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An Investigation of Problems Which Cause Stress Among Music Teachers in Tennessee

Patricia Ann Brown
University of Tennessee, Knoxville

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To the Graduate Council:

I am submitting herewith a dissertation written by Patricia Ann Brown entitled "An Investigation of Problems Which Cause Stress Among Music Teachers in Tennessee." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration.

Robert K. Roney, Major Professor

We have read this dissertation and recommend its acceptance:

Norma Mertz, Peter Husen, Charles Ball, Michael Logan

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

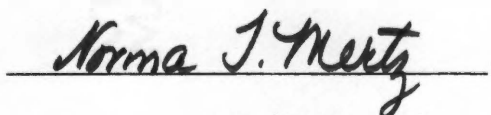
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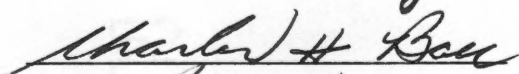
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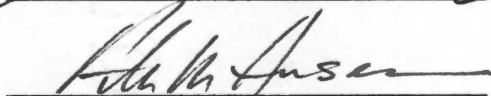
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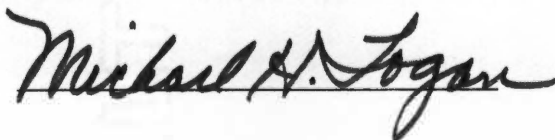

Robert K. Roney, Major Professor

We have read this dissertation
and recommend its acceptance:

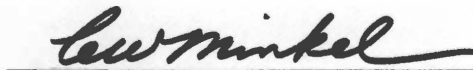








Accepted for the Council:


Vice Provost
and Dean of The Graduate School

AN INVESTIGATION OF PROBLEMS WHICH CAUSE STRESS
AMONG MUSIC TEACHERS IN TENNESSEE

A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville

Patricia Ann Brown

March 1987

ACKNOWLEDGEMENTS

The writer wishes to express her sincere appreciation to Dr. Robert K. Roney, Chairperson of her doctoral committee, for his guidance and support throughout the research. Appreciation and thanks are also expressed to committee members Dr. Charles Ball, Dr. Peter Husen, Dr. Michael Logan, and Dr. Norma Mertz for their interest in the research, for their suggestions for improvement of the study, and for their patience.

Gratitude is also expressed to the writer's colleagues on the panel of experts and to the respondents throughout the state who participated in the study. Special acknowledgement is made to the writer's colleague and mentor, Mr. J. B. Lyle, Supervisor of Music in the Knox County Schools, whose counsel was invaluable during the study.

The writer is especially indebted to her family for their continued support, patience, and understanding throughout this study and her professional career and for their faith in her endeavors.

ABSTRACT

Teachers in general and music teachers in particular face problems which make teaching stressful. The purpose of this study was to identify sources of stress for music teachers in Tennessee in the following categories: environmental stressors, job-related stressors, classroom management/student behavior stressors, interpersonal stressors, and personal stressors. Also identified were coping strategies used and found effective by teachers.

The study was designed to address the following questions:

1. What are the perceptions of a panel of experts regarding factors which cause stress for music teachers?
2. What factors which cause stress are common to teachers in all three music areas--general, choral, and instrumental?
3. What factors which cause stress are common to all levels of teaching in the three music areas?
4. What factors which cause stress are unique to each music area and teaching level?
5. Is there a difference in factors which cause stress as perceived by music teachers, as compared to the list generated by the panel of experts?
6. What are some effective ways teachers cope with stress in teaching?
7. Is there a relationship between factors which cause stress and the gender, years of teaching experience, and how likely teachers are to continue to teach?

8. Is there a relationship between factors which cause stress and the teaching area and teaching level of teachers in the survey?

9. Is there a relationship between stress and the coping strategies used by teachers?

The data were collected by means of a survey instrument. Teachers were selected by random sample from the 43 school systems which provided a list of music teachers. A total of 161 teachers participated in the survey. Frequencies and percentages were calculated for each item on the survey, and stress variables were ranked from high to low for the total sample and by teaching area, years of teaching experience, gender, and by teachers' response to the questions: How stressful is teaching? and, How likely are you to continue to be teaching in ten years' time? A Pearson Product Moment correlation was used to determine correlation between stress variable groups and coping strategies and between the total stress score and the question: How stressful is teaching?, and between the questions: How stressful is teaching? and, How likely are you to be teaching in ten years' time? Means and standard deviations were determined for each stress variable and for the stress and coping groups and the total stress and coping scores. The General Linear Model (GLM) was used to produce analysis of variance tables to determine the main effects of teaching area, teaching level, how likely teachers were to continue to teach, and the interactions of these variables. Analysis of variance was also used to determine the main effects of years of teaching experience, gender, and how likely teachers were to continue to teach.

The panel of expert and music teachers did not agree upon what was stressful to music teachers. The panel of experts ranked the following stress variables to be the most stressful to teachers: uncertainty about job, student load, class load, lack of planning time, number of school assignments, evaluation, paperwork/housekeeping, and inadequate school discipline policy. The most stressful items according to teachers were: inadequate salary, Career Ladder Program, unmotivated students, low status of the profession, and inadequate fringe benefits. Music teachers indicated that job-related stressors, i.e., those which reflect how teachers are valued by their school system and by the public were the most stressful, while the panel of experts indicated environmental stressors to be the most stressful.

General music teachers, the majority of whom were at the elementary and middle school/junior high levels, found evaluation, student load, class load, and planning/teaching for individual student needs to be more stressful than did choral and instrumental teachers. Choral music teachers indicated that concerts, noise, and festivals were more stressful than did general and instrumental music teachers. Instrumental music teachers indicated that lack of materials/equipment and lack of promotion opportunities were more stressful than did general and choral music teachers. The most used and effective coping strategies for teachers were religion, reading, situational compartmentalization, diet and nutrition, deep breathing, muscle tension/relaxation, sports, aerobic exercise, crafts, and detachment, all of which are

physical or psychological strategies. Chemical coping strategies were ranked very low by the majority of teachers.

Gender did not appear to be significantly related to the stress variables, but years of teaching experience was a significant variable. Stress items tended to be more stressful to inexperienced teachers, i.e., those who had taught less than 5 years. The future plans of teachers, i.e., how likely they were to continue to teach, was a significant variable in the analysis of environmental stress variables. Environmental factors were ranked higher by teachers who were likely to continue to teach, while job-related factors were ranked higher by teachers who were not likely to continue to teach.

Environmental, job-related, and classroom management/student behavior factors were moderately stressful for the three teaching areas, while interpersonal and personal factors were less stressful. Instrumental teachers found job-related and classroom management/student behavior factors to be more stressful than did general and choral music teachers. General music teachers found environmental, job-related, and classroom management/student behavior factors to be less stressful than did choral and instrumental music teachers, but ranked personal factors to be somewhat more stressful than did choral and instrumental teachers.

Teachers in low, moderate, and high stress groups tended to use some of the same coping strategies, but higher stress teachers used more coping strategies. The most used and effective coping strategies by low stress teachers were religion, reading, sports, and situational

compartmentalization. High stress teachers added to this list aerobic exercise, crafts, and diet and nutrition. The Pearson Product Moment correlation procedure revealed no significant correlation between stress groups and coping groups.

Many teachers (36%) indicated that teaching was extremely stressful, and 59% indicated that it was moderately stressful. Individual teacher stress scores and total stress scores for each variable indicated that many aspects of teaching are quite stressful to many and at least moderately stressful to a majority of music teachers. The difference in perceptions of stress by teachers and by the panel of experts in music education gave evidence to the lack of communication between these groups and the need to address concerns of teachers.

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CHAPTER I

INTRODUCTION

"Stress could be a one-word definition of teaching" (Alschuler, 1980, p. 7). This statement by Alfred S. Alschuler expresses the feelings of many teachers and many researchers who have investigated problems of teaching. Swick and Hanley (1983) state:

By the nature of their work, teachers are thrust into many stressful situations. They must deal with the academic and emotional needs of numerous students in the course of a normal teaching day. They must cope with administrative and parental interruptions, with professional activities such as meetings, conferences, and in-service education; and with record keeping and evaluation responsibilities, to name just a few of their duties. (p. 29)

A number of researchers have looked at the problem of stress as it affects the teaching profession. In a 1978 study of 4,934 teachers in Chicago, Cichon and Koff (1978) found that the priority concerns which caused stress among teachers were: student discipline, involuntary transfer, overcrowded classrooms, lack of books and supplies, and disagreement with supervisor. Discriminate analysis revealed no significant differences for age, sex, or type of school.

Wangberg (1984) explored job dissatisfaction among female elementary teachers in the South, Midwest, and West, and found that nearly 40% of the women indicated that they would not choose elementary teaching if they were to rechoose their career.

The research reveals stress among all teachers, but very little has been done among teachers of specific subject areas. Two researchers have investigated the stress among special education

teachers, but the majority of studies have not looked at teachers of specific subject areas. It was the speculation of the author that teachers of one of the "special areas", i.e., music, have problems that are unique to them. This feeling has been substantiated by colleagues in this subject area, but no research had been done in this area.

Bischoff and Ellis (1983) conducted a study of first-year physical education teachers, the problems which they encounter, and how their perceptions compare to those of teachers in other subject areas. An attempt was made to gain information on perceived difficulties unique to teaching physical education. The study revealed that the highest degree of difficulty appeared to be managing classes with large numbers and being flexible in using instructional facilities.

An extensive literature search revealed that no research had been done in the specific area of music teachers. There is a need for such a study of this and perhaps other subject area teachers as well. The focus of this study was music teachers, and included general, choral, and instrumental teachers.

Statement of the Problem

Teachers of music may have problems which are unique to their subject area and which seem to cause undue stress. Some of the problems may be common to all music teachers, and some may be unique to the music area and/or grade levels taught.

Purpose

The purpose of this study was to investigate and identify common sources of undue stress for music teachers of the three music areas (general, choral, and instrumental) at all levels. Also identified were unique stressors associated with each area and teaching level. Ways in which teachers deal with the causes and effects of stress were also identified and reported.

Importance of the Study

Stress appears to permeate the teaching profession and many other professions as well. Stress is not necessarily bad in itself; only when it interferes with the physical and mental health of teachers, or interferes with their ability to function as teachers does it become a serious problem. Research indicates that teachers are leaving the profession because of the effects of stress in their jobs. Others continue in their stressful position, becoming less and less effective. It is important that we know what factors cause undue stress on teachers so that these can be addressed and stress can be reduced. If we are to secure and keep effective teachers, the working environment must be as positive as possible. One of the ways this can be done is to identify and eliminate as many stressors as possible.

Assumptions

The investigation of sources of stress to music teachers was based on the following assumptions:

1. It is possible to identify stressors unique to music teachers collectively and specifically by means of a survey instrument.
2. Respondents will provide accurate data.
3. Respondents have certain perceptions about their jobs which will provide useful data.
4. Music teachers are an important part of the teaching profession because of the unique and necessary skills, concepts, and perceptions which they bring to students.
5. The data are interval in nature because it is assumed that the Likert-type scale had equal increments.

Limitations and Delimitations

The following limitations and delimitations were recognized in this study:

1. The teacher population was limited to those systems where superintendents cooperated in the study by providing a list of teachers of general, choral, and instrumental music.
2. The teacher population was limited to those who chose to respond from the school systems selected.
3. The sample size was limited by the fact that many school systems in the state of Tennessee do not have music teachers.
4. The study was delimited to teachers of music in Tennessee.
5. The study was delimited to teachers who were employed at elementary, middle/junior high, and high school levels in public schools.

Definition of Terms

The following terms are defined for the purposes of this study:

Music teachers. Music teachers were defined as those teachers who teach in one of the music areas (general, choral, or instrumental) at least one-half of their teaching day in a public school.

Burnout. Burnout was defined as a state of mind characterized by emotional exhaustion, physical fatigue, feelings of helplessness, and lack of enthusiasm about work which can occur among individuals who work with other people in the helping professions such as teaching.

Panel of experts. The panel of experts was the group of educators in supervision and higher education selected to verify the existence of and causes of stress among music teachers.

Stress. Occupational stress is a negative physiological and psychological response to a discrepancy between a teacher's work needs and expectations and the ability of the teacher to meet these needs and expectations.

Stressors. Stressors are those factors which prevent the teacher from meeting his work needs and expectations, resulting in occupational stress.

Environmental stressors. Environmental stressors are those which refer to conditions of the teaching environment.

Job-related stressors. Job-related stressors are those which reflect how teachers feel they are valued by their school system and the public.

Classroom management/student behavior stressors. Classroom management/student behavior stressors are those which reflect how teachers deal with students and how student participate in their education.

Interpersonal stressors. Interpersonal stressors are those which refer to teachers' relationships with peers, the school administration, school personnel, and parents.

Personal stressors. Personal stressors were those which refer to situations in the private lives of teachers.

Questions

Questions to be addressed by this study are as follows:

1. What are the perceptions of a panel of experts in education regarding factors which cause stress for music teachers?
2. What factors which cause stress are common to teachers in all three music areas--general, choral, and instrumental?
3. What factors which cause stress are common to all levels of teaching in the three music areas?
4. What factors which cause stress are unique to each music area and teaching level?
5. Is there a difference in factors which cause stress as perceived by music teachers, as compared to the list generated by the panel of experts?
6. What are some effective ways teachers cope with stress in teaching?

7. Is there a relationship between factors which cause stress and the gender, years of teaching experience, and how likely teachers are to continue to teach?

8. Is there a relationship between factors which cause stress and the teaching area and teaching level of teachers in the survey?

9. Is there a relationship between stress and the coping strategies used by teachers?

Procedures

The primary investigative instrument for the study was a questionnaire. Based on a review of the literature on the topic, a preliminary survey instrument was developed and sent to a panel of experts in music education. These individuals were selected on the basis of previous experience as a teacher of general, choral, or instrumental music and because of their previous or present position as an administrator in music education and/or teaching at the college level in music education. They were asked to add other items to the list if they chose, and then rate the items on a scale of 1 to 3 according to the degree of stress which they cause, in the opinion of the experts, with 1 being low, 2 being moderate, and 3 being extreme. Using the information gained from these lists, the author revised the questionnaire to be sent to the teachers.

The questionnaire included demographic data as follows: years of experience, sex, music area taught, levels taught, area and level preferred, school size, number of schools served, number of students

served in an average day, and certification areas. The second section consisted of a list of stressors developed from the literature and the feedback of the panel of experts. Teachers were asked to list any sources of stress that were not included on the list, and then to rate the stressors on a Likert-type scale of 1 to 7, with 1 being not at all stressful, and 7 being extremely stressful.

A third section asked teachers to identify and rate ways in which they cope with stress. Again, they were asked to add to the list any means of stress relief not included on the list. This section also included a Likert-type scale for rating.

A fourth section asked teachers to indicate their attitude toward teaching and how stressful they perceived teaching to be for themselves and for other teachers. They were also asked to indicate their future plans as they relate to teaching in the next ten years. They were asked to list reasons why they would leave teaching, if they indicated that this was likely.

In order to choose the population of teachers for the study, a letter was sent to all superintendents in the State of Tennessee asking them to send a list of the music teachers in their school systems, with school addresses for each teacher. A random sample of teachers from these systems was selected for the study. These teachers were sent a copy of the questionnaire with a cover letter of explanation and request for their participation.

Since the data collected were interval in nature, and the sample randomly selected, the analysis of variance statistical method was used

to analyze the data regarding the main effects of music areas taught, level of teaching, and future plans of teachers. A second analysis of variance analyzed data for mean differences in respondents by experience, sex, and future plans. Since F-tests in the analysis of variance indicated significant differences in means, a Scheffé Post Hoc test was used to identify and explain the differences. Frequencies and percentages were calculated for each variable, and stress variables were ranked in several categories.

The data were reported in an item-by-item analysis by groups, with means and standard deviations of music teachers in each area of teaching for each stress variable. Overall means and standard deviations for each area were also reported. Stress variables were ranked from high to low for the total sample and for subgroups, and coping strategies were ranked from high to low by use and effectiveness.

Organization of the Study

The study was divided into five chapters as follows:

Chapter I contains the introduction and description of the research design.

Chapter II contains a review of the literature related to stress in teaching.

Chapter III contains a presentation of the data:

Chapter IV contains an analysis and discussion of the data.

Chapter V contains a summary of findings, conclusions, recommendations, and final observations.

CHAPTER II

A REVIEW OF RELATED LITERATURE

Introduction

The purpose of this chapter is to review literature concerning stress in general and stress in the teaching profession in particular. It will be noted that there were no studies to be found that relate specifically to music teachers. Teacher stress will be explored in terms of an historical perspective of stress, definitions of stress, causes of stress, and effects of stress. Also examined will be coping strategies as described in the literature.

Historical Perspective

Tache and Selye (1986) stated that stress is a twentieth-century word that is becoming more and more popular. This fact is attested to by the dates of research, books, and articles written about stress. Except for a few treatises written on anxiety such as that of Freud (1936), and a paper presented to the Army Medical Service Graduate School by J. C. Whitehorn on stress (Whitehorn, 1953), very little information can be found regarding stress before Lazarus' writings on psychological stress in 1952 and Selye's 1956 book, The Stress of Life. Hans Selye is often called the father of stress research (Beehr & Bhagat, 1985). He developed the General Adaptation Syndrome concept (GAS) which describes bodily reactions to stressful events. Most

literature specifically about teacher stress, particularly research, has been written since 1970.

The initial research on stress in the field of education was limited to administrators, presumably since some researchers felt that administrators were likely to be in stressful situations. Much of stress research has been conducted at the executive or management level in industry, and the administrative level in education is perhaps considered comparable. Goodman (1980) stated that there are more references dealing with school administrator stress than teacher stress and cited a statement by Maslach in which she says that there is perhaps a bias against considering stress in relation to workers as opposed to administrators. It is her theory that one possible reason for this "reluctance by administrators to view situational rather than personal variables (faults of the teacher) as responsible for stress is that consideration of the situational variables may shed some blame on their own action" (p. 7).

The majority of research on teacher stress has been limited to teachers in general. Only a small number of studies involved a specific subject area or group. Bischoff and Ellis (1983) investigated difficulties of first-year physical education teachers, and a few studies have been done regarding special education teachers (Faas, 1984; Olson & Matusky, 1982; Bensky et al., 1980). It has been suggested that special education teachers have more potential for stress and burnout, but little evidence exists to support this hypothesis.

Until recently, according to Schwartz et al. (1983), much of the research on teacher stress has focused on teacher personality rather than on environmental causes of stress. It is the feeling of these writers that the aforementioned research has not only failed to discover a relationship between teacher personality and maladjustment, but it has also obscured the fact that teachers must adapt to particular settings as they work--settings which may be more or less favorable, and which no doubt have an effect on the teacher (Schwartz).

Definitions of Stress

Cedoline (1982, p. 1) noted that "in ancient China, the symbol for stress included two written characters--the ones for danger and opportunity." Danger is the possibility of bodily harm, and opportunity is the motivating effect of stress.

Although the term stress was used in medicine and psychology as early as 1914 (Mason, 1975), it was Hans Selye who proposed the idea of nonspecific bodily reactions to demands made upon it. Many of these early "demands" identified by Selye were physical rather than social or psychological, but he was able to recognize a similar syndrome in response to any kind of damage to the body. He eventually called this syndrome the General Adaptation Syndrome, which has three stages: alarm reaction, resistance, and exhaustion (Beehr & Bhagat, 1985, p. 5). Selye has since enlarged his description to include psychological and social demands. He still contends that all of these stressors have physical effects on the body.

Beehr and Bhagat (1985) defined stress in the following way:

Stress is a cognitive state in which an individual confronts a decision-making or problem-solving situation characterized by high levels of uncertainty, associated with obtaining important outcomes, and in which existence of such uncertainties are long in their duration. (p. 6)

Decision making here is used in a broad sense to encompass the response selection that anyone does when performing any action.

Chris Kyriacou (1977), an English researcher on teacher stress, defined stress as follows:

Stress is a response by a teacher of negative affect (such as anger, anxiety, or depression) accompanied by potentially pathogenic physiological changes (such as increased heart rate or release of adrenocorticotrophic hormone into the bloodstream) as a result of the demands made upon the teacher in his role as a teacher. (p. 299)

Robert Alley (1980) noted that stress has both a positive and a negative side. Vacations, pay raises, and beautiful sunsets evoke stress upon an individual. Alley mentioned two additional terms which are used to distinguish between the "good" stress and the "bad" stress. These terms are eustress and distress (p. 5). He further stated that stress is a necessary condition of everyone's life and that the ultimate extreme of too little or too much stress is death. He illustrated with the diagram (Figure 1) from Walter H. Gmelch's Beyond Stress to Effective Management (p. 44).

