



SCHOOL of  
GRADUATE STUDIES  
EAST TENNESSEE STATE UNIVERSITY

East Tennessee State University  
**Digital Commons @ East  
Tennessee State University**

---

Electronic Theses and Dissertations

Student Works

---

May 1994

# A Correlational Study of Hardiness, Health, and Burnout among Teachers in the Sullivan County School System

Deborah F. Morelock  
*East Tennessee State University*

Follow this and additional works at: <https://dc.etsu.edu/etd>

 Part of the [Educational Administration and Supervision Commons](#), and the [Other Psychology Commons](#)

---

## Recommended Citation

Morelock, Deborah F., "A Correlational Study of Hardiness, Health, and Burnout among Teachers in the Sullivan County School System" (1994). *Electronic Theses and Dissertations*. Paper 2753. <https://dc.etsu.edu/etd/2753>

This Dissertation - Open Access is brought to you for free and open access by the Student Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact [digilib@etsu.edu](mailto:digilib@etsu.edu).

## **INFORMATION TO USERS**

**This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.**

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

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

**Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.**

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

# **U·M·I**

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

**Order Number 9424176**

**A correlational study of hardiness, health, and burnout among  
teachers in the Sullivan County School System**

**Morelock, Deborah Falin, Ed.D.**

**East Tennessee State University, 1994**

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

A CORRELATIONAL STUDY OF  
HARDINESS, HEALTH, AND BURNOUT  
AMONG TEACHERS  
IN THE SULLIVAN COUNTY  
SCHOOL SYSTEM

---

A Dissertation  
Presented to  
the Faculty of the Department of  
Educational Leadership and Policy Analysis  
East Tennessee State University

---

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

---

by  
Deborah Falin Morelock

May 1994

APPROVAL

This is to certify that the Graduate Committee of

DEBORAH FALIN MORELOCK

met on the

twenty-second day of March, 1994.

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

Ronald L. McEwen  
Chairman, Graduate Committee

Ronald F. West

W. Hal Knight

Charles C. Bennett

A. Keith Dinkels

Signed on behalf of  
the Graduate Council

Dev R. Norman  
Associate Vice-President for  
Research and Dean, School of  
Graduate Studies

## ABSTRACT

### A Correlational Study of Hardiness, Health, and Burnout Among Teachers In The Sullivan County School System

by

Deborah F. Morelock

The purpose of this study was to explore the relationships among hardiness, health and burnout and to investigate the relationships of the subscales of hardiness to health and to the subscales of burnout among teachers in the Sullivan County School System. The Hardiness Test was used to measure hardiness and the Maslach Burnout Inventory Form Ed to measure burnout. Results of the Health Evaluation and Risk Test was reported on the Educators Demographic Data Survey. The study sample consisted of 501 teachers.

A statistically significant relationship was revealed between hardiness and health; among the hardiness subscales, commitment accounted for the largest amount of variance in health. Multiple regression was used to analyze the relationships among the subscales of hardiness and the subscales of burnout. Of the hardiness subscales, commitment and control equally accounted for the greatest amount of variance in depersonalization and personal accomplishment.

To determine the extent to which the subjects' demographic variables were related to any study variables, correlation coefficients were computed between demographic variables and each of the study variables. While age, years teaching experience, and level taught were significantly related to the study variables, the extremely low correlations indicate that only 1% of the variance in these three variables were explained by the study variables, preventing meaningful interpretation.

Kobasa's health and hardiness theory is supported by the results of this study. These results also support previous research findings which suggest that hardiness buffers against burnout.

IRB Number 01  
Assurance Number M1194

IRB FORM 108


PROTOCOL NO. 93-048s

**EAST TENNESSEE STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD**

PROJECT TITLE: Hardiness: Its Relationship to Health and Burnout  
Among Teachers in the Sullivan County School  
System.

PRINCIPAL INVESTIGATOR: Deborah F. Morelock

The Institutional Review Board has reviewed the above-titled  
project on November 12, 1993 with respect to the rights and  
safety of human subjects, including matters of informed consent  
and protection of subject confidentiality, and finds the project  
acceptable to the Board.



Anthony J. DeLucia  
Chairman, IRB

## DEDICATION

To my mother who taught me very early in my life the value of an education. To my father who taught me later in my life the difference between that education and wisdom.



## ACKNOWLEDGEMENTS

I would like to publicly acknowledge the words of encouragement and support that the members of Cohort III have given me during the past three years; without them I would have never completed this endeavor.

I am grateful to the Educational Leadership and Policy Analysis Department at East Tennessee State University for creating a doctoral program for working school administrators and for admitting me to it.

A special word of thanks goes to Dr. Robert Mc Elrath, my advisor, teacher, and Chair of my Committee. Not only did I have the best chairman I could hope for, I was blessed with the ideal committee members: Dr. Charles Burkett, Dr. Hal Knight, Dr. A. Keith Turkett, and Dr. Russ West who contributed ideas, edits and positive encouragement.

To my children, Erin and Brooks, I express gratitude for behaving as though Mom's schooling was a natural part of life, not a source of inconvenience. Hopefully, you were both too young to remember the amount of time I spent away from you. To my husband, Chris, for his love and support, as he endured much over the past three years to help me make this dream a reality. I have yet to decide if the view is worth the climb.

Finally, I appreciate the participation of the five hundred one teachers in Sullivan County, Tennessee who helped provide data for this study.

## CONTENTS

| Chapter                                    | Page |
|--|------|
| 1. INTRODUCTION .....                      | 1    |
| Statement of the Problem .....             | 3    |
| Significance of the Study .....            | 3    |
| Purpose .....                              | 4    |
| Limitations of the Study .....             | 4    |
| Assumptions of the Study .....             | 5    |
| Research Questions .....                   | 5    |
| Definition of Terms .....                  | 6    |
| Organization of the Study .....            | 8    |
| 2. LITERATURE REVIEW .....                 | 10   |
| Kobasa's Hardiness Theory .....            | 10   |
| Kobasa's Original Hardiness Research ..... | 12   |
| Other Hardiness Research .....             | 14   |
| Teachers and Hardiness Research .....      | 17   |
| Health's Evolution .....                   | 19   |
| Cardiovascular Disease and Health .....    | 19   |
| Relationship of Health to Hardiness .....  | 23   |
| Burnout .....                              | 24   |
| Maslach's Study of Burnout .....           | 25   |
| Burnout and Hardiness .....                | 27   |
| Burnout Research and Teachers .....        | 29   |
| Summary .....                              | 32   |
| 3. RESEARCH DESIGN.....                    | 34   |
| Population .....                           | 34   |

| Chapter   | Page |
|---|------|
| Instruments .....   | 35   |
| The Hardiness Test .....                                      | 35   |
| The Maslach Burnout Inventory Form Ed .....                   | 37   |
| HEART .....   | 39   |
| Educators Demographic Data Sheet .....                        | 40   |
| Data Collections Procedures .....                             | 41   |
| Data Analysis .....   | 41   |
| Hypotheses .....  | 42   |
| Summary of Methodology .....                                  | 45   |
| 4. RESULTS .....  | 48   |
| Sample Demographics .....                                     | 48   |
| Description of Hardiness, Health,<br>and Burnout Scores ..... | 51   |
| Hardiness Test .....  | 52   |
| Health .....  | 53   |
| Burnout .....   | 54   |
| Research Questions .....                                      | 57   |
| Research Question 1 .....                                     | 57   |
| Research Question 2 .....                                     | 58   |
| Research Question 3 .....                                     | 59   |
| Research Question 4 .....                                     | 60   |
| Research Question 5 .....                                     | 63   |
| Age .....   | 65   |
| Gender .....  | 66   |
| Years Teaching Experience .....                               | 66   |
| Highest Level of Education .....                              | 67   |

| Chapter   | Page |
|---|------|
| Level Taught .....                                      | 67   |
| Teaching Assignment .....                               | 68   |
| 5. DISCUSSION, CONCLUSIONS AND<br>RECOMMENDATIONS ..... | 70   |
| Discussion.....   | 70   |
| Hardiness and Health .....                              | 70   |
| Hardiness and Burnout .....                             | 72   |
| Hardiness .....   | 75   |
| Conclusions .....                                       | 76   |
| Recommendations .....                                   | 77   |
| Summary .....   | 78   |
| BIBLIOGRAPHY .....                                      | 81   |
| APPENDIXES  |      |
| A. The Hardiness Test .....                             | 90   |
| B. Maslach Burnout Inventory Form Ed .....              | 95   |
| C. Educators Demographic Data Survey .....              | 98   |
| VITA .....  | 99   |

## LIST OF TABLES

| Table   | Page |
|---|------|
| 1. Gender, Age, and Years Teaching Experience .....   | 49   |
| 2. Level of Education, School Level Assigned, Class Type .....  | 50   |
| 3. Descriptive Statistics for Hardiness and Subscales, Health, and Burnout Subscales (Raw Scores) .....               | 53   |
| 4. Frequency and Percentages of Total Risk Points .....   | 54   |
| 5. Frequency and Percentages of Experienced Burnout of Respondents as Measured by the Maslach Burnout Inventory ..... | 56   |
| 6. Regression Analysis for Health Using Hardiness Subscales .....   | 60   |
| 7. Regression Analysis for Emotional Exhaustion Using Hardiness Subscales .....                                       | 62   |
| 8. Results of Regression Analysis for Depersonalization Using Hardiness Subscales ...                                 | 63   |
| 9. Results of Regression Analysis for Personal Accomplishment Using Hardiness Subscales .....                         | 63   |
| 10. Correlation Coefficients of Study Variables .....   | 69   |
| 11. Correlation Coefficients for Burnout Subscales and Hardiness Subscales.....                                       | 74   |

## CHAPTER 1

### Introduction

Stress and contemporary life styles have become inextricably linked (Selye, 1980). Stress has been shown to be related to poor health, chronic illness, exhaustion, fatigue and burnout (Selye, 1978; Sutterly, 1986; Maslach, 1986). Hardiness may be described as an aspect of the personality which reduces the effects of stress. Individuals who possess personality hardiness may actually negate the harmful effects of stress and enjoy an enhanced health status (Kobasa, 1977).

It is generally recognized that the increasingly higher rate of turnover among public school teachers is due to stress. Some of the sources of stress for teachers include: (a) task overload (heavy work load, inadequate time for preparation); (b) lack of control over activities and outcomes (lack of teaching aids, inadequate resources, incompetent administration); (c) insufficient satisfactions from work (frequent negative and infrequent positive feedback); (d) role conflicts (career development issues, inadequate time for individual remedial work); (e) rapid or unpredictable change; (f) interpersonal conflicts (disruptive students, pupil misbehavior, difficult social relations); (g) unrealistic expectations; and (h) feelings of inadequacy (Dewe, 1986).

Although the nature and origin of stress experienced by public school teachers may vary, it is certain that stress is part of the typical teacher's life. Maslach (1976) and Cunningham (1983) have described the subsequent effects of chronic stress on teachers in terms of burnout. They noted that when the multitude of stressors found in the teaching situation continue without relief, the pattern of reactions described by burnout seriously damages the teacher's ability to perform: feelings become negative, attitudes become cynical, concern for students is lost, frequency of physical illness and absenteeism increases, and use of drugs and alcohol frequently goes up. Thus, burnout, as the subsequent outcome of continued stress, reflects the cumulative reactions to this stress.

The role of hardiness (composed of control, commitment and challenge dimensions) as a mediator of stress has been presented as a personality orientation that helps people cope with stressors and stress in ways that minimize the potentially debilitating effects of life change (Kobasa, 1977).

Burnout is a "syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur" in individuals who work with people (Maslach, 1986, p.3). In this study, burnout will be measured by the separate scores of the subscales for the Maslach Burnout Inventory: Emotional Exhaustion, Depersonalization,

Personal Accomplishment (Maslach & Jackson, 1986).

Excessive stress over a long period of time can lead to burnout and even threaten health. Two-thirds of office visits to family doctors are prompted by stress-related symptoms (Wallis, 1983).

As a result of this concern, it is essential that teachers assume self-responsibility for their health through wellness programs similar to that of the Health Evaluation and Risk Test (HEART), sponsored through Blue Cross and Blue Shield of Tennessee and used in the Sullivan County School System.

For this study of hardiness, health, and burnout, the theory of hardiness will provide the theoretical framework because hardiness is connected with both health and burnout. This study differs from previous health and hardiness research in that health will not be measured through self-reported instruments but through medical analysis.

#### Statement of the Problem

The problem is to determine the relationships of health and burnout among teachers in the Sullivan County School System and hardiness as a personality characteristic.

#### Significance of the Study

The investigation of stress-resistant personality



factors in educators has been advocated by Holt, Fine, and Tollefson (1987) with an ultimate view toward increasing the educator's potential for success in teaching. The value of hardiness, a stress-resistant factor, to the educator has application for deterring teacher burnout and entrapment.

