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.

UMI

STRESS MANAGEMENT TRAINING FOR IMPROVED

PERFORMANCE IN A U.S. ARMY COMBAT UNIT

by

Bruce Thomas Murphy

Dissertation
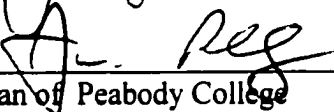
Submitted to the Faculty of
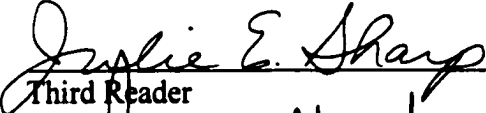
Peabody College of Vanderbilt University

in Partial Fulfillment of the Requirements

for the Degree of

DOCTOR OF EDUCATION

in

Human Resource Development

December 1997

_____   _____
Major Professor   Date

_____   _____
Second Reader   Date

_____   _____
Third Reader   Date

_____   _____
Department Chair   Date

_____   _____
Dean of Peabody College   Date

UMI Number: 9817286

Copyright 1997 by
Murphy, Bruce Thomas

UMI Microform 9817286
Copyright 1998, by UMI Company. All rights reserved.

UMI

300 North Zeeb Road
Ann Arbor, MI 48103

STRESS MANAGEMENT TRAINING FOR IMPROVED
PERFORMANCE IN A U.S. ARMY COMBAT UNIT
by
Bruce Thomas Murphy, Ed.D.
Peabody College of Vanderbilt University
December 1997

Major Field: Human Resource
Development

Number of Words *349*

This study examined stress management training in a United States Army profes-

sional development program. Specifically, the study (a) focused on the characteristics,

perceptions, and attitudes of participants in a program incorporating the concepts of stress

management; (b) identified issues and problems surrounding the use of stress management

in Army settings; and (c) made recommendations for future practice. The approach to this

project was to develop a stress management training program for leaders, implement the

program in a sample setting, and evaluate results of the program. An instrument was

adapted to provide a tool for determining the level of stress of program participants before

and after training.

The study was conducted with 111 U.S. Army military police soldiers from Fort

Campbell, Kentucky. All participants were leaders (noncommissioned officers, officers, or

military police) with at least two years of military service. The program's foundation is a

model of stress management training in which participants identified their own stress levels

based on reflection on their personal experiences, causes of stress, and individual reactions

to stress. Participants formulated action plans, based on the model and their own particu-

lar life projects, to enable them to manage future stress.

1

Prior to training, all participants completed a series of self-assessments to determine level of stress. Immediately after training, participants completed a reaction sheet indicating subjective evaluation of the training and its utility in their work lives. Approximately 6 weeks after the training, participants were again asked to complete self-assessments.

Analysis of variance showed no significant differences between participants in the training and control groups in stress levels as indicated by the self-assessments. However, analysis using the Pearson r showed statistically significant correlation between the participants' level of perceived overall stress and several dimensions of stress. This indicates that the training tended to increase awareness of one's stress level as the first step in stress management. This was also borne out by qualitative analysis of participants' responses. To provide a contextual setting for this study and to form a basis for recommendations, trainer reflections on previous workshops are discussed. Implications for future practice and research are included.

Neal Nadler, Major Professor   _27 Oct 97_

Neal Nadler, Major Professor   Date

© 1997

Bruce T. Murphy

All Rights Reserved

DEDICATION

This dissertation is dedicated to American soldiers, sailors, airmen, marines, and their families who have served their country with distinction since 1775 and have withstood all manner of stress in times of war and in times of peace.

It is especially dedicated to those whose sacrifices in the name of duty have helped to formulate my own understanding of stress in the military while they served in Lafayette, Louisiana; on a jungle trail in Cambodia; at Kirchgoens, Germany; aboard the USS Spadefish; in Zakho, Iraq and Camp Doha, Kuwait; and throughout Latin America. May these words in some way pay tribute to their deeds.

ACKNOWLEDGMENTS

I wish to acknowledge all persons who made significant contributions to this study. I am deeply grateful to my committee members, Neal Nadler, Patricia Arnold, and Julie Sharp representing the many other teachers, advisers, mentors, and sources of encouragement. Special thanks is given to Mary Dietrich for her help in statistical analysis and to Gloria Mason for her tireless efforts in style editing. Appreciation is also extended to all of my fellow students especially Jack Patterson and Gloria Pierce for help in getting started and to David Baskin, Joe Bablonka, and Maureen LaParo for their support in the early days.

Additionally, my sincere gratitude is extended to Jeanne Picariello whose unending professionalism as a training partner, sponsor, and senior Army leader contributed materially in the conduct of this study.

Finally, I wish to thank Alondra Murphy Carnahan and Ashley Carnahan for giving me special insight into stress during extremely stressful times and George, Ruth, and Dennis Murphy for a lifetime of inspiration, guidance, and love.

iv

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure		Page

CHAPTER I

INTRODUCTION

Background

Since the end of the Cold War the United States' military has been assigned a variety of missions unimaginable only a few years ago. These range from conventional warfare in the Persian Gulf to disaster relief in this country. All of these missions have been accomplished during a time of steady and dramatic downsizing, thus placing a heavy burden on soldiers, sailors, airmen, and marines and those who lead them. Unless care is given to the human dimension of our military, we may find ourselves with a force unable to meet these increasing demands.

During Operation Desert Shield and Desert Storm, the Army's V Corps in Germany deployed over 60,000 troops to the Gulf war. In order to address what was becoming a serious problem, the corps commander directed that a comprehensive program be developed to assist soldiers and their leaders to deal with the stress of combat and reintegration after combat. The program, developed by members of the V Corps staff, was known as "Desert Calm" and enjoyed great success. Teams of educators presented training in Germany as well as Saudi Arabia, Kuwait, and Iraq. This training aimed primarily at small unit leaders dealt with combat stress, stress management, family stress of deployment, and a special case of stress--suicide. Although similar programs were undertaken by

1

chaplains and social workers, no other program used principles of adult education to give combat leaders a tool for assisting their subordinates during these stressful times.

The foundation of the program is a model of stress in which participants identify their own stress levels, the causes of stress, and individual reactions to stress after reflecting on personal experiences. Participants then formulate action plans, based on the model and their own particular life projects, to enable them to deal with stress in the future. The suicide portion of the program was based on a model developed at the University of Calgary (Ramsay, Tanney, Tierney, & Lang, 1996) and successfully implemented throughout Canada and at several U.S. military and civilian sites.

Following up on the success of the Germany-based program, trainers subsequently adapted the training program and presented it to Americans of the State Department, Defense Department, and other U.S. agencies as well as foreign national employees in U.S. embassies throughout Central and South America between 1992 and 1994. More recently, the team was asked to go to Saudi Arabia in November 1994 to present the training to troops of the 24th Infantry Division who had deployed in reaction to Iraqi war overtures.

The ability of the United States Army to accomplish its mission of ensuring peace through combat readiness has always relied upon the Army's ability to have soldiers trained not only in technical proficiency with weapons systems, but also in the capacity for officers and noncommissioned officers (NCOs) to work as leaders of teams that employ those systems at critical and decisive points of conflict. The science of warfare has made many evolutionary steps since the days of primitive human-wave assaults and the massing of large numbers of armored vehicles characteristic of World War II. Most experts in the

field agree that the nature of the most dangerous threat, the mid-intensity Central European or Mid-East scenario, will be characterized by fluidity of the situation, short but violent anti-tank exchanges and by independent action by small units. At the same time, the job of leading small units is becoming increasingly more complex.

For example, consider a squad leader in a mechanized infantry platoon. Not only must he[1] lead and care for 10 subordinates, he must also be ready to employ a wide variety of weapon systems even at this lowest level of military command. Included in his mini arsenal are: an armored personnel carrier, M-16 automatic rifles, .45 caliber pistols, M-60 light machine-guns, M-203 dual purpose (rifle/grenade) weapons, M-47 "Dragon" anti-tank missiles, hand grenades, Claymore antipersonnel mines, M-72 light antitank rockets, bayonets, and an assortment of demolitions. Each of these weapons has unique characteristics and methods of employment. Additionally, the sergeant must have his entire unit trained in the care, maintenance, and proper use of these weapons. This brief illustration has not included the wire and radio communications equipment nor the Nuclear/Biological/Chemical (NBC) defense equipment for which the sergeant is also responsible. In a constantly changing and modernizing Army, the noncommissioned officer must be able to adapt to change and constantly learn new skills in order, literally, to survive. For his efforts, the taxpayers compensate the squad leader with $1,610.70 a month.[2]

The Army is not alone in the information/technology explosion popularized by Toffler's (1970) *Future Shock*. Many institutions we know are likewise caught in the

---

[1] The masculine personal pronoun is used in this example because current United States law does not permit women in Infantry units.

[2] Base pay for an E-6 with 4 years' service ("The Soldiers Almanac," 1997, p. 40).

educational obsolescence spiral. At one time in history it was possible to know most of what there was to know. Hence, a valid goal of education in the past was "to know everything." Sergeants in Washington's Continental Army could be relatively secure in a career once they mastered the basics of soldiering. However, as people began to enjoy longer lives and the amount available to know expanded exponentially, this necessarily changed. This phenomenon is described by Knowles (1980):

> It is no longer functional to define education as a process of transmitting what is known; it must now be defined as a lifelong process of continuing inquiry. And so the most important learning of all . . . is learning how to learn, the skills of self-directed inquiry. (p. 41)

Education is the traditional answer in addressing knowledge gaps; but traditional education will not suffice for the lifelong learning needs of Army leaders. The field of adult education has identified a difference in the way adults learn as compared to nonadults. Adults, for example, see learning in terms of problem-solving situations based on their roles as adults in society. Nonadults, on the other hand, tend to approach learning in a more dependent way. A concept called "andragogy" was identified as early as the late 20s and has been developing ever since. The notion of andragogy is based on the primary assumption that adults are different from nonadults with respect to how they learn. The word "andragogy" has been derived from the Greek *aner*, meaning man, and thus, in contrast to "pedagogy" (*paid* meaning *child*), it is the art and science of helping adults to learn (Darkenwald & Merriam, 1982). Andragogy calls for learning methods based upon the unique characteristics of adult learners. By reviewing the literature dealing with andragogy and by distilling its core concepts, one is able to identify appropriate learning methods and practices.

The implications for providers of education in any institution are clear. If professionals are to keep up with technological change, they must be developed toward lifelong learning rather than toward specific skill acquisition. Officers and noncommissioned officers need to learn how to learn and how to be problem solvers.

The Army, therefore, could certainly benefit from an exploration of the principles and practices of human resource development aimed toward self-directed learning in its leader training and education program. Currently, there is no clear information about the practice of adult education, and more specifically about workplace stress management, in the military setting. Information about the use of andragogy, including the associated issues and problems, is missing and needed.

Purpose of the Study

The purpose of this study was to examine the applicability of the concepts of stress management training to selected U.S. Army professional development programs. More specifically, the study (a) focuses on the perceptions and attitudes of actual participants in a program incorporating the concepts of stress management collected over a 3-month period, (b) identifies issues and problems surrounding the training for stress management in the Army, and (c) makes recommendations about how to introduce adult learning concepts into training for soldiers.

The approach to this qualitative study with quantitative aspects was to develop a stress management training program for leaders through literature search, implement the program in a sample setting, and compare results of the program with groups who did not receive training. Of specific interest were programs designed to assist soldiers and their

leaders to deal with the stress of combat, reintegration after combat, and related matters including suicide. In other words, it sought to determine how the stress management training program can serve as a foundation for other needed learning.

The study conducted a review of selected literature to determine the principles of stress management and the potential problems associated with its use in Army leadership programs. This provided a base of knowledge as well as a setting for the context of professional development training examined in the study. An instrument was developed, based on the review of literature, to provide a tool for getting at the "before" and "after" level of stress of program participants. Findings were analyzed and synthesized in order to make recommendations.

The anticipated outcomes of this study included guidelines for consideration in formulating policy concerning the appropriateness of the use of control of stress programs based on principles of adult education and in particular on the concept of andragogy. Included in these recommendations are comments on program goals and objectives, feasible delivery systems, major instructional strategies and techniques, and evaluation techniques. These guidelines can be given wide dissemination in the professional literature for small unit leaders and in other official Army publications as well as the human resource development literature.

Rationale and Significance

The Army has begun to identify the need for leaders who are capable of learning new skills and technologies on their own. This has come of necessity with the rapid influx of new weapons and communications systems. Additionally, the Army is realizing that

many of its old ways of doing business will not work in the modern world. The Army has institutionalized these concepts in its "Battle Labs," which seek to stay ahead of the technology revolution and show that the Army is starting to realize that the lock-step methods of the past will not meet the dynamic demands of the future.

In the environment that the Army is predicting for its future, it will be more and more critical to develop leaders who are oriented toward continually learning about new technologies and methods. Because the exact nature of such a rapidly expanding future cannot be predicted with certainty nor planned, leaders must be prepared for continuing professional education and instilled with an orientation toward lifelong learning.

By determining some essential components of programs for control of stress and then by carefully analyzing the Army's professional development programs in terms of these variables, the study provides insight into how well the Army is meeting this demand. More importantly, by using this approach the researcher is able to make recommendations for the general improvement of the professional practice in a key area of human resource development in the Army.

This study, therefore, makes several contributions to the field of human resource development. First, it adds to the general knowledge base by focusing on the role of stress management in human resource development. What is found here can be applied to other settings including other military services, government agencies, business and industry. The study should yield a better understanding of the current state of human resource development in professional development programs for Army leaders. It also should result in a better understanding of the problems associated with furthering adult education in the military setting. The information from this study can suggest further directions for

research in other settings and develop a framework for the analysis of professional development programs in a variety of organizations.

Second, this study can promote lifelong learning in a professional environment and brings Army personnel in contact with educators to enhance the fulfillment of their social roles. Program recommendations, once adopted, can serve as a forum for the discussion and resolution of a myriad of concerns for the participants. Within the context of control of stress learning activities, learning will take place through the exchange of ideas. Conclusive results are unpredictable now, but the flexibility built into the recommendations should provide Army leaders with the opportunity to adapt their programs to the particular needs of their adult learners and missions.

Third, the program makes a major advancement into an arena not previously penetrated by adult educators. The U.S. Army has long viewed adult education as being synonymous with basic skills education. Training programs within Army service schools generally tend to concentrate on specific skill development of the individual soldier. Systematic, self-initiated programs designed to heighten the work group's awareness of the dimensions of their interaction are virtually unknown in the Army. Where these efforts have been present they have not been sustained or institutionalized. This study may serve as an important step toward bridging the gap between human resource development theory and practice for the individuals and organizations concerned. As a result of this study, both the Army and the field of human resource development should reap benefits in terms of additional knowledge about the human resource development process and the very real development of teams and individuals.