Goodall and Brown (1980) described stress as the body's reaction to demands which cause one to feel threatened, anxious, or frustrated. The body then creates extra energy to cope with this fear or apprehension. They noted that the concept of extra energy for fight or flight can be traced back to prehistoric man and that the unspent

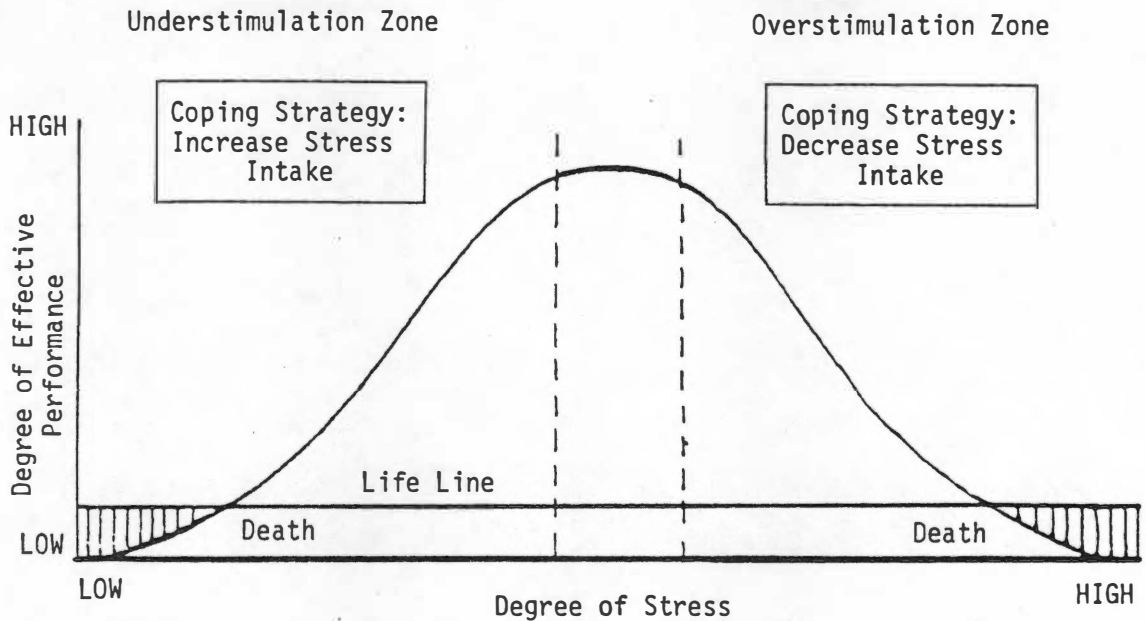


Figure 1. Stress and performance.

Source: Walter H. Gmelch, Beyond Stress to Effective Management (Eugene, Oregon: Oregon School Study Council Bulletin, Vol. 20, Nos. 9 and 10, 1977), p. 44.

energy from our body's reactions to threats is essentially what causes stress (p. 18).

Sources/Causes of Stress

There are numerous opinions among researchers and authors concerning the sources or causes of stress among teachers. These stressors range from very general items such as role ambiguity to very specific items such as noise. A number of opinions from the literature will be explored.

Cichon and Koff (1980), in cooperation with a committee of teachers from the Chicago Teachers Union, examined a large number of

events thought common to teaching. A base-line indicators of stress was established as an event common to all teachers--the first week of the school year. All teachers who were members of the Chicago Teachers Union were mailed this Teaching Stress Events Inventory, and 4,934 of a possible 22,448 teachers, or 22%, returned completed questionnaires. More than half the respondents (56%) reported physical illness related to their work, and about one-quarter of the teachers indicated that they experienced mental illness which they felt was related to their work. The sources of stress which were considered priority concern events by the teachers were: managing disruptive children, being threatened by personal injury, having a colleague assaulted in school, and being a target of verbal abuse by students. A second theme of concern was management tension which included such events as involuntary transfer, overcrowded classrooms, notice of unsatisfactory performance, lack of books and supplies, reorganization of programs and classes, implementation of board of education goals, denial of promotion or advancement, and disagreement with supervisor. These items reflect events that are imposed upon the teachers and over which they have no control. The item regarding involuntary transfer was a result of the Chicago Board of Education's mandate from the court to desegregate its faculty. A third category of events centered around doing a good job. Stressful items in this category included maintaining self-control when angry and teaching students who are below average in achievement level (p. 91).

In 1978 the Tacoma, Washington, School District conducted a survey of its teachers to determine causes of stress among its teachers (Young, 1980). A modified form of the Chicago Teaching Events Stress Inventory was administered to the 1,500 teachers in the school system. From a list of 45 events, the 20 most stressful events for Tacoma teachers were as follows:

1. Involuntarily transferred
2. Notification of unsatisfactory performance
3. Colleague assaulted in school
4. Managing disruptive children
5. Disagreement with supervisor
6. Overcrowded classroom
7. Threatened with personal injury
8. Denial of promotion or advancement
9. Feeling of inability to bring about change in your building
10. Difficulty in dealing with building administrator
11. Target of verbal abuse by student
12. Teaching physically or mentally handicapped children
13. Reorganization of classes and program
14. Change in duties/work responsibility
15. Disagreement with another teacher
16. Teaching students who are "below average" in achievement level
17. Maintaining self-control when angry
18. Lack of availability of books and supplies
19. Changing classrooms within building
20. Implementing student learning objectives (p. 39)

Larry Faas (1984) investigated stress-producing factors and their effects on 274 regular and special education teachers and administrators and found that paperwork, procedural red tape, discipline and behavior problems, and disinterested parents were high stressors for all groups of educators. Items that were more stress-producing for special education teachers were lack of breaks and preparation time, preparation and conferences regarding students' Individualized Education Program (IEP), and fatigue. Teachers of emotionally handicapped

students also reported hostile/aggressive students and hostile/aggressive parents as high-ranking stressors (p. 5).

Gupta and Jenkins (1981) were interested in sources of stress for a small sample of teachers and wanted to investigate the differences in stress predictors for men and women. Their results showed that the most frequently experienced stressor was quantitative role overload, which simply means too much work. Other factors were role ambiguity (job not clearly defined and predictable), and role conflict (demands made by people at school that conflict with each other). Women were found to experience these stressors at a higher level than men, but both experienced psychological strain as a result of stress (p. 9).

A study limited to female elementary school teachers was conducted by Elaine Wangberg (1984). She used a questionnaire which focused on teacher job expectations, satisfaction and perceptions of working conditions, perceptions of career importance and career options for women, teaching as a career, and personal background. Nearly 40% of the women involved in the study indicated that they would not again choose elementary teaching if they could rechoose their career. The most important factors identified by Wangberg as attributing to these results were poor working conditions, the increase of paperwork, the declining status of teachers, and the availability of other job options. This study led to the development of the Teacher Stress Scale (TSS) which is used to identify factors of teacher stress and job dissatisfaction. Following a study of teachers in a large urban system, the following nine factors were then identified:

1. Burnout, dissatisfaction. Descriptors: negative feelings about work and competence, lack of administrative support, loss of decision making for own classroom, care less about students, less time for positive interaction with students, negative feelings about teaching as a career
2. Environment. Descriptors: unpleasant work environment, run down building, noise, inadequate materials, violence, extremely hot or cold temperatures
3. Work rewards. Descriptors: lack of public and parent support and respect, poor benefits and salary, lack of individual recognition, low job mobility, low job status
4. "Caretaker" personality. Descriptors: avoid expressing feelings, focus on failure, can't say "no", feel selfish if take time for self, feel inadequate compared to other teachers
5. "Other" control. Descriptors: little control over what teach, little control over how teach, little participation in decision making
6. Physical symptoms. Descriptors: headaches, neckaches, backaches, taking more drugs, taking more sick days, severe physical problems
7. Overload. Descriptors: too much to do, paperwork, workload has a negative effect on interactions with students
8. Perfection. Descriptors: 100% standards for success, feel upset when not a perfect teacher
9. Health habits. Descriptors: nonnutritional diet, smoking more, eating more, drinking more, too little exercise (pp. 6-9)

This study revealed that elementary teachers perceived less stress than secondary teachers. Also, workload was more stressful for elementary teachers, while burnout was more of a problem for secondary teachers.

An additional study by Wangberg using the TSS which was conducted nationwide through Education Week yielded the following nine factors which contribute to stress: burnout/dissatisfaction, work overload, "other" control, classroom management, physical environment, perfection, work rewards, uptightness, and health habits (Wangberg, 1984, p. 10).

Carol Beasley's study of on-the-job stress in regular and special education teachers revealed no significant difference between stress levels of regular and special education teachers (Beasley, 1983). She used the Maslach Burnout Inventory, the Stress Profile for Teachers and a demographic and job-related questionnaire to find that both regular and special education teachers scored in the moderate ranges of stress and burnout and that only 3.3% were in the high burnout category. Time management was the most stressful component of the stress profile with parent/teacher relations being the second most stressful. Beasley concluded that since the 3.3% of teachers who were in the high burnout category represents approximately two teachers in each of the 190 schools in the sample, this fact raises the question of whether we have made much ado about nothing (p. 39).

A series of three studies done in central and western Kentucky in 1983 by Livingston Alexander and others revealed five categories of factors related to stress in 660 teachers. These were: (1) personal/professional threat, (2) interpersonal relationships, (3) racial issues, (4) noncontact teaching tasks, and (5) change in normal routine. This study used the Teaching Events Stress Inventory developed by Cichon.

Frances C. Welch (1983) investigated stress and burnout in South Carolina. Four hundred twenty-nine principals, regular teachers, and special education teachers returned a survey on teacher stress and burnout. High stressors included a category "other" which was a diverse list not given in the results. The next highest stressors

were: notification of unsatisfactory performance, last week of school, overcrowded classrooms, and managing disruptive students (p. 11).

Henrietta Schwartz and others (1983) conducted an intensive year-long study focusing on the work environment of the school situation in six schools in two major cities. This was an ethnological study involving a series of observations, interviews with teachers and principals, and key informant interviews. Researchers also provided a breakdown of the important elements of school descriptions into categories of status, security, and sociability to provide a clearer understanding of the measure and source of the stressors. Following their work done in psychological anthropology, Schwartz and others postulated that once the basic human needs are met individuals seek security, status (self-worth), and sociability (goodwill) in their culture (Schwartz et al., 1983, p. 5). A cultural system (of which a school is a subset) must provide opportunities for persons in that culture to achieve these in appropriate degrees. A case study prepared for each of the six schools revealed a set of stressors which described that school's work environment. General categories of stressors with specific examples are as follows:

- Security (personal safety, job security)
- Governance/Leadership (dissatisfaction with principal and other administration, school board)
- Budget cuts (personnel, supplies, maintenance and repair)
- Staff relations (teachers of "new programs", union representation, racial division)
- Student issues (discipline problems, low achievement)

These conditions were determined to affect the levels of stress to teachers in the six schools. Two other basic stressors which cut

across the lines of status, security, and sociability needs were a lack of respect for teachers and the existence of barriers to teaching. Because of the lack of respect which teachers perceive, they feel as if they have little or no control over a hopeless, insecure situation. Barriers to teaching include nonteaching functions, paperwork, interruptions, intrusions by outsiders, shortages of supplies and equipment, depressing conditions, and too much time required to discipline disruptive students (Schwartz et al., 1983, pp. 14, 18-25).

Coates and Thoresen (1976) summarized the findings of 15 studies on sources of anxiety or stress among teachers. They stated that "although these self-report survey data lack validation against other indices of anxiety, they suggest that teachers experience considerable strain, tension, or anxiety in the classroom" (p. 161). Their review of findings concerned anxiety during the beginning and later teaching years. Beginning teachers' anxieties and concerns focus on their ability to maintain discipline, students' liking of them, their knowledge of subject matter, what to do in case they made mistakes or run out of materials, and how to relate to other faculty members, the school system, and parents (p. 164). Experienced teachers' sources of anxiety are time demands, difficulties with pupils, large class enrollments, financial constraints (inadequate salary, funds for materials), and lack of educational resources (p. 165).

Kyriacou and Sutcliffe (1978a) surveyed 257 teachers in 16 schools in England using a 51-item survey in which they were to indicate how stressful the items were. They were also asked to respond

to the question, "In general, how stressful do you find being a teacher?" An additional section asked questions regarding symptoms of stress. Their findings indicate that one-fifth of the teachers surveyed were experiencing large amounts of stress. Chief sources of stress were general categories of pupil misbehavior, poor working conditions, time pressures, and poor school ethos, with specific items in each of these categories which included noisy pupils, difficult classes and behavior problems, poor career structure and promotion opportunities, inadequate salary, not enough time to do work, too much work to do, and too much administrative and paperwork. In a second study, Kyriacou and Sutcliffe (1978b) used only 14 of these items but added the questions, "How stressful do you find being a teacher?", and "How likely is it that you will still be a school teacher in ten years' time?" Results showed that 23.4% found teaching to be very stressful or extremely stressful, 21.1% and 51.4% were very satisfied and fairly satisfied, respectively, and 23.5% indicated that it was fairly or very unlikely that they would be teaching in ten years' time. The most significant of the 14 items as they correlated to job satisfaction were poor career structure, individual pupils who continually misbehave, inadequate salary, inadequate disciplinary policy of the school, and noisy pupils. Kyriacou and Sutcliffe concluded that it is the conditions of work rather than the work itself (the experience of teaching) which may cause the greatest amount of stress which strongly contributes to job dissatisfaction and intention to leave teaching (Kyriacou & Sutcliffe, 1978b, p. 163).

Goodall and Brown (1980) reported the following sources of stress among teachers: student misbehavior, lack of financial rewards, and lack of satisfaction from job performance (pp. 19-20). These findings are based upon their assessment of research such as studies conducted by the National Education Association.

Swedish researcher, Sten Tellenback (1982) felt that individual personality characteristics rather than biographical ones are associated with stress variables. He investigated seven dimensions in relation to stress: teacher values and needs, pupils as a source of stress, staff and parents as a source of stress, miscellaneous sources of stress, social support, reaction to the sources of stress, and health. He found that teachers' relationships with students are by far the most important source of stress. Specific factors regarding pupil relationships included pupils' motivation, pupils' negligence, pupils' lack of discipline and pupil dissimilarity (p. 5).

Robert Alley, in his article, "Stress and the Professional Educator" (1980), identified and defined four sources of stress: personal, interpersonal, institutional, and societal. "Personal stress is that which we do to ourselves--our inner fears, inner drives, ambitions, etc." (pp. 7-8). Interpersonal sources come from our interaction with others because they cause an emotional response. This interaction may be with family, friends, students, or colleagues. Institutional stress is closely connected to interpersonal stress since institutions generally involve other people. For a teacher, school policies and new expectations can be institutional stressors. Societal stressors for teachers

include the toll of inflation on their earning power, attitudes of the public toward schools and teachers, and attacks upon school programs by public officials or the media.

Manera and Wright (1980) reported a study conducted over a period of 3 years in classes, workshops, and conferences in which the topic of stress in teaching was addressed. A list of 14 stressors ranked by participants as high, medium, or low stress are as follows:

1. Accepting and using other people's expertise
2. Activating
3. Judging people
4. Decision making
5. Individualized instruction
6. Time management
7. Maintaining a good relationship with your superiors
8. Pacing your energy expenditures
9. Professional growth
10. Building a professional reputation
11. Discipline and classroom management
12. Apathy
13. Personnel
14. Curriculum

The most stressful of the fourteen were: time management, individualized instruction, judging people, and professional growth (p. 51).

Daniel Dukes (1984) cited job insecurity as a prime factor in teacher stress. He described the annual ritual for many experienced teachers in many locations across the country as they wait for the spring letter from the superintendent telling them that their positions may be eliminated. He stated the following:

The teachers whose seniority permits them to hang on to positions not only must adjust to uncertainty, but they must face the prospect of receiving assignments they would not choose under normal conditions. (p. 38)

This fact is perhaps more true for teachers of so-called "special" subjects such as art and music than for other teachers. Prescott (1981) made the following statement in "Music Education in Crisis":

Music programs in crisis often bounce from total elimination to total reinstatement to partial elimination in a short period of time--and when this happens, music teachers don't know from one week to the next if they will be employed during the new school year. (p. 38)

Debbie Walsh (1979) stated that "teaching may be hazardous to your health" (p. 253). Based upon the research cited previously, it is apparent that there are a number of factors which contribute to stressful situations for teachers. Although the research findings vary, there seem to be general themes which appear repeatedly. To summarize, they are as follows:

Students--discipline in general, disruptive students, threats of abuse and violence, low achievers, disinterested students

Working conditions--poor facilities, too much work, too much paperwork and red tape, poor management by principals, not enough time to do the job

Status of teachers--inadequate financial rewards, poor career structure, disinterested parents, little or no control over decision making

It is perhaps a combination of many or all of these factors that explain results of a 1979 study by Sparks. Sparks found the following:

1. Forty-six percent of teachers surveyed were dissatisfied with their job as a whole, and would not again choose teaching as a career.
2. Over fifty-four percent said they would probably not stay in teaching.

3. Seventy percent said they frequently or always left school physically or emotionally exhausted.
4. Thirty-six percent said work at school affected their home life.
5. Ninety-one percent said they had little or no influence on curricula or policy decisions.
6. Only twenty-three percent said they had high quality relationships with their administrator.

A look at the effects of these stressful events and factors will now be presented.

Effects of Stress

Many researchers, as they investigated stressful events or stress factors which seemed to contribute to the degree of stress reported by teachers, also reported on many effects of stress as revealed by their research. Some listed physiological or somatic effects, chronic conditions, and psychological effects, while others focused on burnout, which is thought by many to be the ultimate result of stress.

Goodman (1980) discussed the effects of stress in terms of the physiological response and the psychological response. He cited Selye's General Adaptation Syndrome discourse as a key example of the physiological response. Selye found objective indicators of stress to be adrenal enlargement, thymus atrophy, and gastrointestinal ulcers, as well as high blood pressure and other physical symptoms (p. 21). Goodman also cited Alfred Bloch's work among teachers in Los Angeles who associated the following physical symptoms with excessive stress: nausea, diarrhea, colitis, ulcers, backache, muscular aches, headaches, bronchial infections, nervous tension, high blood pressure, heart palpitations, coronary artery disease, and arteriosclerosis

(p. 23). Freunderberger's research was also mentioned by Goodman, and the following physical symptoms were indicated: a feeling of exhaustion and fatigue, the inability to shake a lingering cold, frequent headaches, gastrointestinal disturbances, sleeplessness, and shortness of breath (p. 24).

As an example of the psychological response, Goodman cited a study in 1961 by Shipley in which he compared the emotional disturbance level among several occupational groups. In the study which looked at those applying to the Mayo Clinic, 55% of the teachers showed signs of emotional illness, while 17% of the physicians, 9% of the railroad engineers, 19% of the dentists, and 30% of the lawyers showed signs of emotional illness (p. 27).

Dukes (1984) reported that 51 of 146 disability retirements in 1979 in New York among teachers were for psychiatric or neurological reasons (p. 16). Needle et al. (1981) concluded that teachers with greater stress have more somatic symptoms, higher levels of anxiety, and psychological symptoms (p. 180). Chronic conditions were reported by 45% of all teachers in their study. These chronic conditions in order of frequency among teachers include: high blood pressure, kidney or bladder trouble, arthritis, lung or breathing problems, insomnia, gastritis, stomach ulcer, anemia, asthma, colitis, and heart disease. From a list of 19 symptoms (such as dizziness, shortness of breath, and poor appetite), the most frequently reported symptom was feeling completely worn out at the end of the day. The second most frequently reported symptom was finding it difficult to get up in the

morning. Needle et al. found that teachers with greater stress were more likely to report significantly higher levels of almost all symptoms (p. 178).

Kyriacou and Sutcliffe (1977) identified three manifestations of stress: physical (peptic ulcers, cardiovascular disease), psychological (depression, anxiety), and behavioral (deterioration in work performance, deterioration in interpersonal relationships) (p. 303). They felt, however, that the distinction between sources of stress and the manifestations of stress may often be unclear and that physical illnesses can become sources of stress rather than manifestations of stress. Kyriacou and Sutcliffe also cited work by Dunham in which he concluded that there are two main types of common stress responses among teachers. The first is frustration, which is associated with headaches, stomach upsets, hypertension, sleep disturbances, and body rashes. The second is anxiety, which is associated with feelings of inadequacy, loss of confidence, confusion in thinking and occasionally panic. Dunham said that absenteeism and early retirement are forms of withdrawal because of undue stress (Kyriacou & Sutcliffe, p. 304). Kyriacou and Sutcliffe also noted that teacher turnover has been interpreted as an indicator of teacher stress and that social priority allowances paid to teachers in some schools by the Department of Education and Science in 1975 were to reduce the high rates of teacher turnover in schools where teachers were assumed to be under greater stress. These were colloquially called stress allowances.

Faas' evaluation of self-reported effects of stress indicated that 79% of the special educators studied experienced at least one period of high anxiety per month (Faas, 1984, p. 5). Twenty percent reported weekly anxiety, and 8% reported daily anxiety. Other manifestations of stress were worry, depression, difficulty in sleeping, loss of appetite, and upset stomach.

As was previously mentioned, general stress researchers and authors looked at stress from the perspective of potential burnout. One such researcher was Frances Welch (1983) in her study of regular and special education teachers. Welch stated that "burnout happens to people who work with other humans and occurs when they can no longer cope with the stress in their lives" (p. 4). She pointed out that one must have stress in one's life but that there is an optimum stress level and that burnout results when there is either too much or too little stress in the life of an individual. She illustrated this idea as shown in Figure 2:

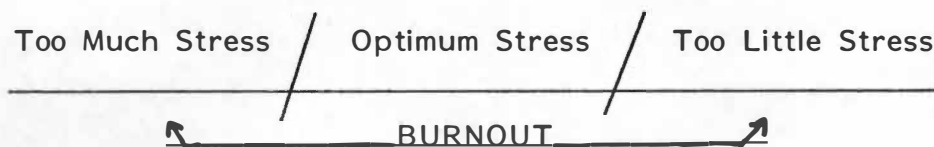


Figure 2. The relationship between stress and burnout.