#### Purpose

Concern with teacher stress is threefold. First, it is quite probable that stress negatively and substantially affects the classroom environment, the teaching-learning process, and the attainment of educational goals and objectives. Secondly, in the past 30 years, physicians and health officials have come to realize how heavy a toll stress is taking on the well-being of individuals. Finally, a combination of stress and health factors can lead to teacher burnout, which in turn does not lead to teacher turnover; rather to teacher "entrapment". It is the purpose of this study to explore those relationships.

#### Limitations of the Study

The scope of the study will be limited to the teachers in the Sullivan County School System who participate in the Health Evaluation and Risk Test conducted by Blue Cross and Blue Shield of Tennessee and volunteer to share that information in this study. Non-participants may differ in motivation level from participants (Borg & Gall, 1989).

A second limitation of the present study is a

statistical one. Correlational studies are appropriately used in providing the degree of the relationship between variables but cannot establish cause-and-effect relationships between correlated variables (Borg & Gall, 1989). Therefore, causation cannot be concluded from the results of this study.

#### Assumptions of the Study

The study includes the following assumptions:

1. All self-reports of subjects, as noted on the Educators Demographic Data Survey (EDDS) and as recorded on the Maslach Burnout Inventory Form Ed (MBI), the Hardiness Test, and the Health Evaluation and Risk Testing (HEART), were true and accurate statements.
2. The MBI can accurately measure burnout.
3. The Hardiness Test can accurately measure psychological hardiness.
4. The HEART can accurately measure health.

#### Research Questions

1. What is the relationship between hardiness and health, that is, the fourteen factors as identified by the American Heart Association which make it possible to determine the extent of risk of cardiovascular disease?
2. What are the relationships among total hardiness and the subscales of burnout (Emotional Exhaustion,

- Depersonalization, and Personal Exhaustion) in public school teachers in the Sullivan County School System?
3. What is the relationship of each subscale of hardiness (commitment, control and challenge) to health in public school teachers in the Sullivan County School System?
  4. What are the relationships among the hardiness subscales (commitment, control, and challenge) and each of the subscales of burnout (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) in public school teachers in the Sullivan County School System?
  5. What is the relationship, if any, between selected demographic variables as reported by the Educators Demographic Data Survey and the three subscales of burnout and hardiness?

#### Definitions of Terms

The following definitions apply to this study:

Hardiness: Hardiness is a personality constellation of commitment, control, and challenge that mediates the effects of stress to promote physical and psychological health (Kobasa, 1977).

Commitment: Commitment is the tendency to involve oneself fully in life and recognize one's distinctive goals and priorities and the appreciation of one's ability to make decisions and hold values (Kobasa, 1982).

Control: Control is the tendency to believe and act as if one can influence the course of events (Kobasa, 1982).

Challenge: Challenge is the capacity to perceive stressful life events as an opportunity and incentive for personal growth, rather than a simple threat to security (Kobasa, 1982).

Burnout: Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur in individuals who work with people (Maslach, 1986).

Emotional Exhaustion: Emotional exhaustion consists of a low energy level, sense of depletion, and feeling of being overwhelmed by the emotional demands imposed by other people (Maslach, 1986).

Depersonalization: Depersonalization is the attempt at emotional self-protection manifested by detached, callous, and even dehumanized response toward others (Maslach, 1986).

Reduced Personal Accomplishment: Reduced personal accomplishment is the sense of inadequacy and failure that arises subsequent to feelings of guilt for the negative response toward others (Maslach, 1986).

HEART: Health Evaluation and Risk Test includes: complete blood profile, body composition testing and determination of target body weight, graded exercise cardiovascular fitness test on stationary bicycle, blood pressure and heart rate reading at rest and during exercise,

evaluation of personal and family traits of cardiovascular disease, stress evaluation and tobacco use evaluation (Wellness I).

Teachers: Teachers included regular and special education classroom teachers, remedial teachers (such as resource math, reading), as well as special areas (such as physical education, art, music, and library). The term "teacher" as used in this research project did not include administrators or pupil professionals (such as guidance counselors, social workers or school psychologists).

#### Organization of the Study

This study was organized and presented in five chapters. Chapter 1 contains the introduction of the study and the statement of the problem including its purpose, significance, limitations, and assumptions. Five research questions, ten definitions of terms, and a discussion of the study are also included in the chapter.

Chapter 2 provides the review of literature regarding hardiness, health, and burnout. The literature review begins with a description and an explanation of hardiness. The chapter then presents research studies of hardiness in teachers. The concept of health is discussed and presented in relation to hardiness. Finally, burnout is described and then related to teaching.

Chapter 3 is comprised of research design, procedures,

and methodology. It includes a description of the target population and the selection of the study sample, the instruments, the treatment of data, the hypotheses, and a summary of methodology.

Chapter 4 contains the presentation of demographic characteristics of research subjects, analysis of data, and results of hypotheses testing.

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

## CHAPTER 2

### Literature Review

This literature review will address hardiness, health, and burnout beginning with a description of hardiness and explained by Kobasa and co-authors (Kobasa, 1977, 1979, 1982; Kobasa, Maddi, & Courington, 1981; Kobasa & Puccetti, 1983). Research studies of hardiness in teachers will be presented (Hammond, 1987; Langemo, 1987; Holt, Fine & Tollefson, 1987; Goor, 1990; Pierce & Malloy, 1990). The concept of health as measured by cardiovascular risk factors will be presented from the perspectives of several authors (Lenfante, Stone, & Castelli, 1987; Stoto, 1991; Gunby, 1992; Brownson, 1992), and its relativeness to hardiness will be discussed. Burnout will be presented from the perspective of Maslach (1986), and will also be related to teaching (Byrme, 1992; Dworkin, 1985; Cadavid & Lunenburg, 1991; Lutz & Maddiralta, 1987).

#### Kobasa's Hardiness Theory

The term "personality hardiness" has been used to describe persons who have a kind of personal and world view that underlies the positive capacity to cope with and mediate stress (Kobasa, 1979). In her originating research, Suzanne C. Kobasa (1979) stated that "persons who experience high degrees of stress, without falling ill, have a

personality structure differentiating them from persons who become sick under stress" (p.3). This personality structure "hardiness" was defined as a constellation of commitment, control, and challenge that serves as a "resistance resource" in encounters with stress (Kobasa, Maddi, & Kahn, 1982, p. 169). The resistance resource theory formed the foundation of Kobasa's proposed concept that individuals who are exposed to high levels of stress who do not become ill, may have characteristics that come under the rubric "personal hardiness" (Kobasa, 1979). Kobasa explained that these hardy individuals choose commitment rather than alienation, control rather than powerlessness, and challenge rather than threat. These three personality characteristics remain the basis of her continuous research on personal hardiness.

Commitment involves activity and curiosity, not passiveness and alienation. It entails belief in the value for "what one is and what one is doing, as well as a tendency to involve oneself fully and vigorously in life." The committed individual finds life in general, and work in particular, meaningful and worth engaging, thereby lessening the threat perceived in situations and circumstances (Kobasa, 1982).

Control is the tendency to believe and act as if one is influential (rather than helpless) in the course of events in one's life. Individuals who have control strive



to understand the reasons for things that occur with particular reference to their own sphere of responsibility (Kobasa, 1982). Control involves developing a repertoire of options and actions that transforms events into a continuing life plan (Holt, Fine, & Tollefson, 1987).

Challenge, the third dimension of the hardiness constellation, involves the belief that one should expect and accept change, not stability, as the normal pattern of life (Kobasa, 1982; Kobasa, Maddi, & Kahn, 1982). The anticipation of change is positive, rather than threatening and change is viewed as an incentive to growth. The individual with this characteristic emphasizes growing and changing, rather than conserving and protecting the status quo (Holt, Fine, & Tollefson, 1987).

#### Kobasa's Original Hardiness Research

Kobasa's original research on hardiness (1979) was a retrospective, single observation, correlational study (N = 200) of middle and upper level male executives of a major utility company who worked in an environment of unusually high stressors, as measured by stressful life events. Demographically, the pool was quite homogeneous.

"The model characteristics of the subjects were (a) male gender; (b) 40 to 49 years of age; (c) married, with two children; (d) on the third or middle management level, and having been there for 6 years or

more; (e) possessing at least a college degree; (f) wife not working outside the home; and (g) usually Protestant, and attending religious services very or fairly often" (Kobasa, 1979, p.5).

Kobasa found that high stress/low illness individuals could be distinguished from high stress/high illness individuals. The high stress/low illness executives showed a commitment to self, vigor, and an awareness of meaning in their lives. Also, these individuals had a greater sense of internal locus of control and were more oriented to challenge (Kobasa, 1979).

Following the original study, Kobasa, Maddi, and Kahn (1982) and Kobasa, Maddi, and Courington (1981) conducted hardiness research in two longitudinal studies using subjects with similar demographic characteristics as the utility company executives. After completion of factor analysis (Kobasa, Maddi, & Kahn, 1982) the cognitive scale was dropped and the idea of a composite hardiness score was developed.

The contributions from this follow-up research were: (1) hardiness serves as a buffer to the effects of stress, (2) hardiness is most operative when stressful life events mount over a period of time, and (3) increased hardiness increased the likelihood of maintaining health (Kobasa, Maddi, & Courington, 1981; Kobasa, Maddi, & Kahn, 1982).

Hardiness was linked to Type A behaviors (Kobasa,

Maddi, & Zola, 1983) and to social supports (Kobasa & Puccetti, 1983) in subsequent research. The two studies continue to confirm the association of hardiness to stress - induced illness. The study on Type A behavior supports the contention that Type A's who are low in hardiness while being exposed to high-stress conditions are even sicker than was formerly indicated (Kobasa, Maddi, & Zola, 1983).

The study on social support concluded that family support functions as a resistance resource only if hardiness is high. Low-hardy executives, those who feel alienated, lacking in control and threatened by change, may not resist stress as actively if they are given strong cohesiveness and expressiveness at home (Kobasa & Puccetti, 1983). It is the hardy who tend to better utilize the positive aspects of social support and assets.

#### Other Hardiness Research

Through 1983, Kobasa's published research used a pool of subjects essentially identical to the sample in her original study. During the next four years other researchers began to submit additional subjects to a hardiness examination; e.g., college student resident assistants (Nowack & Hanson, 1983), female college students (Ganellen & Blaney, 1984), female secretaries (Schmied & Lawler, 1986), New York State school superintendents (Falinski, 1985), faculty researchers, researchers, and

administrators at a southwestern university (Hammond, 1987), and athletic trainers (Shapiro, 1987).

Nowack and Hanson (1983) found that hardiness correlated significantly and accounted for 35% of the variance in frequency and severity of illness. The authors concluded that hardiness buffers burnout.

Ganellen and Blaney (1984) found that commitment and challenge, but not control, were significantly correlated with social support. Therefore, the researchers conclude that the higher the level of social support subjects report, the higher their level of hardiness. Also found was that powerlessness and internal locus of control measure perceptions of control, not control itself.

Schmied and Lawler (1986) set out to determine if the original all male hardiness research could be generalized to females. The authors stated:

"Hardiness may not generalize to females, especially when using physical illness as the dependent measure; hardiness in men may not be the same as hardiness in women; because hardiness was associated in this study with age, education and marital status, hardiness may be a developmental trait; and hardiness may not manifest itself in the occupational role of a secretary where there is little opportunity for control or challenge and Type A behaviors are unlikely to be rewarded" (Williams, 1988, p.50).

Falinski (1985) found that personal hardiness contributed to the ability of New York State school superintendents to handle role stress and therefore feel job satisfaction. In another similar study by Hammond (1987), faculty, researchers, and administrators at a southwestern university responded to a questionnaire revealing that satisfaction could be predicted by hardiness, social support, and coping strategies.

Shapiro (1987) in a later study of athletic trainers confirmed that personal hardiness was a significant contributor to job satisfaction of these individuals.

Up to this point, the majority of hardiness studies involved executives and high-level managers. Since then several studies of hardiness have included two other groups of professionals who experience high daily stress, nurses and teachers.

Simoni (1987) conducted a study of nurses in Kentucky. He found that personal hardiness factors helped to reduce the symptoms of burnout as well as to improve nurses' perceptions of career satisfaction. In a similar study of a subgroup of nurses working in oncology, D'Ambrosia (1982) found that burnout could be predicted based on hardiness factors, particularly the sense of control versus powerlessness. Rich and Rich (1987) concluded that hardiness is an important stress-resistance resource in preventing or reducing burnout in female staff nurses.