Assumptions

The first assumption made in this study was that selected instrumentation would differentiate levels of stress among participants. There is little agreement in the field about a single measure of stress. Therefore, a comprehensive instrument was selected to address many aspects of stress. It was assumed that by approaching the measurement of individual stress from multiple perspectives, the truest possible image of each person's stress would emerge.

Another assumption was that the participants would be honest in their responses to survey questions. Respondents can give erroneous or misleading answers if they believe negative consequences will befall them for answering honestly. For this study, every attempt was made to assure anonymity of participants; however, soldiers are notoriously wary of such situations.

Research Questions

This study attempts to answer the following questions:

1. What is the impact of stress management training on participants' level of stress?

2. What is the impact of stress management training on participants' ability to identify stressors and develop strategies to deal with stress?

3. What implications for the practice of human resource development in the Army can be gleaned from a stress management training program based on concepts of adult learning?

Hypotheses

In this study certain hypotheses were posed and evaluated using statistical analysis in order to provide greater understanding of the impact of the stress-and-performance-for-leaders workshop on military leaders. These hypotheses were:

1. Participants trained on the stress-and-performance-for-leaders model will have lower stress than those not trained on the model.

2. Participants trained on the stress-and-performance-for-leaders model will exhibit greater awareness of their own level of stress than those not so trained.

3. Participants trained on the stress-and-performance-for-leaders model will exhibit a greater ability to develop and apply strategies to deal with stress than those not so trained.

Definitions

To provide clarity and as a reference, a number of terms that may be unfamiliar to the reader are defined below:

Distress is harmful, unpleasant stress (Selye, 1974). It is maladaptive stress with intensity sufficiently high to cause decompensatory processes, operationally defined by subjective or affective symptomatology (Weybrew, 1992).

Eustress, on the other hand, is adaptive or "good" stress. Coined by Selye (1974), the term refers to a stress reaction of intensity sufficiently low so that the compensatory mechanisms are adequate to maintain homeostasis (Weybrew, 1992).

The *general adaptation syndrome (GAS)* describes the manifestations of stress in the whole body, as they develop in time. The general adaptation syndrome evolves in

three distinct stages: alarm reaction, stage of resistance, and stage of exhaustion (Selye, 1974).

Homeostasis comes from the Greek *homoios* meaning similar and *stasis* meaning position. Homeostasis is the body's tendency to maintain a steady state despite external changes. It is physiological "staying power" (Selye, 1974).

Stress, in biology, is the nonspecific response of the body to any demand made upon it. For general orientation, it suffices to keep in mind that by stress the physician means the common result of exposure to any stimulus. For example, the bodily changes produced whether a person is exposed to nervous tension, physical injury, infection, cold, heat, X rays, or anything else are what we call stress. In other words, stress is what remains regardless of specific changes. Stress is also defined as the rate of wear and tear in the body (Selye, 1974).

A *stressor* is that which produces stress (Selye, 1974).

Limitations

Qualitative research poses a variety of problems for the researcher. One must make a choice between seeing what we know (deductive) or knowing what we see (inductive) in determining an appropriate research method (Guba, cited in Patton, 1980). Qualitative research, by its very nature, tends to provide more questions than answers. It is also possible to "get lost in the data," losing perspective because of immersion. "Thematic cul-de-sacs" (Brookfield, 1983, p. 27) also occur, resulting in frustration. However, it is through the qualitative research process that a deeper understanding of complex human phenomena can be achieved. When one wants to study processes or find

out the "why" behind phenomena, qualitative research is the only way to examine such questions. It was not anticipated that definitive answers to the problem of how best to develop professional Army leaders would be obtained in this research study. It is reasonable to hope, however, that by using the qualitative approach, the assumptions and issues surrounding stress management training in military settings would emerge.

The total sample size for statistical purposes was 111 participants drawn from a military police battalion at Fort Campbell, Kentucky. This relatively small number, although adequate to draw statistical inferences, may reduce the ability to generalize to a universe of over 480,000 active duty soldiers.

A degree of objectivity may be lost because I was involved in all phases of the training program and I conducted the training that subjects attended. Participants who attended workshops conducted by other trainers were not interviewed for this study. My investment in the workshop could have caused some loss of objectivity and possibly obstructed my ability to make clear judgments and interpretation of data.

The nature of the subject matter studied also placed limitations on the study. Only one training program was examined in detail. The Army has many programs that contribute to the professional development of its leaders. The setting was in the continental United States. The Army also conducts professional development and training programs in Europe, Korea, Japan, Alaska, Hawaii, and Panama. While these worldwide settings were not studied directly, my past experiences permitted anecdotal evidence to add color and depth to the study.

The study described above has two additional limitations. First, the scope of the study represented a major obstacle in that relatively new ground is being broken in this

research. Of necessity, several components of the study are being undertaken that might in themselves be interesting pieces of research; for example, a focus on the sources of stress in the military or the role of traditional military training in helping to control stress. This necessitated careful consideration of priorities and selection of appropriate directions. Some aspects of the study may, therefore, receive less attention than others. However, this process should allow for the identification of specific areas for further research.

Finally, the relative large scope of the study required me to limit the number of programs studied. Decisions had to be made as to which programs were included based on availability and comprehensiveness. This limitation affects the generalizability of the findings, but previous military researchers have noted that there is no such thing as a "typical" unit nor installation making any location as representative as any other (Ingraham, 1978).

CHAPTER II

REVIEW OF THE LITERATURE

This study examined the perceptions of selected persons involved in an existing program for leader professional development in the Army regarding the use of stress management training. It then sought to identify problems and issues concerning the implementation of stress management training into these programs and identify areas for program improvements. With these as goals, there were three relevant literatures to be reviewed: (a) principles and practices of stress and stress management, (b) human resource development (HRD) including adult learning, and (c) leadership and organization development. HRD must be reviewed because the literature contains the philosophical foundations for the examination of stress management as a basis for the enhancement of professional development programs. The review of human resource development literature yields a consensus on the basic principles of stress management and some guidelines for practice. The literature of leader and organization development in the Army provides a contextual basis for the study as well as an indication of the general issues and problems that emerge throughout the study.

Each of these areas is explored in this chapter to provide a solid basis for the stress management training program and to contribute benchmarks for the practice of

14

human resource development. The focus of this review is necessarily broad in order to

capture a wide range of issues and potential opportunities.

Principles and Practices of Stress and Stress Management

The notion of stress and particularly of stress among soldiers is not a new one. In

Shakespeare's *Henry IV*, Part I, as annotated by Shay (1995, pp. 165-166), provides an

account given by the wife of a combat veteran:

O, my good lord, why are you thus *alone*?	Social withdrawal and isolation
For what offense have I this fortnight been *A banish'd woman from my Harry's bed*?	Random, unwarranted rage at family, sexual dysfunction, no capacity for intimacy
Tell me, sweet lord, what is't that takes from thee *Thy stomach, pleasure*	Somatic disturbances, loss of ability to experience pleasure
and thy golden *sleep*?	Insomnia
Why dost thou *bend thine eyes upon the earth*,	Depression
And *start* so often when thou sit'st alone?	Hyperactive startle reaction
Why hast thou *lost the fresh blood in thy cheeks*,	Peripheral vasoconstriction, autonomic hyperactivity
And given my treasures and my rights of these To thick-eyed musing and cursed melancholy?	Sense of the dead being more real than the living, depression
In thy *faint slumbers* I by thee have watch'd.	Fragmented, vigilant sleep
And heard thee murmur tales of iron wars, Speak terms of manage to thy bounding steed, Cry "Courage! to the field!" And thou hast talk'd Of sallies and retires, of trenches, tents, Of palisades, frontiers, parapets,	Traumatic dreams, reliving episodes of combat, fragmented sleep

Of prisoner's ransom, and of soldiers slain,
And all the currents of a heady fight.
Thy spirit within thee hath been so at war
And thus hath so bestirr'd thee in thy sleep,

That beads of sweat have stood upon thy brow,   Night sweats, autonomic
Like bubbles in a late-disturbed stream.   hyperactivity

These reactions on the part of a soldier recently exposed to combat form a classic presentation of posttraumatic stress disorder (PTSD) but they are also characteristic in general terms of the stress of soldiers even when they are not exposed to combat. In fact, in today's high-technology, fast-paced, information-age world, stress has become an increasing problem for the population at large. Some indication of the magnitude of the stress problem in the workplace is illustrated by the following statistics on the cost of stress in the United States.

The National Council on Compensation Insurance (NCCI) states that workers' compensation costs represent 5% of the total health-care expenses in the United States (NCCI, 1991). They go on to note that stress accounts for more than 14% of all worker compensation claims, up from 5% in 1980. The NCCI indicates that claim benefits paid for stress average $15,000, twice the amount paid for the average physical-injury claim (McCarthy, 1988). A study by Northwestern National Life (1991) revealed that 25% of their sample had multiple stress-related illnesses, up from 13% in 1985; similarly, 46% of these workers felt "highly stressed" compared with 20% in a 1985 sample. Finally, stress-related disorders have been estimated to cost business and industry in excess of $150 billion per year from decreased productivity, absenteeism, and disability (Pelletier & Lutz, 1988). Similar costs can be expected in any segment of society including the military.

Stress is not a uniquely American problem. Powell and Enright (1990) give the perspective from Great Britain as they note:

1. An estimated 80% of all modern diseases have their beginnings in stress.

2. In the early 1980s, 1 in 10 adult British males and 1 in 5 adult British females received prescriptions for the benzodiazepine class of tranquilizer.

3. Four to 5% of the population are treated for diagnosed anxiety complaints every year.

4. In Britain 250,000 people die annually due to coronary heart disease (the most common cause of death)--the death rate doubled for men age 34-44 between 1953 and 1973.

5. Forty million days are lost to British industry every year due to direct stress related conditions (as accounted for by NHS certificates).

6. A conservative estimate of the cost of stress to British industry would be £1.3 billion a year. Typical symptoms would include alcoholism, absenteeism, premature death, and retirement.

7. In the USA there has been a 500% increase in coronary heart disease over the last 50 years.

8. In the USA 8 million people have stomach ulcers; 12 million people are esti-mated to have alcohol problems.

9. Americans take 5 billion doses of tranquilizers and 16,000 tins of aspirin each year.

Giving additional weight to the global nature of the problem but in a more philo-

sophical direction, Pestonjee (1992) outlines stress in ancient Indian thought and describes

two Sanskrit words *klesa* and *duhkha*, which approximate stress:

> The word *klesa* has its origins in the root *khis* which means to "torment," "cause
> pain," or "to afflict." *Klesas* are not mental processes but are a set of "hindering
> load" on our mental process, they produce agitation which acts as restrictions or
> hindrances. . . . the fundamental non-cognition which leads to phenomenological
> stress is *avidya*. This *avidya* leads to *asmita* (self-appraisal), *raga* (object ap-
> praisal), *dvesha* (threat appraisal), and *abhinivesa* (coping orientation). These
> three appraisals, namely, those concerning the self, the object and the threat are
> used for reality testing. Faulty evaluation in either or all of these can produce
> stress and torment. The *samkhya* system postulates that the feeling of *duhka* or
> stress is experienced by the individual in the course of his interaction with the
> world around him. The system mentions three types of stresses: personal
> (*adhyatmik*), situational (*adhibhotik*) and environmental (*adhidevik*). (pp. 27-29)

Stress, therefore, has been a part of human existence for a long time and is deeply

embedded in the human psyche. Weybrew (1992) identifies transient stress reactions such

as anxiety reactions, hysterical or other neurotic reactions, depression, and performance

decrement. In addition, he points to stress-related illnesses including coronary heart dis-

ease, ulcers, headaches, allergies, arthritis, nervous exhaustion, depression/suicide, hyper-

tension, immunological changes, and psychosis. According to Manuso (1984) the Presi-

dent's Commission on Mental Health estimated that one of every four people in the United

States was suffering from "severe emotional stress," even though they did not have any

diagnosable mental or other illness. In fact, in 1980 more than 50% of the Worker's

Compensation cases in California were for stress-related disorders. Therefore, there is

keen interest in developing useful ways to deal with this problem.

These authors have certainly captured the notion that stress is an important and

potentially dangerous phenomenon on the individual, interpersonal, group, and societal

levels. In order to provide a context for stress management training in the military, one must first examine what is being done about stress in the civilian workplace. Quick, Bhagat, Dalton, and Quick (1987) give the following examples of organizations' responses to the problem of stress:

1. New York Telephone Company saves at least $2.7 million annually from a well-designed wellness program.

2. HCA has invested over $50,000 annually in cash awards to employees who participate in an aerobic exercise program.

3. The Los Angeles Fire Department has a program of teaching meditation to its trainees.

4. General Motors figures that in 1985, health care costs accounted for $400 of the cost of every car they produced.

5. Johnson and Johnson and IBM have instituted comprehensive programs of health checkups and exercise and "life-style" classes for smoking cessation and stress management.

6. Aerobics Center in Dallas is a focal point for corporate physical fitness programs. Some 60 corporations are members and there is a waiting list of over 20 more.

7. Employer contributions for employee health insurance have gone from $1.8 billion in 1955 to $101.0 billion in 1985, nearly a hundredfold increase in 30 years.

According to the authors, the examples above signal the beginning of an important era in the study of human stress and strain in work organizations, its etiological significance, and the role of preventive management in its governance. Health promotion and effective management of work stress in terms of encouraging both preventive and

therapeutic interventions are slowly becoming important parts of today's corporation's strategic mission. The military, however, has been slow to respond to these cues. Even with a comprehensive health promotion directive issued over 10 years ago (Department of Defense, 1986) the services have experienced a dearth of efforts aimed specifically at helping soldiers identify their stress and develop strategies to manage it.

In direct conflict with the Army's training philosophy of centralized planning (Department of the Army, 1988) is the fact that capacity to withstand stress varies from individual to individual. Powell and Enright (1990) have presented this phenomenon in terms of the analogy of the tap and the glass as shown in Figure 1. If we consider the body's limitation for stress to be the glass, we all have a different size and shape glass internally. This accounts for different capacities for stress. Everyday stress is represented by the tap dripping drops of fluid into the glass. It is important to notice that just as our individual stress glasses are different, so our stress taps and what turn on these taps are different for everyone.
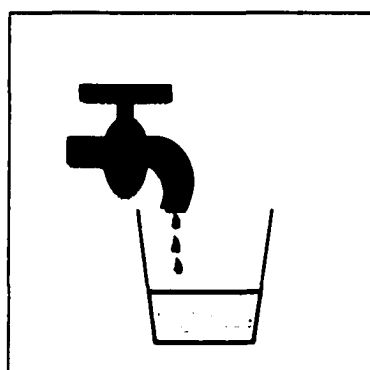
Figure 1. The tap and glass–a model of stress.