Welch found the most frequently reported symptoms of stress to be feelings of tiredness, emotional exhaustion, and anxiety (p. 11).

Much stress research has used the Maslach Burnout Inventory developed by Christina Maslach. This instrument was designed to measure hypothesized aspects of the burnout syndrome and was used by Maslach and Jackson in a study of human service professionals including teachers. Maslach and Jackson (1981) defined burnout as "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind" (p. 99). They listed three key aspects of the burnout syndrome: increased feelings of emotional exhaustion, development of negative cynical attitudes and feelings about one's clients, and a tendency to evaluate oneself negatively. They stated that the chronic stress associated with helping professionals who work continuously with people in staff-client interaction can be emotionally draining and poses the risk of burnout.

Schwab and Iwanicki (1982) used the Maslach Burnout Inventory and their own Teachers' Stress Survey to collect data for their study examining the relationship of role conflict and role ambiguity to teacher burnout. Role conflict refers to the teacher's perception of role as it conflicts with others' perceptions. An example of a role conflict statement is "I have to do things that should be done differently." Role ambiguity refers to the teacher's perception of what is expected. An example of a role ambiguity statement is "I know what my responsibilities are." Respondents were asked to rate these statements on a scale from 1 to 7 as being definitely not true (1) to extremely true (7). The role ambiguity statements were reverse scored since they were stated positively. Schwab and Iwanick found that role conflict

and role ambiguity accounted for a statistically significant amount of variance in the emotional exhaustion and depersonalization aspects of teacher burnout. They also concluded that there is a statistically significant relationship of perceived role conflict and role ambiguity to teacher burnout (pp. 70-71).

Charles Cardinell (1980) wrote that stress has been singled out as a major cause of teacher burnout in American schools and listed the following symptoms from the writings of the various professions:

- A. Physical Symptoms
 - 1. fatigue and physical exhaustion
 - 2. headaches and gastrointestinal disturbance
 - 3. weight loss
 - 4. sleeplessness
 - 5. depression
 - 6. shortness of breath
 - B. Behavioral Symptoms
 - 1. changeable mood
 - 2. increased irritability
 - 3. loss of caring for people
 - 4. lowered tolerance for frustration
 - 5. suspiciousness of others
 - 6. feelings of helplessness and lack of control
 - 7. greater professional risk taking
- (pp. 9-10)

Cardinell pointed out that an array of stresses has been clearly identified by research but that burnout is caused by more than an overload of stresses. He hypothesized that "the most hazardous time in a professional's life for burnout occurs when commitment to the ideas of the profession outstrips one's sense of satisfaction from life and work" (p. 11). He further stated that the conflict in high commitment and low satisfaction at midlife is "a normal, developmental, and generally predictable stage in adult development" (p. 11).

Debbie Walsh (1979) wrote that anger, fear, and frustration caused by the stresses of teaching are frequent responses and often lead to absenteeism, alcoholism, and abandonment of the profession (p. 253). Cedoline stated that conflict exists for teachers between the desirable and the actual which creates disillusionment and contributes to burnout (p. 106). He felt that burnout is a more serious problem to the teaching profession than job change or early retirement because "it renders a teacher unable to cope, although he or she remains in the classroom" (p. 93).

It is indicated by the literature that there are consequences or effects of stress to be observed in and reported by teachers. The most frequently reported and most obvious seem to be physiological responses which are manifested by such symptoms and conditions as headaches, ulcers, gastrointestinal disorders, hypertension, insomnia, and exhaustion. Other symptoms include anxiety, feelings of helplessness, frustration. Most researchers and writers feel that these symptoms are indicators of stress and that stress is directly related to burnout.

Related Studies

Two other studies not directly related to stress, but rather to attitudes and problems as perceived by teachers, will be described here briefly. The first study was conducted by Paul Kelley in 1971 to determine attitudes of classroom teachers in Knoxville, Tennessee, toward certain conditions of work. Respondents were asked to express

themselves as satisfied, dissatisfied, or neither very satisfied nor dissatisfied with 118 items relating to the Knoxville schools. These items dealt with policies and procedures, attitudes of persons and groups toward the schools and teachers, services provided by various persons and groups, and effectiveness of instruction in all of the subject areas. A second survey asked teachers for specific reasons why they were satisfied or dissatisfied with items which ranked among the first 25 items in terms of expressed satisfaction and dissatisfaction. Kelley found that conditions of work which have to do with compensation, communication, and the attitudes of persons and groups toward education and teachers are sources of greatest dissatisfaction.

A study of first-year and fifth-year teachers was conducted by the Office of Research and Evaluation in 1982 in the Knox County, Tennessee School system to determine whether the kinds of problems encountered by the beginning teacher were the same as for those who had gained tenure. The questionnaire consisted of 21 potential problems that teachers might encounter as indicated by the literature. Teachers were asked to evaluate the relevance of each problem by checking one of four responses ranging from "never a problem" to "severe problem". The highest ranging items for first-year teachers were:

1. meeting personal or household expenses
2. knowing how to motivate reluctant learners
3. maintaining student discipline
4. knowing how to teach certain concepts
5. interpreting and using standardized test scores

6. obtaining adequate teaching supplies and materials
6. experiencing an unhealthy amount of stress

Highest ranking items for fifth-year teachers were:

1. meeting personal or household expenses
2. knowing how to motivate reluctant learners
3. losing some of my original enthusiasm for teaching
4. experiencing an unhealthy amount of stress
5. maintaining student discipline
6. feeling depressed
7. obtaining adequate teaching supplies and materials

Teachers were also asked to choose one of five words describing their experience as a teacher for the current year. While 43% of the first-year teachers and 46% of the fifth-year teachers indicated satisfaction, the last two of the descriptive words indicated a difference in the two groups as follows:

<u>Description</u>	<u>First-Year Teacher</u>	<u>Fifth-Year Teacher</u>
Frustration	10%	16%
Despair	--	5%

A third section asked teachers to indicate their plan 5 years later. First-year teachers planned to still be in education, but 31% of fifth-year teachers indicated that they would be in another line of work or at home with a family (Office of Research and Evaluation, Knox County Schools, 1982, pp. 3, 4, and 7).

Implications for Teachers, Education, and Society

The existence of what appears to be moderate to high degrees of stress among teachers has implications for teachers, for education in general, and for society. Goodman (1980) stated that the effects of stress may range from such physical impacts as a simple twitch to death by cardiac arrest, and from such psychological impacts as occasional anger to complete breakdown (pp. 38-39). The effects of stress may force many teachers to leave the profession. It may result in home and family problems, lower a teacher's self-confidence, and cause depression. "Thus, excessive stress has the potential of lowering the physical, emotional, educational and psychological qualities of a teacher's life" (p. 39). Goodman also suggested that the impact of undue stress may result in some of the following outcomes: (1) high anxiety levels among students, (2) lowered achievement levels among students, (3) lowered school morale, (4) increased negative feelings among students toward teachers, and (5) reduced community support.

In terms of the impact of teacher stress on society, Goodman noted that higher stress is reported in low socioeconomic urban areas, and this fact further disadvantages an already disadvantaged group within our society. He suggested that "lowering the stress level of teachers may result in positive educational outcomes for students, for community, and for society at large" (p. 40).

Goodall and Brown (1980) stated that unless stress is dealt with appropriately, "it will result in deterioration of physical and mental

health, or at the very least, it will result in a reduction of the pleasurable experiences associated with schooling" (p. 21).

David Berliner, Professor and Advisor to the research team headed by Schwartz, stated that the results of the ethnographic study was "disconcerting to those of us who believe that teaching should be a noble profession. . . ." (Schwartz et al., 1983, p. 8). He further noted that the researchers have found a profession under great stress and schools that are not educating youth as they should. These facts are, according to Berliner, threats to the profession and to the educational system. It would appear that there is evidence to support these statements to some degree in much of the research, and there is a need for more research as well.

Coping Strategies

Writers and researchers suggested or identified a variety of coping strategies, many of which are specific techniques for individuals, while others involve a support group or the organization such as a school or school system. Examples of each of these will be presented.

Writing in general terms, Taché and Selye (1986) identified four ways in which coping with stress can be accomplished:

1. by removing stressors from our lives
2. by not allowing certain neutral events to become stressors
3. by developing a proficiency in dealing with conditions we do not want to avoid
4. by seeking relaxation or diversion from the demand (p. 20)

Obviously, not all of these coping strategies can be used by everyone for every stressor or stressful event, but each of these strategies is included in the suggestions that follow from the literature.

Beehr and Bhagat (1985) provided a list of 40 coping strategies proposed in the popular literature. These include such examples as talk, make time for fun, solitude and tranquility, self-awareness, hobbies, leave job for another, proper diet, behavior modification, and promise yourself a reward (p. 357). Beehr and Bhagat noted that stress management has become so important and necessary that major corporations such as Kimberly-Clark, Tenneco, Inc., Hospital Corporation of America, and Texas Instruments have established elaborate stress management programs (pp. 418-419).

Faas (1984) reported four frequently listed coping strategies in his study of special education teachers. These were talking with one's spouse or a colleague on a daily basis, taking time off from work, exercising, and prayer (p. 6).

Madeline Hunter (1977) stated that air traffic control, surgery, and teaching are three of the most potentially stressful occupations in the world (p. 122). She suggested two groups of coping strategies or counterirritants to teaching which can reduce stress. One group consists of activities which demand or stimulate creativity in a completely different field. The other consists of activities which require only participation. She then suggested three categories of strategies with examples which could serve as either creative or participation only activities, depending upon how one engages in them. They are as follows:

1. Physical counterirritants--swimming, tennis, dancing, jogging, brisk walking, vigorous movement
2. Emotional and social counterirritants--new tasks, books, TV, social groups, gardening, macrame, relaxing with friends
3. Intellectual counterirritants--learning about something new, reading. (pp. 123-124)

Hunter stated that teachers should include both demanding and relaxing activities weekly, not just for vacation (p. 125).

Goodall and Brown (1980) suggested six coping strategies to reduce stress:

1. Scrutinize your job and appraise those tasks which give pleasure and which you dislike. Try to vary the kind of tasks you do.
2. Be kind to yourself--reward your good work with a night out, a new outfit, relaxing with a friend.
3. Avoid people who are depressing.
4. Learn to play--hobbies, sports, things you always wanted to do.
5. Proper exercise program.
6. Meditation--15 to 20 minutes a day to stop thinking. (pp. 20-21)

Coates and Thoresen (1976) referred to a promising technology of stress and tension management which includes such techniques as systematic desensitization, relaxation training, and participant modeling. Others include self-hypnosis, meditation, muscle relaxation, physical exercise, and behavioral self-management. They noted that these techniques are "not designed to produce teachers who are desensitized to the point of becoming inactive or tolerating unreasonable or unhealthy environments" (p. 179). They felt that many teachers may have anxieties that are entirely appropriate because of the harsh conditions in which they must work.

Cedoline (1982) outlined 11 methods of relaxation which he felt allow one to view the body, mind, and spirit as one as suggested by Plato in the Republic. These 11 are as follows:

1. Physical activity--walking, tennis, isometrics, gardening, etc.
2. Meditation
3. Progressive relaxation--beginning with muscles in one part of the body and proceeding to all parts, tensing then relaxing the muscles
4. Thought-intrusion exercises--focus on a word, number, or pleasant, calm, past experience; or imagine a pleasant scene
5. Focusing on breathing--feel yourself relax each time you exhale
6. Desensitization--in a relaxed state, release the adverse situation, each time gradually reducing the anxiety
7. Mental relaxation
8. Yoga exercise
9. Biofeedback--using a muscle tension monitoring device to measure tension
10. Deep muscle relaxation--tense different muscles, then relax and let them go limp, telling them to be heavy and warm. Follow procedure on each side of the body. Feeling of warmth and heaviness indicates relaxation
11. Autogenic training--concentration on mental images, relaxation, and self-talk to relax the entire body. Creates feelings of warmth and relaxation (pp. 117-128).

Welch (1983) described six strategies for coping with stress which she gleaned from research. These are as follows:

1. Awareness--recognizing that stress exists and needs to be dealt with
2. Time management--improve the management of time
3. Support system--have a person or persons for support group
4. Take care of yourself--engage in activities for yourself
5. Change--do things differently
6. Learn something new (pp. 14-15)

Welch stated that her research showed that sources and symptoms of stress appear to be consistent, and administrators should plan for alleviating or managing some of the sources of stress at the school and district levels.

Goodman (1980) reported that popular coping methods include the use and abuse of alcohol, tobacco, tranquilizers, marijuana, and other drugs but that no research on these can be found in teacher stress literature (p. 30). He cited Coates and Thoresen's reference to two categories of stress reduction techniques: (1) those employing teaching skills training, and (2) those using some method for teaching relaxation skills. Of the six studies on teaching skills training, two reported no treatment effect, and three others showed weak or questionable effects. Goodman also referred to Maslach's study which identified the following methods for coping used by some helping professionals:

1. Detachment--teacher detaches him or herself from the student
2. Intellectualization--intellectualization and abstraction of relationship between teacher and student
3. Situational compartmentalization--separation of work life from home life
4. Psychological withdrawal--depersonalization of student, and diminished personal contact
5. Black humor--transforming harsh realities into laughable subjects
6. Semantic detachment--depersonalization of relationships by ascribing negative or impersonal names for students (pp. 30-31)

Maslach noted that the self-protection of the teacher in these instances comes at the expense of the recipients (Goodman, 1980, p. 33).

Needle et al. (1981) investigated not only causes and effects of stress in their study, but also coping strategies and their effectiveness as reported by the respondents. The four psychological coping strategies examined were: (1) positive comparisons in the teachers' perceptions of how their work life now compares to a year ago or to

the future, (2) optimistic action, in which they search for the positive aspects of the job, (3) substitution of rewards, in which the positive features of the job are maximized and the negative features minimized, and (4) selectively ignoring problems, in which they focus on more gratifying aspects of work. Needle et al. found that only positive comparisons significantly reduced the impact of stress on general well being and somatic complaints. Chronic conditions were not affected. They note that although the psychological strategies as well as exercise, sleep and diet can increase resistance to stressors, "they do not eliminate sources of stress. The ideal, but least feasible, strategy for coping with occupational stress is to modify those factors in the work situation which cause stress" (p. 178).

In another article, Needle et al. (1980) reported on a suburban school district which arranged for a workshop on teacher identification and management of stress during the 1978-79 school year. The program consisted of four 2½-hour sessions held weekly after school. Activities included four films focusing on staff meetings and teacher support, parent-teacher conflicts, student-teachers conflicts, and individual learning needs and styles of students. Teachers were asked to develop a personal list of stressful events or circumstances. Significant issues became the content for the final phase of the workshop. Often the most stressful factors were out of their control. The last step of the process encouraged teachers to seek help from colleagues in planning specific actions to reduce stress. Needle et al. made these suggestions for teachers, administrators, and teacher training institutions to deal with the problem of stress:

Teachers could:

- increase personal support for colleagues
- improve skills
- support collective action through professional associations to address issues

Administrators could:

- take actions to reduce teacher stress
- reinforce efforts by teachers
- attempt to remove or reduce organizational stressors
- provide inservice to improve coping skills
- provide social support systems and strategies

Colleges and Universities could:

- provide personal growth opportunities with emphasis on personal coping skills
- train administrators to facilitate a humane, supportive school environment
- increase emphasis on supervisory skills and techniques
- train teachers in organization and collective action
- encourage and support research into the causes and consequences of teacher stress

(pp. 98-99)

Tim Young (1980) reported on a unique program regarding stress in education in Tacoma, Washington, in 1978. This was the first public school district to implement a comprehensive stress reduction program which included insurance coverage for teachers who were suffering from long-term disabilities as a result of classroom stress or burnout. Some of the components of the program included fitness and nutrition information, information on fitness programs, ski trips and weekend dinners at a modest cost, aerobics workshops, seminars on diet, stress and exercise, in-service workshops on problems in teaching which could cause stress, strategies to improve teacher self-images, assertive discipline, and effective techniques with special education students. Other aspects of the program were an insurance program designed to protect teachers who were disabled because of stress, a counseling program, and a resource notebook of community

resources in professional, legal, medical, and financial areas (pp. 37-40).

The wide variety of coping strategies in the literature is illustrated in the previous information presented. Depending upon the writer being cited, it appears that coping strategies vary from things an individual teacher does such as exercise, to programs implemented by a school system, and include both physiological and psychological strategies. It is to be noted that some writers placed the impetus for coping on the individual teacher, while others stressed the need for principals and other administrators and school systems to become involved in doing what they can to make the teachers' work situation less stressful, since many of the stressors are out of the teachers' control.

CHAPTER III

PRESENTATION OF THE DATA

Introduction

An understanding of situations and events which are stressful to music educators in Tennessee could and should be a useful means of helping address and reduce stress in these teachers. Identifying and eliminating some of these stressors should aid in securing and keeping effective teachers in music education. This study investigated causes of stress in music educators in Tennessee and how these music educators deal with stress. The data were collected in the spring of 1986 by means of a survey instrument developed by the writer. Questions were designed to elicit information from respondents regarding the degree of stressfulness of each item and the use and benefit of various coping strategies. The University of Tennessee Computer Services provided a means of data analysis through the Statistical Analysis System (SAS). Data analysis included frequencies and percents, correlations, means and standard deviations, rankings of variables, and the General Linear Model (GLM) procedure.

The Panel of Experts

A panel of experts in music education was selected, to whom a preliminary survey instrument, developed from items taken from various previous studies found in the review of the related literature and from the writer's experience as a teacher and consultant, was sent.

These 16 individuals were selected on the basis of previous experience in teaching general, choral, or instrumental music and because of their present or former position as an administrator in music education and/or teacher at the college level in music education. They were asked to indicate their present position and the area(s) in which they supervised or taught. Ten of the 16 panel members returned the surveys, and the information regarding their backgrounds and positions is summarized in Table I.

Totals in each group show that 7 panel members were involved in administration, 6 were involved in college teaching in which they had contact with music educators, 8 were or had been involved in supervision or teaching in the area of general music, 9 in choral music, and 5 in instrumental music. The members of the panel of experts were asked to assess the survey to determine whether the items related to stress were appropriate for the study and were clear and concise for an accurate investigation. They were also asked to rate the stress items on a scale of 1 to 3, with 1 representing low stress, 2 representing moderate stress, and 3 representing extreme stress. This rating was to represent the degree of stressfulness they perceived each item to be to music teachers whom they know and/or with whom they work. Two panel members made suggestions to help clarify the instrument further, and these suggestions were used in the revision.

TABLE I

A SUMMARY OF THE BACKGROUNDS OF THE PANEL OF EXPERTS

Panel Member	Administration	College	General	Choral	Instrumental
1	X	X	X	X	
2	X		X	X	
3		X	X	X	X
4	X		X	X	X
5	X			X	
6		X	X	X	
7	X		X	X	
8		X	X	X	X
9	X	X		X	X
10	<u>X</u>	<u>X</u>	<u>X</u>	<u>—</u>	<u>X</u>
TOTALS	7	6	8	9	5

The Research Participants

The target population for the study was music educators in public schools in Tennessee. A list of certified music teachers in Tennessee who were filling a teaching position during 1985-86 was obtained from the Tennessee Department of Education, which showed a possible population of 1,492. A letter was sent to each superintendent in the 141 school systems in the State, requesting a list of music teachers and their school addresses. Lists were provided by 72 systems (51%), and a population of 583 was realized from these lists. Hauskin's guide for estimating sample size indicated the appropriate sample for a population of 1,500 was 306 (Hauskin, 1963). A random sampling of the 583 teachers to acquire a sample of 306 determined the sample of teachers to whom the survey was sent. When the lists provided by superintendents were compared with the list obtained from the Tennessee Department of Education, it was determined that in the systems responding, only 64% of those certified in School Music or Instrumental Music were actually teaching music. Thirty-six percent were teaching other subjects. Six teachers were on the superintendents' lists who were not on the State Department of Education list, and 6 of the 141 school systems had no certified music teachers teaching at all.

Of the 72 systems responding to a request for a list of music teachers, 2 systems had no music teachers, 4 systems' lists were returned too late to be used, teachers from 7 systems were not chosen in the random sample, and 16 systems had no return of the survey from teachers; thus responses were received from teachers in 43

systems. The surveys were coded so that systems responding could be determined and so that follow-up letters could be sent to participants who did not respond within a designated time limit. Four respondents chose to be anonymous, and the school systems represented could not be determined; therefore, it is possible that more than 43 school systems were represented in the study. Table II is a summary of the survey sample and response. The range of the number of music teachers employed in the participating school systems was 0 to 82, with a mean of 9.5 teachers per system. Six systems had 35 or more teachers, while 12 systems had only one person teaching music.

Demographic data revealed that 97 females (60.2%) and 64 males (39.8%) responded to the survey. The range of years of teaching experience was 1-37 years, with a median of 13.7 years. All but one were currently teaching. A decision was made to use the information from that teacher since the teacher had taught several years, and could provide information relative to the study.