### Teachers and Hardiness Research

Recent studies of personal hardiness in teachers have shown a relationship between hardiness factors and reduced symptoms of burnout. In a study of university faculty, Hammond (1987) and Langemo (1987) found that, indeed, hardiness factors provided energy for coping with work-related stress. Holt, Fine, and Tollefson (1987) surveyed 192 female regular and special education elementary teachers to study the mediating effects of coping and hardiness on the stress-burnout relationship. As in previous studies, individuals with high occupational stress and low burnout were found to choose active coping, feel less alienation, and experience more internal locus of control. These teachers were also likely to report both physical and mental illness.

The findings in the Holt et al. (1987) study stimulated interest in terms of teacher career stages and reported levels of stress. In the group perceiving lower stress, there was a higher percentage of older, more experienced teachers and also younger, less experienced teachers. In contrast, the high stress group contained more teachers with five to ten years of experience, that is, the early, teacher-career-stage group.

Goor (1990) in his investigation of teachers at three career stages concluded that teachers who remain in the

educational profession despite their exposure to the stress of frustrating job conditions and student failure had higher personal hardiness than those who left the profession. As a group, more seasoned or later-career teachers had higher personal hardiness characteristics than novice or early-career teachers.

The study most significant to the present investigation is that of Pierce and Molloy (1990). The subjects in this research included a total of 750 teachers from 16 contrasting socio-economic status schools. The study was designed to investigate the psychological and work patterns of teachers experiencing high and low levels of burnout. Higher levels of burnout were associated with poorer physical health, higher rates of absenteeism, lower self-confidence and more frequent use of regressive coping strategies. Teachers classified as experiencing high levels of burnout attributed most of the stress in their lives to teaching and reported low levels of career commitment and satisfaction. Further, teachers who recorded high levels of burnout were characterized by lower levels of the personality disposition of hardiness.

In summary, the three personality characteristics, commitment, control and challenge, are the basis of ongoing research on personal hardiness. While some researchers use different ways to measure hardiness, research results on hardiness in teacher samples are sufficient enough to

provide incentive for further investigation of Kabasa's hardiness theory.

### Health's Evolution

Humanity's earliest efforts at optimizing health might be described as survival, avoidance of dangers. With written records comes increased evidence related to health-oriented practices. The Hebrew Old Testament and Greek literature show that health practices were incorporated into belief systems (Grasser & Craft, 1984). Hippocrates supported the belief in the body's ability to heal. After the Middle Ages, the use of the scientific method in health practices was prevalent. Thus, the evolution of health moved away from treatment of disease toward use of information derived from interventions to determine risk factors (Grasser & Craft, 1984).

### Cardiovascular Disease as a Measure of Health

The Framingham Heart Study in 1948 pioneered the concept that certain items, known eventually as risk factors, were associated with the development of heart disease (Lenfant, Stone, & Castelli, 1987). From the 45-year-old Framingham Heart Study emerged the identification of risk factors for cardiovascular disease such as high blood cholesterol, elevated blood pressure, cigarette smoking, overweight, elevated blood sugar, lack of physical



activity, and stress (Dawber, 1980).

The concept of risk factors spawned a new generation of studies aimed at intervening to reduce the impact of risk factors on health. The first conclusive evidence of the value in lowering risk factors came in hypertension intervention trials. A consensus then emerged that identifying and treating high blood pressure would greatly lower the stroke rate. This was followed by a campaign to encourage health professionals to measure blood pressure and identify people with elevated blood pressure, and to bring them into a treatment setting to have their pressures controlled surfaced (Lenfante, Stone, & Castelli, 1987). By the late 1970s, the stroke rate had fallen dramatically. The scientific base provided by the 45-year-old Framingham Heart Study and the risk factor concept associated with lifestyle have provided the field with a base for health promotion and disease prevention programs which include HEART, the risk testing analysis used in the current study.

Cardiovascular disease is the leading cause of death and disease in the United States, a somewhat alarming fact since it is mainly a preventable illness. Cardiovascular health is an important indicator of a person's overall health. This is because persons who promote and protect their own cardiovascular health have chosen lifestyles or behaviors which lessen their risks, not only for cardiovascular disease, but also for many other chronic

diseases.

Chronic cardiovascular disease includes a large list of diseases that involve the heart (hence, "cardio"), and vascular system (arteries, veins, heart and lungs). These include hypertension (also known as high blood pressure), and atherosclerosis, also known as "hardening of the arteries" (blocking of the arteries with plaque), i.e., coronary artery disease (angina and heart attacks), strokes, peripheral vascular disease (involving the arteries of the periphery of the body--neck and head, legs and arms). Also included are some causes of chronic obstructive lung diseases and some causes of chronic kidney diseases. Chronic diseases, such as cardiovascular disease, "are all related to a common set of risk factors (diet, smoking, alcohol, exercise)" (Stoto, 1991, p. 1460).

In 1989, nearly one million persons in this country died of cardiovascular disease, "almost as many as those who died of cancer, accidents, pneumonia, influenza, and all other causes of death combined" (Gunby, 1992, p. 336). Changes in health trends reflect a decline in mortality due to heart disease, however, "heart disease remains the leading cause of death among men and women" (Kritz-Siverstein, 1992, p. 335). Progress in the treatment of heart disease has been made yet "close to one quarter of the US population, some 69,080,000 persons, has one or more forms of cardiovascular disease today" (Gunby, 1992, p.

336).

Cardiovascular disease as the leading cause of death is "greatly influenced by lifestyle and behavior."

"...Nutritional practices, exercise and stress management are known to be influential in prevention and treatment of cardiovascular disease" (Tanner, 1991, p. 845). Behavioral and attitudinal changes toward health prevention have reduced certain risk factors. "Lifestyle has been defined as all those behaviors over which an individual has control" (Walker, 1987, p. 76). Risk factors are those tendencies (inherited, developed or chosen), which increase one's odds of developing a disease. Risk factors for development of cardiovascular disease are (1) hypertension, (2) diabetes, (3) smoking, (4) sedentary lifestyle, (5) diet high in fats, (6) positive family history of heart disease. One of the major risk factors in an individual's lifestyle is cigarette smoking. "Cigarette smoking is now considered the leading avoidable cause of mortality in the United States, accounting for approximately 434,000 deaths in 1988" (Brownson, 1992, p. 99).

Persons who choose lifestyles or behaviors that promote and protect their overall health and their cardiovascular health believe their "health outcomes are under their own control" (Brownson, 1992, p.100.) By making conscious choices about their lifestyles which promote health, they have become participants in the health care process, as

opposed to those who are only recipients of health care. They have chosen to prevent diseases and protect their health. Their overall health, as well as their cardiovascular health is more likely to remain free from disease. "When people accept responsibility for their health, changes in lifestyle practices could prevent and reverse many of the health problems of today..." (Tanner, 1991, p.846). While health promotion is an imperative goal for our nation. One needs only to look at the major causes of cardiovascular disease to know that lifestyle factors are major contributors. "A number of authors have voiced the belief that health care is undergoing a revolution...with the focus shifting specifically to lifestyle and wellness behaviors..." (Grasser & Craft, 1984, p. 210).

#### Relationship of Health to Hardiness

Health was found to be an outcome of personality hardiness (Kobasa, 1977, 1979; Kobasa & Pucetti, 1983). Individuals high in hardiness are hypothesized to be better able to withstand the negative effects of life stressors and, consequently, are less likely than individuals in low hardiness to become ill (Shepperd & Kashani, 1991). Their resistance to illness presumably results from perceiving life changes as less stressful (Kobasa, 1979) or from having more resources at their disposal to cope with life changes (Kobasa, 1982). In support of this hypothesis Kobasa found

that hardy executives were more likely to remain healthy under conditions of high stress than were non-hardy executives (Kobasa, Maddi, & Kahn, 1982).

An important issue in hardiness research in general should be noted. Most investigations of hardiness have relied on self-report instruments to assess health status rather than using physiological measures or medical records (Maddi, 1983). There is some evidence that self-report measures of illness reflect negative affectivity and are unrelated to actual, long-term health status (Watson & Pennebaker, 1989). This evidence calls much of the hardiness literature into question and adds importance to the results of this study.

### Burnout

One of the first uses of the term burnout was in 1974 by Fruedenberger. He used it to describe the conditions of some volunteers in free clinics. He defined burnout as "a situation in which one loses an idea - the incentive that motivates the person. Something within that person dies and does not return " (p. 160). Fruedenberger, a trained psychoanalyst, based his model of burnout on emphasizing the psychology of the individual. He used a case study approach with focus on an individual's psychological capacities and vulnerabilities when placed in a stressful work situation. He was primarily concerned with the individual dynamics of

burnout and the psychological reasons why it occurs.

### Maslach's Study of Burnout

Christina Maslach and her colleagues at the University of California, Berkeley provided a complementary contrast to the theory of burnout. Maslach and Pines, both trained social psychologists, began to conduct extensive interviews with over 200 social welfare workers (Pines & Kafry, 1978), psychiatric nurses (Pines, Aronson & Kafry, 1981), poverty lawyers (Maslach & Jackson, 1978), prison personnel (Maslach & Jackson, 1981), and child-care workers (Pines & Maslach, 1978).

From these studies Maslach arrived at a symptomatic definition of burnout. She states burnout is a "syndrome of physical and emotional exhaustion, involving the development of negative self-concept, negative job attitudes, and loss of concern and feeling for clients" (Pines & Maslach, 1978, p.233). Maslach (1993) later expanded on this definition, "Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind" (p.1). According to Maslach, burnout is a response to job-related stress, particularly of emotional overload and a sense of being overwhelmed by the perceived demands of others. It is a process; it does not happen spontaneously.

Defining the phenomenon of burnout has resulted in both

confusion and controversy. In an attempt to form a working definition of burnout Maslach found consensus in three areas. They include the occurrence of burnout at an individual level; burnout as an internal psychological experience involving feelings, attitudes, motives and expectations; and burnout as a negative experience for the individual, in that it involves distress, problems, dysfunction and/or negative consequences (Holt, 1985).

Maslach (1984) addressed potential problems of an over-expanded definition of burnout. These problems include: the potential of inflating the incidence of the syndrome of burnout and the risk of inappropriate causes and solutions. As a result, burnout will become a catch-all phrase with decreased diagnostic value.

Passivity, impatience, and self-doubt have been found to have a close association with the experiences of burnout (Maslach, 1986). For the most part, gender has little effect on the overall incidence of burnout, however, slight variations have been noted in depersonalization and emotional exhaustion (Maslach, 1986). Depersonalization tends to be demonstrated to a greater extent in men than in women, while emotional exhaustion tends to occur more often in women than men. Burnout tends to occur more frequently in whites than in blacks; and its incidence is greater in young rather than in older, more experienced people (Maslach, 1986). Holt (1985), in a study of burnout and

hardiness among female elementary teachers (N=211), found teachers with five to ten years experience were significantly higher in the high stress-high burnout group.

Maslach clearly presented in her findings (1986) that burnout does not afflict people indiscriminantly. The conditions of burnout appear to be a product of a combination of factors, both internal and external to the individual, in varying combinations and levels of intensity. Fruedenberger (1980) echoed this statement: "Not all people are equally susceptible to burnout, such as the underachiever and the happy-go-lucky individual with fairly modest aspirations" (p.19).

#### Burnout and Hardiness

Not everyone is susceptible to burnout (Maslach, 1993). Personality differences appear to be related to the vulnerability of burnout (Maslach, 1982). Burnout, as described by Maslach, parallels in many ways the characteristics of low personality hardiness (Lambert & Lambert, 1987).

Burnout-prone individuals tend not to be aware of their limits (Maslach, 1982), which is consistent with the commitment facet of hardiness (Kobasa, 1979). Maslach (1982), emphasizing self-awareness, implies that a person needs to know his/her strengths and weaknesses, assets and liabilities, skills and talents as well as deficiencies in



those areas. Maslach (1982) stated that "The emotional overload that precipitates burnout is more likely to occur if you do not know when it is time to stop, to say no, or to make changes" (p.65). Individuals who lack commitment tend to "establish a sense of self-worth by winning approval and acceptance of others. In so doing, the person may be so accommodating that he or she is overextended too often" (Maslach, 1985, p.63). Assuming responsibility for the successes and failures of individuals is fertile ground for experiencing a low sense of personal accomplishment (Maslach, 1986).

Burnout is related to locus of control, another factor that also contributes to low hardiness. Rotter defines locus of control as the degree to which individuals feel they have personal control over outcomes and suggests that external locus of control individuals are more prone to learned helplessness. These types of individuals believe that they have little or no control over their environment and tend to withdraw in faces of stress and frustration.

Kyriacou and Sutcliffe (1979) found a significant correlation between self-reported teacher stress and external locus of control. They noted that teachers with a belief in external locus of control may be more likely to appraise their environment as threatening and thereby may be more prone to experience occupational stress, thus, strengthening the conceptual link between burnout and

hardiness.