As the level of fluid in the glass rises, it becomes increasingly likely that the body will produce physical, mental, or behavioral symptoms or any combination of these to this stress. At some point this becomes critical as seen in Point A of Figure 2 and the body signals the activation of the stress response. This will vary from individual to individual. It may be headache, irritability, feelings of depression, crying spells, or a host of other signals. The person has the opportunity to recognize that the body is being stressed and to do something about it. If the individual does not take action to reduce the level of stress, the tap keeps dripping and another critical point is reached. The stress signal may intensify or another stress signal may appear. If this continues without action, stress can bring the glass to the overflow or breaking point. For Powell and Enright (1990), "the process of overcoming the problems of stress and anxiety is about learning to turn off the stress tap and drain down the stress glass" (p. 69).
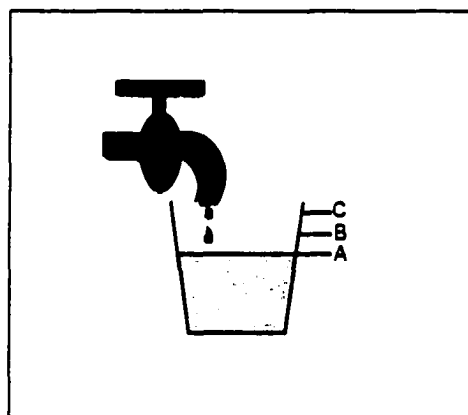
Figure 2. The level of stress and degree of symptoms.

The task for soldiers then is to keep things in balance. Tracy (1994) summarizes this notion of homeostasis well by noting:

Stress generates strain within the system. Ordinarily the system copes with strain by means of motivated behavior directed at changing the stressful input or output. Normal stress is no problem; in fact, it is called "eustress" and it motivates high performance. If the system cannot cope, however, the result is distress. When stress results in symptoms of distress, something must be done about it before it harms people or destroys the organization. (p. 132)

The symptoms of distress on the individual can be quite diverse and pervasive.

Figure 3 (adapted from Schell, 1997, pp. 100-111) outlines in lay terms potential consequences of stress on both the individual and the organization.

---

1. Physiological

   Short Term: Heart rate, GSR, respiration, headache

   Long Term: Ulcer, blood pressure, heart attack

   Nonspecific: Adrenaline, noradrenaline, thymus deduction, lymph deduction, gastric acid production, ACTH production

2. Psychological responses (affective and cognitive)

   Flight or withdrawal; Apathy, resignation, boredom; Regression; Projection; Negativism; Fantasy; Expression of boredom with much of everything; Forgetfulness; Tendency to misjudge people; Uncertainty about whom to trust; Inability to organize self; Inner; confusion about duties or roles; Dissatisfaction; High intolerance for ambiguity, do not deal well with new or strange situations; Tunnel vision; Tendency to begin vacillating in decision making; Tendency to become distraught with trifles; Inattentiveness: loss of power to concentrate; Irritability; Procrastination; Feelings of persecution; Gut-level feelings of unexplainable dissatisfaction

3. Behavior

   A. Individual consequences

       Loss of appetite; Sudden, noticeable loss or gain of weight; Sudden change in appearance; decline/improvement in dress; Sudden change of complexion (sallow, reddened, acne); Sudden change in hair style or length; Difficult breathing; Sudden change of smoking habits; Sudden change in use of alcohol

   B. Organizational consequences

       Low performance-quality/quantity; Low job involvement; Loss of responsibility; Lack of concern for organization; Lack of concern for colleagues; Loss of creativity; Absenteeism; Voluntary turnover; Accident proneness

Figure 3. Individual symptoms of stress.

Simply stated, because stressors draw upon an individual's finite life-energy supplies, each individual "needs to develop his or her own repertoire of 'adaptive resources' in order to use one's energy supplies efficiently and effectively. Efficient and effective use of energy is good stress management" (Schell, 1997, p. 33).

The Army has recognized that there is stress associated with military life and specifically with combat. In typical centralized planning for training fashion, the Army tells leaders how to handle stress in combat. Figure 4 is adapted from the Army's current guidance for such actions (Department of the Army, 1991).

Although there are similarities to Schell's (1997) comprehensive listing of stress reactions, the Army's offering has certain distinct characteristics. First, it correctly recognizes that there are degrees of stress that a soldier might be experiencing. However, it seems to place great responsibility on the small unit leader to observe correctly and diagnose slight differences in order to take action. Second, the underlying assumption seems to be that stress is inevitable and one must wait for reactions to do something about it. This view is common in the literature, particularly in the popular literature about stress management. A more useful approach would be one that seeks to manage stress prior to the reaction event. To formulate such an approach, it is necessary to more fully understand what stress is and how persons react to it.

The work of Selye (1974) gives us the now classic general adaptation syndrome, which can be used to describe what happens to an organism put under a constant level of stress over time as illustrated in Figure 5. Applied to the human organism, the individual exists at a state of homeostasis; that is, all systems are functioning normally and performance is at a constant level. When the new stressor is introduced, the individual begins to

Most soldiers have these reactions. No special treatment is necessary.	Trembling; perspiring/cold sweats; nausea; frequent diarrhea; frequent urination; Pounding heart; stomach pains; anxiety; agitation
Look out for these reactions.	Not moving or talking; seems without emotion; apathy—cannot be bothered; moodiness; loss of sense of humor; unable to concentrate on job; decreased appetite; overactive; emotional outbursts; loss of self-control; argumentative; aggressive; unable to sleep
Give on-the-spot treatment.	Remain calm; do not ridicule; calm the soldier; reassure the soldier; show understanding; share a joke; team up with him for a while; if possible, give him a warm drink, gum, candy; give him a special task
Report to your superior. (Severe reactions)	Repeated nausea and vomiting; inability to use some parts of the body; unable to perform job; feelings of guilt; excessive use of alcohol or tobacco
Unit treatment is necessary.	Keep soldier with unit but away from battle; Allow him to sleep; treat him as a soldier, not as a patient; have someone stay near him—supervise; have members of his unit interested in his welfare; have him help on small jobs; return him to unit after about two days

If reactions still persist or are very severe,
CALL A MEDIC

Figure 4. Combat stress and treatment.

adapt to the stress. In the first stage, or alarm stage, performance drops from the normal

level. This is because the person is now concerned about the new requirements placed on

it by the stressor. What is this new level of performance demanded? How can I best meet
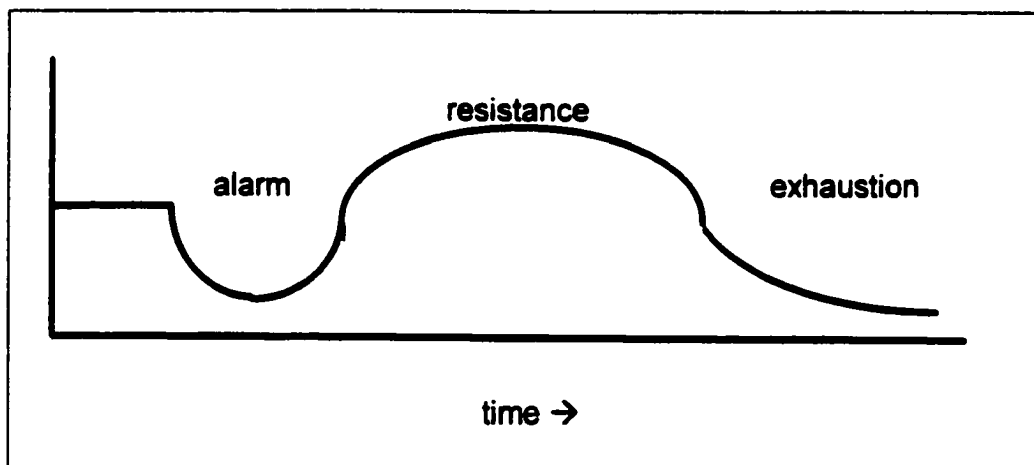
Figure 5. General adaptation syndrome.

this demand? How much energy should I expend in meeting this demand? While the individual is posing and answering these questions, attention is diverted from the task of maintaining constant performance. Hence, performance drops. As these questions begin to be answered and the focus once again returns to the tasks at hand, performance rises and finally plateaus at a sustainable level. During this resistance stage the focus is on getting the job done. This is where most people probably are most of the time. We are resisting the stress of all of the demands placed upon us. However, at some point in time the stress becomes too great and we enter the exhaustion stage. Here our performance begins to drop. We weaken and if the stress continues we ultimately begin to break down.

It is useful to modify the concept of the general adaptation syndrome to obtain a working model of how stress impacts one's performance. A number of authors including Powell and Enright (1990) have done just that (see Figure 6). If we hold time, rather than the level of stress, constant and vary the amount of stress, we can likewise observe the impact on performance. At very low levels of stress, there are corresponding low levels
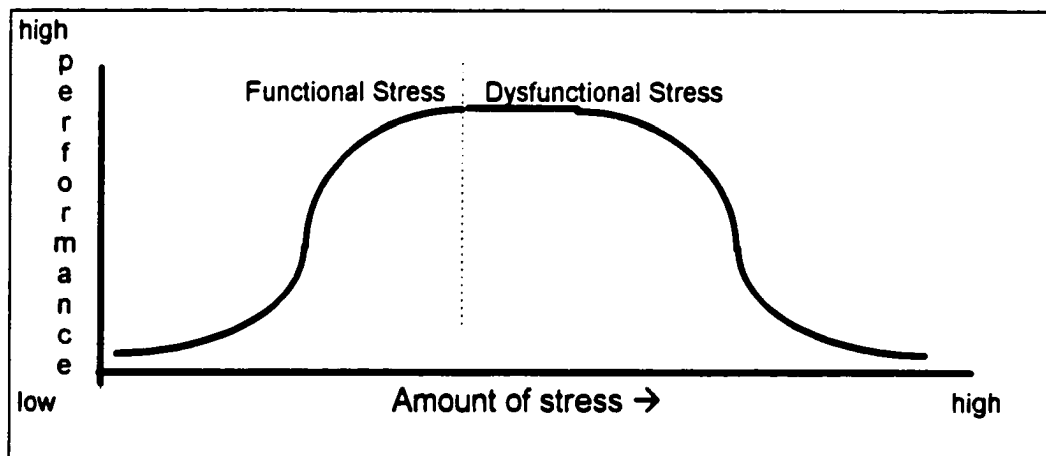
Figure 6. Relationship between stress and performance.

of performance. This is because there is no challenge, no demand to be met and conse-

quently, nothing gets done. This is not a bad circumstance *per se*, but for leaders charged

with getting results from individuals and teams, it is unacceptable. As more stress is

added, the level of performance increases correspondingly until it reaches a plateau where

increases in stress do not increase performance level. Eventually, if enough stress is

added, performance gradually begins to taper off and then falls to a very low level. Most

people are familiar with the notion that there is good stress and bad stress. Using this

model we can see that stress is good or functional if an increase in stress yields an increase

in performance, while stress is bad or dysfunctional if an increase in stress does not yield

an increase in performance.

The implications for leadership development are clear. The leader must be trained

to ensure that there is sufficient stress to enhance performance but not so much stress that

it threatens to harm either performance or the performers. This is the essence of stress

management.

In a study of undergraduate education curricula Wagner (1995) determined that stress management was one of the top 10 topics needed in leadership development programs. There are many useful models for the management of stress. A search of the literature of stress management reveals that the majority of these models focus on reacting to the stress response. Hence, such diverse methods as behavior modification, relaxation techniques, biofeedback, time-out, and social support have arisen and been popularized.

Pool (1996) noted that although there is an abundance of experimental research demonstrating the health benefits of various stress reduction programs, there is little empirical evidence for the comparative efficacy of any one stress reduction regimen or the relative merit of instruction in stress management compared with participation in social support groups. This notion is supported by other recent research by Mullins (1995) who tested three different meditation strategies (progressive muscle relaxation, autogenics, guided imagery), Digliani (1994) who developed stress management training for police officers, and Swafford (1993). All of these researchers found no statistical differences between those individuals trained and the control groups in their studies, yet each researcher reported on the benefits perceived by the study subjects and the need for continued efforts to develop effective stress management training programs.

We see also great variety in the mode selected for stress management training. Meditation was found by Anderson (1996) to be a viable stress management intervention that can be easily and successfully used by teachers, but Chang (1996) determined that a Zen-based stress management intervention may be expected to be effective within a society with a large Buddhist population segment. The less specific, but more universally appropriate methods of mediation have long been used in stress management training

and best articulated by "the father of deep breathing," Herbert Benson. Benson (1996)

boils mediation down into two basic components:

> One is a repetition—generally silent—of a sound, a word, a phrase, or a prayer. Or this can even take the form of one's own breathing. The second component is passively setting aside other thoughts when they come to mind and returning to the repetition. (pp. 35-36)

Lists of ways to reduce stress have become popular in recent years. In the space

of five pages, Dunham (1984) provides four lists for reducing stress based on research

consisting of 20, 9, 5, and 6 steps, respectively. Dunham concludes that although there is

similarity in the literature, there also exists the possibility of confusion if general themes

are not identified with the specific needs of the individual.

There is no standard time frame for stress management training. Washburn

(1996) presented training 1 hour a week for 8 weeks. Anderson (1996) used 1.5 hours

per week for 5 weeks while Lyon (1996) used 6 weeks and Digliani (1994) used five 2-

hour sessions. Crago (1995), although discussing stress management training, reports on

"therapy sessions" over a 4-week period. The appropriate time frame seems to depend on

a number of factors including the model selected for training and the organizational con-

text within which the training takes place.

Weybrew (1992) offers the ABC model of stress, which has similar elements to

Lewin's (1951) force field analysis and Vroom and Yetton's (1978) expectancy theory of

motivation. In his behavioral approach, Weybrew (1992) describes stress as a process in-

volving (a) antecedents, which involve the individual's prepotency of needs active at any

given time; (b) behavior or contingencies such as the avoidance and approach contingen-

cies for a given action; and (c) consequences or reinforcers of the elicited behavior.

Weybrew sees perceived or anticipated stress as barriers between the behavior and the consequences. He describes these barriers and defines stress as patterns of stress reactivity (POSR). The individual's task is to overcome these barriers through feedback and feedforward processes detailed by Weybrew.