Teachers were asked to indicate the number of schools which they served and the sizes of these schools. Table III illustrates the number of teachers who taught in the four school sizes indicated. It is to be noted that the total numbers and percents do not equal 161 respondents or 100% since a number of teachers had more than one school. For example, some teachers taught at two schools that were in the 300-499 category and an additional school in the 500-699 category. Since these teachers were counted in both categories, they were in

TABLE II
A SUMMARY OF THE SURVEY SAMPLE AND RESPONSE

Description	Number
Certified music teachers teaching in Tennessee in 1985-86	1492
School systems	141
Lists of teachers returned by superintendents	72
Systems with no music teachers	2
Systems whose lists were returned too late for use	4
Systems not chosen in random sample	7
System from which there was no teacher response	16
Number of systems actually represented in the study	43
Number of anonymous respondents	4
Number of teachers teaching music in the 72 systems	583
Range of the number of music teacher in responding systems	0-82
Mean number of music teachers per system	9.5
Number of school systems having 35 or more music teachers	6
Number of school systems having only one music teacher	12
Number of surveys mailed to the sample population	306
Number of surveys returned by respondents (53%)	161

TABLE III

NUMBER OF TEACHERS WHO SERVED IN SCHOOLS OF VARIOUS SIZES

School Size	Number of Teachers*	Number of Schools	%*
Under 300	25	1	15.5
	5	2	3.1
	4	3	2.5
	<u>3</u>	4	<u>1.9</u>
TOTAL	37		23.0
300-499	38	1	23.6
	12	2	7.5
	2	3	1.2
	1	4	.6
	<u>1</u>	7	<u>.6</u>
TOTAL	54		33.5
500-699	37	1	23.0
	7	2	4.3
	2	3	1.2
	<u>3</u>	4	<u>1.9</u>
TOTAL	49		30.4
700+	54	1	33.5
	10	2	6.2
	4	3	2.5
	<u>2</u>	4	<u>1.2</u>
TOTAL	70		43.4

*Totals added together exceed 161 (number of respondents) and 100% since some teachers were in more than one category.

effect counted twice in the totals, thus making the total number of teachers greater than 161, which was the number of respondents.

Table IV indicates the number of teachers who served in urban, suburban, and rural schools and the number of schools served in each category. Again, these totals exceed 161 and 100% since some teachers were counted in more than one category. Teachers were also asked to indicate the total number of schools served and the average number of students served per day. Table V shows that slightly more than half (51.6%) served one school and half (50.9%) taught 100-200 students per day. Seventeen teachers (10.6%) reported serving four or more schools, and nine teachers (5.7%) reported serving 300 or more students per day.

Teachers were asked to indicate certification areas. One hundred thirty-one teachers (81.4%) had School Music certification, 91 teachers (56.5%) had Instrumental Music certification, and 41 (25.5%) had other certification. Many teachers had a combination of certification areas, including one of the music certifications. Four teachers were not included on the list of certified music teachers obtained from the Tennessee Department of Education. Other certification areas listed by teachers were:

1. Elementary grades
2. English
3. Speech
4. Mathematics
5. Principal K-8

TABLE IV

NUMBER OF TEACHERS SERVING VARIOUS NUMBERS OF SCHOOLS
IN URBAN, SUBURBAN, AND RURAL AREAS

Location	Number of Teachers*	Number of Schools	%*
Urban	29	1	18.0
	12	2	7.5
	4	3	2.5
	4	4	2.5
	<u>1</u>	5	<u>0.6</u>
TOTAL	50		31.1
Suburban	47	1	29.2
	12	2	7.5
	6	3	3.7
	3	4	1.9
	<u>1</u>	6	<u>0.6</u>
TOTAL	69		42.9
Rural	31	1	19.3
	20	2	12.4
	3	3	1.9
	2	4	1.2
	1	5	0.6
	<u>1</u>	6	<u>0.6</u>
TOTAL	58		36.0

*Totals added together exceed 161 (number of respondents) and 100% since some teachers were in more than one category.

TABLE V
NUMBER OF SCHOOLS AND STUDENTS SERVED PER DAY
BY MUSIC TEACHERS

	Number of Teachers	Number of Schools	Number of Students Per Day	%
	83	1		51.6
	42	2		26.0
	19	3		11.8
	17	4		10.6
TOTAL	161			100.0
	16		Less than 100	9.9
	82		100-200	50.9
	54		200-300	33.5
	9		More than 300	5.7
TOTAL	161			100.0

6. Principal 7-12
7. Principal 7-12 Advanced
8. Supervisor K-8
9. Supervisor 7-12
10. Administration and Supervision 7-12
11. Social Studies
12. Psychology
13. Reading

In the seven music subjects listed, 99 taught general music (61.5%), 81 taught choral music (50.3%), 65 taught instrumental music (40.4%), 18 taught music theory (11.2%), 7 taught music appreciation (4.3%), 5 taught handbells (3.1%), and 3 taught guitar (1.9%). Other subjects taught included class piano (5 teachers), study hall (3 teachers), mathematics (2 teachers), history (2 teachers), reading (2 teachers), and 7 other areas taught by one teacher each.

Teachers were asked to indicate the grade levels taught and their subject and level of teaching preference. Table VI shows that 83 teachers (51.6%) taught in grade six, seven, and eight, sometimes in combination with other grade levels. These grades were also the least preferred grades in which to teach. Thirty-five teachers (21.7%) listed these grades as their teaching preference, while 51 teachers (31.7%) preferred kindergarten through fifth grade, and 52 teachers (32.3%) preferred grades nine through twelve. Instrumental music was the preferred subject area of 64 teachers (39.7%), choral music was preferred by 53 teachers (32.9%), and general music was preferred by 41 teachers (25.5%).

TABLE VI
SUMMARY OF GRADE LEVELS TAUGHT AND GRADE LEVEL
AND MUSIC TEACHING AREA PREFERENCE OF TEACHERS

	Number of Teachers	%
Grade Level Taught		
Kindergarten	47	29.2
One	53	32.9
Two	54	33.5
Three	55	34.2
Four	64	39.8
Five	73	45.3
Six	83	51.6
Seven	83	51.6
Eight	83	51.6
Nine	70	43.5
Ten	64	39.8
Eleven	64	39.8
Twelve	62	38.5
Grade Level Preference		
K-5	51	31.7
6-8/7-9	35	21.7
9-12	52	32.3
Music Area Preference		
General	41	25.5
Choral	53	32.9
Instrumental	64	39.7

One hundred sixteen of the 161 teachers (72%) indicated that they had other employment in addition to their teaching assignment. Forty-four teachers (27.3%) gave private lessons, 34 (21.1%) had church choirs, 27 (16.8%) served as organist/pianist, 23 (14.3%) were soloists, and 59 (36.6%) indicated other types of employment, some of which were music-related and some of which were not music-related.

The Survey Instrument

The Survey of Music Educators, the survey instrument used in the study, was developed by the writer after an investigation of several survey instruments used in other stress research (see Appendix C). Some of these stress items found in other research were used, and additional items were added by the writer, based on her teaching and consultant experience in music education and upon suggestions of colleagues and two members of the panel of experts. The survey instrument was designed to be a self-reporting indicator of stressors and of coping strategies used by the respondents. The survey items addressed the following five stress areas: environmental (items 1-10), job-related (items 11-25), classroom management/student behavior (items 26-32), interpersonal (items 33-37), and personal (items 38-40).

The coping strategies were of three types: physical (items 1-9), psychological (items 10-22), and chemical (items 23-27). Demographic data included gender, years of teaching experience, school size and location, number of schools served and students served per day, areas

of certification, subjects and grade levels taught, percentage of time spent in primary, intermediate, middle school/junior high, and high school levels, preference of grade levels and subjects taught, and other employment. Teachers were also asked to answer questions regarding their attitudes toward teaching, how stressful they perceive teaching to be, and their plans for the future. A checklist of health problems was also included, and teachers were asked to indicate the number of days missed in the last 5 years. A Likert-type scale was used for recording responses regarding the stressfulness of each item as follows:

Not at all Stressful				Moderately Stressful				Very Stressful	Does Not Apply
1	2	3	4	5	6	7			

A similar scale was used to rate the usefulness of coping strategies as follows:

No Relief				Moderate Relief				Considerable Relief	Does Not Apply
1	2	3	4	5	6	7			

Space was provided at the end of both lists for respondents to indicate additional stressors and coping strategies.

Data Collection

Surveys and a cover letter with a return envelope were mailed to the 306 teachers in the sample. Coding for individual response was used for follow-up letters, but anonymity of respondents was

guaranteed. Two follow-up letters were sent to teachers not responding, and a total of 161 surveys were returned for a response rate of 53%.

Statistical Procedures

Frequencies and percents were calculated for each item in the survey, and individual stress scores were determined. Stress variables and coping strategies were ranked from high to low based upon the response of the participants as they indicated most stressful to least stressful items and most used to least used coping strategies. Stress variables were also ranked by teaching area, years of teaching experience, gender, and by teachers' response to the questions: How stressful is teaching? and, How likely are you to be teaching in ten years time?

A Pearson Product Moment correlation was used to determine correlation between stress variable groups and coping strategy groups, between the total stress score and the question: "How stressful is teaching?", and between the questions: "How stressful is teaching?" and, "How likely are you to be teaching in ten years' time?"

Means and standard deviations were determined for each stress variable, for the five general stress groups and three general coping strategy groups, and for the total stress and total coping scores. Tables were generated to indicate the frequencies for each stress variable and coping strategy, controlling for teaching areas and teaching level.

The General Linear Model (GLM) was used to produce analysis of variance tables to determine the main effects of teaching area, teaching level, how likely teachers were to continue to teach, and the interactions of these variables, using the five general stress groups as dependent variables. Additional analysis of variance was used to investigate the main effects of years of teaching experience, gender, and how likely teachers were to continue teaching, again using the five general stress areas as dependent variables. Data were considered significant at the .10 level. This level of significance was chosen since the analysis involved a two-tailed test and a probability of .05 was preferred in either end of the curve. Also, the use of human subjects seemed to indicate the need for a less rigid level of significance than .05.

Presentation of Data

The data are presented to answer the following questions proposed in the study:

1. What are the perceptions of a panel of experts in education regarding factors which cause stress for music teachers?
2. What factors which cause stress are common to teachers in all three music teaching areas--general, choral, and instrumental?
3. What factors which cause stress are common to all levels of teaching in the three music areas?
4. What factors which cause stress are unique to each music teaching area and level?

5. Is there a difference in factors which seem to be more stressful to music teachers, as compared to the perceptions of the panel of experts?

6. What are some effective ways teachers cope with stress in teaching?

7. Is there a relationship between factors which cause stress and the gender, years of teaching experience, and how likely teachers are to continue to teach?

8. Is there a relationship between factors which cause stress and the teaching area and teaching level of teachers in the survey?

9. Is there a relationship between stress and the coping strategies used by teachers?

Questions one through six, which were answered using descriptive data, will be discussed in this chapter; and questions seven through nine, which required statistical analysis, will be discussed in Chapter IV.

Perceptions of a Panel of Experts

The panel of experts in music education was asked to rate each stress variable on a scale of 1 to 3, using 1 to indicate low stress, 2 to indicate moderate stress, and 3 to indicate extreme stress. This rating was to be based upon how stressful the panel members felt each item was to the music educators with whom they worked and/or whom they knew. The perceptions of the panel of experts are shown in Table VII. It will be noted that since the range of the rating scale

TABLE VII

PERCEPTIONS OF A PANEL OF EXPERTS IN MUSIC EDUCATION
REGARDING THE STRESSFULNESS OF CERTAIN ITEMS
TO PUBLIC SCHOOL MUSIC TEACHERS

Ranking	Mean Score	Item Number	Item Description
1	2.6	13	Uncertainty about job
2	2.4	2	Student load
	2.4	3	Class load
	2.4	5	Lack of planning time
	2.4	6	Number of school assignments
	2.4	15	Evaluation
7	2.3	10	Paperwork/housekeeping
	2.3	28	Inadequate school discipline policy
9	2.2	8	Interruptions
	2.2	11	Inadequate salary
	2.2	21	Career Ladder Program
	2.2	25	Contests
	2.2	38	Health problems
14	2.1	4	Lack of materials/equipment
	2.1	9	Noise
	2.1	18	Lack of recognition of work
	2.1	26	Problem students
	2.1	27	Unmotivated students
	2.1	35	Principal/administration
20	2.0	23	Festivals
	2.0	1	Poor facilities
	2.0	12	Inadequate fringe benefits
	2.0	37	Family problems
25	1.9	20	Lack of promotion opportunities
	1.9	7	Extracurricular assignments
27	1.8	22	Lack of participation in decision making
	1.8	24	Concerts
	1.8	31	Planning/teaching for individual students
30	1.7	17	Community attitude toward program
31	1.6	14	Contract negotiations
	1.6	33	Colleague relationships
33	1.5	32	Student rapport
	1.5	16	Risk of involuntary transfer
35	1.4	29	Student vandalism
	1.4	30	Substance abuse by students
	1.4	34	Parent conferences/relationships
38	1.1	36	Clerical/custodial/paraprofessional relationships

was narrow (1 to 3), several variables had the same ranking and mean. Those variables ranking in the top six most stressful were:

1. Uncertainty about job
2. Student load
3. Class load
4. Lack of planning time
5. Number of school assignments
6. Evaluation

Those ranking in the bottom six least stressful were:

1. Student rapport
2. Risk of involuntary transfer
3. Student vandalism
4. Substance abuse by students
5. Parent conferences/relationships
6. Clerical/custodial/paraprofessional relationships

The rankings of the panel of experts will be compared to those rankings given by teachers as a part of the discussion of question five.

Perceptions of Teachers Regarding Stress

Analysis of the stress variables revealed that some stressors were common to all three music teaching areas (general, choral, and instrumental), while others were unique to each area. An original intent of the study was to examine stressors in relation to both teaching area and teaching level, but investigation of the data revealed that the majority of choral and instrumental teachers were at the middle and high

school levels, while the general music teachers were primarily at the elementary and middle levels. Since this grouping was apparent, a decision was made to report only the teaching area, which also reflects the teaching level to a great extent. An item analysis of the stress variables in Table VIII shows the mean and standard deviation for each variable when grouped by teaching area and an overall mean and standard deviation for each variable. Tables IX, X, XI, XII show, respectively, the ranking of stress variables in order of stressfulness from high to low for the total sample, for general music teachers, choral music teachers, and instrumental music teachers. There were 29 general music teachers, 16 choral music teachers, 41 instrumental music teachers, and 79 teachers who taught a combination of the three areas. These were then regrouped according to the area in which the teacher spent the most time, and the number in each group was as follows: general--79, choral--25, instrumental--56.

Table XIII shows a comparison of the ranking of the top ten variables by total group and by the three teaching areas. Those stress variables that were common to all three teaching areas were: inadequate salary, low status of the profession, Career Ladder Program, unmotivated students, and problem students. Inadequate fringe benefits was ranked 11th by choral teachers but was in the top ten for general and instrumental teachers. Paperwork/bookkeeping was ranked 13th by general teachers but was in the top ten for choral and instrumental teachers. Interruptions was ranked 18th by general music teachers but was in the top ten for choral and instrumental teachers.

TABLE VI 11
MEANS AND STANDARD DEVIATIONS OF STRESS VARIABLES BY EACH
TEACHING AREA AND OVERALL

Stress Variable	General		Choral		Instrumental		Overall	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1 Poor facilities	2.75	2.02	3.04	2.05	3.59	2.18	3.09	2.10
2 Student load	4.00	2.03	3.12	1.99	2.77	1.86	3.42	2.03
3 Class load	3.98	1.96	3.32	1.99	2.70	1.81	3.45	2.00
4 Lack of materials/equipment	3.56	2.00	3.48	1.96	4.46	1.85	3.84	1.99
5 Lack of planning time	3.78	2.11	3.84	2.34	3.77	2.11	3.79	2.13
6 Number of school assignments	2.85	2.04	2.68	2.14	3.23	2.15	2.94	2.09
7 Extracurricular assignments	3.08	1.75	3.64	1.80	3.29	1.92	3.24	1.81
8 Interruptions	3.49	1.85	4.64	1.44	4.43	1.91	4.00	1.87
9 Noise	3.50	1.85	4.08	2.14	3.88	1.94	3.74	1.93
10 Paperwork/housekeeping	3.73	1.85	5.08	1.71	4.63	1.75	4.27	1.87
11 Inadequate salary	4.61	1.86	4.76	1.64	5.55	1.55	4.94	1.78
12 Inadequate fringe benefits	3.96	1.94	4.00	1.94	5.14	1.80	4.37	1.96
13 Uncertainty about job	3.43	2.25	2.60	2.08	2.99	2.02	3.13	2.16
14 Contract negotiations	2.99	1.86	2.72	1.62	2.88	2.10	2.89	1.90
15 Evaluation	4.04	2.03	3.64	1.73	3.07	1.96	3.63	2.00
16 Risk of involuntary trans.	2.99	2.12	2.40	1.47	2.09	1.74	2.57	1.94
17 Comm. attitude toward program	2.65	1.86	3.48	1.87	3.41	1.92	3.03	1.83
18 Lack of recognition for work	3.09	1.96	3.36	1.89	3.86	1.96	3.39	1.97
19 Low status of profession	4.14	2.02	4.92	1.85	4.80	1.86	4.47	1.97
20 Lack promotion opportunities	3.73	2.09	3.44	2.38	4.20	2.17	3.83	2.17
21 Career Ladder Program	4.70	2.14	4.76	2.22	4.75	2.27	4.71	2.18
22 Lack of part. in decisions	3.37	1.88	3.16	1.62	3.54	2.11	3.38	1.92
23 Festivals	2.85	2.27	4.04	2.05	3.80	1.86	3.37	2.15
24 Concerts	3.62	1.92	4.20	1.58	3.50	1.63	3.67	1.77
25 Contests	1.72	2.06	3.84	2.17	3.57	2.24	2.69	2.34
26 Problem students	4.48	1.69	4.20	1.68	4.18	1.66	4.34	1.67
27 Unmotivated students	4.44	1.80	5.24	1.61	4.70	1.88	4.65	1.81
28 Inadequate school discipline	3.75	2.12	2.48	1.85	3.75	2.15	3.54	2.12
29 Student vandalism	2.53	1.60	3.44	2.12	3.73	1.91	3.08	1.88
30 Substance abuse by students	1.73	1.42	3.60	1.96	3.14	1.99	2.51	1.89
31 Plan/teach for ind. students	4.00	1.47	3.92	1.50	3.89	1.61	3.96	1.51
32 Student rapport	2.20	1.22	2.32	1.49	2.25	1.31	2.24	1.29
33 Colleague relationships	2.13	1.39	1.84	1.07	2.07	1.31	2.06	1.31
34 Parent conf./relationships	2.16	1.14	2.16	1.03	2.48	1.35	2.27	1.20
35 Prin/admin. lack of support	2.33	1.88	2.44	1.73	2.73	2.06	2.48	1.92
36 Prin/admin. expectations	2.44	1.62	2.20	1.50	2.46	1.66	2.40	1.61
37 Clerical/custodial/paraprof.	1.87	1.26	1.64	0.91	1.93	1.23	1.86	1.20
38 Family problems	2.53	1.80	2.40	1.71	1.95	1.41	2.31	1.66
39 Health problems	2.33	1.52	2.08	1.44	1.86	1.37	2.12	1.46
40 Financial problems	3.24	2.00	3.12	1.99	3.41	2.02	3.27	1.99

1 = Low stress

7 = High stress

TABLE IX
RANKING OF STRESS VARIABLES BY THE TOTAL POPULATION OF MUSIC TEACHERS^a

Rank	Stress Variable	Stress Score ^b
1	Inadequate salary	796
2	Career Ladder Program	759
3	Unmotivated students	749
4	Low status of the profession	720
5	Inadequate fringe benefits	704
6	Problem students	698
7	Paperwork/housekeeping	688
8	Interruptions	644
9	Planning/teaching for individual students	637
10	Lack of materials/equipment	619
11	Lack of promotion opportunities	617
12	Lack of planning time	610
13	Noise	602
14	Concerts	591
15	Evaluation	585
16	Inadequate school discipline policy	570
17	Class load	555
18	Student load	551
19	Lack of recognition for work	545
20	Lack of participation in decision making	544
21	Festivals	543
22	Financial problems	527
23	Extracurricular assignments	521
24	Uncertainty about job	504
25	Poor facilities	497
26	Student vandalism	496
27	Community attitude toward program	488
28	Number of school assignments	474
29	Contract negotiations	466
30	Contests	433
31	Risk of involuntary transfer	414
32	Substance abuse by students	404
33	Principal/administration lack of support	399
34	Principal/administration expectations	387
35	Family problems	372
36	Parent conferences/relationships	365
37	Student rapport	360
38	Health problems	341
39	Colleague relationships	331
40	Clerical/custodial/paraprofessional relations	299

^aTotal population was 161.

^bStress score is the composite of all respondents' ratings of the variable on the Likert-type scale of 1 to 7. Highest possible was 1,127 (7 x 161).

TABLE X
RANKING OF STRESS VARIABLES BY GENERAL MUSIC TEACHERS^a

Rank	Stress Variable	Stress Score ^b
1	Career Ladder Program	371
2	Inadequate Salary	364
3	Problem students	354
4	Unmotivated students	351
5	Low status of the profession	327
6	Evaluation	319
7	Student load	316
7	Planning/teaching for individual students	316
9	Class load	314
10	Inadequate fringe benefits	313
11	Lack of planning time	299
12	Inadequate school discipline policy	296
13	Paperwork/housekeeping	295
13	Lack of promotion opportunities	295
15	Concerts	286
16	Lack of materials/equipment	281
17	Noise	277
18	Interruptions	276
19	Uncertainty about job	271
20	Lack of participation in decision making	266
21	Financial problems	256
22	Lack of recognition for work	244
23	Extracurricular assignments	243
24	Contract negotiations	236
24	Risk of involuntary transfer	236
26	Number of school assignments	225
26	Festivals	225
28	Poor facilities	217
29	Community attitude toward program	209
30	Student vandalism	200
30	Family problems	200
32	Principal/administration expectations	193
33	Principal/administration lack of support	184
33	Health problems	184
35	Student rapport	174
36	Parent conferences/relationships	171
37	Colleague relationships	168
38	Clerical/custodial/paraprofessional relations	148
39	Substance abuse by students	137
40	Contests	136

^aNumber of general music teachers was 79.