Characteristics of burnout-prone individuals (Maslach, 1982) that correspond to the challenge component of hardiness include passiveness and powerlessness. Individuals described like this tend to lack self-esteem or confidence. This type of individual is at the mercy of his environment instead of shaping and controlling it. This behavioral pattern is consistent with that of low challenge which is characterized by a strong sense of threat toward changing life events (Kobasa, 1982).

#### Burnout Research and Teachers

In the education literature, the connection between stress and burnout is fairly well established (Sarros & Sarros, 1987; Rinke, 1989; Crump, 1991). Most of the studies have identified specific work stressors such as role ambiguity, work load, and overall work stress as contributing to burnout. Few have looked at the degree to which the individual teacher experiences the three aspects of burnout (Schwab & Iwanicki, 1982), that is, emotional exhaustion, depersonalization, and reduced personal accomplishment. There is also no consistent estimate of the extent of burnout among teachers.

Colasurdo (1987) in a study of San Diego teachers indicated that 52% of the 215 respondents were burned out or reported frequent feelings of burnout. A recent survey by

the American Federation of Teachers (Natale, 1993) yielded a 31% report of being burned out or "getting there".

Symptoms vary in both intensity and frequency. It is not unusual for any teacher to experience occasional feelings of burnout. It is when those feelings persist over a long period of time that they manifest themselves in chronic physical and emotional difficulties (Iwanicki, 1983).

Yet, there are teachers, despite their exposure to the stress of teaching who do not exhibit symptoms of burnout at the same high levels as other teachers in similar situations. Previous research has attempted to examine the relationships among teacher background, organizational factors, individual personality, and various aspects of teacher burnout. These studies have relied primarily on teacher questionnaires and are subject to the limitations of that type of instrument. Nevertheless, the findings provide some interesting insights about the individual teacher and burnout.

In a study of 469 randomly selected Massachusetts teachers, Schwab and Iwanicki (1982) found age to be a factor in feelings of emotional exhaustion and fatigue. Younger teachers had more intense feelings than older counterparts. Carlson (1992) found similar results in studies with special education teachers. While these findings have been replicated in other dissertations

(Tuettemann & Punch, 1992; Connolly & Sanders, 1986; Harrison, 1983; Hooper, 1983; Raison, 1981), contradictory findings about age have been determined in other studies (Hipps & Maulpin, 1991; Clarke, 1991; Pierce & Molloy, 1990; Colasurdo, 1981; Malanowski, 1982). A similar contradictory pattern of findings has been seen when studies have included teacher sex, years of teaching experience, level of education, teaching level, marital status, regular or special education, or size of school district. In a recent study of 145 urban middle school teachers, Maynard (1992) reported any attempt to predict teacher burnout should take into consideration marital status, ethnicity, and sex.

There have been some personality characteristics which have been shown to influence levels of experienced burnout. Locus of control was found to be a significant mediator between stress and burnout among 599 full-time elementary, 203 intermediate and 715 secondary teachers (Byrne, 1992). Teachers with a more external locus of control evidenced more feelings of burnout than those with a more internal orientation. Similar results were found in a survey of 200 high school teachers (Mazur & Lynch, 1989) and in a study of 191 junior high teachers in an interracial cross-cultural center (Cadavid & Lunenberg, 1991). Significant relationships have also been found between higher levels of reported burnout and self criticism (Jackson, 1983), low self regard (Hipps & Malpin, 1991), low sense of competence and

self-actualization (Pierce & Molloy, 1990), few coping strategies (Cadauid & Lunenberg, 1991), and intolerance of ambiguity (Fielding, 1982).

Cedoline (1982) feels that most individuals who have chosen teaching as a profession are disposed by their personalities to certain attitudes and aptitudes. These include a high dedication to their work, a sincere desire to help others, and a willingness to accept certain occupational disadvantages in order to do what they think needs to be done. "The personality characteristics of altruism, sincere caring, and idealism--when met by lack of feedback, limited appreciation, public apathy, and day-to-day stress--make teachers vulnerable candidates for occupational distress" (p.105).

#### Summary

Personality hardiness is a stress-resistance resource (Kobasa, 1977), Health has been found to be an outcome of hardiness (Kobasa, 1977, 1982; Kobasa, Maddi, & Courington, 1981; Rich & Rich, 1987). The literature is replete with hardiness studies which measure health based on one's perception rather than medical analysis (Kobasa, 1977, 1979, 1982; Kobasa, Maddi, & Courington, 1981; Kobasa & Pucetti, 1983; Hammond, 1987; Langemo, 1987; Holt, Fine, & Tollefson, 1987; Goor, 1990; Pierce & Malloy, 1990).

The link between hardiness and burnout is essential in

the descriptions of low hardiness (Kobasa, 1977, 1979) and burnout (Maslach, 1986), and in the similarities between coping strategies of educators (Hammond, 1987) and teachers who experience burnout (Lambert & Lambert 1987).

In the education literature, the connection between stress and burnout is fairly well established (Sarros & Sarros, 1987; Rinke, 1989; Crump, 1991). These findings, in conjunction with Goor's (1990) study of hardiness at three teacher career stages, corroborates the importance of studying hardiness, health, and burnout among teachers in the Sullivan County School System.

## CHAPTER 3

### Research Design

In this chapter, sample selection and data collection procedures are presented; demographic information about the subject population is discussed; instrumentation is described; and research hypotheses are stated.

A descriptive correlational design was used to investigate the relationships among hardiness, health and burnout and to investigate the relationships of the components of hardiness to health and to the components of burnout in educators in the Sullivan County School System.

#### Population

The subjects used in this study were 804 full-time teachers in the Sullivan County School System located in Northeast Tennessee. Of these 804 subjects, 213 are high school teachers, 201 middle school teachers and 390 elementary teachers. They represent four high schools, nine middle schools, and seventeen elementary schools.

The term "teachers" included regular and special education classroom teachers, remedial teachers (such as resource math, reading), as well as special areas (such as physical education, art, music, and library). The term "teacher" as used in this research project did not include administrators or pupil professionals (such as guidance

counselors, social workers or school psychologists).

### Instruments

Two instruments, a personal demographic questionnaire and a cardiovascular risk factor analysis, will be used to measure the variables of this study. They include the third generation version of the Hardiness Test, the Maslach Burnout Inventory Form Ed, the Educators Demographic Data Survey, the Health Evaluation and Risk Test (HEART).

#### The Hardiness Test

In this investigation, the third generation version of the Hardiness Test, also known as the Personal Views Survey, was used to measure hardiness. This instrument was developed by Suzanne Kobasa in 1986. The current version is a 50-item, four-point Likert scale estimated to take 10 minutes or less to take. It is the result of multiple item- and factor-analyses of data from several samples.

In her originating research in 1977, Suzanne C. Kobasa used a 253-item questionnaire derived from four standardized instruments and two personality measures she constructed. The instruments chosen for their "theoretical relevance and empirical reliability and validity" (Kobasa, 1979, p.5) included: Jackson's Personality Research Form; Hahn's California Life Goals Evaluation Schedules; Rotter's Test for Internal vs. External Locus of Control; Maddi, Kobasa,



and Hoover's Alienation vs Commitment Test (Kobasa, 1977).

The Hardiness Test is comprised of three subscales: challenge, commitment, and control. The challenge items are numbers 2, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 37, 40, 43, 46, and 49. An example from this subscale is, (6) "I feel uncomfortable if I have to make any changes in my everyday schedule." The commitment items include numbers 1, 8, 11, 14, 17, 20, 23, 26, 29, 32, 38, 39, 41, 44, 47, and 50. An example from the commitment subscale is, (1) "I often wake up eager to take up my life where it left off the day before." The control items include numbers 3, 4, 5, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 35, 42, 45, and 48. An example control item is, (4) "Planning ahead can help avoid most future problems."

These subscales provide negative indicators of hardiness. In other words, a low score indicates a high level of hardiness. Each of these scales has adequate reliability and validity. Factor analysis by Kobasa and Maddi (1985) include "estimates of internal consistency with Coefficient Alphas in the .90s for total hardiness score, and in the .70s for commitment, control, and challenge scores. Stability appears to be in the .60s over periods of two weeks or more." The reported reliability coefficients that were obtained are: .71 for commitment, .67 for control, .59 for challenge, and .81 for total hardiness. The validity of the hardiness construct as a

moderator of stress has been established through many studies (Kobasa, 1979, 1980; Kobasa & Maddi, 1982; Kobasa, Maddi, & Courington, 1981; Kobasa, Maddi & Puccetti, 1982; Kobasa, Maddi, & Zola, 1983; Kobasa & Puccetti, 1983; Kobasa, Maddi & Kahn, 1982).

#### The Maslach Burnout Inventory Form Ed

The Maslach Burnout Inventory Form Ed is a 22-item Likert scale that contains three subscales, Emotional Exhaustion, Depersonalization, and Personal Accomplishment; it is estimated to take 10-15 minutes for completion (Maslach & Jackson, 1986).

Burnout is a continuous variable with ranges of low to high degrees of experienced feeling. Teachers are not classified as "burned out" or "not burned out", instead they are placed on a continuum of "more burned out" to "less burned out". Those teachers who experience a higher degree of burnout will score high on Depersonalization and Emotional Exhaustion and low on Personal Accomplishment. Scores of those teachers who experience a low degree of burnout will be reversed, while teachers experiencing moderate levels of burnout will have moderate scores on all three subscales. Scores of each subscale are considered separately and are not combined into a single, total score.

Scores are considered high if they are in the upper third of the normative distribution, moderate if they are in

the middle third, and low if they are in the lower third. Scores for groups of respondents can also be treated as aggregate data with means and standard deviations computed for each subscale, comparisons made to available normative data or local norms, and correlations made with other information obtained from respondents.

The Maslach Burnout Inventory norms and scale development are based on a sample ( $N = 2000$ ) human service employees (police officers, teachers, counselors, social workers, physicians, psychologists, and lawyers). The MBI Form Ed is basically the same as the MBI. The only modification of items in the MBI Form Ed has been to change the word "recipient" to "student". In the teaching profession, students are the teachers' recipients (Schwab, 1993). Validity and reliability are substantiated by two studies conducted with these changes, Iwanicki and Schwab. Factor analytic studies by Iwanicki and Schwab report Cronbach alpha estimates of .90 for Emotional Exhaustion, .76 for Depersonalization, and .76 for Personal Accomplishment, while Gold reports estimates of .88, .74, and .72, respectively. These reliabilities parallel those of the MBI (Schwab, 1993).

Mean scores and standard deviations tend to be slightly higher for teachers on Emotional Exhaustion (teachers mean = 21.25, overall sample mean = 20.99); substantially higher on Depersonalization (teachers mean = 11.00, overall sample

mean = 8.73); and lower scores on Personal Accomplishment (teachers mean = 33.54, overall sample mean = 34.58). Since the mean scores vary from the overall sample, the cut-off points for classifying teachers who are experiencing high, average, and low levels of burnout vary from other subgroups and the overall sample (Schwab, 1993).

### HEART

Health will be measured through the analysis of HEART (Health Evaluation and Risk Test) which is available to all Sullivan County School System employees. This testing occurred during the fall of 1993. Incentives to participate include: no cost to employees, testing is done in a mobile unit at each school on school time, and follow-up conferences with a Blue Cross Blue Shield physician who provides the participants with an explanation of their test results.

The American Heart Association has identified the factors which make it possible to determine the extent of risk of cardiovascular disease. They include: cardiovascular fitness, systolic blood pressure, diastolic blood pressure, body fat percentage, total cholesterol, H.D.L. cholesterol, triglycerides, glucose, resting electrocardiogram, stress electrocardiogram, tobacco use, tension and stress, personal history of heart disease, family history of heart disease, and age factor. Tests

results from the cardiovascular disease testing and the health evaluation questionnaire are used to develop a composite cardiovascular disease risk factor score, identifying the risk factors which affect individuals and to what extent they may influence present and future risk of cardiovascular disease. Included on each teacher's test report is an entry labeled "Total Risk Points"; this is used to determine the overall risk category and serves as a measure of health. The risk categories include:

| Total Risk Points   | Risk      |
|---------------------|-----------|
| 5.9 or less Points  | Very Low  |
| 6.0 - 13.9 Points   | Low       |
| 14.0 - 22.9 Points  | Moderate  |
| 23.0 - 31.9 Points  | High      |
| 32.0 or more Points | Very High |

Each participant will be asked to report this risk factor on the Educators Demographic Data Sheet distributed with the Maslach Burnout Inventory Form Ed and the Hardiness Test.

#### Educators Demographic Data Sheet

The Educators Demographic Data Sheet will be used to collect descriptive information about the sample. Demographic data will include sex, age, education level, primary assignment, number of years in current assignment, and number of years in education.