C-O-P-E is an abbreviation that stands for four key types of self and organizational analyses that Schell (1997) believes are essential for individuals to complete so that they can understand their unique stress situations and develop their optimal stress coping potentials. In this four letter model: "C" represents the *control* that individuals perceive they have over their personal and organizational stressors at any point in time. "O" represents the *outward signs* of distress that present—in an individual or in the organization at any point in time. "P" represents the *personality predispositions* and conditioned behavioral patterns contributing to an individual's overall stress level, particularly over the longer term. "E" represents the projected and real *energy expenditures and energy returns* of the individual over some period of time, such that the predominance of eustressors acts as a sort of stress buffer and such that the predominance of distressors acts as a sort of catalyst for "stress disability" (p. 36).

Manuso (1984) outlines a model stress management program used successfully in corporate settings. In this program small groups of employees are taught seven core techniques of stress management: the quieting response, a method of deep relaxation, assertiveness, psychological coping strategies (including stress inoculation and systematic desensitization), stretching and isometric exercises, proper dietary and nutritional practices, and a series of behavioral techniques for changing habits. During an assessment phase, participants are sent a health hazard appraisal that assesses their health profile and

risk factors. They are also sent an assertiveness inventory, a Type A-Type B scale, and a

social readjustment rating scale (Holmes & Rahe, 1967). These instruments, according to

Manuso (1984), attract the participants' interest before the training program and engage

them in ongoing self-assessment procedures before it begins. During the training ses-

sions, participants are taught the seven core techniques mentioned above. The program

utilizes a variety of audiovisual, didactic, and interactive training sequences to accomplish

its goals. Ten weeks after the training, participants are again sent a packet of materials for

self-assessment.

A comprehensive view of stress and stress management presented by Girdano, Ev-

erly, and Dusek (1997) became the primary instrument for evaluating individual stress in

this study. In the model the individual performs a self-assessment along 10 dimensions

(see Table 1) to identify the prepotent stressors. These dimensions yield a profile of the

individual's total stress vulnerability, which can then be used to address management of

the stress according to the degree of vulnerability.

Table 1

Ten Dimensions of Stress

Self-assessment exercise	Dimension of stress
Exercise # 1	Adaptation
Exercise # 2	Frustration
Exercise # 3	Overload
Exercise # 4	Deprivational stress
Exercise # 5	Nutrition
Exercise # 6	Self-perception
Exercise # 7	Type A behavior
Exercise # 8	Anxious reactivity
Exercise # 9	Control
Exercise # 10	Occupational stressors

Because these dimensions comprised the instrument used in pretest and posttest of the sample population, it is important to describe what is meant by each of the dimensions. Adaptation is the tendency of the body to fight to restore homeostasis in the face of forces that upset this natural bodily balance. Holmes and Rahe (1967) compiled a list of positive and negative life events that seemed to contribute to the stress reaction. From these efforts emerged the Social Readjustment Rating Scale (SRRS), first published by Holmes and Rahe in 1967. This scale originally listed 43 life events, and each carried a weighting indicating the amount of stress to be attributed to it. The weightings were determined by the sample population being tested, and the weighting units were called life change units (LCUs). It is change, or the disruption of homeostasis, that produces stress and adaptation, whether the event is desirable or undesirable. Schell (1997) points to a flaw in this dimension when he notes, "From an organizational-use perspective, the SRRS's greatest shortcoming is its disproportionately low number of life events dealing with work" (p. 60).

Frustration is the thwarting or inhibiting of natural or desired behaviors and goals. Four major sources of everyday frustration in the urban and suburban United States are overcrowding, discrimination, socioeconomic factors, and bureaucracy.

Overload is a level of stimulation or demand that exceeds the capacity to process or comply with that input, overstimulation. The four major factors of overload are (a) time pressures, (b) excessive responsibility or accountability, (c) lack of support, and (d) excessive expectations from individuals and those around them. Any one or a combination of these factors can result in stress from overload. This can occur in urban, occupational, academic, and domestic environments. Deprivational stress, on the other hand, is the psychophysiological stress response caused by states of boredom and/or loneliness. It is the

internal bodily reaction to cognitive understimulation; that is, our body's response to boredom (monotonous, unchallenging tasks) and loneliness (emotional deprivation).

Nutrition is a subset of bioecological causes of stress. This type of stressor is only minimally colored by our higher perception and thought processes, and this is what separates it from the other two major categories of stress (psychosocial and personality).

Several dimensions of stress stem from one's personality. Self-perception is one of the most influential factors in human behavior. The origin of much personal stress may lie within the individual's concept of self. Major components of self-concept are self-awareness, self-worth, self-love, self-esteem, self-confidence, and self-respect.

Type A behavior is a specific behavior pattern that adversely affects health. From their contact with coronary patients, Friedman and Rosenman (1974) formulated a construct of action-emotion behavior patterns that seemed to embody the coronary-prone individual. This construct was referred to as the Type A personality and included in it the following characteristics:

1. An intense sense of time urgency; a tendency to race against the clock; the need to do more and obtain more in the shortest possible time.

2. An aggressive personality that at times evolves into hostility; high motivation, yet very easy loss of temper; a high sense of competitiveness, often with the desire to make a contest out of everything; the inability to "play for fun."

3. An intense achievement motive, yet without properly defined goals.

4. Polyphasic behavior; that is, the involvement in several different tasks at one time.

Anxious reactivity is another personality type. Anxiety is a basic component of stress. It is not only a symptom of stress but also a cause of further stress. The anxious-reactive personality is hypersensitive to the feedback mechanisms at work during the stress reaction. This means that the anxious individual suffers from a feedback "loop" that perpetuates the anxiety reaction.

The need for control may be the rosetta stone for a more complete understanding of stress. It can be argued that the most powerful stressor of all is real or imagined loss of control moderated by the individual's need to control the events and environments that impact one's life.

Occupational stressors are significant because most individuals spend one third of their adult lives in the workplace. This is a natural place to search for sources of stress but it is also a natural venue within which to apply stress management techniques. Stressors in the workplace can be categorized as organizational, individual, or environmental. Organizational stressors include lack of financial rewards, lack of career guidance, overspecialization, and work overload that may involve time pressure, job complexity, and decision-making requirements. Individual stressors include occupational frustration, job ambiguity and role conflict, stifled communication, discrimination, bureaucratic frustration (red tape), and inactivity resulting in boredom at work. Environmental stressors include occupational change and adaptation (relocation, promotion, reorganization, and down-sizing), violence in the workplace, time change associated with jet lag and shiftwork fatigue, noise, lighting, temperature, and ergonomic strain. These certainly open opportunities for the human resource development practitioner.

For the basic model of the stress-and-performance-for-leaders workshop this study

turned to another comprehensive approach, called the person-situation interaction model

of stress, offered by Prince (1981). In this model (see Figure 7), stress is thought to arise
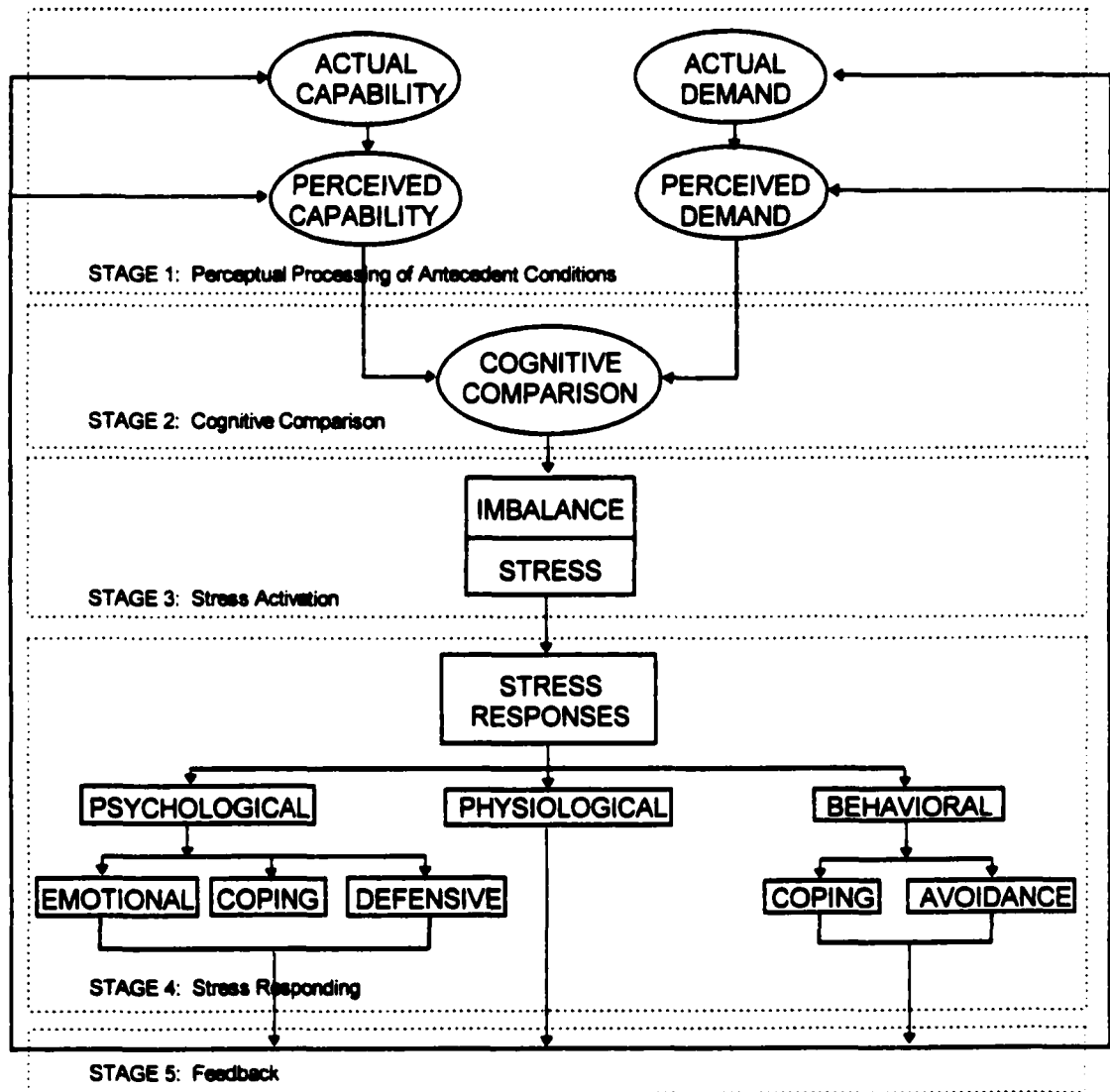
Figure 7. Person-situation interaction model of stress.

as a result of several stages of an interactive process. A perceived demand is compared

with the person's perceived capability to meet the demand. If the two are equal, no stress

results. Conversely, if the two are not equal, the stress response is activated. In other

words, under this model, an operational definition of stress is an imbalance between perceived demands and perceived capabilities. Because the direction of the imbalance is not considered, both demand too great for capability and capability too great for demand trigger the stress response. This fits with the concept either too much or too little stress is harmful. A moderate imbalance between demand and capability will produce the functional stress or eustress described earlier while a large gap will produce distress.

According to Bandura (1977), it is mainly perceived inefficacy in coping with potentially aversive events that makes them fearsome. To the extent that one can prevent, terminate, or lessen the severity of aversive events, there is little reason to fear them. The main goal of stress management then is to increase one's ability to understand the sources of stress and develop strategies to deal with stressful situations.

An interpretation of the Prince (1981) work yielded a concise yet comprehensive basic model for use in this study's stress-and-performance-for-leaders workshop. In its simplified form, the model focuses on the three key components of demand, capability, and response (see Figure 8). These three are useful in providing an operational definition of stress as an imbalance between perceived demands and perceived capabilities, which then causes the individual to respond to the stress. They are also helpful in providing rubrics for the development of stress management strategies. By aligning all possible strategies under these three general areas, the learner not only can sift through the plethora of available strategies, but can also select strategies that have specific and targeted aims such as reduce demands or increase capabilities.
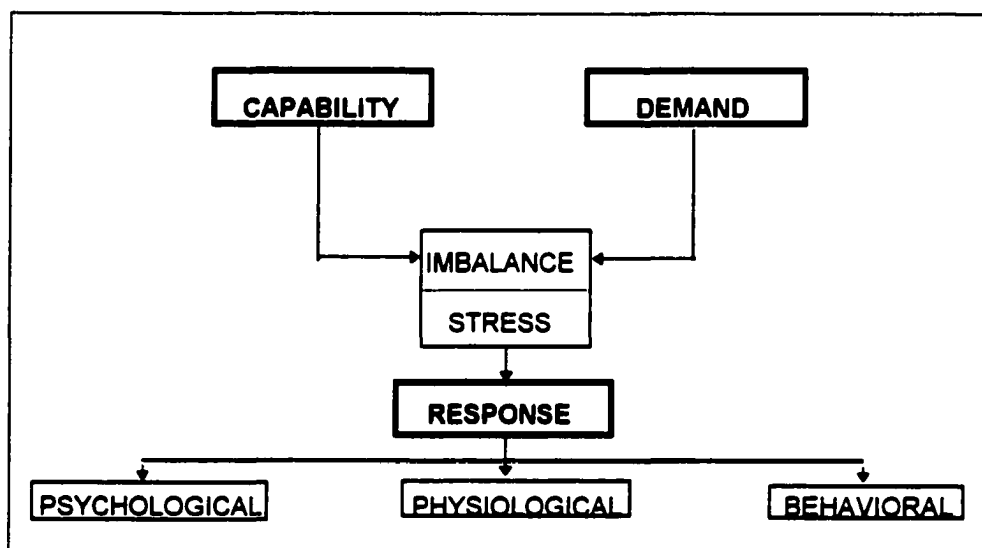
Figure 8. Modified interaction model of stress.

The foregoing discussion of stress and stress management provides a basis for the content and philosophy of a stress management training program. To better understand how best to approach learners, an examination of how adults learn is required.

Human Resource Development and
Adult Learning

Central and most significant in adult learning is what Mezirow (1981) calls "perspective transformation," an expanded awareness that is precipitated by life events that he terms "disorienting dilemmas." These dilemmas trigger a life transition in which "old ways of defining problems and solving them no longer work and the stage is set for a perspective transformation through the critical assessment of psycho-cultural assumptions" (Mezirow, 1981, p. 6). Here the HRD practitioner plays or should play a major role in helping learners move toward more authentic meaning perspectives; more authentic because they are less distorting of reality, that is they are more inclusive, more discriminating and more integrative of experience.