^bHighest possible stress score was 553 (7 x 79).

TABLE XI
RANKING OF STRESS VARIABLES BY CHORAL MUSIC TEACHERS^a

Rank	Stress Variable	Stress Score ^b
1	Unmotivated students	131
2	Paperwork/housekeeping	127
3	Low status of the profession	123
4	Inadequate salary	119
4	Career Ladder Program	119
6	Interruptions	116
7	Concerts	105
7	Problem students	105
9	Noise	102
10	Festivals	101
11	Inadequate fringe benefits	100
12	Planning/teaching for individual students	98
13	Lack of planning time	96
13	Contests	96
15	Extracurricular assignments	91
15	Evaluation	91
17	Substance abuse by students	90
18	Lack of materials/equipment	87
18	Community attitude toward program	87
20	Lack of promotion opportunities	86
20	Student vandalism	86
22	Lack of recognition for work	84
23	Class load	83
24	Lack of participation in decision making	79
25	Student load	78
25	Financial problems	78
27	Poor facilities	76
28	Contract negotiations	68
29	Number of school assignments	67
30	Uncertainty about job	65
31	Inadequate school discipline policy	62
32	Principal/administration lack of support	61
33	Risk of involuntary transfer	60
33	Family problems	60
35	Student rapport	58
36	Principal/administration expectations	55
37	Parent conferences/relationships	54
38	Health problems	52
39	Colleague relationships	46
40	Clerical/custodial/paraprofessional relations	41

^aNumber of choral music teachers was 25.

^bHighest possible stress score was 175 (7 x 25).

TABLE XI.1
RANKING OF STRESS VARIABLES BY INSTRUMENTAL MUSIC TEACHERS^a

Rank	Stress Variable	Stress Score ^b
1	Inadequate salary	311
2	Inadequate fringe benefits	288
3	Low status of the profession	269
4	Career Ladder Program	266
5	Unmotivated students	263
6	Paperwork/housekeeping	259
7	Lack of materials/equipment	250
8	Interruptions	248
9	Lack of promotion opportunities	235
10	Problem students	234
11	Planning/teaching for individual students	218
12	Noise	217
13	Lack of recognition for work	216
14	Festivals	213
15	Lack of planning time	211
16	Inadequate school discipline policy	210
17	Student vandalism	209
18	Poor facilities	201
19	Contests	200
20	Lack of participation in decision making	198
21	Concerts	196
22	Community attitude toward program	191
22	Financial problems	191
24	Extracurricular assignments	184
25	Number of school assignments	181
26	Substance abuse by students	176
27	Evaluation	172
28	Uncertainty about job	167
29	Contract negotiations	161
30	Student load	155
31	Principal/administration lack of support	153
32	Class load	151
33	Parent conferences/relationships	139
34	Principal/administration expectations	138
35	Student rapport	126
36	Risk of involuntary transfer	117
37	Colleague relationships	116
38	Family problems	109
39	Clerical/custodial/paraprofessional relations	108
40	Health problems	104

^aNumber of instrumental music teachers was 56.

^bHighest possible stress score was 392 (7 x 56).

TABLE XIII

COMPARATIVE RANKINGS OF THE TOP TEN STRESS VARIABLES BY
TOTAL SAMPLE, GENERAL, CHORAL, AND INSTRUMENTAL

Variable	Total Sample Ranking	General Ranking	Choral Ranking	Instrumental Ranking
Inadequate salary	1	2	4	1
Career Ladder Program	2	1	5	4
Unmotivated students	3	4	1	5
Low status of profession	4	5	3	3
Inadequate fringe benefits	5	10	11	2
Problem students	6	3	7	10
Paperwork/ housekeeping	7	13	2	6
Interruptions	8	18	6	8
Planning/teaching for individual student needs	9	7	12	11
Lack of materials/ equipment	10	16	18	7

Those stress variables ranked in the top ten that were unique to general music teachers were: evaluation, student load, planning/teaching for individual student needs, and class load. Evaluation was ranked 15th by choral teachers and 27th by instrumental teachers. Student load was ranked 25th by choral teachers and 30th by instrumental teachers. Planning/teaching for individual student needs was ranked 12th by choral teachers and 11th by instrumental teachers. Class load was ranked 23rd by choral teachers and 32nd by instrumental teachers.

Those stress variables ranked in the top ten that were unique to choral teachers were: concerts, noise, and festivals. Concerts was ranked 15th by general teachers and 21st by instrumental teachers. Noise was ranked 17th by general teachers and 12th by instrumental teachers. Festivals was ranked 26th by general teachers and 14th by instrumental teachers.

Those stress variables ranked in the top ten that were unique to instrumental teachers were: lack of materials/equipment and lack of promotion opportunities. Lack of materials/equipment was ranked 16th by general teachers and 18th by choral teachers. Lack of promotion opportunities was ranked 13th by general teachers and 20th by choral teachers.

Other stress variables which showed a disparity in ranking by the three groups of teachers are shown in Table XIV. Lack of recognition for work was ranked 13th by instrumental teachers, while general and choral teachers both ranked this variable 22nd. Inadequate

TABLE XIV

COMPARATIVE RANKINGS OF SELECTED STRESS VARIABLES BY
GENERAL, CHORAL, AND INSTRUMENTAL MUSIC TEACHERS

Stress Variable	Total Ranking	General Ranking	Choral Ranking	Instrumental Ranking
1 Poor facilities	25	28	27	17
7 Extracurricular assignments	23	23	15	24
13 Uncertainty about job	24	19	30	28
16 Risk of involuntary trans.	31	24	33	36
18 Lack of recognition/work	19	22	22	13
25 Contests	30	40	13	19
28 Inadequate sch. discipline	16	12	31	16
29 Student vandalism	26	30	20	17
30 Substance abuse/students	32	39	17	26

school discipline policy was ranked 12th by general teachers, 16th by instrumental teachers, and 21st by choral teachers. Student vandalism was ranked 17th by instrumental teachers, 20th by choral teachers, and 13th by general teachers. Poor facilities was ranked 17th by instrumental teachers, 27th by choral teachers, and 28th by general teachers. Contests was ranked 13th by choral teachers, 19th by instrumental teachers, and 40th by general teachers. Extracurricular assignments was ranked 15th by choral teachers, 23rd by general teachers, and 24th by instrumental teachers. Substance abuse was ranked 17th by choral teachers, 26th by instrumental teachers, and 39th by general teachers. Uncertainty about job was ranked 19th by general teachers, 28th by instrumental teachers, and 30th by choral teachers. Risk of involuntary transfer was ranked 24th by general teachers, 33rd by choral teachers, and 36th by instrumental teachers.

In response to the question asked at the end of the stress variables regarding additional stressors not included in the list that were stressful to the respondents, 71 items were added by respondents. A compilation of similar items produced 28 items. Forty-four of the original 71 items were ranked very stressful (7 on the scale) by respondents. A list of these additional stressors may be found in Appendix F.

Difference in Perceptions of the Panel of Experts and Music Teachers

The list of stress variables on the survey sent to teachers contained two more items than the one sent to the panel of experts. This

was a result of suggestions made by the panel of experts regarding the contents of the survey. The two additions consisted of further specifying the principal/administration item to include principal/-administration lack of support and principal/administration expectations. Also added was an item called financial problems. Table XV shows a list of the 40 variables from the final version of the survey, and the rank given by the teachers and panel of expert members for each variable. Those variables which were ranked similarly by the two groups are as follows:

1. Paperwork/housekeeping
2. Interruptions
3. Noise
4. Festivals
5. Parent conferences/relationships
6. Extracurricular assignments
7. Contract negotiations
8. Risk of involuntary transfer
9. Clerical/custodial/paraprofessional relationships
10. Community attitude toward program
11. Substance abuse by students

Those variables which were ranked the most dissimilarly by the two groups are as follows:

1. Health problems
2. Number of school assignments
3. Uncertainty about job

TABLE XV

A COMPARISON OF PERCEPTIONS OF THE PANEL OF EXPERTS
AND TEACHERS REGARDING STRESS VARIABLES

Stress Variable	Teacher Ranking	Panel of Experts Ranking
1 Poor facilities	25	20
2 Student load	18	2
3 Class load	17	2
4 Lack of materials/equipment	10	14
5 Lack of planning time	12	2
6 Number of school assignments	28	2
7 Extracurricular assignments	23	25
8 Interruptions	8	9
9 Noise	13	14
10 Paperwork/housekeeping	7	7
11 Inadequate salary	1	9
12 Inadequate fringe benefits	5	20
13 Uncertainty about job	24	1
14 Contract negotiations	29	31
15 Evaluation	15	2
16 Risk of involuntary transfer	31	33
17 Community attitude toward program	27	30
18 Lack of recognition for work	19	14
19 Low status of teaching profession	4	20
20 Lack of promotion opportunities	11	25
21 Career Ladder Program	2	9
22 Lack of participation in decisions	20	27
23 Festivals	21	20
24 Concerts	14	27
25 Contests	30	9
26 Problem students	6	14
27 Unmotivated students	3	14
28 Inadequate school discipline policy	16	7
29 Student vandalism	26	35
30 Substance abuse by students	32	35
31 Planning/teaching for individuals	9	27
32 Student rapport	37	33
33 Colleague relationships	39	31
34 Parent conferences/relationships	36	35
35 Principal/administration lack of support	33	14
36 Principal/administration expectations	34	14
37 Clerical/custodial/paraprof. relationships	40	38
38 Family problems	35	24
39 Health problems	38	9
40 Financial problems	22	--

4. Contests
5. Principal/administrator (lack of support, expectations)
6. Student load
7. Low status of teaching profession
8. Planning/teaching for individual student needs
9. Class load
10. Inadequate fringe benefits

Table XVI shows the highest ranking stress variables for both groups. Because of identical mean scores, some items in the panel of experts list have the same rank. Only four items appear in the highest ranked variables for both groups. These are: paperwork/housekeeping, interruptions, inadequate salary, and Career Ladder Program. None of the top five or six items are the same on both lists.

Coping Strategies Used by Teachers

Teachers were asked to indicate use and effectiveness of 27 coping strategies. A column was provided to indicate those that did not apply to individual respondents. Table XVII shows a list of the coping strategies ranked from most used and effective to least used and effective. The total coping score is the total of all responses on the seven point scale. Four of the coping strategies ranked in the top ten are from the psychological category (religion, reading, situational compartmentalization, and detachment), and six are from the physical category (diet and nutrition, deep breathing, muscle tension/relaxation, sports, aerobic exercise, and crafts). None of the chemical strategies appeared in the top ten ranked items. Forty-eight

TABLE XVI
STRESS VARIABLES RANKED HIGHEST BY THE PANEL OF EXPERTS
AND PUBLIC SCHOOL MUSIC TEACHERS

Items ranked highest by panel of experts	Items ranked highest by teachers
1 Uncertainty about job 2 Student load Class load Lack of planning time Number of school assignments Evaluation 7 Paperwork/housekeeping Inadequate school discipline policy 9 Interruptions Inadequate salary Career Ladder Program Contests Health problems	1 Inadequate salary 2 Career Ladder Program 3 Unmotivated students 4 Low status of profession 5 Inadequate fringe benefits 6 Problem students 7 Paperwork/housekeeping 8 Interruptions 9 Planning/teaching for individuals students 10 Lack of materials/equipment

TABLE XVII

COPING STRATEGIES RANKED BY USE AND EFFECTIVENESS
BY PUBLIC SCHOOL MUSIC TEACHERS

Rank	Coping Strategy	Total Coping Score*	Number of Teachers Using	Number of Teachers Not Using
1	Religion	768	145	16
2	Reading	675	138	23
3	Situational compartmentalization	596	128	33
4	Diet and nutrition	581	133	28
5	Deep breathing	533	135	26
6	Muscle tension/relaxation	519	130	31
7	First sport	508	89	72
8	Aerobic exercise	470	103	58
9	Crafts	388	92	69
10	Detachment	369	94	67
11	Psychological/social withdrawal	351	99	62
12	Meditation	324	86	75
13	Caffeine	321	107	54
14	Second sport	307	54	107
15	Imagery	293	83	78
16	Behavior analysis	219	72	89
17	Alcohol	204	70	91
18	Tobacco	200	64	97
19	Autosuggestion	177	68	93
20	Counseling	174	57	104
21	Painting	169	59	102
22	Biofeedback	146	59	102
23	Third sport	134	25	136
24	Transactional analysis	126	50	111
25	Desensitization	116	50	111
26	Tranquilizers	81	41	120
27	Other drugs	70	38	123

*Highest possible coping score was 1127 (161 x 7). Lowest possible score was 0.

respondents (29.8%) listed at least one additional coping strategy, and a compilation of these by similarities produced 20 items. A list of additional coping strategies may be found in Appendix G. Space was provided on the survey for respondents to list the sports used by them, and 21 sports were listed by respondents. The 10 most used sports were as follows:

1. Walking
2. Tennis
3. Swimming
4. Golf
5. Basketball
6. Softball
7. Fishing
8. Jogging
9. Biking
10. Lifting weights

Additional Data from the Survey

The items on the final page of the survey were related attitudes of teachers about teaching and health problems. The first question asked teachers to indicate on the 7-point scale how stressful they perceived teaching to be. Fifty-eight teachers (36%) rated this question 6 or 7 which indicated extremely stressful. Ninety-five teachers (59%) gave this question a moderate rating of 3, 4, or 5, and eight teachers (5%) gave this question a low stress rating.

When asked how satisfied they were with teaching, 42 teachers (26.1%) indicated that they were extremely satisfied, 101 teachers (62.8%) indicated that they were moderately satisfied, and 18 (11.2%) indicated dissatisfaction with teaching. When asked how stressful they perceived teaching to be to other teachers they knew, 68 teachers (42.3%) indicated that teaching was extremely stressful to other teachers, 90 teachers (55.9%) indicated that teaching was moderately stressful to other teachers, and 3 (1.9%) indicated that teaching was not stressful to other teachers.

Teachers were asked to indicate their plans for the future relative to continuing to teach for the next ten years. They were also asked to state if they planned to leave teaching and why they would leave. Thirty-six teachers (22.3%) indicated that they were extremely likely to continue to teach. Sixty-six teachers (40.9%) indicated that they were moderately likely to continue to teach, and 59 (36.7%) indicated that they were not likely to continue to teach. Seventy teachers (43.5%) listed no plans to leave teaching, and 24 (14.9%) listed retirement as their reason to leave teaching. Twenty-nine teachers (18%) listed salary as their reason to leave teaching, 17 teachers (10.5%) listed the demands of the job, and 10 teachers (6.2%) listed student apathy and discipline. Other reasons among the 18 total reasons included stress, other job interests, frustration, to have a family, and burnout.

Teachers were asked to indicate from a list of 14 health problems those from which they suffer as a result of the stresses of their job.

The health problem affecting the most teachers was fatigue. One hundred sixteen teachers (72%) indicated that they suffered from fatigue. Other conditions ranked as problems for a number of teachers were tension/anxiety (82 teachers or 54.7%), headaches (71 teachers or 44.1%), insomnia (46 teachers or 28.6%), back pain (27 teachers or 16.8%), high blood pressure (25 teachers or 15.5%), and digestive problems (24 teachers or 14.9%).

A question regarding days missed revealed the mean days missed as follows:

1985-86	3.16
1984-85	4.02
1983-84	3.66
1982-83	3.10
1981-82	2.32

With the exception of 1985-86 which was not complete at the time the survey was conducted, the mean days missed by teachers increased each year. The number of teachers missing no days decreased from 65 in 1981-82 to 43 in 1984-85, and 37 in 1985-86.

CHAPTER IV

ANALYSIS AND DISCUSSION OF THE DATA

Introduction

Although stress is considered healthy and necessary in reasonable amounts, extreme and continuous stress to people in any profession can be debilitating, can cause those persons to be less effective, and can eventually lead to burnout if not addressed. Loss of good teachers or loss of effectiveness in good teachers because of unnecessary stress is a cause for concern in the education profession. Research indicates that teachers are leaving their jobs or are continuing to teach in a less effective way because of the effects of stress in their jobs. It is important that we know what factors are stressful to teachers and seek to reduce or eliminate these factors. The purpose of this study was to investigate sources of stress among music teachers in Tennessee and to answer the following questions:

1. What are the perceptions of a panel of experts in education regarding factors which cause stress for music teachers?
2. What factors which cause stress are common to teachers in all three music teaching areas--choral, instrumental, and general music?
3. What factors which cause stress are common to all levels of teaching in the three music areas?
4. What factors which cause stress are unique to each music teaching area and level?

5. Is there a difference in factors which seem to be more stressful to music teachers as compared to the perceptions of the panel of experts?

6. What are some effective ways teachers cope with stress in teaching?

7. Is there a relationship between factors that cause stress and the gender, years of experience, and how likely teachers are to continue to teach?

8. Is there a relationship between factors which cause stress and the teaching area and teaching level of teachers?

9. Is there a relationship between stress and the coping strategies used by teachers?

Questions one through six were answered in Chapter III. Questions seven, eight, and nine will be answered in this chapter; and significant data from the survey will be discussed.

Analysis of the Data

The effects of stress are further complicated and affected by other factors in the lives of teachers. Some of these factors were considered in the study and were analyzed regarding their effect upon the stress variables used in the survey. Stress variables were grouped into five categories: environmental factors, job-related factors, classroom management/student behavior factors, interpersonal factors, and personal factors. These categories were used to analyze the main effects of gender, years of teaching experience, teaching

area, teaching level, how likely teachers were to continue to teach (future plans), and the interactions of these variables. Analysis was also done on the total stressors in relation to these variables. The Scheffe' Post Hoc test was used to attempt to identify and explain differences in means as revealed by the analysis of variances. Frequency tables and various rankings of stress variables were also used to assist in explaining the significance of variables.

Analysis of Gender, Years of Experience, and Future Plans

The analysis of variance for gender, years of experience, and future plans, using the environmental stress score as the dependent variable, is shown in Table XVIII. When the environmental stress score category was the dependent variable, those variables that were significant at the .10 level were years of experience, future plans, the interaction of future plans and years of experience, and the interaction of gender and future plans, thus indicating a relationship of those variables to the environmental stressors. The environmental stressors which were ranked to be the ten most stressful by the total sample of teachers were paperwork/housekeeping, interruptions, and lack of materials/equipment (see Table IX, p. 65). When comparing the rank given these stressors by teaching experience groups of zero to 4 years, 5 to 10 years, and more than 10 years, as is indicated by Table XIX, it is apparent that 20% of the less experienced teachers gave the environmental stressors a high rating, while fewer of the more experienced teachers rated these stressors high. Since there

TABLE XVIII

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF GENDER, YEARS OF EXPERIENCE, AND FUTURE PLANS
ON ENVIRONMENTAL STRESS SCORES

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Gender	1	0.716	0.72	0.3984
Years of experience	1	7.595	7.62	0.0066*
Future plans	6	12.678	2.12	0.0552*
Gender and years of experience	1	0.893	0.90	0.3456
Future plans and years of experience	6	20.059	3.35	0.0041*
Gender and future plans	6	18.150	3.03	0.0082*
Years of experience, gender, and future plans	6	7.565	1.26	0.2781

*Significant at the .10 level.

TABLE XIX
FREQUENCIES AND PERCENTAGES OF LOW AND HIGH RATINGS
OF TEACHERS BY EXPERIENCE FOR THE ENVIRONMENTAL
STRESS CATEGORY

Stress Score Category	Years of Experience	Number of Teachers	Frequency	%	Scale Rating ^a
Environmental	0-4	25	4	20.0	Low ^b
	5-10	46	14	30.4	Low
	10+	90	27	30.0	Low
	0-4	25	5	20.0	High ^c
	5-10	46	5	10.9	High
	10+	90	7	7.8	High

^aPossible scale rating was 1-7. "Does not apply" was assigned the value 0.

^bLow rating was 1 to 2.9.

^cHigh rating was 5 to 6.2.

were very few ratings of 7 in the total score for each variable, a decision was made to use 5 and above as the range for the high rating. The high range in Table XIX and subsequent tables reflects the actual range for each stress score category. The range for the low rating was 2.9 and below, and the low rating in Table XIX and subsequent tables reflect the actual range for each stress score category.

When teachers answered the question regarding their future plans for teaching during the next ten years, it was found that when ratings 1 and 2 were combined (not likely to continue), 59 teachers (36.7%) were not very likely to continue to teach, as is shown in Table XX. When ratings 6 and 7 were combined (very likely), it was found that 36 teachers (22.3%) were very likely to continue to teach. One of the frequent reasons for leaving teaching given by teachers was demands of the job, which could be classified as an environmental stressor.

Gender did not appear significant in the analysis of variance except as it interacted with future plans. Environmental stress variables found in the 15 highest ranked variables were very closely ranked by both genders, as is illustrated by Table XXI.