### Data Collection Procedures

Data collection procedures followed in this study will emphasize a personalized approach from the researcher to the potential subjects. Prior to a first contact with the teachers, a letter will be sent by John O'Dell, Superintendent of the Sullivan County School System to all regular classroom teachers in the system. He will request their support in participating in this research study. The researcher will attend all Wellness counseling sessions. At that time each subject will be given a testing packet which will include a letter explaining the study and asking for their participation, instruments consisting of the Hardiness Test, Maslach Burnout Inventory Form Ed, Educators Demographic Data Sheet to include a request for the risk factor from the Health Evaluation and Risk Testing, and an envelope which is preaddressed to the researcher. The answer sheets and return envelopes will be numerically coded in order to protect the subjects' confidentiality and to inform the researcher of nonresponse.

### Data Analysis

This investigation used correlational techniques: Pearson Product Moment correlations and multiple regression analyses. Descriptive statistics and one-way analyses of variance were computed as needed. Pearson product moment

correlation coefficients were used to evaluate the correlations among all variables: the three MBI Form Ed subscales; the three Hardiness subscales; and gender, age, years teaching, teaching assignment, and level of education from the Educators Demographic Data Survey. The level of significance was 0.05.

### Hypotheses

The twenty-two null hypotheses in this study are:

1. There is no statistically significant relationship between levels of hardiness, as measured by the Hardiness Test, and health, as reported on the Educators Demographic Data Sheet (EDDS) and measured by the Health Evaluation and Risk Test (HEART).

2. There is no statistically significant relationship between levels of hardiness, as measured by the Hardiness Test, and degrees of burnout as measured by the Emotional Exhaustion subscale of the Maslach Burnout Inventory (MBI) Form Ed.

3. There is no statistically significant relationship between levels of hardiness, as measured by the Hardiness Test, and degrees of burnout as measured by the Depersonalization subscale of the MBI Form Ed.

4. There is no statistically significant relationship between levels of hardiness, as measured by the Hardiness Test, and degrees of burnout as measured by the Personal

Accomplishment subscale of the MBI Form Ed.

5. There is no statistically significant relationship between levels of commitment, as measured by the Hardiness Test, and health, as reported on the EDDS and measured by HEART.

6. There is no statistically significant relationship between levels of control, as measured by the Hardiness Test, and health, as reported on the EDDS and measured by HEART.

7. There is no statistically significant relationship between levels of challenge, as measured by the Hardiness Test, and health, as reported on the EDDS and measured by HEART.

8. There is no statistically significant relationship between levels of commitment, as measured by the Hardiness Test, and Emotional Exhaustion as measured by the MBI Form Ed.

9. There is no statistically significant relationship between levels of control, as measured by the Hardiness Test, and Emotional Exhaustion as measured by the MBI Form Ed.

10. There is no statistically significant relationship between levels of challenge, as measured by the Hardiness Test, and Emotional Exhaustion as measured by the MBI Form Ed.

11. There is no statistically significant relationship



between levels of commitment, as measured by the Hardiness Test, and Depersonalization as measured by the MBI Form Ed.

12. There is no statistically significant relationship between levels of control, as measured by the Hardiness Test, and Depersonalization as measured by the MBI Form Ed.

13. There is no statistically significant relationship between levels of challenge, as measured by the Hardiness Test, and Depersonalization as measured by the MBI Form Ed.

14. There is no statistically significant relationship between levels of commitment, as measured by the Hardiness Test, and Personal Accomplishment as measured by the MBI Form Ed.

15. There is no statistically significant relationship between levels of control, as measured by the Hardiness Test, and Personal Accomplishment as measured by the MBI Form Ed.

16. There is no statistically significant relationship between levels of challenge, as measured by the Hardiness Test, and Personal Accomplishment as measured by the MBI Form Ed.

17. There is no statistically significant relationship between age and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

18. There is no statistically significant relationship between gender and the study variables (hardiness,

commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

19. There is no statistically significant relationship between years teaching experience and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

20. There is no statistically significant relationship between highest level of education and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

21. There is no statistically significant relationship between level taught and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

22. There is no statistically significant relationship between teaching assignment and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

#### Summary of Methodology

A descriptive correlational design was used to study the relationships among hardiness, health, and burnout among teachers in the Sullivan County School System. A sample of

804 full time classroom teachers, representing four high schools, nine middle schools, and seventeen elementary schools was recruited.

Instrumentation included the Hardiness Test (a composite score and three subscores for commitment, control, and challenge), the Health Evaluation and Risk Test (cardiovascular risk factor), and the Maslach Burnout Inventory Form Ed (subscale scores for Emotional Exhaustion, Depersonalization, and Personal Accomplishment) to measure hardiness, health, and burnout, respectively. Demographic data were collected from the Educators Demographic Data Survey.

All regular classroom Sullivan County teachers were contacted in writing by John O'Dell, Superintendent of Schools, to encourage them to volunteer to participate in the study. Arrangements were made through Anthony Delucia, Chairperson, Institutional Review Board, East Tennessee State University to ensure that the Institutional Review Board's criteria were met. Dates and locations at participating schools were arranged for data collection.

An explanation was presented to participating teacher subjects that included the purpose of the study, instructions for completing the questionnaire, confirmation of anonymity of data, procedure for requesting a copy of research findings, and an expression of appreciation for the teachers' participation in the study. Questions and

feedback were solicited from the teachers.

## CHAPTER 4

### Results

The purpose of this study was to explore the relationships of hardiness and the three subscales of hardiness: commitment, control, and challenge, to health and to the subscales of burnout: Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA) in teachers. These relationships were investigated through a descriptive correlational design.

The Hardiness Test and the Maslach Burnout Inventory Form Ed were used to measure the personality traits. Health was measured by reporting the total risk factor points scored on the Health Evaluation and Risk Test (HEART). Data collected from 501 teachers in the Sullivan County School System were analyzed, utilizing Spearman rho and Eta correlation coefficients and multiple regression analyses.

Descriptive statistics of the variables are presented, followed by the results of the data analyses computed to address each of the research hypotheses and questions.

#### Sample Demographics

Five hundred twenty-one (64.8%) of a total population of eight hundred four teachers volunteered to participate in this study. Five hundred one (96.16%) of the five hundred twenty-one questionnaires were analyzed; twenty were unusable because of missing risk factors.

Gender, age, years teaching experience, grade level assigned, level of education, and regular or special education assignment were the demographic variables selected for analysis. Frequency distributions with percentages were computed for each demographic variable and are presented in Table 1.

Table 1

Gender, Age, and Years Teaching Experience

| Category                         | Number | Percent |
|----------------------------------|--------|---------|
| <b>Gender</b>                    |        |         |
| Female                           | 389    | 77.6    |
| Male                             | 112    | 22.4    |
|                                  | 501    | 100.0   |
| <b>Age</b>                       |        |         |
| Under 26                         | 18     | 3.6     |
| 26 - 35                          | 72     | 14.4    |
| 36 - 45                          | 204    | 40.7    |
| 46 - 55                          | 163    | 32.5    |
| 56 and over                      | 44     | 8.8     |
|                                  | 501    | 100.0   |
| <b>Years Teaching Experience</b> |        |         |
| 1 - 3                            | 33     | 6.6     |
| 4 - 9                            | 55     | 11.0    |
| 10 - 14                          | 76     | 15.1    |
| 15 - 19                          | 126    | 25.4    |
| 20 - 24                          | 118    | 23.3    |
| 25 - 29                          | 72     | 14.4    |
| 30 and over                      | 21     | 4.2     |
|                                  | 501    | 100.0   |

Table 2

Level of Education, School Level Assigned, Class Type

| Category                     | Number     | Percent      |
|------------------------------|------------|--------------|
| <b>Level of Education</b>    |            |              |
| Bachelors                    | 209        | 41.7         |
| Masters                      | 217        | 43.3         |
| Masters Plus                 | 68         | 13.6         |
| Specialist                   | 5          | 1.0          |
| Doctorate                    | 2          | .4           |
|                              | <u>501</u> | <u>100.0</u> |
| <b>School Level Assigned</b> |            |              |
| Elementary                   | 241        | 48.1         |
| Middle                       | 140        | 27.9         |
| High                         | 120        | 24.0         |
|                              | <u>501</u> | <u>100.0</u> |
| <b>Class Type Assigned</b>   |            |              |
| Regular Ed                   | 442        | 88.2         |
| Special Ed                   | 59         | 11.8         |
|                              | <u>501</u> | <u>100.0</u> |

The majority of teachers participating in this study were female (77.6%). Most respondents were between the ages of 36-45 (40.7%) and 46-55 (32.5%) with the highest percentage in the 36-45 age group (40.7%) and the lowest in the under 26 age group (3.6%). Years of teaching experience varied from 1-3 years (6.6%) to 30 and over (4.2%). Most teachers had between 10-24 years teaching experience; 10-14

years (15.1%), 15-19 years (25.4%), and 20-24 years (23.3%). The largest group of teachers were elementary (48.1%) followed by middle (27.7%) then high school (24.0%). A majority of teachers held Master's (43.3%) or Bachelor's (41.7%) degrees. Four hundred forty -two (88.2%) were regular education teachers. The sample included 59 (11.7%) special education teachers.

#### Description of Hardiness, Health, and Burnout Scores

Table 3 shows descriptive statistics for the independent variables. The means, standard deviations, ranges, and reliability coefficients are presented for the raw scores for hardiness and its subscales. Descriptive statistics and analyses of data for the health scale and burnout subscales were computed on raw scores. Descriptive statistics, including mean scores, standard deviations, ranges of scores, and reliability coefficients were used to report group performance on each instrument.

Reliability coefficients for the Hardiness Test subscales ranged from .63 to .80. The coefficients on Table 3 indicate that commitment was the most reliable subscale associated with the hardiness construct followed by control and challenge. The Maslach Burnout Form Ed had higher reliability coefficients. Reliability coefficients for the MBI Form Ed ranged from .70 to .89, possibly this reflects its standardization for commercial use.



An analysis of survey instrument data implied both the Hardiness Test and Maslach Burnout Inventory Form Ed met acceptable reliability requirements. An alpha reliability coefficient of .86 indicated the Hardiness Test was a reliable instrument to measure total hardiness in spite of the fact that the subscale reliabilities were moderate, ranging from .63 for challenge, .67 for control, and much higher for commitment at .80. Reliability coefficients for the Maslach Burnout Inventory Form Ed ranged from .70 for Depersonalization, .79 for Personal Accomplishment, and .89 for Emotional Exhaustion. These moderate to high reliabilities indicate that the three subscales for measuring burnout are adequate.

#### Hardiness Test

The possible raw score range was 0 to 48 for the commitment subscale, 0 to 51 for the control and challenge subscales, and 0 to 150 for total hardiness. The mean raw scores obtained in this study were 38.67 for commitment, 39.08 for control, 31.56 for challenge, and 109.44 for total hardiness. The mean subscale scores are consistent with those reported by Holt (1985) for a sample of 211 elementary public school teachers.

Table 3

Descriptive Statistics for Hardiness and Subscales, Health, and Burnout Subscales (Raw Scores)

| Factor     | Mean   | SD    | Range     | Reliability |
|------------|--------|-------|-----------|-------------|
| Hardiness  | 109.44 | 12.97 | 69 - 137  | .86         |
| Commitment | 38.67  | 5.20  | 23 - 48   | .80         |
| Control    | 39.08  | 4.84  | 27 - 50   | .67         |
| Challenge  | 31.56  | 5.69  | 15 - 49   | .63         |
| Health     | 13.30  | 5.97  | .5 - 35.1 |             |
| Burnout    |        |       |           |             |
| EE         | 22.99  | 10.90 | 0 - 52    | .89         |
| DP         | 6.92   | 5.44  | 0 - 29    | .70         |
| PA         | 37.38  | 7.00  | 13 - 48   | .79         |

Health

The possible scoring range for the Health Evaluation and Risk Evaluation (HEART) was 0.5 to 40.3. The mean score obtained in this study was 13.30 placing the teachers of the Sullivan County School System in the low range for cardiovascular disease. Comparisons of the health score to other studies are ill-advised because of the variation in instrumentation used by researchers to measure health.

Table 4 provides the frequency and percentages of total

risk points. Most teachers were in the low (48.3%) and moderate (34.9%) categories of risk points with the highest percentage in the 6.0 - 13.9 risk point group (48.3%) and the lowest in the very high (.2%).