Facilitators of adult learning who are cognizant of the continually evolving sense of

self that occurs throughout adulthood will be guided in their practice accordingly. Sensi-

tivity to this important aspect of adult experience suggests certain guidelines, some of

which are:

> To devote time to unstructured solitude, . . . allowing our minds to wander on the
> edge of fantasy, . . . to be reflective, to consider strengths and weaknesses, along
> with problems and opportunities and a sense of direction, . . . to express your
> feelings to help discover them. Many feelings become more defined and suscepti-
> ble to change as we disclose them to others who are caring and accepting. In the
> process, implicit meanings are revealed and we can sometimes attain even greater
> understanding. (Mezirow, 1978b, pp. 354-355)

Knox (1978) also points out that the necessity of adults unlearning interfering ma-

terial also suggests that certain guidelines be followed. If learners are too defensive and

anxious because of such interference, it can inhibit learning; therefore, support, reassur-

ance, and assistance are necessary to diminish the sense of threat and increase a sense of

success. Further guidelines suggested by Knox (1978) are (a) emphasize abilities;

(b) provide advance organizers to help build a cognitive structure; (c) relate concepts to

what learners already know; (d) give clear instructions and explanations of concepts that

begin with basic concepts and procedures and progress to more difficult ones; (e) present

memorable encounters to provide the salience and affective intensity that results in greater

learning; (f) utilize varied resources--books, tapes, recordings, films, co-learners--because

preferred resources enable adults to learn better; and (g) provide opportunities for feed-

back from others in the learning group, self-assessment, or test instruments.

Kidd (1973) believes in the critical role of dialogue in learning. In fact, he writes

that "all learning is a dialogue" (p. 217) and that "for all learning, it is essential that two-

way communication be achieved" (p. 228). He goes on to elaborate on the concept of

engagement and the importance of being involved in a relationship with the subject or task, group, environment, or teacher. Kidd (1973) believes that the "opportunity to raise doubts, air misunderstandings, and become involved by verbalizing" are key factors in learning (p. 217). Also both security and stimulus are essential; learners must feel both a sense of well-being and enough of a challenge. "Learning and all kinds of growth arise in part through the excitement and stimulation of difference and tension, not just from a condition of well-being" (Kidd, 1973, p. 243). Engagement is related to the affective aspects of learning because feelings that are not released can interfere with learning. If there is no opportunity for learner response, questions, reactions, and so forth, learning can be inhibited, especially if the perception of threat or attack draws energies toward protection and defense rather than freeing them for growth, change and learning. "Attitudes are most likely to be altered when the person is not undergoing threat or tension, to solidify under covert attack" (Kidd, 1973, p. 129).

Smith (1982) describes a climate conducive to learning as one of collaboration, personal concern and caring for others, an emphasis on positive feedback, and the expression of feelings. He contrasts it with one that is impersonal and formal, emphasizing the negative and errors, and characterized by personal distancing and competition. Smith further distinguishes among three types of learning models for adults: self-directed, collaborative, and institutional, each of which has its own salient features, advantages, and obstacles. Because Smith (1982) identifies "developing awareness of oneself" (p. 57) as a central task of learning how to learn, the collaborative mode affords an excellent means of increasing self-understanding because:

[It] tends to center in activity related to the exploration of ideas and opinions and finding solutions to problems. Changes in values, attitudes, and understandings are often the expected outcome, as opposed to the rapid encompassing of a body of subject matter. . . . And a group may be helpful for clarifying personal interests and reasons for changing or for assessing personal potential. (pp. 91-91)

Although collaborative learning is well-suited to self-discovery and self-understanding, it is not without its pitfalls. The leadership role is a difficult one requiring many sensitivities to create the climate necessary for successful collaborative learning. Smith (1982) describes this as:

a mutually supportive climate, one in which one can safely express opinions, test ideas, try new behavior, and give and get help as needed. It enables the curiosity , experience, and problem-solving abilities of several people to be released and harmonized in order to achieve mutual purposes while meeting individual needs. Interpersonal relationships and communication are of central concern. One learns with and through other people--perhaps as much as from resources outside the group or brought into the group. (p. 91)

One of the most serious obstacles to collaborative learning, yet simultaneously the factor that makes it possible at all, is the past experience of the learners. If reintegrating and redefining the meaning of past experiences in life is seen as the chief purpose of adult learning (Lindeman, 1961), then the fund of life experience is the basis for learning and each person in a learning group becomes a resource for this process. On the other hand, this body of experience can also be a deterrent. As Smith (1982) puts it:

Past experience then constitutes a base for new learning and a source of obstacles discouraging deliberate entrance into education or hampering learning and change once in. It often requires "unlearning" and helping adults to raise their established meanings, values, skills, and strengths to a conscious level, and to examine these meanings, values, skills and strengths and proceed to a new awareness, to the perception of new relationships and new insight about themselves. (pp. 41-42)

Because of this, the task of the facilitator of collaborative learning is challenging and difficult. The "Jonah complex" is the denial of our talents and potential for greatness

because of the ambivalence we feel toward growing and changing. Humans are pulled

between "the need to know and the fear of knowing" (Maslow, 1968, p. 60).

The work of Jung (1971) provides the basis for Kolb's (1981) learning style theory

in which Kolb envisions growth and learning as the development of ever greater complex-

ity and integration of the four learning dimensions of concrete experience, reflective ob-

servation, abstract conceptualization, and active experimentation. As individuals develop,

they gain greater affective, perceptual, symbolic, and behavioral complexity, respectively,

and these also become more completely integrated with one another during adulthood.

Adult development and learning, therefore, involves "higher level integration and expres-

sion of non-dominant modes of dealing with the world" (Kolb, 1981, p. 236). In Kolb's

model, learning requires the expression and integration of abilities that are polar opposites-

-reflectivity/activity and concreteness/abstraction. "Thus, in the process of learning one

moves from actor to observer, from specific involvement to general analytic detachment"

(Kolb, 1981, p. 236). No single one of these modes is exclusively good or exclusively

bad; all are necessary and each has its advantages and disadvantages. As a person be-

comes more complete and more fully functioning, however, "development in one mode

induces development in the others," resulting in greater complexity, wholeness, creativity

and growth (Kolb, 1981, p. 249).

Kolb speaks out against the damage done to individuals by a reductionism that

actually encourages the disintegration of the person rather than growth and integration.

Because of an overemphasis on specialized functionalism, Kolb (1981) writes:

> The great organizations of our present-day civilization actually strive for the com-
> plete disintegration of the individual, since their very existence depends upon the
> mechanical application of the preferred individual functions of men. It is not man

that counts but his one differentiated function . . . he is even exclusively identified with this function. (p. 250)

Experiential learning enables individuals to develop their nondominant abilities as well as their dominant ones. To experience, observe, conceptualize, and experiment are latent capacities of every person, and in the higher stages of adult development, beginning typically in mid-life or mid-career, learning in the nondominant mode is necessary for continued growth.

A key concept in adult education is *andragogy*. Mezirow (1981) defines andragogy as "an organized and sustained effort to assist adults to learn in a way that enhances their capability to function as self-directed learners" (pp. 21-22). This involves decreasing learner dependency on the educator, assisting learners to use resources, including the experience of other persons, assuming responsibility for their choices and progress, and facilitating self-reflection, problem-posing, and a positive self-concept in a climate supportive of changes, risk-taking, and examining perspectives.

Knowles (1980) bases andragogy on four critical assumptions that contrast with the assumptions of traditional pedagogy: (a) a self-concept that moves toward self-directedness, (b) "a reservoir of experience that becomes an increasingly rich resource for learning" (p. 45), (c) learning readiness related to the developmental tasks of adult roles, and (d) immediate applicability of learning.

At its best, stress management training for soldiers should embody the principles of andragogy. Additionally, this training can go a long way toward helping soldiers realize their full potential in the social roles in which they find themselves. For some it could even be a focal point in their lives.

An important dimension of adult development and transition is described by Mezirow (1978a) as "learning how we are caught in our own history and are reliving it" (p. 101). Usually a challenge or "disorienting dilemma" precipitates a critical assessment of the structure of psychological and cultural assumptions which shape our lives, referred to by Mezirow (1978a) as a "meaning perspective, . . . a personal paradigm for understanding ourselves and our relationships" (p. 101). Because the current meaning perspective does not provide an effective way of dealing with the life crisis or dilemma, we begin a process which Mezirow calls "perspective transformation," a shift to a more authentic meaning perspective, which enables the person "to find a new sense of identity ...which can lead to greater autonomy, self-determination and responsibility—important gains in personal identity" (1978b, p. 17). In a study of women participating in college reentry programs the transformation cycle was found to consist of (a) a disorienting dilemma, (b) self-examination, (c) a critical assessment of assumptions, (d) relating one's discontent to a public issue, (e) exploring options for new ways of living, (f) building competence and self-confidence in new roles, (g) planning action and acquiring the knowledge and skills for such action, (h) provisional action, and (i) reintegration into society (Mezirow, 1981).

Several important points are made in his explanation of perspective transformation. One is that meaning perspectives are not merely intellective; they have dimensions of thought, feeling, and will. Another is that "moving to a new perspective and sustaining the actions which it requires is dependent upon an association with others who share the new perspective" (Mezirow, 1978a, p. 105). Support and reinforcement from others is necessary. A third important consideration is the criteria for evaluating the quality of

meaning perspective. Because a fundamental need of humans is to discover the meaning of their experience, one perspective is better than another because it is more inclusive, more discriminating, and more integrative of experience and also because it enables the person to move eventually to still broader perspectives (Mezirow, 1978b, p. 17).

A transition occurs if a person abandons one set of assumptions in favor of new ones that enable the person to behave differently and to see oneself and one's relationships differently. Schlossberg's (1981) model for analyzing adaptation to such transitions takes into account the person's balance of resources to deficits at the time of the transition, the life environments of the person before and after the transition and the characteristics of the person himself or herself, including his or her sense of competency, well-being, and health.

Especially significant for the facilitator of stress management training for adults are two observations made by Brammer and Abrego (1981). They state that "if persons believe they are powerless to respond effectively to change, they are not likely to attempt a proactive response . . . [and also that] extra sources of social support" (pp. 27-28) often are needed in times of transition.

Leadership and Organization Development

If one is to develop effective stress management training in an Army, an understanding of the workings of leadership and organization is essential. One key to learning effectiveness in organizations is the concept of systems thinking. Gardner (1995) recognizes the importance of systems in complex human endeavors when he states, "In the ever-renewing society what matters is a system or framework within which continuous innovation, renewal and rebirth can occur" (p. 5). This view is important to Gardner

because parts of the system are interconnected in such a way that a change in one affects all. For the HRD practitioner, this implies that training events and interventions must fit the whole system, including the value system of the organization to be meaningful.

The notion of systems thinking for organizational learning is perhaps best articulated in Senge's (1994) *The Fifth Discipline*. In describing systems thinking in organizations, Senge (1994) states:

> Businesses. . . are bound by invisible fabrics of interrelated actions, which often take years to fully play out their effects on each other. . . . Systems thinking is a conceptual framework, a body of knowledge and tools that has been developed over the past fifty years, to make the full patterns clearer, and to help us see how to change them effectively. (p. 7)

The function of the HRD practitioner in such an environment then is to understand the system and to cause others to act in a way that supports the purposes of the system.

In practice, human resource development tends to be specific. We think of the lone adult striving to better himself or herself by pursuing mastery in fundamentals of accounting, reading comprehension, or stress reduction. In this country of hearty individualism we hold the belief that the educational needs of the solitary citizen are more important than those of the group. Collective learning tends to be more general and aimed at group goals. Common objectives are to get along better, improve communication, identify better work processes, and so on.

There is a need for both individual and collective approaches because the two are so intimately intertwined in both theory and practice. Nadler and Nadler (1991) define human resource development as "organized learning experiences provided by employers within a specified period of time to bring about the possibility of performance improvement and/or personal growth" (p. 4). Human resource development holds the potential

for an ever-expanding body of knowledge. To maximize its potential, human resource development efforts should employ multi-echelon strategies; individual, small group, organizational, community, national, and global. As a responsible segment of society, human resource development institutions must provide both individual and collective approaches responsive to the needs of individual and collective clients.

Another key role for human resource development is evaluation. In providing learning opportunities, there must be established criteria for determining when objectives are reached. Who should determine these criteria? Who should conduct the evaluation? When and how often should evaluation be conducted? These are proper questions for practitioners of human resource development to ponder.

Kirkpatrick (cited in Nadler & Nadler, 1991) presents a model for evaluation that uses four levels to assess results of training: reaction, learning, behavior, and results. The skillful HRD practitioner will use these levels as tools for evaluation without falling into the trap that there is a strict hierarchy of value in them. For example, the reactions of a key leader in the organization may be more useful in the long run than positive results for any one employee.

Lippitt (1982) discusses the concept of organizational renewal as a learning process involving the members of an organization. If an organization is to renew itself (i.e., "initiate, create, and confront needed changes so as to become or remain viable" [Lippitt, 1982, p. xiv]), then the organizational climate must support learning. "Renewal depends upon a process of continual learning" (Lippitt, 1982, p. 348).

Argyris and Schon (1978) go even further. They posit that a particular type of learning is required for organizations to become self-renewing and to remain viable.

Distinct from "single-loop learning," which solves only problems within the context of previously existing organization norms, "double-loop learning" goes further in that it actually questions and examines the assumptions upon which operating procedures and practices are based and which make restructuring and modifying norms possible. This type of learning seems to be more and more necessary for organizations to survive and evolve in a rapidly changing environment.

Trist (1970) explains that both personal and organizational forms of adaptation that were functional in simple environments are inadequate for complex environments characterized by interdependence and uncertainty. Today's organizations, including the Army, are just such "turbulent fields" and require new ways of operating other than the competitive, authoritarian, mechanistic structures that suited the technocratic bureaucracy. Trist seems to be saying organizations such as the Army must abandon the organizational forms that heretofore have defined them.

Total quality management (TQM) and continuous quality improvement (CQI) are organization development approaches that have grown out of the earlier quality of work life (QWL) movement. The quality of work life movement in organizations included such concepts as industrial democracy, decentralization, organizational fluidity, networks, power and information sharing, work teams, and so forth. As Bennis (1976) and Toffler (1980) have both pointed out, bureaucracies are gloriously insufficient in rapidly changing times. Networks of informal open communication, more decentralized than traditional rigid hierarchies, are more appropriate. The best companies are in this sense learning environments in which the human element is valued rather than debased. The connection

between adult learning and democracy so clearly pointed out by Lindeman (1961) becomes evident.

