior of some other teachers					
20. Pupils' non-acceptance of teacher's authority					
21. Lack of time for further study					
22. Shortage of equipment					
23. Inadequate disciplinary support available					
24. Lack of effective consultation					

	No Stress	Mild Stress	Moderate Stress	Much Stress	Extreme Stress
25. Pupils not on grade level					
26. Pupils' general misbehavior					
27. Lack of recognition for good teaching					
28. Groups of too wide an ability					
29. Noisy pupils					
30. Maintaining class discipline					
31. Poor facilities					
32. Inadequate salary					
33. No time to relax between lessons					
34. Poor promotion opportunities					
35. Individual pupils who continually misbehave					
36. Too much paperwork					
37. Lack of time to spend with individual pupils					
38. Covering lessons for absent teachers					

	No Stress	Mild Stress	Moderate Stress	Much Stress	Extreme Stress
39. Pupils who show a lack of interest					
40. Demands on after school time					
41. Difficult behavior problems					
42. Pupils' impolite behavior					
43. Lack of participation in decision making					
44. Large classes					
45. Generally high noise level					
46. Supervisory duties (e.g. playground, cafeteria)					
47. Mixed ability groups					
48. Attitudes and behavior of the principal					
49. Too many periods actually teaching					
50. Poor career structure					
51. Pupils' general low ability					

12. In general, how stressful do you find being a teacher?

Not at all Stressful	Mildly Stressful	Moderately Stressful	Very Stressful	Extremely Stressful
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13. Please estimate how frequently during the school year you feel in these ways:

		About Once A Week	About Once A Day	Many Times A Day
	Never	Rarely		

1. Nervous

2. Headaches

3. Loss of voice

4. Tearful

5. Frustrated

6. Anxious

7. Panicky

8. Very tense

9. Heart beating fast

10. Acid in stomach

11. Cold sweat

12. Under stress

13. Depressed

	Never	Rarely	About Once A Week	About Once A Day	Many Times A Day
14. Unable to cope					
15. Exhausted					
16. Increased blood pressure					
17. Very angry					
14. Any final comments?					

VITA

EMMA LORRAINE C. TURNER

Current Address: Box 518, Route 1
 Castlewood, Virginia 24224
 Telephone: 703/762-9713

Personal Data: Date of Birth: August 28, 1950
 Place of Birth: Lebanon, Virginia
 Marital Status: Married
 Wiley A. (Ike) Turner
 Vice-Principal, Castlewood
 Elementary, Castlewood, Va.
 Religious Affiliation: Baptist
 Health: Excellent
 Physical Impairments: None
 Social Security Number: 223-66-3925

Education: Castlewood High School, Castlewood, Virginia; 1968
 Clinch Valley College, Wise, Virginia; B.A., 1971
 Appalachian State University, Boone, North
 Carolina; M.A., 1972
 East Tennessee State University, Johnson City,
 Tennessee; EdD., 1981

Professional
 Experiences: Teacher, Russell County School System; Dante,
 Virginia, 1971-1978
 Doctoral Fellow Teacher, Child Study Center, East
 Tennessee State University, Johnson City,
 Tennessee, 1978-1979
 Doctoral Fellow Research, East Tennessee State
 University, Johnson City, Tennessee, Fall, 1979
 Teacher, Clinch River Elementary, Castlewood,
 Virginia, 1980-present

Professional
 Memberships: Phi Delta Kappa
 National Education Association
 Virginia Education Association
 Russell County Education Association

Honors and
 Awards: Phi Delta Kappa
 Doctoral Fellowship, East Tennessee State University,
 Johnson City, Tennessee, 1978-1981