Table 4

Frequency and Percentages of Total Risk Points

| Total Risk Points        | Frequency | Percentage |
|--------------------------|-----------|------------|
| Very Low (5.9 or less)   | 46        | 9.2        |
| Low ( 6.0 - 13.9)        | 242       | 48.3       |
| Moderate (14.0-22.9)     | 175       | 34.9       |
| High (23.0 - 31.9)       | 37        | 7.4        |
| Very High (32.0 or more) | 1         | .2         |
|                          | 501       | 100.0      |

Burnout

The possible scoring ranges for the Burnout subscales were as follows: Emotional Exhaustion, 0 to 54; Depersonalization, 0 to 30; Personal Accomplishment, 0 to 48 (Schwab, 1993). Means reported for subscale scores for a sample of 469 Massachusetts teachers and 462 California teachers were: 21.25 for Emotional Exhaustion (slightly higher than the 20.99 overall sample mean); 11.00 for Depersonalization (substantially higher than the 8.73 overall sample mean); and 33.54 for Personal Accomplishment (slightly lower than the 34.58 overall sample mean) (Schwab,

1993).

For this study sample, a mean of 22.99 was obtained for Emotional Exhaustion which indicates a moderate level of experienced burnout, as measured by this subscale. For the Depersonalization subscale, the sample mean of 6.92 is indicative of a low level of Depersonalization. The sample mean of 37.38 obtained for Personal Accomplishment is indicative of a low level of this aspect of burnout. The study sample means were consistent with the results reported by Schoenig (1986) for 188 public school teachers for the three subscales: Emotional Exhaustion ( $M = 20.69$ ), Depersonalization ( $M = 6.72$ ), and Personal Accomplishment ( $M = 35.48$ ).

Table 5 provides the frequency and percentages of experienced burnout of respondents as measured by the Maslach Burnout Inventory. The highest percentage of teachers (60.4%) scored in the high category of personal accomplishment with 22.4% in the moderate group and 17.2% in the low group. Emotional exhaustion scores were evenly distributed with 35.1% in the high and moderate group and 29.8% in the low group. The majority of teachers (68.3%) were in the low depersonalization subscale.

Table 5

Frequency and Percentages of Experienced Burnout of  
Respondents as Measured by the Maslach Burnout Inventory

| Variables                      | Frequency | Percentage |
|--------------------------------|-----------|------------|
| <b>Personal Accomplishment</b> |           |            |
| High (0 - 30)                  | 303       | 60.4       |
| Moderate (31 -36)              | 112       | 22.4       |
| Low (37 or over)               | 86        | 17.2       |
|                                | 501       | 100.0      |
| <b>Emotional Exhaustion</b>    |           |            |
| High ( 27 or over)             | 175       | 35.1       |
| Moderate ( 17 -26)             | 175       | 35.1       |
| Low (0-16)                     | 151       | 29.8       |
|                                | 501       | 100.0      |
| <b>Depersonalization</b>       |           |            |
| High (14 or over)              | 68        | 13.6       |
| Moderate (9-13)                | 90        | 18.0       |
| Low (0-8)                      | 343       | 68.4       |
|                                | 501       | 100.0      |

### Research Question 1

The first research question was: What is the relationship between hardiness and health among teachers in the Sullivan County School System? A Spearman rho correlation was used to address this question and null hypotheses one:

H<sub>0</sub>1: There is no statistically significant relationship between levels of hardiness and health. A correlation of .15 ( $p < .001$ ) was obtained between total hardiness and health among teachers in the Sullivan County School System who participated in this study, indicating a weak although statistically significant relationship and resulting in the rejection of hypotheses one. Furthermore, an  $r^2$  of .023 indicates that hardiness accounts for only 2% of the variance of health.

Further analyses, utilizing Spearman rho correlation coefficients, were conducted with respect to the relationships between the subscales of hardiness and health. The coefficient obtained for the commitment subscale and health was .086 ( $p < .001$ ), with an  $r^2$  of .007, indicating that commitment accounts for 1% of the variance in health. For the control subscale and health, the coefficient obtained was .0933 ( $p < .001$ ), yielding an  $r^2$  of .009, which indicates that control explains 1% of the variance in

health. The coefficient obtained for the challenge subscale and health was .1370 ( $p < .001$ ), yielding an  $r^2$  of .019 which indicates that challenge explains 2% of the variance in health. These results further support the weak relationship between total hardiness and health.

### Research Question 2

The second research question was: What are the relationships among total hardiness and the subscales of burnout (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) in public school teachers in the Sullivan County School System? Three null hypotheses were stated in response to this question:

H<sub>0</sub>2: There is no statistically significant relationship between Hardiness and Emotional Exhaustion.

H<sub>0</sub>3: There is no statistically significant relationship between Hardiness and Depersonalization.

H<sub>0</sub>4: There is no statistically significant relationship between Hardiness and Personal Accomplishment.

Spearman rho correlation coefficients were used to analyze these relationships. The correlation coefficient between total Hardiness and Emotional Exhaustion was  $-.53$  ( $p < .001$ ), indicating an inverse relationship between these two variables. Null hypotheses two was rejected. An  $r^2$  of .2809 was obtained which indicates that Hardiness explains 28% of the variance in Emotional Exhaustion. Between total

Hardiness and Depersonalization, the coefficient was  $-.43$  ( $p < .001$ ), indicating an inverse relationship and the rejection of hypotheses three. An  $r^2$  of  $.1849$  indicates that Hardiness accounts for 18% of the variance in Depersonalization. Between total Hardiness and Personal Accomplishment the coefficient was  $.40$  ( $p < .001$ ), indicating a positive relationship between these two variables, thus hypotheses four was rejected. An  $r^2$  of  $.16$  indicates that Hardiness accounts for 16% of the variance in Personal Accomplishment. The moderate, inverse relationship between total Hardiness and Emotional Exhaustion was the strongest of the three; the other two were rather weak.

### Research Question 3

The third research question was: What is the relationship of each subscale of hardiness (commitment, control and challenge) to health in public school teachers in the Sullivan County School System? Stepwise multiple regression analysis was used to address this question and hypotheses five through seven. This technique allowed the researcher to determine which independent variables remain significant predictors of burnout when they are considered in the presence of other previously significant predictors. Stepwise regression also identifies which-independent variables, together, explained the greatest amount of variance.



H<sub>0</sub>5: There is no correlation between levels of commitment, as measured by the Hardiness Test, and health, as reported on the Educators Demographic Data Sheet (EDDS) and measured by the Health Evaluation and Risk Test (HEART).

H<sub>0</sub>6: There is no statistically significant relationships between levels of control and health.

H<sub>0</sub>7: There is no statistically significant relationship between challenge and health.

Commitment entered the regression equation at the first step ( $F = 16.58$ ,  $p < .0001$ ) and explained 4% of the variance. Control and challenge did not enter the equation, therefore, hypotheses five was rejected, while hypotheses six and seven were retained. The results are presented in Table 6.

Table 6

Regression Analysis for Health Using Hardiness Subscales

---

| Variables  | R    | R <sup>2</sup> | F     |
|------------|------|----------------|-------|
| Commitment | .193 | .04            | 16.58 |

---

$p < .0001$

Research Question 4

The fourth research question was: What are the relationships among the hardiness subscales (commitment, control, and challenge) and each of the subscales of burnout

(Emotional Exhaustion, Depersonalization, and Personal Accomplishment) in public school teachers in the Sullivan County School System? To address this question and hypotheses eight through sixteen three stepwise multiple regression analyses were used.

Null Hypotheses Eight through Sixteen

H<sub>0</sub>8: There is no statistically significant relationship between commitment and Emotional Exhaustion.

H<sub>0</sub>9: There is no statistically significant relationship between control and Emotional Exhaustion.

H<sub>0</sub>10: There is no statistically significant relationship between challenge and Emotional Exhaustion.

H<sub>0</sub>11: There is no statistically significant relationship between commitment and Depersonalization.

H<sub>0</sub>12: There is no statistically significant relationship between control and Depersonalization.

H<sub>0</sub>13: There is no statistically significant relationship between challenge and Depersonalization.

H<sub>0</sub>14: There is no statistically significant relationship between commitment and Personal Accomplishment.

H<sub>0</sub>15: There is no statistically significant relationship between control and Personal Accomplishment.

H<sub>0</sub>16: There is no statistically significant relationship between challenge and Personal Accomplishment.

Commitment entered the first regression equation at the

first step ( $F = 219.04$   $p < .00005$ ), accounting for 34% of the variance in Emotional Exhaustion and the rejection of hypotheses eight. At the second step, challenge entered the equation ( $F = 114.09$   $p < .00005$ ), explaining an additional 1% of the variance and the rejection of hypotheses nine. Hypotheses ten was not rejected as control did not enter the equation. In table 7 the results of the first regression equation are presented.

Table 7

Regression Analysis for Emotional Exhaustion Using Hardiness Subscales

| Variable   | R   | R <sup>2</sup> | F      |
|------------|-----|----------------|--------|
| Commitment | .58 | .34            | 219.04 |
| Challenge  | .59 | .35            | 114.09 |

$p < .00005$

Commitment entered the second regression equation at the first step ( $F = 43.44$ ,  $p < .00005$ ), explaining 24% of the variance in depersonalization. Challenge and control did not enter the equation. For the second equation, in which the subscales of hardiness were regressed on the dependent variable Depersonalization, the results are presented in Table 8. Hypothesis eleven was rejected while hypotheses twelve and thirteen were retained.

Table 8

Results of Regression Analysis for Depersonalization Using Hardiness Subscales

---

| Variable   | R   | R <sup>2</sup> | F     |
|------------|-----|----------------|-------|
| Commitment | .49 | .24            | 43.44 |

---

$p < .00005$

Commitment entered the third equation at the first step ( $F = 24.05$ ,  $p < .00005$ ), explaining 15% of the variance in Personal Accomplishment, and retaining hypothesis fourteen. Challenge and control did not enter the equation, thus hypotheses fifteen and sixteen were retained. The stepwise multiple regression results are presented in Table 10.

Table 9

Results of Regression Analysis for Personal Accomplishment Using Hardiness Subscales

---

| Variable   | R   | R <sup>2</sup> | F     |
|------------|-----|----------------|-------|
| Commitment | .14 | .38            | 24.05 |

---

$p < .00005$

Research Question 5

The fifth research question was: What is the relationship, if any, between selected demographic variables

as reported by the Educators Demographic Data Survey (EDDS) and the three subscales of burnout and hardiness?

To determine the extent to which the subjects' demographic variables were related to any study variables, correlation coefficients were computed between demographic variables and each of the study variables. Null hypotheses seventeen through twenty-two were addressed.

Null Hypotheses Seventeen through Twenty-two

H<sub>0</sub>17: There is no statistically significant relationship between age and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

H<sub>0</sub>18: There is no statistically significant relationship between gender and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

H<sub>0</sub>19: There is no statistically significant relationship between years teaching experience and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

H<sub>0</sub>20: There is no statistically significant relationship between highest level of education and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and

Personal Accomplishment).

H<sub>0</sub>21: There is no statistically significant relationship between level taught and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

H<sub>0</sub>22: There is no statistically significant relationship between teaching assignment and the study variables (hardiness, commitment, control, challenge, health, Emotional Exhaustion, Depersonalization, and Personal Accomplishment).

Spearman rho correlation coefficients were computed between the demographic variables age and years teaching experience and total hardiness, hardiness subscales, health, and burnout subscales. Eta correlation coefficients were calculated between the demographic variables gender, highest education level, level taught, type of teaching assignment and total hardiness, hardiness subscales, health, and burnout scales.

### Age

Spearman rho correlation coefficients indicated a statistically significant relationship between age and Health ( $r^2 = .36$ ,  $p < .001$ ). This relatively low correlation indicates that age explains 13% of the variance in the risk of cardiovascular disease. Only this portion of

hypothesis seventeen was rejected all other portions were retained.

### Gender

While Eta correlation coefficients revealed statistically significant relationships between gender and total hardiness (Eta = .13,  $p < .005$ ), commitment (Eta = .16,  $p < .0005$ ), control (Eta = .11,  $p < .01$ ), and Depersonalization (Eta = .09,  $p < .05$ ), these extremely low correlations indicate that only 1% of the variance in these four variables is explained by gender, preventing meaningful interpretation. Hypothesis eighteen is rejected for these four parts and retained for challenge, Emotional Exhaustion, and Personal Accomplishment.

### Years Teaching Experience

All variables (health, total hardiness and the hardiness subscales and the burnout subscales) with the exception of Depersonalization revealed statistically significant relationships with years of teaching experience, thus only one part (Depersonalization) of hypothesis nineteen was retained. All other parts were rejected. Spearman rho correlation coefficients between years teaching experience and health ( $r_s = .29$ ,  $p < .05$ ), years teaching experience and Emotional Exhaustion ( $r_s = .10$ ,  $p < .05$ ) indicated 8% and 1% of the variance respectively. These

relatively low correlations indicate that older teachers have greater cardiovascular disease risk and experience more Emotional Exhaustion. Total hardiness ( $r, = -.15, p < .01$ ) and the hardiness subscales, commitment ( $r, = -.14, p < .001$ ), challenge ( $r, = -.12, p < .01$ ), control ( $r, = -.13, p < .01$ ), along with the burnout subscale Personal Accomplishment ( $r, = -.10, p < .05$ ) were inversely related to years teaching experience. This shows that younger teachers were hardier and felt greater Personal Accomplishment.