Peters and Waterman (1982) discovered that managers need attitudes and talents similar to adult educators. They may need to exhibit some qualities of the counselor, such as empathy. They may even have to engage in self-discovery.

Hierarchical managerial authority is also outmoded and problematic in American business. "Within the walls of the corporation, the military model of the relationship between the superior and subordinate is often sacrosanct. In most large corporations one simply doesn't question the boss" (O'Toole, 1981, p. 124). The assumption is counterproductive in a society shifting from industrial production to the delivery of services and information where sensitivity to human needs and creativity is essential. O'Toole (1981) observes:

> In the future the prime task of management will be the development of human resources—if only because less than twenty percent of all workers in the United States are still engaged in the direct production of goods. Service and knowledge industries have only one resource—people. (pp. 127-128)

Such an environment, even in the Army, requires individuals who can think for themselves and function as centers of intelligent awareness rather than simply obey the orders of a superior.

The changing nature of organizations in the last decade of the 20th century causes special concern for managers and leaders. Fritz (1994) observed that "most people in leadership positions think stress will just disappear if they don't dwell on it. Not true" (p. 10). Commanders of Army units, following this same maxim, devote little or no time to preparing their soldiers to deal with stress.

Stone (1995) also sees the changing nature of organizations leading to stress in the

workplace. He observes:

As functional silos are falling, companies are moving increasingly to team-based organizations, and managers are being exhorted to empower their employees. The scramble to handle and implement these changes, combined with the lack of clarity—and sometimes conflicting needs—for change, results in burnout. (Stone, 1995, p. 1)

One good way to empower Army leaders is to provide them with a way to handle their

own future stress and assist their subordinates in dealing with stress. This will also engen-

der in soldiers the trust that is essential in all phases of military operations.

Comish, Swindle, and Daboval (1994) see the solution to workplace stress embod-

ied in trust: "Job stressors vary with specific situations such as constant deadlines, heavy

workloads and high-pressure work environments, but common to most stressors are un-

certainty, fear and doubt" (p. 25). They also provide guidelines in Figure 9 for organiza-

tions to follow in order to reduce stress.

> Policies Likely to Support Positive Trust and Reduce Negative Trust
> - Flexible scheduling to fit firm and individual needs
> - Formal mentoring system
> - Awards/comparable pay for part-time workers
> - Near-site or on-site day-care support
> - Concern for special employees and their problems
> - Promotion of special employees who meet guidelines
> - Clear communication of adopted policies
> - Open communication channels within the firm
> Stress is diminished
> Fear, uncertainty and doubt are less of a problem

Figure 9. The trust/stress strategy.

According to Kelly (1997), "Employees need simple, easy-to-remember formulas

to cope with stress" (p. 51). In this case the formula is Kelly's A-A-A method representing

awareness, attitude, and action. Tracy (1994) links the concepts of individual stress to the

larger phenomena associated with stress in organizations:

> Employees who are in distress may show a variety of symptoms. They may per-
> form poorly or erratically. They may abuse drugs or alcohol, or engage in other
> forms of self-destructive behavior. They may show frantic bursts of energy fol-
> lowed by periods of depression. . . . Departments or even whole organizations may
> exhibit similar signs of distress. Typical symptoms are chaos, lack of cooperation,
> sabotage, backstabbing, frequent random changes of direction, and other forms of
> ineffective or destructive behavior. If stress remains unrelieved for long periods of
> time, the organization may collapse and dissolve. (p. 132)

There are, therefore, clearly implications for managers and Army leaders. Tracy

(1994) advocates that managers differentiate the source of the stressor and take appropri-

ate actions. If stress is the result of purely work site causes, the manager should take

steps to alter the demands on the employee. Tracy (1994) notes, however:

> When stressors are not under managerial control, as when an employee's domestic
> situation is falling apart, it may not be wise to lighten the employee's work load.
> Maintaining a feeling of competence at work may be holding him together. In-
> stead, help should focus on giving the employee skills to cope with the problem.
> The organization may offer or pay for family counseling services, alcoholism and
> drug abuse rehabilitation, psychological counseling, and training in problem solving
> as well as the usual range of medical services. The role of the manager may be to
> encourage use of these aids, because employees are often reluctant to admit that
> they need them. (p. 133)

Although the Army has led the way for integration of the races and women in the

workplace in this country, today's soldiers face a form of stress that André (1995) has

identified and calls diversity stress. Diversity stress for soldiers is the "discomfort they feel

when they face a situation in which, because of the presence of multicultural factors, their

usual modes of coping are insufficient" (Andre, 1995, p. 489). Examples of this could

stem from situations such as a Jewish U.S. soldier training an Arab counterpart; or a

female soldier assigned to a Japanese headquarters where the work day extends into the night and the nightclubs.

Summary

The literature provides guidelines for the practice of human resource development and in particular for the development of stress management training in military organizations. First, the training should be based on a sound model of stress that is comprehensive yet simple enough to be easily understood and used by soldiers. Second, the model selected should recognize that stress is operational at the individual level and, therefore, it should permit maximum flexibility in application by individual soldiers. Third, the model should address the goal of reducing the costs of stress in monetary and human terms. Finally, the stress management training program must recognize the organizational context within which soldiers operate.

There is currently a gap in Army programs in terms of stress management training for leaders and soldiers. This study takes a major step in closing that gap.

CHAPTER III

METHODOLOGY

Purpose

This is a qualitative study with certain quantitative aspects involved in the analysis. It focuses on the perceptions and attitudes of actual participants in a program incorporating the concepts of stress management collected over a three-month period, identifies issues and problems surrounding the training for stress management in the Army, and makes recommendations about how to introduce adult learning concepts into training for soldiers.

To obtain the required information, a case study approach was used to describe a stress management training program. According to Cockerill (1962) the case study can be used as a tool for moving from specific examples of real situations to general principles regarding practice. In this instance, the purpose of the study requires an analytical stance toward the data that "seeks not only to describe but also to explain" (Darkenwald, 1980, p. 75). The need to go beyond description to achieve more incisive and generalizable findings requires the linking of several methods that, taken together, may yield more information of value than the use of any one method alone.

In general, this study was characterized by the three features of qualitative research described by Brookfield (1983) as follows:

51

1. A substantive concern with the exploration of perceptions and attitudes, and with understanding the inner meaning and significance of behaviors.

2. A reliance on certain data collection techniques, open-ended interviews, participant and nonparticipant observation, and the use of unobtrusive measures.

3. A predilection for the application of grounded theory towards the analysis and coding of data, discernment of central themes, generation of hypotheses, and establishment of typologies and classifications.

This analysis for this study involved four approaches to data collection: (a) examination of documentary evidence, (b) on-site observation and participation, (c) self-reported survey data, and (d) critical incident exploration. This was supplemented by elements of grounded theory in that both surveys and other forms of observation were conducted in a flexible way to be open to new elements rising out of the data that might be pursued further either by returning to earlier surveys, and interviews, or by studying a larger number of organizations and individuals to "saturate" effectively a new-found category. An inductive approach to theory development was used, incorporating elements of a modified grounded theory approach. The quantitative aspects of the study included administration of a pretest and posttest stress instrument and statistical analysis of the results.

Grounded theory is relevant to this study as it is described by Darkenwald (1980) as "an inductive approach to research that focuses on social interaction and relies heavily on data from interviews and observations to build theory grounded in the data rather than to test theory or simply describe empirical phenomena" (p. 64). This summarizes the more thorough presentation of grounded theory developed by Glaser and Strauss (1967) in *The*

Discovery of Grounded Theory: Strategies for Qualitative Research, in which the authors describe a range of procedures for identifying categories from which new theory can be generated.

Of these four approaches, it was anticipated that useful information would come from focused group interviews with participants and from the use of critical incident research with participants. The relevance of these two techniques to qualitative research is well established.

Interviewing is a method of finding out "what is in and on someone else's mind" (Patton, 1980, p. 196); that is, to gain access to the perspective of the person being interviewed rather than to assume preconceived categories. The purpose of interviewing is to find out information that is unavailable through printed materials or from direct observation. It allows us to understand why learning efforts were carried out as they were and the meanings attached to them by both leaders and participants. The main aim of interviewing is "to get information . . . to do with the respondent's experiences or with his knowledge, opinions, attitudes, habits or practices" (Chein, 1984, p. 4).

A type of group focused interview was embedded in the training in the form of worksheets about the individual's stress history and responses to stress. The use of individual *focused interviews* to obtain the opinions of participants was considered but rejected. The highly transient nature of the subjects coupled with the Army's need to preserve anonymity made follow-up interviews impractical. The necessary structure or standardization of questions common to all interviews upon which commonalties and differences are more easily apparent was obtained with open-ended portions of the pre- and posttraining surveys. This strategy would not preclude the discovery and discussion of

new topics not anticipated when the survey was initially developed. Thus, the study was able to provide a vehicle which "keeps the interaction focused, but allows individual perspectives and experiences to emerge" (Patton, 1980, p. 201).

Critical incident techniques were developed to go beyond the boundaries of information customarily gathered through interviews to obtain more clearly "a record of specific behaviors from those in the best position to make the necessary observations and evaluations" (Flanagan, 1954, p. 355). In this study, participants' critical incidents were used not only to supplement interviews and to generate a large number of written responses on dealing with stress, but were also used as a central piece of the training program itself. The process of critical incident research in a variety of settings has been described by Kohl and Carter (1972) and Oaklief (1976). While Flanagan (1954) preferred the direct observation of incidents, the general practice is the use of "recalled incident data" by respondents to specific questions put to them.

The use of critical incident research is described by Nadler (1982) as a means of involving participants and program designers in evaluation of ongoing programs. This includes areas pertinent to this study including level of stress, reactions to stress, and methods of dealing with stress.

Direct observation of learning activities included at least one illustrative activity in each group using checklists that record the instructional strategy and methods used, the interaction between the facilitator and the participants, the interaction between the participants themselves, the role of learner needs and experiences, and the role of critical reflection in the instructional process. This study employed focused surveys to identify the meanings, relationships, and implications of factors found present in learning settings.

Therefore, the use of on-site observation and impressionistic description of activities was limited to confirming the accuracy of survey findings and discerning discrepancies between survey data and practice.

Observational techniques of research are an important approach to conducting descriptive research in which the purpose is to describe systematically the facts and characteristics of a given population or area of interest, factually and accurately (Isaac, 1971). Grounded theory research goes beyond the simple description of empirical phenomena. Glaser and Strauss (1967) as well as Darkenwald (1980) have argued that grounded research relies heavily on data from interviews and observations to build theory grounded in the data.

Whether direct observation is used in simply descriptive research, or to derive grounded theory, or in theorizing about critical incidents, the emphasis is upon clarity by the observer of those behaviors being observed, their relationship to each other, and their possible implications.

Quantitative data were gathered before, during, and after the training. Before training, a baseline was established by having participants complete the 10 self-assessments described above to determine the level of stress in participants. During the training, skill mastery evaluations were taken to see if the participants had grasped and could perform the skills taught. After the training, follow-up measurements were taken to determine the degree to which participants were applying the learned skills back on the job. For the before and after measurements, participants' leaders were also asked to comment on participants' use of workshop skills.

Treatment

Subjects were randomly assigned to five groups as shown in Table 2. Three groups (#1, #2, and #4) received the stress-and-performance-for-leaders training, one group (group #3) received training in combat stress (placebo), and one group (group #5) received no training. A pretests and a posttest, each consisting of the 10-dimension self-assessment, were administered to all of the groups. All groups except the untrained group were given feedback on their self-assessments (pretest). This experimental design was intended to control for nontraining effects and provide a good picture of the impact of stress and performance training in the population studied.

Table 2

Treatment Groups

Treatment group	Frequency	%	Cumulative %
#1 Trained	24	21.6	21.6
#2 Trained	26	23.4	45.0
#3 Control	24	21.6	66.7
#4 Trained	24	21.6	88.3
#5 Untrained	13	11.7	100.0
Total	111	100.0	

The stress-and-performance-for-leaders workshop for this study consisted of a 2-hour, classroom learning experience. The training addressed the task of developing and applying control of stress strategies. To accomplish this task, participants had to master elements of knowledge that supported the goal. These elements were (a) to define stress

operationally; (b) to describe the relationship of stress and performance; (c) to describe sources of stress; (d) to identify constructive and destructive responses to stress; and (e) to describe strategies to manage stress in terms of demand, capability, and response.

In the workshop, participants first calculated their personal level of stress by completing a Stress and Performance Worksheet. Next they determined if the level of stress was functional or dysfunctional by reviewing their Stress Response Worksheet. Through discussion and reflection, participants analyzed their sources of dysfunctional stress. The final task of the workshop saw participants developing a strategy for changing dysfunctional stress into functional stress using Stress Strategy Worksheets and ensuring that the selected strategy addressed demand, capability, and response aspects. To implement strategies to control stress such that dysfunctional stress is removed and performance is enhanced, the participants completed an Action Plan for use back on the job. The lesson outline for the workshop is shown in Appendix A and Appendix B contains the instructor's guide.

Instruments

The primary research instrument for gathering both baseline and follow-up data on individual stress was the 10-dimension self-analysis of Girdano et al. (1997) described above. For the first dimension, adaptation, the Holmes-Rahe Social Readjustment Scale was used with an open-ended response ranging from 0 and higher. Each of the other nine dimensions had a 10-item questionnaire with possible scores ranging from 10 to 40 points. This instrument (see Appendix C) was distributed to subjects 1 week before training with instructions to complete the instrument prior to the training session. Along with the

instrument was a cover sheet that asked the participants to provide certain demographic information and provided them with the standard Army privacy act statement (see Appendix D).

Once the self-assessments were completed and scored for each dimension, they became part of the training model by having participants transfer their scores to personal stressor profile summary sheets (see Figure 10).

Personal Stressor Profile Summary Sheet

EXERCISE:	1	2	3	4	5	6	7	8	9	10
	Adaptation	Frustration	Overload	Depri-vation	Nutrition	Self-Perception	Type A Behavior	Anxious Reactivity	Control	Occupational Stressors
Scores Indicative of	•400 • • • •350	•40 • • • •35	•40 • • • •35	•40 • • • •35	•40 • • • •35	•40 • • • •35	•40 • • • •35	•40 • • • •35	•40 • • • •35	•40 • • • •35
High Vulnerability to Stressors	• • • •300 • • • • •250	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25	• • • •30 • • • • •25
Moderate Vulnerability to Stressors	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •
	•200 • • •	•20 • • •	•20 • • •	•20 • • •	•20 • • •	•20 • • •	•20 • • •	•20 • • •	•20 • • •	•20 • • •
Low Vulnerability to Stressors	•150 • • • • •100	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10	•15 • • • • •10

Adapted from Girdano, Everly & Dusek

Figure 10. Personal stressor profile summary sheet.