When the job-related stress score was the dependent variable, those variables that were significant at the .10 level were years of experience, the interaction of future plans and years of experience, and the interaction of gender and future plans, as shown by Table XXII. The job-related stressors which were ranked to be the ten most stressful were inadequate salary, Career Ladder Program, low

TABLE XX

ATTITUDES OF TEACHERS REGARDING THEIR PLANS TO CONTINUE
TO TEACH IN THE NEXT TEN YEARS

Rating Scale		Frequency	%
Not Likely	1	37	23.0
	2	22	13.7
Moderately Likely	3	20	12.4
	4	20	12.4
	5	26	16.1
Very Likely	6	20	12.4
	7	16	9.9

TABLE XXI

A COMPARISON OF RANKINGS OF SELECTED ENVIRONMENTAL
STRESS VARIABLES BY MALE AND FEMALE TEACHERS

Stress Variable	Male Ranking	Female Ranking
Inadequate salary	1	1
Career Ladder Program	3	2
Unmotivated students	2	3
Low status of profession	5	5
Inadequate fringe benefits	4	6
Problem students	8	4
Paperwork/housekeeping	6	7
Interruptions	7	13
Planning/teaching for individual students	12	8
Lack of materials/equipment	9	12
Lack of promotion opportunities	10	14
Lack of planning time	16	9

TABLE XXII

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF GENDER, YEARS OF EXPERIENCE, AND FUTURE PLANS
ON JOB-RELATED STRESS SCORES

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Gender	1	0.274	0.26	0.6099
Years of experience	1	5.043	4.81	0.0300*
Future plans	6	10.919	1.74	0.1173
Gender and years of experience	1	1.970	1.88	0.1727
Future plans and years of experience	6	24.614	3.91	0.0012*
Gender and future plans	6	15.495	2.46	0.0272*
Years of experience, gender, and future plans	6	2.122	0.34	0.9160

*Significant at the .10 level.

status of the profession, and inadequate fringe benefits (see Table IX, p. 65). Table XXIII indicates that job-related stressors were less stressful to experienced teachers than to those teachers with less experience. Six of the 25 less experienced teachers (24%) gave the job-related stressors a high rating, while only 8.7% and 8.9% of more experienced teachers gave the job-related stressors a high rating. The gender and future plans variables were not significant as main effects but were significant in interactions with years of experience.

Table XXIV shows that when the classroom management stress score was the dependent variable none of the independent variables were significant in main effects. The interaction of future plans and years of experience showed that in combination these variables were significant. The classroom management stressors which were ranked as the ten most stressful by the total sample of teachers were unmotivated students, problem students, and planning/teaching for individual students (see Table IX).

When the interpersonal stress score was the dependent variable, years of experience was significant at the .10 level, as illustrated by Table XXV. Table XXVI shows that, when comparing the rank given these stressors by teaching experience groups, some difference may be seen. A somewhat higher percent of less experienced teachers gave the interpersonal stress scores a higher rating, although none of the experience groups rated them at 6 or 7 on the stress scale. Although future plans was not significant in itself, it was significant in combination with years of experience. There were no interpersonal

TABLE XXIII
 FREQUENCIES AND PERCENTAGES OF LOW AND HIGH RATINGS
 OF TEACHERS BY EXPERIENCE FOR THE JOB-RELATED
 STRESS CATEGORY

Years of Experience	Number of Teachers	Frequency	%	Scale Rating ^a
0-4	25	7	28.0	Low ^b
5-10	46	17	36.9	Low
10+	90	32	35.6	Low
0-4	25	6	24.0	High ^c
5-10	46	4	8.7	High
10+	90	8	8.9	High

^aPossible scale was 1-7. "Does not apply" was assigned the value 0.

^bLow rating was 1.3 to 2.9.

^cHigh rating was 5 to 6.4.

TABLE XXIV

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF GENDER, YEARS OF EXPERIENCE, AND FUTURE PLANS
ON CLASSROOM MANAGEMENT STRESS SCORES

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Gender	1	0.203	0.18	0.6716
Years of experience	1	2.750	2.44	0.1205
Future plans	6	4.814	0.71	0.6403
Gender and years of experience	1	2.662	2.36	0.1266
Future plans and years of experience	6	28.234	4.18	0.0007*
Gender and future plans	6	10.643	1.57	0.1593
Years of experience, gender, and future plans	6	4.297	0.64	0.7014

*Significant at the .10 level.

TABLE XXV

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF GENDER, YEARS OF EXPERIENCE, AND FUTURE PLANS
ON INTERPERSONAL STRESS SCORES

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Gender	1	0.656	0.68	0.4106
Years of experience	1	15.583	16.17	0.0001*
Future plans	6	7.594	1.31	0.2554
Gender and years of experience	1	0.239	0.25	0.6188
Future plans and years of experience	6	11.715	2.03	0.0664*
Gender and future plans	6	7.278	1.26	0.2807
Years of experience, gender, and future plans	6	6.276	1.09	0.3743

*Significant at the .10 level.

TABLE XXVI
 FREQUENCIES AND PERCENTAGES OF LOW AND HIGH RATINGS
 OF TEACHERS BY EXPERIENCE FOR THE INTERPERSONAL
 STRESS CATEGORY

Years of Experience	Number of Teachers	Frequency	%	Scale Rating ^a
0-4	25	13	52.0	Low ^b
5-10	46	33	72.0	Low
10+	90	76	84.0	Low
0-4	25	2	8.0	High ^c
5-10	46	2	4.0	High
10+	90	0	0.0	High

^aPossible scale was 1-7. "Does not apply" was assigned the value 0.

^bLow rating was 0.4 to 2.8.

^cHigh rating was 5 to 5.7.

stressors ranked as the ten most stressful by the total sample of teachers.

When the dependent variable was the personal stress score, the variable that was significant at the .10 level was years of experience, as shown by Table XXVII. There were no personal stressors ranked in the ten most stressful by the total sample. When comparing the rank given the personal stressors by teaching experience groups, less experienced teachers ranked them higher, as is illustrated by Table XXVIII. The percentage of teachers giving personal stressors a low rating increased with years of experience.

Table XXIX shows that when the total stress score was the dependent variable years of experience, the interaction of future plans and experience, and gender and future plans were significant at the .10 level. Table XXX indicates some increase in stressfulness of variables as the level of experience decreases. Only 2.2% of more experienced teachers gave the total stress score a high stress rating, while 12% of less experienced teachers gave the total stress score a high rating. Interactions of future plans and years of experience and gender and future plans indicate that they were significantly related to the total stress score in combination.

Years of experience appeared to be the most significant factor related to the various categories of stress variables. Table XXXI indicates that problem students and lack of materials/equipment were ranked higher in degree of stressfulness for less experienced teachers than for more experienced ones. Interruptions appeared to decrease

TABLE XXVII

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF GENDER, YEARS OF EXPERIENCE, AND FUTURE PLANS
ON PERSONAL STRESS SCORES

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Gender	1	1.175	0.65	0.4200
Years of experience	1	6.840	3.81	0.0531*
Future plans	6	7.242	0.67	0.6724
Gender and years of experience	1	1.149	0.64	0.4253
Future plans and years of experience	6	6.883	0.64	0.6990
Gender and future plans	6	10.810	1.00	0.4261
Years of experience, gender, and future plans	6	12.110	1.12	0.3519

*Significant at the .10 level.

TABLE XXVIII
 FREQUENCIES AND PERCENTAGES OF LOW AND HIGH RATINGS
 OF TEACHERS BY EXPERIENCE FOR THE PERSONAL
 STRESS CATEGORY

Years of Experience	Number of Teachers	Frequency	%	Scale Rating ^a
0-4	25	13	52.0	Low ^b
5-10	46	22	47.0	Low
10+	90	59	65.5	Low
0-4	25	3	12.0	High ^c
5-10	46	2	4.3	High
10+	90	3	3.3	High

^aPossible scale was 1-7. "Does not apply" was assigned the value 0.

^bLow rating was 0 to 2.66.

^cHigh rating was 5 to 6.66.

TABLE XXIX

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF GENDER, YEARS OF EXPERIENCE, AND FUTURE PLANS
ON THE TOTAL STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Gender	1	0.007	0.01	0.9129
Years of experience	1	6.304	10.80	0.0013*
Future plans	6	6.118	1.75	0.1150
Gender and years of experience	1	0.309	0.53	0.4677
Future plans and years of experience	6	17.362	4.96	0.0001*
Gender and future plans	6	8.545	2.44	0.0286*
Years of experience, gender, and future plans	6	2.654	0.76	0.6044

*Significant at the .10 level.

TABLE XXX
 FREQUENCIES AND PERCENTAGES OF LOW AND HIGH RATINGS
 OF TEACHERS BY EXPERIENCE FOR THE TOTAL
 STRESS CATEGORY

Years of Experience	Number of Teachers	Frequency	%	Scale Rating ^a
0-4	25	5	20.0	Low ^b
5-10	46	16	34.8	Low
10+	90	34	37.8	Low
0-4	25	3	12.0	High ^c
5-10	46	1	2.2	High
10+	90	2	2.2	High

^aPossible scale was 1-7. "Does not apply" was assigned the value 0.

^bLow rating was 1.4 to 2.98.

^cHigh rating was 5.08 to 5.78.

TABLE XXXI
A COMPARISON OF THE RANKINGS OF STRESS VARIABLES
BY YEARS OF EXPERIENCE

Stress Variables as Ranked by Total Population	0-4 Years of Experience	5-10 Years of Experience	More than 10 Years of Experience
1 Inadequate salary	2	1	2
2 Career Ladder Program	5	4	1
3 Unmotivated students	1	2	4
4 Low status of profession	7	8	3
5 Inadequate fringe benefits	6	3	6
6 Problem students	3	7	8
7 Paperwork/housekeeping	15	5	5
8 Interruptions	17	10	7
9 Planning/teaching for individual students	12	14	9
10 Lack of materials/equipment	4	9	14

in stressfulness with more experience, and the Career Ladder Program was somewhat more stressful to experienced teachers than to less experienced teachers. These facts were corroborated by the Scheffé Post Hoc test. In the test for environmental stress scores there were significant differences between means of teachers who had taught less than 5 years and those who had taught 5 to 10 years. The test for interpersonal stress scores also indicated significant differences between means of teachers who had taught less than 5 years and those who had taught more than 10 years. Total stress score mean differences were significant between teachers who had taught less than 5 years and teachers who had taught more than 10 years, and between teachers who had taught less than 5 years and teachers who had taught 5 to 10 years. All of these were significant at the .05 level.

Analysis for Teaching Area, Teaching Level, and Future Plans

Table XXXII shows that significant variables at the .10 level using the environmental stress score as the dependent variable were future plans and the interaction of teaching area and teaching level. An investigation of the top-ranked stress variables of teachers who rated this variable a 1 (not likely to continue to teach) and the top-ranked stress variables of teachers who rated this variable a 7 (extremely likely to continue to teach) revealed some difference in variable ranking. Table XXXIII compares the ranking of the total sample, the ranking of those teachers who were not likely to continue to teach, and the ranking of those teachers who were likely to continue to

TABLE XXXII

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF TEACHING AREA, TEACHING LEVEL, AND FUTURE PLANS
ON THE ENVIRONMENTAL STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Teaching area	4	1.386	0.29	0.8817
Teaching level	5	2.302	0.39	0.8549
Future plans	6	15.989	2.25	0.0453*
Teaching area and teaching level	8	18.138	1.92	0.0671*
Teaching area and future plans	16	12.966	0.69	0.8010
Teaching level and future plans	28	32.842	0.99	0.4891
Teaching area, teaching level, and future plans	4	11.364	2.40	0.0557

*Significant at the .10 level.

TABLE XXXIII

A COMPARISON OF RANKINGS OF SELECTED STRESS VARIABLES
BY TOTAL SAMPLE, TEACHERS WHO ARE NOT LIKELY TO
CONTINUE TO TEACH, AND TEACHERS WHO ARE LIKELY
TO CONTINUE TO TEACH

Stress Variable	Total Sample Ranking	Not Likely Ranking	Likely Ranking
Inadequate salary	1	2	2
Career Ladder Program	2	3	7
Unmotivated students	3	4	3
Low status of profession	4	1	6
Inadequate fringe benefits	5	6	5
Problem students	6	5	4
Paperwork/housekeeping	7	11	1
Interruptions	8	8	9
Planning/teaching for individual students	9	9	14
Lack of materials/equipment	10	25	11
Noise	13	12	8
Class load	17	19	10
Lack of promotion opportunities	11	7	12
Lack of recognition for work	19	10	22

teach. The first 10 variables were the ones ranked highest (1 to 10) by the total sample. The four variables which follow were ranked highest in one of the other rankings. The Career Ladder Program, low status of profession, lack of promotion opportunities, and lack of recognition for work were ranked higher and more stressful by teachers who were not likely to continue to teach than by the total sample or by teachers who were likely to continue to teach. Teachers who were likely to continue ranked paperwork/housekeeping, noise, and class load higher than either the total sample or teachers who were not likely to continue to teach. Those variables which were in the environmental category were paperwork/housekeeping, lack of materials/equipment, noise, and class load.

When the dependent variable was the job-related stress score, teaching area and the interaction of teaching level and future plans were significant at the .10 level, as illustrated by Table XXXIV. Table XXXV shows that teachers in the instrumental area found job-related stress variables more stressful than teachers in the general and choral areas. General music teachers found job-related stress variables less stressful than both choral and instrumental teachers. Although teaching level and future plans were not significant as main effects, they were significant in combination. Job-related stressors ranked high by teachers were inadequate salary, Career Ladder Program, low status of the profession, and inadequate fringe benefits. Table XXXVI shows the means for the total sample and each teaching area of scores in each stress variable category. Mean scores are

TABLE XXXIV

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF TEACHING AREA, TEACHING LEVEL, AND FUTURE PLANS
ON THE JOB-RELATED STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Teaching area	4	8.656	2.09	0.0893*
Teaching level	5	8.567	1.65	0.1547
Future plans	6	4.375	0.70	0.6479
Teaching area and teaching level	8	14.084	1.70	0.1102
Teaching area and future plans	16	17.941	1.08	0.3850
Teaching level and future plans	28	42.934	1.48	0.0867*
Teaching area, teaching level, and future plans	4	5.568	1.34	0.2608

*Significant at the .10 level.

TABLE XXXV

FREQUENCIES AND PERCENTAGES OF LOW AND HIGH RATINGS
OF TEACHERS BY TEACHING AREA FOR THE JOB-RELATED
STRESS CATEGORY

Years of Experience	Number of Teachers	Frequency	%	Scale Rating ^a
General	79	31	39.2	Low ^b
Choral	25	7	28.0	Low
Instru.	56	17	30.3	Low
General	79	6	7.6	High ^c
Choral	25	1	4.0	High
Instru.	56	11	19.6	High

^aPossible scale was 1-7.

^bLow rating was 1-2.

^cHigh rating was 5-7.

TABLE XXXVI

MEAN SCORES OF THE STRESS CATEGORIES FOR THE
TOTAL POPULATION AND BY TEACHING AREA

Stress Score Category	Total Population Mean Score	General Mean Score	Choral Mean Score	Instrumental Mean Score
Environmental	3.58	3.47	3.69	3.67
Job-related	3.61	3.46	3.69	3.81
Classroom management	3.47	3.31	3.60	3.66
Interpersonal	2.12	2.19	2.06	2.34
Personal	2.57	2.70	2.53	2.40
Total	3.32	3.22	3.38	3.46

generally lower for general music teachers than for choral and instrumental.

Table XXXVII shows that the interaction of teaching level and future plans was significant at the .10 level when classroom management was the dependent variable. There were no significant main effects. Classroom management stressors ranked high by teachers were unmotivated students and problem students.

When the interpersonal stress score was the dependent variable, future plans and the interaction of teaching level and future plans were significant at the .10 level, as shown by Table XXXVIII. No interpersonal stressors were ranked high by teachers. Table XXXIX shows that the interaction of teaching area and teaching level was significant at the .10 level when the dependent variable was the personal stress score, but there were no significant main effects. No personal stressors were ranked high by teachers. Table XL shows that significant variables at the .10 level, using the total stress score as the dependent variable, were the interactions of teaching area and teaching level and teaching level and future plans.

Analysis of the Relationship Between Stress and Coping Strategies

Pearson Product Moment correlations for all stress categories and all coping categories revealed a positive correlation between the chemical coping score and interpersonal stress score ($r = .37153$, $p = .0516$), and between the chemical coping score and personal stress score ($r = .49913$, $p = .0069$). Although these were significant at the

TABLE XXXVII

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF TEACHING AREA, TEACHING LEVEL, AND FUTURE PLANS
ON THE CLASSROOM MANAGEMENT STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Teaching area	4	4.657	1.15	0.3400
Teaching level	5	6.745	1.33	0.2595
Future plans	6	4.122	0.68	0.6687
Teaching area and teaching level	8	13.489	1.66	0.1194
Teaching area and future plans	16	16.644	1.02	0.4395
Teaching level and future plans	28	55.373	1.95	0.0099*
Teaching area, teaching level, and future plans	4	7.347	1.81	0.1342

*Significant at the .10 level.

TABLE XXXVIII

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF TEACHING AREA, TEACHING LEVEL, AND FUTURE PLANS
ON THE INTERPERSONAL STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Teaching area	4	4.618	1.20	0.3151
Teaching level	5	1.179	0.25	0.9409
Future plans	6	12.297	2.14	0.0570*
Teaching area and teaching level	8	8.335	1.09	0.3805
Teaching area and future plans	16	15.330	1.00	0.4658
Teaching level and future plans	28	49.339	1.84	0.0170*
Teaching area, teaching level, and future plans	4	0.554	0.14	0.9651

*Significant at the .10 level.

TABLE XXXIX

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF TEACHING AREA, TEACHING LEVEL, AND FUTURE PLANS
ON THE PERSONAL STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Teaching area	4	2.961	0.43	0.7898
Teaching level	5	5.688	0.65	0.6592
Future plans	6	7.221	0.69	0.6566
Teaching area and teaching level	8	28.656	2.06	0.0484*
Teaching area and future plans	16	40.046	1.44	0.1424
Teaching level and future plans	28	40.007	0.82	0.7168
Teaching area, teaching level, and future plans	4	4.320	0.62	0.6487

*Significant at the .10 level.

TABLE XL

ANALYSIS OF VARIANCE FOR MAIN EFFECTS AND INTERACTIONS
OF TEACHING AREA, TEACHING LEVEL, AND FUTURE PLANS
ON THE TOTAL STRESS SCORE

Variables	Degrees of Freedom	Sum of Squares	F Value	Probability of F
Teaching area	4	3.090	1.26	0.2924
Teaching level	5	2.694	0.88	0.4995
Future plans	6	5.340	1.45	0.2049
Teaching area and teaching level	8	9.678	1.97	0.0594*
Teaching area and future plans	16	10.487	1.07	0.3975
Teaching level and future plans	28	25.968	1.51	0.0754*
Teaching area, teaching level, and future plans	4	3.929	1.60	0.1814

*Significant at the .10 level.

.10 level, further investigation showed that all of these scores were very small in comparison to other stress and coping scores. The mean for the chemical coping score was 1.18, and the means for the interpersonal and personal stress scores were 2.41 and 2.94 respectively. These were the lowest mean scores in the two categories of scores. Also, all interpersonal stressors and chemical coping strategies were ranked very low by respondents. Thus, the correlations do not appear to be extremely important.

Another way of analyzing the relationship between stress and coping strategies was utilized to determine which coping strategies were the most used and effective by low stress teachers. Teachers were assigned total stress scores which were the total of the responses on the rating scale for each stress variable. The stress scores were then divided into the following categories by a frequency distribution bar chart: low stress, moderate stress, and high stress, with low stress scores ranging from 0 to 110, moderate stress scores ranging from 111 to 170, and high stress scores ranging from 171 to 280. There were 42 teachers in the low stress group, 100 in the moderate stress group, and 19 in the high stress group. Coping strategies were then analyzed by these groups to determine which were the most used and effective by the low stress group. Table XLI shows the 10 most used and effective coping strategies as they were ranked by the total sample and the percentage of teachers in each of the stress groups who rated these 6 or 7 on the scale (considerable relief). Teachers in the low stress group tended to use religion, reading,

TABLE XLI

COPING STRATEGIES USED AND CONSIDERED EFFECTIVE BY
LOW, MODERATE, AND HIGH STRESS GROUPS

Highest Ranked Coping Strategies	Stress Group	Number of Teachers	Frequency*	%
1 Religion	Low	42	20	47.6
	Moderate	100	51	51.0
	High	19	9	47.4
2 Reading	Low	42	19	45.2
	Moderate	100	37	37.0
	High	19	8	42.0
3 Situational Compartmentalization	Low	42	16	38.0
	Moderate	100	26	26.0
	High	19	5	26.3
4 Diet and nutrition	Low	42	13	30.9
	Moderate	100	18	18.0
	High	19	5	26.3
5 Deep breathing	Low	42	10	23.8
	Moderate	100	13	13.0
	High	19	2	10.5
6 Muscle tension/ relaxation	Low	42	10	23.8
	Moderate	100	12	12.0
	High	19	4	21.0
7 Sports	Low	42	19	45.2
	Moderate	100	37	37.0
	High	19	7	36.8
8 Aerobic exercise	Low	42	10	23.8
	Moderate	100	26	26.0
	High	19	7	36.8
9 Crafts	Low	42	10	23.8
	Moderate	100	19	19.0
	High	19	5	26.3
10 Detachment	Low	42	3	7.1
	Moderate	100	12	12.0
	High	19	3	15.8

*Number of teachers rating the coping strategy 6 or 7 (considerable relief).

sports, and situational compartmentalization as predominant coping strategies. Teachers in the moderate stress group tended to use religion, reading, sports, situational compartmentalization, and aerobic exercise as predominant coping strategies. Teachers in the high stress group tended to use those used by the low and moderate groups, and in addition, they used crafts and diet and nutrition as predominant coping strategies. It is possible that those who seem to derive the most relief from coping strategies do so because they concentrate on fewer strategies. Conversely, it is possible that the low stress people need fewer coping strategies because they have less stress. Other than this relationship, there was little to indicate that certain coping strategies are related to the degree of stress in the lives of teachers.