#### Highest Level of Education

To determine the extent to which the subjects' level of education was related to any of the study variables, Eta correlation coefficients were computed between level of education and each of the study variables. Level of education was significantly related to Personal Accomplishment (Eta = .16,  $p < .01$ ), the extremely low correlations indicate that only 2% of the variance in this variable is explained by level of education, preventing meaningful interpretations and the rejection of only the Personal Accomplishment portion of hypothesis twenty and the retainment of all other parts.

#### Level Taught

As indicated in Table 10, level taught (elementary,



middle or high) and Health (  $\eta = .15, p < .05$ )  
Depersonalization ( $\eta = .16, p < .001$ ) and Personal  
Accomplishment ( $\eta = .14, p < .01$ ) were found to be  
statistically correlated through Eta coefficients. These  
portions of hypothesis twenty-one were rejected. Hardiness,  
commitment, challenge, control, and Emotional Exhaustion  
were not statistically correlated, thus these portions of  
hypothesis twenty-one were retained.

#### Teaching Assignment

To identify the depth of the relationships between  
teaching assignment and the hardiness, health, and burnout  
measures Eta coefficients were computed. The results  
revealed no significant correlations, thus hypothesis  
twenty-two was retained.

Table 10

Correlation Coefficients of Study Variables

| Variable   | Risk | H     | Commit | Chall | Control | EE  | DP   | PA    |
|------------|------|-------|--------|-------|---------|-----|------|-------|
| Age        | .36* | .08   | .05    | .09   | .06     | .07 | .04  | .09   |
| Gender     | .01  | .13*  | .16*   | .03   | .11*    | .04 | .09* | .04   |
| Experience | .29* | -.15* | -.14*  | -.12* | -.13*   | .10 | .08  | -.10* |
| Education  | .10  | .10   | .16    | .09   | .10     | .03 | .07  | .14*  |
| Level      | .15* | .09   | .09    | .04   | .04     | .05 | .16* | .12   |
| Assignment | .07  | .05   | .06    | .07   | .10     | .07 | .10  | .06   |

\*p &lt; .05

Risk = HEART risk point

H = Total hardiness score

Commit = Commitment

Chall = Challenge

Control = Locus of Control

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

## CHAPTER 5

### Discussion, Conclusions, and Recommendations

#### Discussion

##### Hardiness and Health

On the basis of hardiness theory it was anticipated that the relationship between hardiness and health would have been stronger than that obtained ( $r_s = .15, p < .001$ ). Correlations between the subscales of hardiness and health revealed that commitment ( $r_s = .086, p < .001$ ), control ( $r_s = .093, p < .001$ ), and challenge ( $r_s = .137, p < .001$ ) were weakly correlated with health. The very low correlation coefficient obtained between challenge and health supports a growing sentiment that the challenge component of hardiness is either not being measured appropriately (Funk & Houston, 1987), or that it does not contribute significantly to hardiness (Rich & Rich, 1987).

In view of the correlation coefficients obtained for the subscales of hardiness in relation to health, the results of the regression analysis were not unexpected. Commitment entered the regression equation at the first step, accounting for only 4% of the variance ( $F = 16.58, p, .0001$ ). Control and Challenge failed to enter the equation.

It is possible that hardiness does not interact in a

protective way with health as proposed by Kobasa (1985). In hardiness research, health has been viewed as the absence of illness. The most common measures of health used in hardiness research has been some form of symptom and disease checklist (Kobasa, 1977, 1979, 1982; Kobasa, Maddi, & Kahn, 1982; Kobasa & Pucetti, 1983; Shepperd & Kashani, 1991).

Research findings reported for studies of hardiness and health have varied in their support of a hardiness-health link. The two strongest supporting studies that have been reported is a positive relationship ( $r = .48, p < .01$ ) between hardiness and physical illness by Nowack (1988) in a study of professional employees and Tang (1989) in a study of 167 police officers ( $r = .59, p < .001$ ).

This study's departure from the customary use of illness instrumentation to measure health resulted in a significant correlation between hardiness and health, albeit rather weak. Another pertinent issue in this regard is that the mean health score of 13.27 (range = .5 - 35.1; SD = 5.97) for the study sample suggests a relatively low level of cardiovascular disease risk among the subjects. It is worth noting that the overall total risk factor for all Sullivan County Educators was 16.24 ( $n = 942$ ). It may be that, for a sample with a broader range of health scores, a higher correlation with hardiness would have been observed. It is likely that a randomized sample, in contrast to the volunteer participants in this study, would have elicited

less skewed health scores. It is conceivable that teachers whose cardiovascular disease risk points were low were more inclined to participate as volunteers in this study, thus skewing the data. Because these findings are based on data from a convenience sample, they cannot generalize to teachers beyond this sample. The results do however, support a theoretical link between hardiness and health.

#### Hardiness and Burnout

The correlation coefficients obtained for total hardiness and the burnout subscales are consistent with previous research findings. For hardiness and Emotional Exhaustion, a correlation coefficient of  $-.53$  was obtained, for Depersonalization, the correlation coefficient was  $-.43$ , and for Personal Accomplishment, the correlation coefficient was  $.40$  (all at the  $.001$  alpha level). These correlation coefficients are shown in Table 11.

Clarke (1991) reported a correlation coefficient of  $.57$  ( $p, .01$ ) for total hardiness and burnout for 211 nursing students. Schoenig (1986), in a study of 188 public school teachers found a correlation coefficient of  $.48$  ( $p < .05$ ) between total hardiness and burnout. Clarke stated that hardiness correlated with each of the subscales of burnout, reporting correlation coefficients of  $-.49$  for Emotional Exhaustion,  $-.33$  for Depersonalization, and  $.42$  for Personal Accomplishment (all at the  $.05$  alpha level).

When relationships among the subscales of hardiness and the subscales of burnout were analyzed with multiple regression, it was found that commitment and control accounted for most of the variation in the burnout scores. Commitment and challenge explained a total of 35% of the variance in emotional exhaustion. For Depersonalization commitment accounted for 24% of the variance while control and challenge failed to enter the equation. For Personal Accomplishment, commitment accounted for 15%; neither control nor challenge entered the equation. Although it is difficult to compare these findings with previous research findings because of instrumentation differences, they are consistent with those reported by Williams (1988) and Holt (1985).

Both Williams (1988) and Holt (1985) used the Locus of Control Scale to measure hardiness in their respective samples, both reported correlations with burnout for five hardiness subscales that were being used to measure hardiness. The correlation coefficients among the subscales of hardiness and burnout reported by Holt (1985) were consistent with those reported by Williams (1988). Neither Holt nor Williams obtained statistically significant relationships between the challenge subscale and burnout.

The limited extent to which the challenge subscale interacted with the burnout variables is similar to its interaction with health. The correlation of challenge with

the burnout variables was an expected finding based on previous research reports (Holt, 1985; Williams, 1988; Clarke, 1991).

Table 11

Correlation Coefficients for Burnout Subscales and Hardiness Subscales

---

|            | EE    | DP    | PA   |
|------------|-------|-------|------|
| Commitment | -.53* | -.45* | .34* |
| Control    | -.43* | -.29* | .26* |
| Challenge  | .40*  | -.25* | .20* |

---

\* $p < .001$

The level of burnout for each of the subscales found in the study sample is consistent with studies of public school teachers (Schoenig, 1986) and female elementary teachers (Holt, 1985). This finding suggests that burnout is prevalent among educators. This concern is offset, at least in part, by the interactions found among the commitment and control components of hardiness and burnout. While not strong, the relationships hold promise that hardiness could provide some protection against the harmful effects of stress on teachers.

As previously pointed out, these findings cannot be generalized beyond this convenience sample. It is worth noting; however, that despite the lack of randomization, the

study subjects represented 31 schools. Nevertheless, lack of randomization clearly constitutes a study limitation. The investigator found, when administering the questionnaire, that teachers expressed considerable interest upon learning that the purpose of the study was to investigate the effects of stress and burnout on teachers. All participants requested the results of the study. One can speculate that teachers who either had an interest in the subject of stress and burnout or those who believed themselves to be experiencing stress and burnout might be more inclined to volunteer to participate in the study. In either event, participant selection would have an undetermined influence on the results. Another observation made by the investigator was that the number of teachers in a school who volunteered appeared to be somewhat determined by the interest and enthusiasm expressed by the school's principal. To control for these and many other intervening factors, a randomized or stratified sample would likely provide more reliable results.

### Hardiness

The results of this study support research findings on hardiness in teachers (Holt, 1985; Williams, 1988) adding to the applicability of hardiness to populations beyond the initial sample of middle-age, male executives (Kobasa, 1977, 1979). These findings serve as encouragement to further



investigate hardiness in populations, such as educators. As more is learned about how hardiness is experienced and developed, it is possible that hardiness techniques can be included in teacher preparation programs.

Findings in this study tend to support the premise that the challenge component does not contribute to the composite hardiness score. Hull, Van Treuren, and Virnelli (1987), in particular, question whether hardiness is truly a unitary concept, contending that commitment and control have independent effects on health and disclaiming any contribution from challenge. Other researchers' findings have brought into question the validity of challenge as a contributing factor to the explanation of hardiness (Jarvis, 1993; Tang, 1989; Nowack, 1991). Kobasa has indicated that challenge has been somewhat elusive and that she is trying to identify more definitive ways to conceptualize and measure it (Kobasa, 1993); she maintains her stance that challenge contributes to total hardiness.

### Conclusions

For this sample, the following conclusions were drawn:

1. Hardiness is present and measurable in this sample of subjects, most of whom were over 35 years of age.
2. Hardiness is significantly related to health, albeit rather weakly.

3. Hardiness is correlated more strongly with Emotional Exhaustion than with the other aspects of burnout.

4. Commitment is more strongly correlated with Emotional Exhaustion than are the other components of hardiness.

5. Contributions of the individual components of hardiness to health and burnout are not equitable.

6. Results of this study tend to support the use of total hardiness scores, rather than subscale scores.

7. Health is related to age, years of teaching experience, and level taught, albeit very weak.

8. Female sample subjects are slightly more hardy than males.

#### Recommendations

The findings in this study suggest the following recommendations:

1. Further investigation of hardiness in randomized sample of teachers.

2. Further investigation of hardiness through longitudinal studies of burnout to establish causation and determine if stress causes burnout or if teachers who experience burnout are unable to cope with stressors.

3. Continued research on the relationship between hardiness and health using true measures of health.

4. Determine whether challenge is a valid dimension of

hardiness, whether it is a component of the commitment dimension, or whether it needs to be eliminated from the hardiness construct.

5. Conduct research on how aspects of hardiness can be taught and implement them into teacher preparation programs.

6. Implementation of other Wellness Programs into school systems.

7. Share findings with the teachers of the Sullivan County School System.

#### Summary

The purpose of this study was to explore the relationships among hardiness, health, and burnout among teachers in the Sullivan County School System. Five research questions and twenty-two null hypotheses were formulated to guide this study. A descriptive correlational design was used; statistical analyses included descriptive statistics and simple and multiple correlations.

A statistically significant positive relationship was revealed between hardiness and health; among the hardiness subscales, commitment accounted for the largest amount of variance in health. Significant relationships were obtained between hardiness and each of the burnout subscales. Of the hardiness subscales, commitment and control equally accounted for the greatest amount of variance in Emotional

Exhaustion; commitment also accounted for the greatest amount of variance in Depersonalization and Personal Accomplishment.

To determine the extent to which the subjects' demographic variables were related to any study variables, correlation coefficients were computed between demographic variables and each of the study variables. While age, years teaching experience, and level taught were significantly related to the study variables, the extremely low correlations indicate that only 1% of the variance in these three variables were explained by the study variables, preventing meaningful interpretation.