Immediately following training, participants were asked to complete a short survey that asked them questions about their reactions to the training (see Appendix E). Specifically, they were asked to indicate their confidence in their ability to perform the following tasks: "Understand sources of stress and reactions to stress," and, "Develop and apply

strategies to manage stress." Participants were also asked to indicate the degree to which they agreed or disagreed with the statements, "The content of this workshop is relevant to my job," and "The activities in this workshop helped me learn the material." To provide impetus for transfer of learning back to the work site, participants were asked to give an example of how they planned to use what they learned in the workshop. They were also asked to describe a future stressful event and situation; finally, they were asked to predict the amount of stress for the future event or situation on a scale of 1 to 10.

Approximately 6 to 8 weeks after training, participants were asked to complete the self-assessment instrument again and to complete another short survey. This time they were asked to indicate their confidence in their ability to perform the following tasks: "Understand sources of stress and reactions to stress," and, "Develop and apply strategies to manage stress." Participants were also asked to indicate the degree to which they agreed or disagreed with the statements "Since the training, I have had a major stressor in my life," and "The workshop helped me manage stress in my life." To check on transfer of learning back to the work site, participants were asked to give an example of how they used what they learned in the workshop back on the job or in their own life. They were also asked to describe a future stressful event and situation and finally, were asked to predict the amount of stress for the future event or situation on a scale of 1 to 10.

Subjects

The subjects in this study are discussed in some detail because some readers may be unfamiliar with military life or certain aspects of the situation that may have impact on the outcomes of this or future studies.

Setting, Location, and History

The site chosen for this study was Fort Campbell, Kentucky, which straddles the Kentucky-Tennessee border at Clarksville about 60 miles north of Nashville, Tennessee. Fort Campbell is the home of the United States Army's 101st Airborne (Air Assault) Division. The 101st Airborne Division (nicknamed the "Screaming Eagles" for the distinctive predatory bird on their shoulder patch) was formed as one of the parachute assault or "airborne" units during World War II. The division saw significant wartime combat in the highly successful Operation Overlord, the D-Day Normandy invasion popularized in the movie *The Longest Day*, and in the failed Operation Market Garden, the complicated and overreaching airborne assault on the Nazi-held Dutch city of Arnhem, popularized in the movie *A Bridge Too Far*. The division was later committed to combat in the Republic of Vietnam from its home base at Fort Benning, Georgia, during the 1960s. Upon return from Vietnam, the division relocated to its present home at Fort Campbell. Because of the relatively high proportion of helicopter to parachute operations in Vietnam, the division was given the additional designation of "air assault." The division is currently part of the XVIII Airborne Corps based at Fort Bragg, North Carolina, and is part of the country's rapid strike force with a mission to respond quickly to any contingency worldwide.

The specific unit chosen for study was the 716th Military Police (MP) battalion. This battalion is an asset of the XVIII Airborne Corps, which means that, in addition to supporting Fort Campbell and the 101st Division, it also has responsibilities to support other organizations. Of the initial 125 soldiers selected randomly for the study, 111 were finally included in the data presented. Fourteen soldiers were excluded from the final study because seven had left Fort Campbell for other assignments during the study, one

was on leave (vacation) at the time of the posttest, and six had erroneously completed

their instruments to a degree that made their data unusable.

Organization

Figure 11 depicts the organizational lines of command and control for the 716th

MP battalion. The battalion is organized as a bureaucratic hierarchy with a central point

DPM [MP] ·· [MP] 716th

101 [MP]   194 [MP]   HHD [MP]   553 [MP]   MPC [MP]

HQ [MP]   HQ [MP]   HQ [MP]

1-3 [MP]   OPS [MP]   OPS [MP]
DS

4 [MP]   1-4 [MP]   1-4 [MP]
GS

31 MP Teams   **44 MP Teams**   **(44 MP Teams)**

Standard Military Symbols:

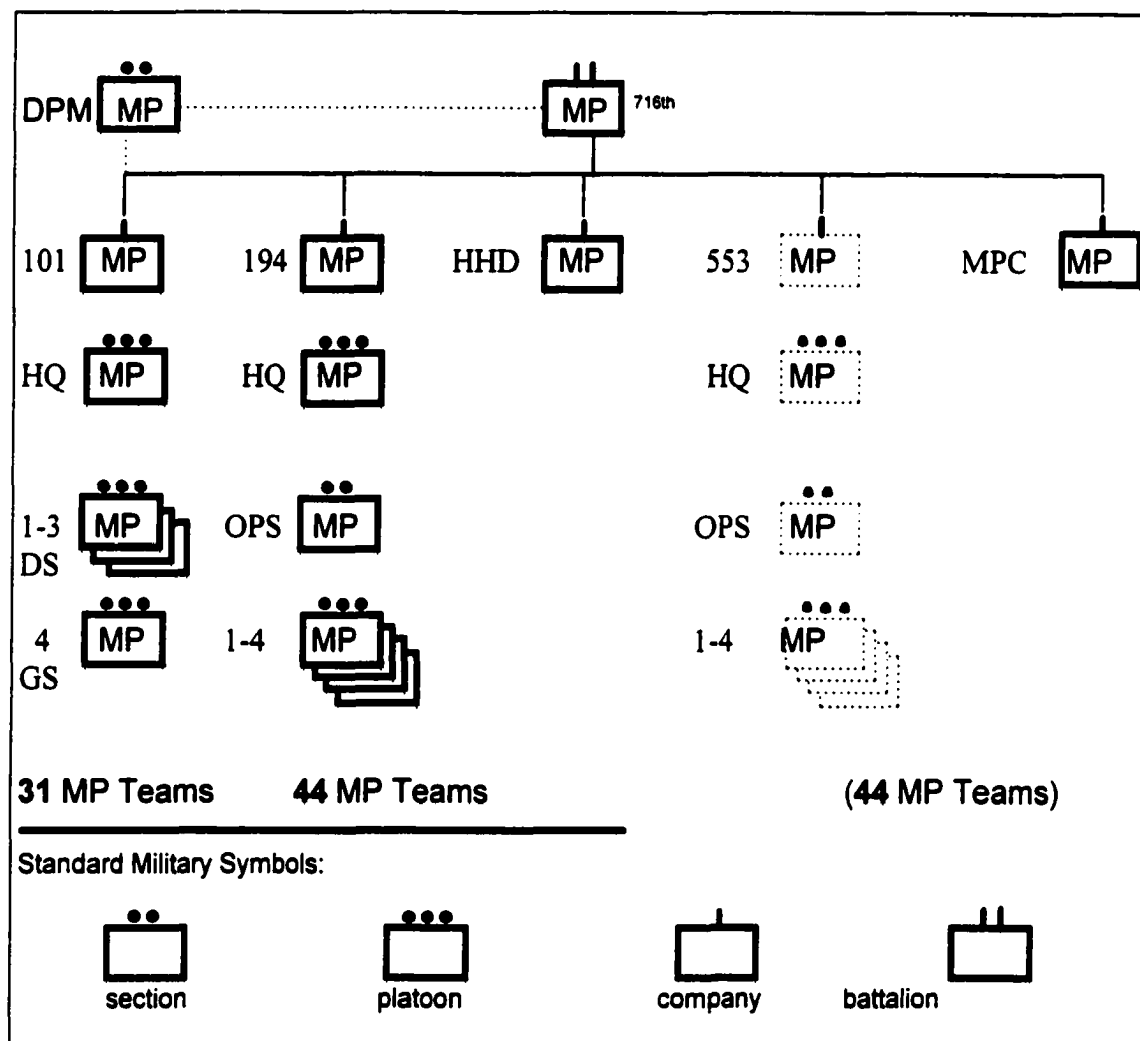[ ] section   [ ] platoon   [ ] company   [ ] battalion

Figure 11. Organization of the 716th MP Battalion.

of leadership in the battalion commander. At the time of the study, four company commanders (101st MP Company, 194th MP Company, Headquarters and Headquarters Detachment, and Military Police Company) reported to the battalion commander and were responsible for all operations within their respective companies. Similarly, each company is comprised of platoons and sections, which execute their missions under the command and control of the company commander.

Missions

The mission of the 716th MP Battalion is to deploy worldwide, providing military police combat and combat support to 101st Airborne Division (Air Assault) and as directed by Forces Command for contingency operations. Forces Command is responsible for the deployment and utilization of all combat units within the continental United States. Additionally, the battalion is to provide uninterrupted force protection/community assistance (FP/CA) to Fort Campbell while in garrison. The unit strength is approximately 500 personnel. The sample, therefore, represented over 20% of the battalion strength.

The mission of the Headquarters and Headquarters Detachment (HHD) is to provide administrative, intelligence, operational, and logistical support for the 716th MP battalion. The approximate unit strength is 66 personnel.

The mission of the Military Police Company (MPC) is to conduct uninterrupted force protection/community assistance on Fort Campbell and in accordance with Army Regulation 5-9; to conduct terrorism counteraction and special threat operations; and to support contingency and deployment operations. The approximate unit strength is 110 personnel.

The mission of the 101st Military Police Company (101 MP) is to deploy and provide military police combat support to 101st Airborne Division (Air Assault) and, on order, provide direct support to a brigade-sized task force. This function is monitored through the division provost marshal (DPM). The approximate unit strength is 130 personnel.

The mission of the 194th MP Company (194 MP) is to deploy worldwide, providing military police combat and combat support as directed by Forces Command for contingency operations. The approximate unit strength is 216 personnel.

The 533rd MP Company (533 MP), to be activated in late 1997, will have the same mission as 194th MP Company. The approximate unit strength will be 200 personnel.

Military police typically operate in the three-person teams (driver, gunner, and team leader) in the high mobility multipurpose wheeled vehicle (HMMWV). There are 44 three-person teams in the 194th MP Company.

All units in the battalion were represented in the study (see Table 3). The total number of subjects (111) was truly a cross-section of the battalion as a whole. Figure 12 shows the representation of each unit in the study and in the battalion. There was a very close approximation of the unit strength levels in the study.

People

The average age of participants in the study was 31 years with a standard deviation of 5.7 years. The youngest participant was 21 and the oldest was 46 years old. The sample was somewhat different from the Army as a whole in terms of age. Army averages (Department of Defense, 1996) for the age groups are shown in Table 4.

Table 3

Study Participants' Unit of Assignment

Unit of assignment	Frequency	%	Valid %	Cumulative %
HHD	15	13.5	15.6	15.6
MPC	24	21.6	25.0	40.6
101st MP Company	28	25.2	29.2	69.8
194th MP Company	29	26.1	30.2	100.0
Total valid	96	86.5	100.0	
Missing	15	13.5		
Total	111	100.0		

716th MP Battalion by Unit

Study Participants

24%

15%

7%

24%

Unit Strength

25%

13%

41%
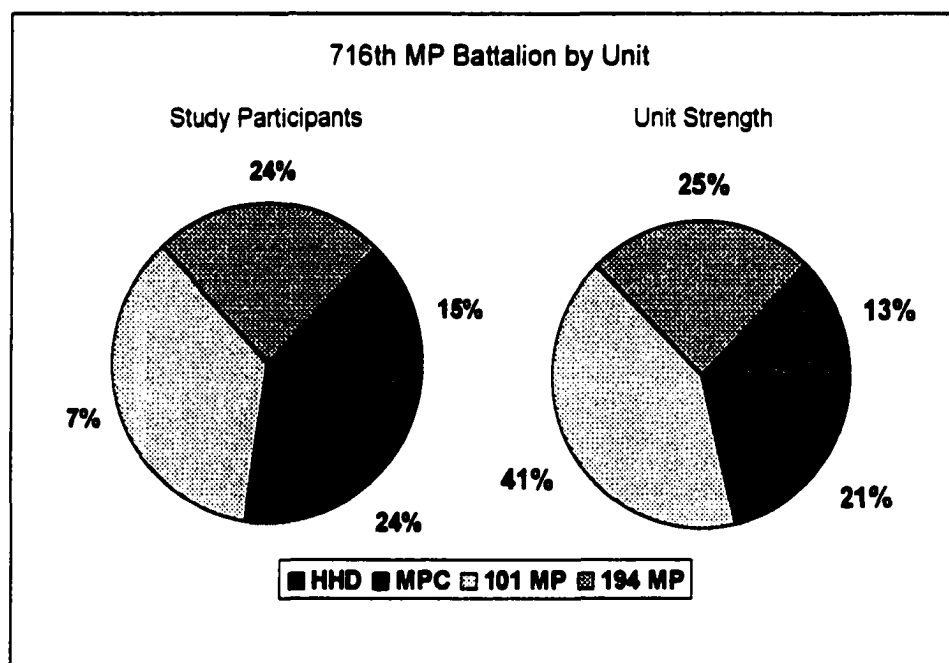
21%

■ HHD ■ MPC ▣ 101 MP ▨ 194 MP

Figure 12. Study participants compared to unit strength.

Table 4

Age Categories for Army and Study Subjects

Age category	Army-wide %	Study %
25 and under	48.7	24.5
26-30	20.8	22.7
31-35	15.4	27.3
36 and over	14.1	25.5

The participants in the study were a good deal older than is reflected throughout the Army (see Table 5). This was probably due to the nature of the 716th MP Battalion. First, all soldiers in the battalion have already completed basic and advanced individual training before assignment, thus eliminating the very youngest soldiers from participation. Second, as a military police organization, the 716th seeks to attract a more mature enlistee for the difficult work of law enforcement.

Table 5

Age of Study Participants

Age category	Frequency	%	Cumulative %
25 and under	27	24.3	24.5
26-30	25	22.5	47.3
31-35	30	27.0	74.5
36 and over	28	25.2	100.0
Total valid	110	99.1	
Missing	1	0.9	
Total	111	100.0	

Most of the participants were married (66.7%) while 18% and 15% were single

and divorced or separated, respectively (see Table 6). The two-thirds married rate is

somewhat higher than the Army population in general, reflecting a married rate of only

57% ("The Soldier's Almanac," 1997).

Table 6

Marital Status of Study Participants

Marital status	Frequency	%	Cumulative %
Married	74	66.7	66.7
Single	20	18.0	84.7
Divorced/separated	17	15.3	100.0
Total	111	100.0	

Of the study participants, 13.5% were women (see Table 7), which closely ap-

proximates the 14% of women in the total Army population ("The Soldier's Almanac,"

1997).