Discussion

In the data there is evidence that there were differences in teachers' and the panel of experts' perceptions of stress in teaching, and that there were differences in stressors in groups by teaching areas, years of experience, and teachers' plans for the future regarding teaching. These differences will be discussed briefly, and health problems and absences will be addressed. A final discussion in this chapter will attempt to answer the question, How stressful do teachers say teaching music is?

A significant factor that appeared to be related to some of the aforementioned differences in groups and opinions was the effect of the

categories of stress items. Table XLII shows a list of the 20 stress variables ranked highest by the total sample, and the category to which each belongs. This list of variables shows that 9 of the 20 stress items were job-related (45%), 7 were environmental (35%), and 4 were in the classroom management category (20%). When examination was made of the list as ranked by the panel of experts shown by Table XLIII, 6 of 19 were job-related (31.6%), 8 were environmental (42.1%), 3 were classroom management (15.8%), 1 was personal (5%), and 1 was interpersonal (5%). Of the top 5 variables ranked by teachers, 4 were job-related, while only 2 variables in the top 6 ranked by the panel of experts were job-related. The panel of experts ranked 4 environmental stressors in the top 6, while the first environmental stressor for teachers was ranked seventh. Although the difference in the 7-point scale used by teachers and the 3-point scale used by the panel of experts may account for some of the disparity, it is evident that job-related stressors were more important to teachers than the panel of experts expected them to be.

The effect of stress categories can also be seen when comparing categories for those not likely to continue to teach with those likely to continue. Table XLIV shows the stress category of the 10 highest stress items as ranked by those not likely to continue to teach. Table XLV shows the stress category of the 10 highest stress items as ranked by those very likely to continue to teach. It can be seen that those not likely to continue to teach found job-related and classroom management stress items to be more stressful than environmental

TABLE XLII

A LIST OF THE TWENTY HIGHEST RANKED STRESS VARIABLES
BY STRESS CATEGORIES AS RANKED BY TEACHERS

Stress Variable and Rank	Stress Category
1 Inadequate salary	Job-related
2 Career Ladder Program	Job-related
3 Unmotivated students	Classroom management
4 Low status of the profession	Job-related
5 Inadequate fringe benefits	Job-related
6 Problem students	Classroom management
7 Paperwork/housekeeping	Environmental
8 Interruptions	Environmental
9 Planning/teaching for individual students	Classroom management
10 Lack of materials/equipment	Environmental
11 Lack of promotion opportunities	Job-related
12 Lack of planning time	Environmental
13 Noise	Environmental
14 Concerts	Job-related
15 Evaluation	Job-related
16 Inadequate school discipline policy	Classroom management
17 Class load	Environmental
18 Student load	Environmental
19 Lack of recognition for work	Job-related
20 Lack of participation in decision making	Job-related

TABLE XLIII

A LIST OF THE NINETEEN HIGHEST RANKED STRESS VARIABLES
BY STRESS CATEGORIES AS RANKED BY THE
PANEL OF EXPERTS

Stress Variable and Rank	Stress Category
1 Uncertainty about job	Job-related
2 Student load	Environmental
Class load	Environmental
Lack of planning time	Environmental
Number of school assignments	Environmental
Evaluation	Job-related
7 Paperwork/housekeeping	Environmental
Inadequate school discipline policy	Classroom management
9 Interruptions	Environmental
Inadequate salary	Job-related
Career Ladder Program	Job-related
Contests	Job-related
Health problems	Personal
14 Lack of materials/equipment	Environmental
Noise	Environmental
Lack of recognition for work	Job-related
Problem students	Classroom management
Unmotivated students	Classroom management
Principal/administration	Interpersonal

TABLE XLIV

A LIST OF THE TEN HIGHEST RANKED STRESS VARIABLES
BY STRESS CATEGORIES AS RANKED BY THOSE
NOT LIKELY TO CONTINUE TO TEACH

Stress Variable and Rank	Stress Category
1 Low status of the profession	Job-related
2 Inadequate salary	Job-related
3 Career Ladder Program	Job-related
4 Unmotivated students	Classroom management
5 Problem students	Classroom management
6 Inadequate fringe benefits	Job-related
7 Lack of promotion opportunities	Job-related
8 Interruptions	Environmental
9 Planning/teaching for individual students	Classroom management
10 Lack of recognition for work	Job-related

TABLE XLV

A LIST OF THE TEN HIGHEST RANKED STRESS VARIABLES
BY STRESS CATEGORIES AS RANKED BY THOSE
VERY LIKELY TO CONTINUE TO TEACH

Stress Variable and Rank	Stress Category
1 Paperwork/housekeeping	Environmental
2 Inadequate salary	Job-related
3 Unmotivated students	Classroom management
4 Problem students	Classroom management
5 Inadequate fringe benefits	Job-related
6 Low status of the profession	Job-related
7 Career Ladder Program	Job-related
8 Noise	Environmental
9 Interruptions	Environmental
10 Class load	Environmental

stressors. Six of the 10 highest ranked items were job-related (60%), and 3 were classroom management items (30%), while only 1 was environmental (10%). Of those likely to continue to teach, 4 job-related items (40%) were in the top ten ranked items, 4 environmental items (40%) were in the top ten, and 2 classroom management items (20%) were in the top ten ranked items. It is apparent that job-related stressors, i.e., those which reflect how teachers feel they are valued by their school system and the public, were the primary reasons teachers would leave the teaching profession.

When comparisons were made of the three music teaching areas, there were stress variables unique to each. General music teachers, who were primarily at the elementary level, ranked the Career Ladder as the most stressful of all of the stress variables. They also ranked evaluation 6th, while choral and instrumental teachers ranked it 16th or 27th. It is likely that choral and instrumental teachers feel less stress from evaluation because their programs are constantly evaluated because of the number of public performances usually associated with these areas. They also apparently separate evaluation from the Career Ladder Program, even though evaluation is a part of the Career Ladder Program, since this stress variable was ranked 4th or 5th. Both evaluation and the Career Ladder Program represent a factor of accountability with which most general music teachers have not had to contend to a great extent in the past. Student load and class load were also more stressful for general music teachers, which was to be expected, since many of them teach as many as ten classes and 200 to

300 students in a day. Also, because of the student and class load, planning/teaching for individual student needs was a high-ranking source of stress.

Choral teachers ranked concerts, noise, and festivals to be more stressful than did general or instrumental teachers. General teachers participate in fewer concerts and festivals than do choral teachers, but instrumental teachers probably participate in as many, if not more, than do choral teachers; and it was surprising to find that these were more stressful for choral teachers. The higher ranking of the noise stress variable is perhaps due to the fact that choral teachers work with voices rather than instruments and find that any outside noise creates a problem in hearing what they need to hear.

Instrumental teachers indicated that lack of materials/equipment and lack of promotion opportunities were more stressful to them than was apparent for general and choral teachers. The kinds of equipment required for many band programs and the cost involved prohibits many instrumental teachers from having the materials and equipment which they feel is necessary. Thus, the lack of these items would be quite stressful. The high rank given to lack of promotion opportunities indicated that this is apparently more important to instrumental teachers than to choral or general teachers. Instrumental teachers ranked this stressor 9th, while choral and general teachers ranked it 20th and 14th, respectively. Although all three teaching areas had a high percentage of job-related stress variables in the top ten ranked variables, the first four stressors for instrumental teachers were job-related,

while general and choral teachers also had classroom management and/or environmental stressors in the top four.

Less experienced teachers (less than 5 years) tended to rate items to be more stressful than did more experienced teachers. Table XLVI shows the mean score of the highest ranked stressors for each experience group. The means for the less experienced teacher group were higher than for those who were more experienced. There was little difference to be found in teachers with 5 to 10 years experience and teachers who had taught more than 10 years. It is possible that those teachers with the highest amount of stress leave teaching before they become experienced (i.e., teach more than 5 years).

A final question to be considered in this chapter is how stressful teaching appears to be, based on the information given by the teachers who returned the survey. Table XLVII is a summary of the information on stress scores and the means for the stress score categories. The highest possible stress score for an individual teacher was 280 (40×7). The highest individual stress score was 231, and the lowest score was 65. High, moderate, and low stress group ranges were determined by a frequency distribution bar chart. When the stress scores were divided into high, moderate, and low stress groups, the ranges for these groups were as follows: high, 171-280; moderate, 111-170; low, 0-110. There were 19 teachers in the high stress group (11.8%), 100 teachers in the moderate stress group (62.2%), and 42 teachers in the low stress group (26%). The mean for the total stress

TABLE XLVI

A COMPARISON OF MEAN STRESS SCORES OF THE TEN HIGHEST
RANKED STRESS VARIABLES BY EXPERIENCE GROUPS

Rank	Mean Scores for Less Than 5 Years	Mean Scores for 5-10 Years	Mean Scores for More Than 10 Years
1	5.40	5.02	4.86
2	5.36	4.65	4.79
3	5.32	4.43	4.62
4	4.84	4.43	4.44
5	4.68	4.28	4.32
6	4.60	4.15	4.28
7	4.60	4.13	4.17
8	4.40	4.11	4.17
9	4.32	3.91	4.07
10	4.32	3.70	3.89

TABLE XLVII
A SUMMARY OF STRESS SCORE INFORMATION AND MEANS
FOR STRESS SCORE CATEGORIES

Description	Number
Highest possible stress score for an individual teacher	280
Highest stress score	231
Lowest stress score	65
Number of teachers on or above the median	56
% of teachers on or above the median	34.8
Number of teachers in the high stress group	19
% of teachers in the high stress group	11.8
Number of teachers in the moderate stress group	100
% of teachers in the moderate stress group	62.2
Number of teachers in the low stress group	42
% of teachers in the low stress group	26.0
Mean for total stress score (possible score of 7)	3.32
Mean for environmental stress score	3.58
Mean for job-related stress score	3.61
Mean for classroom management stress score	3.47
Mean for interpersonal stress score	2.21
Mean for personal stress score	2.57

score was 3.32, and the means for stress variable categories were as follows: environmental--3.58, job-related--3.61, classroom management--3.47, interpersonal--2.21, and personal--2.57. The three categories that appeared to be the most stressful for the majority of teachers, i.e., environmental, job-related, and classroom management were near the mid-point on the 7-point rating scale.

When the answers to questions one and three on the last page of the survey regarding how stressful teachers perceive teaching to be to themselves and to other teachers are considered, it appears that teachers consider teaching to be quite stressful. Table XLVIII shows that 58 teachers (36%) rated teaching to be extremely stressful, 95 teachers (59%) rated teaching to be moderately stressful, and 8 teachers (5%) rated teaching to be not very stressful. A somewhat higher rating was given on the question regarding stress in other teachers. Sixty-eight teachers (42.3%) rated teaching for other teachers to be extremely stressful, 90 teachers (55.9%) rated teaching for other teachers to be moderately stressful, and 3 teachers (1.9%) rated teaching for others to be not very stressful. It is apparent that many teachers perceive other teachers as being more stressed than they are personally. It is also apparent that, based on teachers' perceptions about stress and on the stress scores derived from the 40 stress items, teachers have reported that teaching is quite stressful for many of them and at least moderately stressful for a majority. A Pearson Product Moment correlation between teachers' answers to the questions,

TABLE XLVIII
TEACHERS' PERCEPTIONS OF HOW STRESSFUL TEACHING IS
TO THEMSELVES AND TO OTHER TEACHERS

Stress Question	Stress Rating	Number of Teachers	%
1. Stressfulness to themselves	Extremely stressful	58	36.0
	Moderately stressful	95	59.0
	Not very stressful	8	5.0
2. Stressfulness to other teachers	Extremely stressful	68	42.3
	Moderately stressful	90	55.9
	Not very stressful	3	1.9

"How stressful is teaching?" and "How likely is it that you will still be a teacher in ten years' time?" indicated a negative correlation ($r = -.35530$, $p = .0635$). Teachers apparently see stress as an important factor in determining whether they will continue to teach, and indicated that the more stressful teaching is, the less likely they are to continue to teach.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS,
AND FINAL OBSERVATIONSIntroduction

The teaching profession is a stressful one, and music teachers are not excluded from this stressfulness. A knowledge of what factors are unduly stressful to music teachers can help administrators to be more effective in alleviating some of the stress among teachers, thereby increasing their effectiveness as teachers. Only through identification of these stress factors can they be reduced or eliminated.

Statement of the Problem

Teachers of music may have problems which are unique to their subject area and which seem to cause undue stress. Some of the problems may be common to all music teachers, and some may be unique to the music teaching area and/or grade level taught.

Purpose of the Study

The purpose of this study was to investigate and identify common sources of undue stress for music teachers in Tennessee. Teachers in the three music teaching areas (general, choral, and instrumental) and the three teaching levels (elementary, middle, and high) were used in the investigation. Also identified were unique stressors associated with each teaching area and level. Ways in which teachers deal with the causes and effects of stress were also identified and reported.

Summary of Findings

Question one: What are the perceptions of a panel of experts in education regarding factors which cause stress for music teachers?

1. The panel of experts ranked uncertainty about job as the most stressful variable for teachers. Other factors ranked high in terms of stress were: student load, class load, lack of planning time, number of school assignments, evaluation, paperwork/housekeeping, and inadequate school discipline policy.

2. The lowest ranking stress variables according to the panel of experts were: clerical/custodial/paraprofessional relationships, parent conferences/relationships, substance abuse by students, student vandalism, risk of involuntary transfer, and student rapport.

Question two: What factors which cause stress are common to all three music teaching areas?

1. The most stressful items reported by teachers were: inadequate salary, Career Ladder Program, unmotivated students, low status of the profession, and inadequate fringe benefits.

2. The stress variables common to all three of the music teaching areas were: inadequate salary, low status of the profession, Career Ladder Program, unmotivated students, and problem students.

3. Four of the top 5 stress variables and 9 of the top 20 (45%) were in the job-related category, i.e., those things which reflect how teachers feel they are valued by the administration and by the public.

Question three: What factors which cause stress are common to all levels of teaching in the three music areas?

Since it was found that the majority of general music teachers were in the elementary and middle grades with much overlapping in the middle grades with choral and since the majority of instrumental teachers were in the middle and secondary grades, only the teaching areas were analyzed. The teaching areas reflect to a great extent the teaching level.

Question four: What factors which cause stress are unique to each music teaching area and level?

1. Those stress variables ranked in the top ten that were unique to general music teachers were: evaluation, student load, planning/teaching for individual student needs, and class load.

2. Those stress variables ranked in the top ten that were unique to choral music teachers were: concerts, noise, and festivals.

3. Those stress variables ranked in the top ten that were unique to instrumental music teachers were: lack of materials/equipment and lack of promotion opportunities.

4. Other differences included the following:

a. Inadequate fringe benefits was more stressful for instrumental teachers (2nd) than for general (10th) or choral (11th).

b. Paperwork/housekeeping was more stressful for choral (2nd) and instrumental (6th) teachers than for general music teachers (13th).

c. Interruptions was a more stressful factor for choral (6th) and instrumental (8th) teachers than for general music teachers (18th).

d. Lack of recognition for work was ranked 13th by instrumental teachers, while general and choral teachers ranked this variable 22nd.

e. Uncertainty about job was ranked 19th by general teachers, 28th by instrumental teachers, and 30th by choral teachers.

Question five: Is there a difference in factors which seem to be more stressful to music teachers, as compared to the perceptions of the panel of experts?

1. There was a considerable difference in the perceptions of the panel of experts and the music teachers regarding the stressfulness of the variables. Only four variables appeared in the ten highest ranked variables for both groups. These were: inadequate salary, Career Ladder Program, paperwork/housekeeping, and interruptions.

2. None of the top five or six variables were the same in the rankings for both groups.

Question six: What are some effective ways teachers cope with stress in teaching?

1. The most used and most effective coping strategies used by teachers were religion, reading, situational compartmentalization, diet and nutrition, deep breathing, muscle tension/relaxation, sports, aerobic exercise, crafts, and detachment.

2. Four of the most used and most effective coping strategies were from the psychological category (religion, reading, situational compartmentalization, and detachment).

3. Six of the most used and effective coping strategies were from the physical category (diet and nutrition, deep breathing, muscle tension/relaxation, sports, aerobic exercise, and crafts).

4. None of the chemical strategies were reported in the top ten ranked strategies.

Question seven: Is there a relationship between factors that cause stress and the gender, years of teaching experience, and how likely teachers are to continue to teach?

1. The analysis indicated that gender was not significantly related to the stress variables. A comparison of stress variables as ranked by both male and female respondents showed very little difference in ranking.

2. Years of teaching experience appeared to be significantly related to the environmental, job-related, interpersonal, personal, and total stress variables. Less experienced teachers ranked problem students and lack of materials/equipment higher than did experienced teachers. Interruptions tended to decrease in stressfulness with experience, and the Career Ladder was somewhat more stressful to experienced teachers than to less experienced teachers. All variables tended to be more stressful for inexperienced teachers.

3. Future plans of teachers, i.e., how likely they are to continue to teach, was a significant variable in the analysis of

environmental stress variables. Thirty-six teachers (22.3%) were extremely likely to continue to teach, 66 teachers (40.9%) were moderately likely to continue to teach, and 59 teachers (36.7%) were not likely to continue to teach. Twenty-four of the teachers (14.9%) indicated plans for retirement as their reason for leaving the teaching profession.

4. Low status of the profession was the top-ranked stress variable of those not likely to continue to teach.

5. Paperwork/housekeeping was the top-ranked stress variable of those likely to continue to teach.

Question eight: Is there a relationship between factors which cause stress and the teaching area and teaching level of teachers in the survey?

1. Instrumental music teachers found all categories of stressors except environmental and personal to be more stressful than general and choral teachers.

2. General music teachers found all stress categories to be less stressful than choral and instrumental teachers, with the exception of the personal category.

3. Job-related and environmental stressors were the highest ranked categories, with classroom management being third.

4. The analysis of variance showed a relationship between teaching area and job-related variables.

Question nine: Is there a relationship between stress and the coping strategies used?

1. Teachers in low, moderate, and high stress groups tended to use some of the same coping strategies. The only difference noted was that higher stressed teachers used more coping strategies.

2. Coping strategies used most by low stress teachers were: religion, reading, sports, and situational compartmentalization.

3. Coping strategies used most by moderate stress teachers were: religion, reading, sports, situational compartmentalization, and aerobic exercise.

4. Coping strategies used most by high stress teachers were: religion, reading, sports, situational compartmentalization, aerobic exercise, crafts, and diet and nutrition.

Conclusions

The findings of the study present evidence to suggest certain conclusions. Based upon the data gathered and analyzed, the following conclusions were reached:

1. There is apparently a lack of communication between music teachers and people who work with them, i.e., administrators and college teachers. It may also be true that the factors teachers verbalize as being problems are not really the things that bother them the most.

2. Factors which relate to how a teacher is valued by the administration and by the public are the most stressful to teachers.

3. Although many music classes at the middle school/junior high level and high school level are elective, motivation and student behavior problems exist for teachers at all levels of teaching.

4. Despite attempts made periodically by the State of Tennessee and by local school systems to deal with the problem, salaries and fringe benefits for teachers do not reflect a regard for teachers as professionals.

5. For music teachers, the Career Ladder Program is not accomplishing its intended goals to improve morale, change the perceptions of the public toward the teaching profession, and reward financially those teachers who are outstanding.

6. Unless changes are made, education will continue to be a less desirable profession than many others because of its low status.

7. The scheduling of music programs at the elementary level is an important factor in how stressful teaching is perceived by music teachers.

8. The requirements of the job of teaching music at the three levels and in the three areas and the organization of the school and school programs may have an impact on how stressful teaching music is perceived by music teachers in the various areas and levels.

9. There is a lack of understanding between administrators and music teachers about the role of music teachers and what is involved in teaching music.

10. Music educators are attempting to solve problems related to stress through the traditional means of physical and psychological coping strategies.

11. The longer music educators remain in the profession the more likely they are able to cope with the problems of teaching.

12. Music educators are likely to continue to leave teaching because of job-related factors unless efforts are made to deal with these factors.

13. The degree of stress a teacher perceives tends to be inversely related to the number of coping strategies utilized.

Recommendations

1. Administrators and college teachers who work with music teachers should seek to become more cognizant of factors that are stressful to teachers. This could be accomplished through closer linkages among colleges, school systems, and teachers, and through an interchange of personnel.

2. School administrators and the general public should make an effort to see that teachers are adequately compensated and complimented for those things which they do well. Efforts should be made to continue to improve salaries and to provide positive feedback as well as constructive criticism.

3. Some teacher in-service should be directed at student motivation.

4. Teacher training programs at both undergraduate and graduate levels should provide help for teachers in creating a climate that allows for student motivation.