## **BIBLIOGRAPHY**

## Bibliography

- Antonovosky, A. (1979). Health, stress and coping. San Francisco: Jossey-Bass.
- Borg, W.R. & Gall, M.D. (1989). Educational Research. Longman: New York & London.
- Brownson, A. (1992). Cardiovascular disease. American Journal of Public Health, 82, 1, 99-102.
- Byrne, B.M. (1992). Investigating causal links to burnout for elementary, intermediate, and secondary teachers. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Services No. ED 344 886)
- Cadavid, V. Lunenberg, F.C. (1991). Locus of control, pupil control ideology, and dimensions of teacher burnout. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Services No. ED 333 560)
- Carlson, B.K. (1992). Effects of teacher and organization related variables on the perceptions of burnout and career direction of special education teachers in Hawaii. (Doctoral dissertation, University of Hawaii, 1992). Dissertation Abstracts International, 53, 2615A.
- Cedoline, A.J. (1982). Job burnout in public education. New York: Teachers College Press.
- Clarke, B.M. (1991). The burnout maze: An exploration of the interrelationships of burnout, hardiness, depression, response mode to burnout, and demographic variables. (Doctoral dissertation, University of Colorado, Denver, 1991).
- Colasurdo, M.M. (1987). A descriptive study of professional burnout amongst public school teachers in San Diego, California. (Doctoral dissertation, United States International University, 1987). Dissertation Abstracts International, 42, 470A.
- Connolly, C. & Sanders, W. (1986). Teacher stress--an ongoing problem that needs attention. Paper presented at the Annual Meeting of the Association of Teacher Educators, Atlanta, GA. (ERIC Document Reproduction Services No. ED 266 139)

- Crump, D.R. (1991). Special and regular secondary education teachers: Relationship of personality preference stress hardiness and job satisfaction. (Doctoral dissertation, Brigham Young University, 1991).
- Cunningham, W. G. (1983). Teacher burnout-Solutions for the 1980's: A Review of the literature. The Urban Review, 15, 37-51.
- D'Ambrosia, S.J. (1987). A study to examine if there is a relationship between burnout and hardiness of nurses working with oncology patients. (Doctoral dissertation, Temple University).
- Dawber, T. W. (1980). The Framingham study: The epidemiology of atherosclerotic disease. Cambridge, MS, Harvard University Press.
- Dewe, P. (1986). Stress: Causes, consequences and coping strategies for teachers. Wellington, N.Z.: New Zealand Education Institute.
- Dworkin, A. G. (1985). When teachers give up: Teacher burnout, teacher turnover and their impact on children. Austin, TX: Hogg Foundation for Mental Health.
- Falinski, J.M. (1987). Role-Stress, personal factors, and work-related outcomes in the superintendency (conflict, ambiguity, locus-of-control, satisfaction). (Doctoral dissertation, University of Syracuse). Dissertation Abstracts International, 47, 07A.
- Fielding, M.A. (1982). Personality and situational correlates of teacher stress and burnout. (Doctoral dissertation, University of Oregon, 1982).
- Freudenberg, H.J. (1974). Staff burn-out. Journal of Social Issues, 30, 159-165.
- Funk, S.D., & Houston, B.K. (1987). A critical analysis of the Hardiness Scale's validity and utility. Journal of Personality and Social Psychology, 53 (3), 572-578.
- Ganellen, R.J., & Blaney, P.H. (1984). Hardiness and social support as moderators of the effects of life stress. Journal of Personality and Social Psychology, 47, 156-163.

- Goor, M. B. (1990). Self-efficacy beliefs and personal hardiness characteristics of teachers at three career stages. (Doctoral dissertation, University of Virginia).
- Gunby, R. (1992). Cardiovascular diseases remain nation's leading cause of death. Journal of the American Medical Association, 267, (3), 335-336.
- Hammond, L.A. (1987). Stress and role satisfaction: The mediating effects of social support, hardiness, coping strategies, and gender in academic multiple role persons. (Doctoral dissertation, University of Florida).
- Harrison, S.N. (1983). The sources of teacher burnout among elementary teachers of Mississippi (Doctoral dissertation, University of Southern Mississippi, 1983).
- Hipps, E. S. & Malpin, G. (1992). The differences in teachers' and principals' general job stress and stress related to performance-based accreditation. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, Knoxville, TN. (ERIC Document Reproduction Services No. ED 353 345)
- Hipps, E. S. & Malpin, G. (1991). The relationship of locus of control, stress related to performance based accreditation, and job stress to burnout in public school teachers and principals. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL. (ERIC Reproduction Services No. ED 333 557)
- Holt, P. (1985). A study of the interaction of levels of occupational stress, degree of burnout, and personality hardiness in female elementary teachers. (Doctoral dissertation, University of Kansas).
- Holt, P., Fine, M.J. & Tollefson, N. (1987). Mediating stress: Survival of the hardy. Psychology in the Schools, 24 (1), 51-58.
- Hooper, M. L. (1983). The relationship between selected demographic variables, job satisfaction, and teacher burnout (Doctoral dissertation, Mississippi State University, 1983).



- Iwanicki, E. F. (1983). Toward understanding and alleviating teacher burnout. Theory into Practice, 21 (1), 27-32.
- Jackson, B.G. (1983). Burnout in teachers working with educationally handicapped children. (Doctoral dissertation, University of Southern California, 1983). Dissertation Abstracts International, 44, 387A.
- Jenkins, S. & Calhoun, J.F. (1991). Teacher stress: Issues and interventions. Psychology in the Schools, 28, 60-70.
- Kobasa, S.C. (1977). Stress, personality, and health: A study of an overlooked possibility (Doctoral dissertation, University of Chicago). Dissertation Abstracts International, 38, 2430B.
- Kobasa, S.C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 37, 1-11.
- Kobasa, S. C. (1982). The hardy personality: Toward a social psychology of stress and health. In G.S. Sanders & J.Suls (Eds.), Social psychology of health and illness (pp.3-32).
- Kobasa, S.C. & Maddi, S.K. (1977). Existential personality theory. In R. Corsini (Ed.), Current personality theories, 243-276. Itasca, IL: Peacock.
- Kobasa, S.C., Maddi, S.R., & Courington, S. (1981). Personality and constitution as mediators in the stress-illness relationship. Journal of Health and Social Behavior, 22, 368-378.
- Kobasa, S.C., Maddi, S.R., & Kahn, S. (1982). Hardiness and health: A prospective study. Journal of Personality and Social Psychology, 42, 168-177.
- Kobasa, S. C., Maddi, S. R., Pucetti, M.C., & Zola, M. A. (1985). Effectiveness of hardiness, exercise and social support as resources against illness. Journal of Psychosomatic Research, 29, 525-533.
- Kritz-Siverstein, D. (1992). Employment status and heart disease risk factors in middle-aged women: The rancho bernardo study. American Journal of Public Health, 82, 2, 215-219.

- Langemo, D.K. (1990). Impact of work stress on female nurse educators. Image: Journal of Nursing Scholarship, 22, 159-162.
- Lenfant, C., Stone, E., & Castelli, W. (1987), Celebrating 40 years of the Framingham heart study. Journal of School Health, 57, 7, 279-281.
- Luckner, J. L. (1990). Strategies for alleviating teacher stress. ACEHI JOURNAL, 16, 4-12.
- Lutz, F.W. & Maddirala, J., (1988). Stress, burnout and reform mandated accountability. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Services No. ED 297 017)
- Malanowski, J.R. (1982). A study of the relationships among burnout, personal orientation, and demographic variables of teachers. (Doctoral dissertation, Bowling Green State University, 1981).
- Martinez, J.G. (1989). Cooling off before burning out. Academic Therapy, 24, 3, 271-84.
- Maslach, C. (1986). Burnout: The cost of caring. New York: Prentice-Hall.
- Maslach, C. & Jackson, S.E. (1986). Maslach burnout inventory (2nd ed.). Palo Alto, CA: Consulting Psychologists.
- Maynard, J.A. (1992). An analysis of occupational burnout among teachers in selected urban schools. (Doctoral dissertation, Texas Southern University, 1992).
- Mazur, P.J. & Lynch, M.D. (1989). Differential impact of administrative, organizational, and personality factors on teacher burnout. Teaching-and-Teacher-Education, 5, 4, 337-53.
- Mechanic, D. (1976). Stress illness and illness behavior. Journal of Human Stress, 2, 2-6.
- Natale, J. A. (1993). Why teachers leave. The Executive Educator, 33, 14-18.
- Nowack, K.M. & Hanson, A.L. (1983). The relationship between stress, job performance, and burnout in college student resident assistants. Journal of College Student Personnel, Nov., 545-550.

- Pardine, P., Dytell, R., and Friedman, A. (April 1982). The stress-illness relationship mediated by negligent health behavior. Paper presented at the annual convention of the Eastern Psychological Association, Baltimore. (ERIC Reproduction Services No. ED 273 575)
- Pender, N.J. (1987). Health promotion in nursing practice (2nd ed.). Norwalk, CT:Appleton & Lange.
- Pierce, C.M., & Molloy, G.N. (1990). Psychological and biographical differences between secondary school teachers experiencing high and low levels of burnout. British Journal of Educational Psychology, 60, 37-51.
- Pines, A.M., Aronson, E., & Kafry, D. (1981). Burnout: From tedium to personal growth. New York: The Free Press.
- Pines, A.M., & Kafry, D. (1978). Occupational tedium in the social services. Social Work, 23, 499-507.
- Pines, A.M., & Maslach, C. (1980). Characteristics of staff burnout in mental health settings. Hospital and Community Psychiatry, 29, (4), 233-237.
- Raison, J. C. (1981). Job burnout and stress in regular and special education teachers: Its relation to contact with handicapped students. (Doctoral dissertation, University of Minnesota, 1981).
- Rich, V.L., & Rich, A.R. (1985). Personality hardiness and burnout in female staff nurses. Image: Journal of Nursing Scholarship, 19, 2, 63-66.
- Rinke, J.M. (1989). The relationship between personality type and burnout in Michigan community college counselors. (Doctoral dissertation, Western Michigan University, 1989).
- Sarros, J.C., & Sarros, A.M. (1987). Predictors of teacher burnout. The Journal of Educational Administration, 25, 2, 216-230.
- Schmied, L.A., & Lawler, K.A. (1986). Hardiness, Type A behavior, and the stress-illness relationship in working women. Journal of Personality and Social Psychology, 51, 6, 1218-1223.

- Schoenig, T.M. (1987). An investigation of the relationships among burnout, hardiness, stressful teaching events, job and personal characteristics in public school teachers. (Doctoral dissertation, Hofstra University, 1987).
- Schwab, R.L., Burnout in education. In Maslach burnout inventory manual, 2nd ed, 1993.
- Selye, H. (1978). The stress of life (rev. ed). New York: Mc Graw-Hill.
- Shapiro, S. H. (1987). Determinants of job satisfaction among athletic trainers: The relationship between academic program factors and job factors, personal factors, and hardiness personality. (Doctoral dissertation, University of Virginia).
- Shepperd, J.A., & Kashani, J.H. (1991). The relationship of hardiness, gender, and stress to health outcomes in adolescents. Journal of Personality, 59, 4, 747-768.
- Smith, J.A. (1981). The idea of health: A philosophical inquiry. Advances in Nursing Science, 3(3), 43-50.
- Sotto, M. A. (1991), National health objectives for the year 2000: The demographic impact of health promotion and disease prevention. American Journal of Public Health, 81, 11, 1456-1465.
- Sutterley, D. C. (1986). Stress management: Grazing the clinical turf. Holistic Nursing Practice, 1 (1), 36-53.
- Tang, T.L. (1991). The effects of hardiness, job-related stress, and life stress on health and absence from work. Paper presented at the Annual Convention of the Psychological Association, Houston, TX. (ERIC Document Reproduction Services No. Ed 299 508)
- Tanner, E.K. (1991). Assessment of a health-promotive lifestyle. Nursing Clinics of North America, 26, 4, 845-853.
- Tuettemann, E., & Punch, K.F. (1992). Psychological distress in secondary teachers: Research findings and their implications. Journal of Educational Administration, 30, 1, 42-54.
- Walker, S.N. (1987). The health-promoting lifestyle profile: Development and psychometric characteristics. Nursing Journal, 36, 2, 76-81.

Wallis, C. (1983, June 6). Stress: Can we cope? Time, 48-54.

Williams, R.F. (1988). Hardiness, health care claims, absenteeism and burnout: A prospective study of direct and moderating effects. (Doctoral dissertation, Case Western Reserve University).

**Appendix A**  
**The Hardiness Test**

**PLEASE NOTE**

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

**pages 90-93  
pages 95-96**

**University Microfilms International**

**Appendix B**  
**Maslach Burnout Inventory Form Ed**



**Appendix C**  
**Educators Demographic Data Survey**

**EDUCATORS DEMOGRAPHIC DATA SHEET**

Your sex:

\_\_\_\_\_ (1) Male          \_\_\_\_\_ (2) Female

Your age:

\_\_\_\_\_ Years

Please indicate the highest degree level you have achieved:

\_\_\_\_\_ (1) Bachelor's

\_\_\_\_\_ (2) Master's

\_\_\_\_\_ (3) Master's plus 30

\_\_\_\_\_ (4) Doctorate

How many years have you been in education?

\_\_\_\_\_ Years

Did you participate in the HEART analysis (Wellness Testing) during the 1993-94 school year? \_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, what is your risk factor?

\_\_\_\_\_ Risk Factor Points

**RETURN QUESTIONNAIRE TO DEBBIE MORELOCK HOLSTON MIDDLE SCHOOL THROUGH PONY EXPRESS.**

**THANKS FOR YOUR PARTICIPATION**