5. Efforts should be made by school administrators and by the State Department of Education to continue to improve the Career Ladder Program and to educate teachers regarding the changes and

improvements. Those who make decisions regarding the Career Ladder Program should investigate the reasons for the stressfulness of the program and make the changes necessary for the program to accomplish its goals.

6. Student and class loads at the elementary level should be reduced so that teaching at that level can be less stressful and more effective.

7. General music teachers, especially at the elementary level, should work with their administrators to understand the evaluation process better so that they can feel more comfortable with it. Administrators should become more knowledgeable about what music teachers teach.

8. Administrators need to explore new ways of scheduling so that music teachers can be utilized in the most effective way for teaching music. Music teachers should be given a reasonable teaching load (eight or nine classes per day at the elementary level) and should be able to see students two or three times per week to be effective.

9. Teacher training programs should provide more opportunities for prospective teachers to be in schools and classrooms so that they are aware of what they can expect to find as a teacher.

10. Teachers should be encouraged to utilize coping strategies for stress, and opportunities should be provided by schools and school systems to develop and utilize these strategies. Fitness programs and nutritional information, in-service workshops focusing on problems in teaching which cause stress, strategies to improve self-images,

assertive discipline, an insurance program to protect teachers who suffer disabilities due to stress, and a counseling program are possible opportunities that could be provided.

11. School administrators and school systems should become knowledgeable about those factors that are stressful to teachers and should develop ways of reducing stress in teaching. Other professions have ongoing programs to help employees deal with stress, while most school systems offer a once-a-year session, if at all.

12. Efforts should be made at both state and local levels to inform the public about the accomplishments of education and its teachers. School systems should employ a public relations person to educate the public and the business and professional community regarding what is happening in schools as a means of upgrading the status of the teaching profession.

13. High stress teachers should be more specific in limiting their choices of coping strategies, and should concentrate on fewer strategies for more effective stress relief.

14. Further research is warranted on the subject of stress in teaching. Some suggested directions and methodologies might be:

a. The relationship of stress to personal factors such as intelligence, verbal skills, personality type, past experience, psychological defenses, and biological and physical sensitivity.

b. The relationship of stress to teacher performance.

c. The relationship of self-reported stress and the physiological measurement of stress.

d. A comparison of factors which cause stress among teachers in other subject areas.

e. A study and/or development of effective programs for helping teachers cope with stress.

f. A long-term study such as ethnographic research using key informant interviews and observation.

g. Studies using control and experimental groups to measure the effects of stress variables and of coping strategies.

Final Observations

The most surprising and potentially useful finding of this study was the considerable difference in the perception of the panel of experts and the teacher respondents regarding the major sources of stress for music teachers in Tennessee. It is apparent that those on whom teachers depend most for help, i.e., administrators and college music educators, do not really know what is stressful to teachers and what their greatest concerns are. Previous research cited in this study revealed a number of stressors among teachers. Of the items cited, teachers indicated that those which were the most stressful were salary, status, student discipline, paperwork, student motivation, and lack of materials. The panel of experts selected uncertainty about job, salary, paperwork, evaluation, and student load as those items which they perceived to be the most stressful to teachers. Only salary and paperwork were selected by both groups. Teachers in Tennessee appear to share some of the concerns of teachers across the

nation, but these shared concerns are different from those anticipated by the panel of experts. For example, student discipline/behavior was ranked in the top ten stressors by teachers and was the most cited stressor in the research, but it appeared at about the midpoint of the list as ranked by the panel of experts. This seems to indicate that the panel of experts was not fully aware of the day-to-day problems of teachers.

It is possible that teachers feel that administrators and college teachers can do little about many of their concerns and therefore do not discuss these concerns with this group of people as much as they should. Whatever the reason for the differences in perception, administrators and college teachers must attempt to find out what are the concerns of teachers and do whatever is possible through their positions of leadership to bring about change. They must solicit this information from teachers individually and collectively through conversations and class or workshop settings. They must become teachers' advocates within the school systems and at the state level to bring about changes that would reduce the stressfulness of such items as salary, the Career Ladder Program, inadequate fringe benefits, paperwork/housekeeping, and lack of materials and equipment.

Supervisors must see that teachers have input into expenditures for materials and equipment and must see that school systems realize the need for adequate materials and equipment in music programs. They must see that paperwork/housekeeping duties include only those that are essential for music programs to operate effectively. They

must provide opportunities for teachers to learn management skills and provide computer training and computers to help them deal with the paperwork involved in managing music programs. They must advocate and implement salary supplements for extra time spent in many music programs, particularly at the high school level. They must see that teachers have adequate professional leave to enable them to take students to festivals and state music activities such as the All-State Chorus, Orchestra, and Jazz Band. They must see that teachers have professional leave for their professional growth through participation in state, regional, and national in-service conferences and conventions and must encourage teachers to attend by providing stipends to help pay expenses. They must advocate and lobby for on-going programs for teachers that will help them reduce or cope with the stresses of teaching. These might include training in and implementation of stress reduction programs such as exercise/sports, diet and nutrition programs, and other coping strategies to help them cope with stress caused by things over which they have no control.

College music educators must provide help in teacher training programs to prepare prospective teachers for the realities of teaching, including such areas as classroom management and student motivation. They must provide opportunities for prospective teachers to visit music classrooms to observe, to teach, and to talk with music teachers. They must provide frequent opportunities for teachers to continue to develop teaching skills and grow as professionals through graduate programs, summer and one-day workshop sessions, and by working with teachers in their schools as a resource.

Both administrators and college teachers need to continue to be involved in teaching in public schools and should spend a designated amount of time in the classroom teaching students frequently. At the same time, teachers could be utilized, particularly in college teacher training programs, to give valuable information and expertise to prospective teachers and to their colleagues. Administrators and college teachers could also develop and implement a mentoring system whereby new and inexperienced teachers would have a mentor with whom they could work closely.

It is very likely that a research study on stress among teachers in other subject areas and at all teaching levels in Tennessee would reveal similar concerns to those found in this study. The fact that almost 22% of music teachers said that they are not likely to continue to teach (not including those who will retire) indicates an alarming potential for a teacher shortage. It is important that administrators and college teacher training educators become more aware of the concerns of teachers and begin to provide the resources that teachers need to make teaching the noble and rewarding profession that it should be.

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APPENDICES

APPENDIX A

LETTER TO SUPERINTENDENTS

3 March 1986

Dear Superintendent

I am Music Consultant in Knox County Schools and work with music teachers in our school system. In an effort to identify problems of music teachers, I am conducting a survey of music teachers throughout the state. I would appreciate having a list of teachers in your system who teach elementary, middle school/junior high, or senior high general, choral, or instrumental music, and a school address for each teacher. These teachers should be those who teach music at least one-half day.

Thank you for your help in this matter.

Sincerely,

A handwritten signature in dark ink, appearing to read "Pat Brown", with a stylized flourish at the end.

Pat Brown

PB/hw

APPENDIX B

LETTER TO PANEL OF EXPERTS

Patricia A. Brown
419 Humphrey Drive
Seymour, Tennessee 37865

February 12, 1986

Dear Colleague:

A few days ago I called and asked you to serve as a member of a Panel of Experts for a survey instrument which I have designed for research. I appreciate your willingness to take time from what I am sure is a busy schedule to assist me in this.

Please read the Sources of Stress section of the enclosed survey and indicate in the left margin how stressful you feel each item is to public school music teachers that you know and/or work with. Use number 1 to indicate low stress, number 2 to indicate moderate stress, and number 3 to indicate extreme stress. Please add any items that you feel are significant that I have omitted.

Please feel free to make any suggestions about the entire document that you feel would help me investigate more accurately causes of stress among public school music educators. Feel free to write on the survey copy.

Also please indicate on the enclosed form your position and teaching experience so that I may verify that you meet the criteria for my panel. These are that you work with teachers as an administrator or at the college level, and that you have had experience as a teacher of general, choral, or instrumental music.

Please return the form and survey to me by February 28 if this is possible.

Thanks so much for your valuable assistance.

Sincerely,



Pat Brown

APPENDIX C

LETTER TO PARTICIPANTS

Patricia A. Brown
419 Humphrey Drive
Seymour, Tennessee 37865

March 24, 1986

Dear Tennessee Music Educator:

Take a coffee break on me and please read on!

I am Music Consultant in the Knox County School System and work with music teachers, after having taught music in our system for a number of years. Because of these facts I am aware that there are many conditions and situations which many of us face as music educators that are stressful. I am interested in identifying some of these sources of stress for Tennessee music educators, and need your help in doing so.

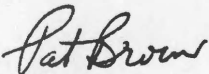
Enclosed is a survey which asks you to indicate what is stressful to you, and also what you do to alleviate stress. It should take you only 10-15 minutes to complete the questions. A self-addressed stamped envelope is enclosed for the return of the survey.

Of course, your participation is voluntary, and your responses will be kept confidential. Data will be reported on a group basis, and individual responses will not be revealed. The survey is coded only to identify follow-up letters for non-respondents.

I hope that you will take time to participate in what I feel will be some important fact-finding for us all.

Please return the survey by April 7, 1986. Thanks so much for your help!

Sincerely,



Pat Brown
Music Consultant
Knox County Schools

APPENDIX D

SURVEY OF MUSIC EDUCATORS

S U R V E Y O F M U S I C E D U C A T O R S

DEMOGRAPHIC DATA

Please indicate appropriate responses.

1. Sex: _____ Male; _____ Female
2. Years of teaching experience: _____ Are you currently teaching music? _____
3. School size: (If more than one school, indicate number in each category)
 _____ under 300; _____ 300-499; _____ 500-699; _____ 700 or more.
4. Location of school(s): (If more than one school, indicate number in each category)
 _____ urban; _____ suburban; _____ rural.
5. Number of schools served: _____ 1; _____ 2; _____ 3; _____ 4 or more.
6. Number of students served in an average day:
 _____ less than 100; _____ 100-200; _____ 200-300; _____ 300 or more.
7. Certification area: _____ School Music (23); _____ Instrumental Music (29); _____ Other (please list) _____
8. Subjects taught: (Please check all that apply)

_____ General Music	_____ Instrumental Music (Band, orchestra, jazz band, etc.)
_____ Choral Music	_____ Music Appreciation
_____ Music Theory	_____ Hand Bells
_____ Guitar	_____ Other (Please list) _____
9. Grade levels taught: (Circle all that apply) K 1 2 3 4 5 6 7 8 9 10 11 12
10. Percentage of time spent at each level (estimate): K-2 _____ ; 3-5 _____ ; 6-8 _____ ; 9-12 _____ .
 Which level do you prefer? _____

11. Percentage of time spent teaching each subject: (should total one hundred percent)

General Music Instrumental Music
 Choral Music Music Appreciation
 Music Theory Hand Bells
 Guitar Other

Which subject(s) do you prefer to teach? _____

12. What kinds of employment other than your teaching job are you involved in (for pay)?

Church Choir Organist/pianist
 Soloist (vocal or instrumental) Private lessons
 Other: Music related; Non-music

* * * * *

SOURCES OF STRESS

Please look at the sources of stress listed below and indicate the degree to which each is stressful to you by circling the appropriate number on the scale. Please respond on the basis of how you feel most of the time.

Source of Stress	Not at all Stressful		Moderately Stressful		Very Stressful		Does not Apply (✓)
1. Poor facilities	1	2	3	4	5	6	7
2. Student load	1	2	3	4	5	6	7
3. Class load	1	2	3	4	5	6	7
4. Lack of materials/equipment	1	2	3	4	5	6	7
5. Lack of planning time	1	2	3	4	5	6	7

	Not at all		Moderately		Very		Does not
	Stressful		Stressful		Stressful		Apply (✓)
6. Number of school assignments	1	2	3	4	5	6	7
7. Extra-curricular assignments	1	2	3	4	5	6	7
8. Interruptions	1	2	3	4	5	6	7
9. Noise - external/internal	1	2	3	4	5	6	7
10. Paperwork/housekeeping	1	2	3	4	5	6	7
11. Inadequate salary	1	2	3	4	5	6	7
12. Inadequate fringe benefits	1	2	3	4	5	6	7
13. Uncertainty about job	1	2	3	4	5	6	7
14. Contract negotiations	1	2	3	4	5	6	7
15. Evaluation	1	2	3	4	5	6	7
16. Risk of involuntary transfer	1	2	3	4	5	6	7
17. Community attitude toward program	1	2	3	4	5	6	7
18. Lack of recognition for work	1	2	3	4	5	6	7
19. Low status of teaching profession	1	2	3	4	5	6	7
20. Lack of promotion opportunities	1	2	3	4	5	6	7
21. Career Ladder Program	1	2	3	4	5	6	7
22. Lack of participation in decision making	1	2	3	4	5	6	7
23. Festivals	1	2	3	4	5	6	7
24. Concerts	1	2	3	4	5	6	7

	Not at all Stressful		Moderately Stressful		Very Stressful		Does not Apply (✓)	
25. Contests	1	2	3	4	5	6	7	
26. Problem students (discipline)	1	2	3	4	5	6	7	
27. Unmotivated students	1	2	3	4	5	6	7	
28. Inadequate school discipline policy	1	2	3	4	5	6	7	
29. Student vandalism	1	2	3	4	5	6	7	
30. Substance abuse by students	1	2	3	4	5	6	7	
31. Planning/teaching to meet individual student needs	1	2	3	4	5	6	7	
32. Student rapport	1	2	3	4	5	6	7	
33. Colleague relationships	1	2	3	4	5	6	7	
34. Parent conferences/relationships	1	2	3	4	5	6	7	
35. Principal/administration (lack of support)	1	2	3	4	5	6	7	
36. Principal/administration (expectations of)	1	2	3	4	5	6	7	
37. Clerical/custodial/paraprofessional relationships	1	2	3	4	5	6	7	
38. Family problems	1	2	3	4	5	6	7	
39. Health problems	1	2	3	4	5	6	7	
40. Financial problems	1	2	3	4	5	6	7	

Please add below any sources of stress that you encounter that are not listed above, and rate each as to their stressfulness to you. Use the back of the page if needed.

41.	1	2	3	4	5	6	7	
42.	1	2	3	4	5	6	7	

WAYS OF COPING WITH STRESS

Listed below are some ways that many people relieve stress. Please look at each and indicate how useful each is to you by circling the appropriate number.

Ways of Relieving Stress	No Relief			Moderate Relief		Considerable Relief	Does not Apply (✓)
1. Deep breathing	1	2	3	4	5	6	7
2. Muscle tension/relaxation	1	2	3	4	5	6	7
3. Diet and nutrition	1	2	3	4	5	6	7
4. Aerobic exercise	1	2	3	4	5	6	7
5. Sports (please list)							
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
6. Painting	1	2	3	4	5	6	7
7. Crafts	1	2	3	4	5	6	7
8. Reading	1	2	3	4	5	6	7
9. Imagery	1	2	3	4	5	6	7
10. Auto-suggestion	1	2	3	4	5	6	7
11. Biofeedback	1	2	3	4	5	6	7
12. Meditation	1	2	3	4	5	6	7
13. Religion	1	2	3	4	5	6	7

<u>Ways of Relieving Stress</u>	<u>No Relief</u>		<u>Moderate Relief</u>		<u>Considerable Relief</u>		<u>Does not Apply (✓)</u>
14. Transactional analysis	1	2	3	4	5	6	7
15. Behavior analysis	1	2	3	4	5	6	7
16. Desensitization	1	2	3	4	5	6	7
17. Counseling	1	2	3	4	5	6	7
18. Detachment	1	2	3	4	5	6	7
19. Situational compartmentalization (separation of work life from home life)	1	2	3	4	5	6	7
20. Psychological/social withdrawal (diminished personal contact)	1	2	3	4	5	6	7
21. Caffeine	1	2	3	4	5	6	7
22. Alcohol	1	2	3	4	5	6	7
23. Tobacco	1	2	3	4	5	6	7
24. Tranquilizers	1	2	3	4	5	6	7
25. Other drugs	1	2	3	4	5	6	7

Please list below any additional stress reduction techniques that you find useful to you, and indicate their effectiveness.

26.	1	2	3	4	5	6	7
27.	1	2	3	4	5	6	7
28.	1	2	3	4	5	6	7

HEALTH AND WORK ATTITUDES

Please answer the following questions regarding your health and your attitude toward your work. Circle the number which best describes the appropriate degree of response, and fill in appropriate blanks.

- | | | | | |
|--|-------------------------------------|---|-------------------------------------|------------------------------------|
| 1. How stressful do you find being a teacher? | Not at all
Stressful
1 2 | 3 | Moderately
Stressful
4 5 | Extremely
Stressful
6 7 |
| 2. Overall, how satisfied are you with teaching? | Not
Satisfied
1 2 | 3 | Moderately
Satisfied
4 5 | Extremely
Satisfied
6 7 |
| 3. How stressful do you think teaching is to other teachers that you know? | Not
Stressful
1 2 | 3 | Moderately
Stressful
4 5 | Extremely
Stressful
6 7 |
| 4. How likely is it that you will still be a teacher in ten years' time? | Not
Likely
1 2 | 3 | Moderately
Likely
4 5 | Extremely
Likely
6 7 |

5. If you plan to leave teaching, please state why. _____

6. From which of the following health problems or chronic conditions do you suffer that you feel are related to the stresses of your work? Check all that apply.

- | | | |
|---|---|--|
| <input type="checkbox"/> Fatigue | <input type="checkbox"/> Insomnia | <input type="checkbox"/> High blood pressure |
| <input type="checkbox"/> Heart disease | <input type="checkbox"/> Anemia | <input type="checkbox"/> Other: please list |
| <input type="checkbox"/> Respiratory problems | <input type="checkbox"/> Digestive problems | _____ |
| <input type="checkbox"/> Headaches | <input type="checkbox"/> Kidney or bladder problems | _____ |
| <input type="checkbox"/> Ulcers | <input type="checkbox"/> Back pain | _____ |
| <input type="checkbox"/> Tension/anxiety | <input type="checkbox"/> Sexual dysfunction | _____ |

7. How many days have you missed work due to illness or extreme stress in the past five years? (estimate)

1985-86 _____ 1984-85 _____ 1983-84 _____ 1982-83 _____ 1981-82 _____

THANKS for completing this survey! PLEASE return by APRIL 7, 1986.

APPENDIX E

PANEL OF EXPERTS

PANEL OF EXPERTS

Dr. Gerald Ballard	Knoxville City Schools
Dr. James Dooley	Western Carolina University
Mrs. Nancy Ferguson	Memphis City Schools
Dr. Solie Fott	Austin Peay State University
Mr. Joe Giles	Tennessee Department of Education
Dr. Carl King	East Tennessee State University
Mr. J. B. Lyle	Knox County Schools
Dr. Sally Monsour	Georgia State University
Miss Gwynelle Spell	Cobb County Schools
Dr. Sandra Stauffer	Peabody Conservatory of Music

APPENDIX F

LIST OF ADDITIONAL STRESSORS

LIST OF ADDITIONAL STRESSORS

1. Problems with coaches
2. Lack of commitment of students
3. Lack of concern of students and parents
4. Administration: disapproval of outside employment, lack of intelligence
5. Class size, teaching load
6. Schedule: no rest time, intensive schedule, lack of time
7. Supervising student teachers
8. Teaching out of certification area
9. No time for myself
10. Carrying materials between schools
11. Grades and grade cards
12. Weather and traffic--travel between schools
13. Lack of support for music in the curriculum
14. Communication
15. Neighbors at home
16. Future professional plans
17. Family demands, time away from family
18. Team teaching
19. Funding, fundraising
20. Class control
21. Educational opportunities--no time or encouragement
22. Making up classes, lack of understanding of classroom teachers
23. Ability grouping
24. School and band trips
25. Professional organization responsibilities
26. Feeder program
27. Lack of confidence
28. Bus duty

APPENDIX G

LIST OF ADDITIONAL COPING STRATEGIES

LIST OF ADDITIONAL COPING STRATEGIES

1. Driving
2. Music: playing guitar, listening, performing, composing
3. Intimate time with wife
4. Family and friends
5. Television
6. Avoid stressful situations
7. Travel/vacation
8. Out-of-doors activities
9. Laughter
10. Gardening
11. Movies
12. Massage
13. Cooking/eating
14. Dancing
15. Hour of silence at the end of the day
16. Sleep
17. Discussion with colleagues
18. A good cry
19. Slow down
20. Time with children

VITA

Patricia Ann Brown is a system-wide consultant in music for the Knox County School system in Knoxville, Tennessee. She was educated in Knox County and received the Bachelor of Science and Master of Science degrees in education from the University of Tennessee in Knoxville. She was awarded the Doctor of Education degree with a major in educational administration and supervision in March 1987, with collaterals in music education and cultural anthropology.

She has taught music at the elementary and middle school levels as a general and choral music teacher, and has served as guest lecturer on general and choral music at the University of Tennessee, Knoxville, and Carson-Newman College, Jefferson City. She is on the part-time music faculty at Carson-Newman College.

Professional affiliations include Music Educators National Conference, Society for General Music (State Chairperson), Tennessee Music Educators Association (Executive Board), East Tennessee Vocal Association (past President), Tennessee Elementary Music Teachers Association, American Choral Directors Association, the United Teaching Profession, Tennessee Association of Middle Schools, Tennessee Association of Supervision and Curriculum Development, East Tennessee Education Association (President), Phi Delta Kappa, and Delta Kappa Gamma.