Table 7

Gender of Study Participants

Gender	Frequency	%	Cumulative %
Male	96	86.5	86.5
Female	15	13.5	100.0
Total	111	100.0	

Time in service is another important discriminator between soldiers. The partici-

pant with the greatest longevity had 22.8 years in service while the person with the least

had been in the Army only 11 months. The mean time in service was 10.87 years with a

standard deviation of 5.23 years (see Table 8).

Table 8

Study Participants' Time in Service

Time in service	Frequency	%	Cumulative %
Under 5 years	16	14.4	14.4
5-10 years	34	30.6	45.0
10-15 years	36	32.4	77.5
15-20 years	21	18.9	96.4
Over 20 years	4	3.6	100.0
Total	111	100.0	

On average, participants had served for 21.9 months at Fort Campbell (see Table

9). The participant serving the least time at Fort Campbell had been there only 1 month,

while one soldier had been at Fort Campbell for an incredible 85 months. This is particu-

larly remarkable considering that Army policy guidelines call for a normal tour of 36

months maximum on station.

Military Occupational Specialty

The principal military occupational specialty (MOS) for personnel in the MP battalion

and in this study is Military Police (95B). The distribution of specialties is depicted in

Figure 13. Military police supervise or provide support to the battlefield by conducting

Table 9

Study Participants' Time at Fort Campbell

Time at Fort Campbell	Frequency	%	Cumulative %
6 months or less	22	19.8	19.8
7-12 months	24	21.6	41.4
13-18 months	9	8.1	49.5
19-24 months	21	18.9	68.5
25-36 months	15	13.5	82.0
37-48 months	11	9.9	91.9
More than 48 months	9	8.1	100.0
Total	111	100.0	

battlefield circulation control, area security, prisoner of war operations, law and order op-

erations on the battlefield, and support to the peacetime Army community through secu-

rity of critical Army resources, crime prevention programs, and preservation of law and

order.

Additionally, there are a number of supporting specialties which provide adminis-

trative and logistical support for the MP battalion. These specialties include: Unit Ar-

morer (92Y), Cook (92G), Supply (92A), Medic (91B), Motor Transport Operator

(88M), Information Management Specialist (75H), Administrative Specialist (71L), Light

Wheel Vehicle Mechanic (63B), Chemical Operations Specialist (54B) and Signal Com-

munication (31V).

The military rank of study participants is shown in Table 10. Approximately 75%

of the subjects were sergeants (E-5) or staff sergeants (E-6). While this figure may appear
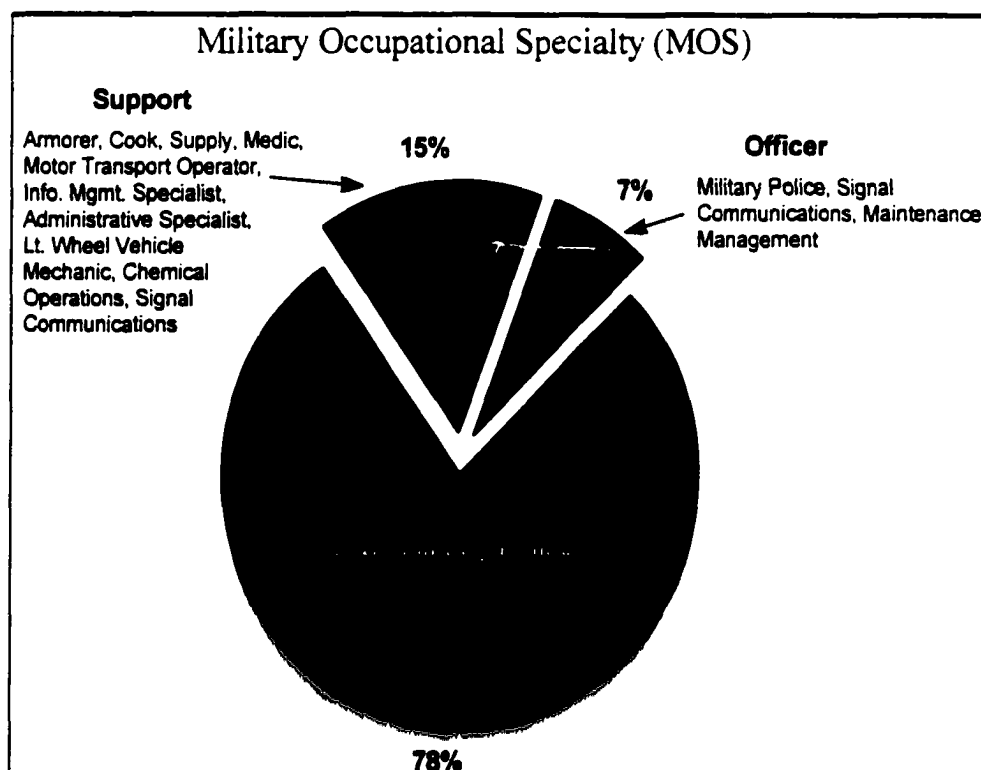
Figure 13. Military occupational specialty of study participants.

Table 10

Military Rank of Study Participants

Military rank	Frequency	%	Cumulative %
E-4	3	2.7	2.7
E-5	49	44.1	46.8
E-6	35	31.5	78.4
E-7	14	12.6	91.0
E-8	3	2.7	93.7
O-1	6	5.4	99.1
WO-1	1	0.9	100.0
Total	111	100.0	

skewed, it is a close approximation to the representativeness of each of these ranks in the battalion. Additionally, these individuals are the ideal target group for stress management training. Most sergeants and staff sergeants will have between 3 and 7 years of service and will be in charge of a small group of soldiers.

Activities

The 716th MP battalion, like most units today, is an extremely busy organization. Since the end of the Cold War and the subsequent downsizing of our nation's military by about one third, all units have found themselves doing a lot more with the remaining force structure. According to the Chairman of the Joint Chiefs of Staff, the military has conducted 40 separate operations in the past 4 years.[3] This is a rate unheard of during the Cold War years. Two new terms, OPTEMPO and PERSTEMPO, have emerged to describe this rapid pace of military life. OPTEMPO, or operations tempo, is the rate of operations in a given unit. This includes training exercises, deployments, and so forth. OPTEMPO is usually expressed in terms of the level of strain on critical equipment. For example an OPTEMPO for a tank battalion might be expressed as 750 miles per year. That means that the planned use of the main battle tanks is 750 miles. The actual rate may be over or under, but OPTEMPO sets the standard. As the Berlin Wall fell and the nature and scope of training and operations in the military began to change, Army leaders found that OPTEMPO was becoming less useful as a means of determining appropriate use of the force. In order to monitor the strain on troops, the Army designated PERSTEMPO,

---

[3]General John Shalikashvili, Chairman JCS, speaking to the National Press Club on September 23, 1997.

or personnel tempo, as the level of strain on personnel. This is expressed as the number of days per year that soldiers are away from their home station on training or deployments. However, this can be a misleading portrayal. When troops are deployed, the normal day-to-day missions at their home station continue. This slack has to be taken up by the units who are not deployed. Although this brings added stress to the "rear detachment," it is not counted in the PERSTEMPO. Additionally, some activities, such as schooling, are not included in the PERSTEMPO calculation. For example, Staff Sergeant A, stationed in Germany, is sent to Fort Benning, Georgia, for the 6-month Advanced NCO Course. Staff Sergeant B, also stationed in Germany, is temporarily assigned to the German army at a plush headquarters 3 miles from his home. One could argue that a 6-month separation from family and unit is considerably more stressful than local staff work; however, A's time does not count as PERSTEMPO but B's does. A full description of the scope and nature of the 716th MP battalion's activities is provided in Appendix F.

Data Collection Procedures

The following were the key steps in collecting data for this study:

1. An organization within the Army was selected for study to participate in control of stress training for leaders of Army units. The site selected was Fort Campbell, Kentucky, and the unit was the 716th Military Police Battalion.

2. Two pilot studies were conducted in order to refine the workshop presentation and the survey instrument. One pilot study was conducted in an Army staff environment to test the mechanics of the workshop in a worksite setting. The other pilot study was

conducted in a university environment to test the self-assessment instrument and to gather information about reactions and usefulness of the training.

3. Contact was made with senior officials in charge of access to the selected unit for the study. The initial contact explained the study and solicited their cooperation in its completion. This included a request for (a) the provision of factual data about the organization and its programs, (b) the availability and cooperation of key staff or volunteers and a sample of participants to be trained and interviewed directly or mailed instruments to complete and return, and (c) permission to conduct stress management training with selected participants. A telephone call to confirm dates, times, and places followed the formal contact, which also clarified any questions suggested by the earlier contact. Permission was obtained for the units at Fort Campbell.

4. To obtain as much factual information about the units as possible prior to on-site training, I developed a list of documents desired from the units studied. These included a general description of unit mission, strength, training schedule, and deployment schedule.

5. Prior to training, participants were administered an instrument designed to identify their current level of stress in several different dimensions. This same instrument was administered approximately 30-60 days after the training to determine if any changes had occurred and to determine which of the areas of stress are most affected by the training. The instrument is found in Appendix C.

6. A form of critical incident research was conducted during the training sessions as part of the instructional strategy. Critical incidents were recalled by participants using

the Stress and Performance Worksheet. The worksheet is found in the workshop instructor's guide in Appendix B.

7. Written summaries of instructor notes of on-site training activities for the stress-and-performance-for-leaders workshop were reviewed using illustrative checklists that record instructional strategy and methods used, the interaction between the facilitator and the participants, the interaction between the participants themselves, the role of learner needs and experiences, and the role of critical reflection in the instructional process.

Strategies for Analysis of Data and Synthesis of Information

This section contains preliminary strategies for analyzing data collected and an elaboration of procedures to collect the data, which were synthesized for recommendations. Data were collected from five sources: (a) documentary evidence, (b) pretraining instruments, (c) observations made during training activities, (d) posttraining instruments, and (e) responses to critical incident collection. To analyze data from these diverse sources, a spreadsheet was constructed to correlate each method with the following general categories or aspects of participant learning about stress: learner involvement, self-directedness, appropriateness to the learner's life situation, problem centeredness, and experience centeredness. The spreadsheet listed all participants along the left side and the categories for analysis across the top from left to right. These categories included responses to open-ended questions as well as demographic data such as age, marital status, and time in service. Unless otherwise noted, both the placebo group and the untrained

group were analyzed as "controls" for simplicity. In fact, very little difference was found between these two categories.

The spreadsheet was used to demonstrate the extent to which data collected from each method correlate with or are discrepant from data collected using other methods. I looked for common variables and patterns or factors seen to enhance or inhibit learning as it pertains to each aspect or category of organizational or program activity.

The spreadsheet was also used to determine the extent to which the data correlated with or are discrepant from principles of adult learning including (a) learner centeredness, (b) focus on learner needs and experience, (c) learner participation, (d) level of experiential learning, (e) degree to which assumptions are questioned and reflection is encouraged, and (f) relation to age and life-stage or phase.

If indicated by the data, additional spreadsheets were developed to demonstrate particular relationships between variables. For example, the rank of participants may influence level of stress, leadership role, and/or training methods. Respondents were categorized by rank and results coded into categories. Through cross tabulation it was possible to determine the extent to which responses differ by rank.

Critical incident responses were categorized on the basis of a frequency count in the categories found and common or discrepant patterns emerged. I sought to determine the degree to which the learning reported is related to one or more of the categories identified in the list above.

Survey data were also summarized and analyzed on the basis of frequency count of responses coded by categories found in three broad areas of interest: (a) program design, (b) program delivery, and (c) transfer of learning. Categories identified were analyzed to

determine patterns or discrepancies and would seek to account for the latter on the basis of factors such as rank of respondent, military occupational specialty, life situation, and so forth.

Statistical Analysis

The two primary means of statistical analysis of data for this study were the general linear model (GLM) and the Pearson *r* correlation. The GLM uses a two-tailed test of significance of the difference of the means of two samples. It can be used to determine within-and-between-subject significance. In other words, it can determine statistically whether the differences in two samples are the result of some independent variable or not (Kerlinger, 1973). The analysis was performed using the Statistical Package for the Social Sciences (SPSS).

The Pearson *r* correlation is a measure of the degree of relationship between two sets of measures. A correlation coefficient ranges from 0.0, denoting no relationship, to 1.0, denoting perfect correspondence, and may be either positive or negative (Karmel & Karmel, 1978). Correlation shows a relationship but does not generally imply causality. However, according to Labovitz and Hagedorn (1976), there are at least four widely accepted scientific criteria for establishing causality. These criteria are association, time priority, nonspurious relation, and rationale. By following these guidelines throughout the statistical analysis, this study sought to show not only correlation but a degree of causality in the data.

CHAPTER IV

RESULTS

This study examines the perceptions of selected persons involved in a stress management training program for Army leaders. It seeks to identify problems and issues concerning the implementation of stress management training into these programs and to identify areas for program improvements. This chapter presents the data gathered from pretest and posttest self-assessments of stress, questions asked immediately after training (reaction), questions asked 6 to 8 weeks after training (follow-up), and information obtained through observation and discussion with program participants.

Results of Reaction and Follow-Up Questions

Participants responded to certain questions immediately after training. This was the reaction phase of inquiry. Six to 8 weeks later they were again asked to respond to a series of questions designated the follow-up questions. As a means to determine the major stressor for each individual, participants were asked to respond to the question, "Describe a future stressful event or situation." A summary of their responses is shown in Table 11.

Job performance issues comprised 44% and 35% of the reaction and follow-up responses, respectively. Job performance issues broke down into aspects of the content of the job and aspects of the context of the job. Content or specific duty responsibilities included such responses as "membership on the special reaction team," "preparing the unit

76

Table 11

Participants' Description of a Future Stressful Event or Situation

Stressor	Reaction	Follow-up
Job performance issues	24	15
Deployment	22	18
Career issues	14	15
PCS	14	12
ETS	10	4
Retirement	7	9
Family/relationship issues	9	11
Health/fitness issues	3	6
Other	4	5
Total	105	95
Missing	6	16
Total	111	111

for deployment," "signing for three new motor pools," "excellence-in-maintenance com-

petition," "end of year account balance," and "FTX" (field training exercise participation).

Context areas included "another job change," "manpower shortage," "working by myself,"

and "working with people who don't care about anyone's career." The only job perform-

ance issue response that was uniquely linked to military police work was "domestic distur-

bance calls, felony traffic stops."

In both the reaction and the follow-up phases, the single most frequent response

was "deployment," with 22% and 18%, respectively. Deployment during peacetime is a

relatively new phenomenon for the Army. During the Cold War all focus was on prepar-

ing to fight the Soviet Union in Central Europe. The Army occupied itself with training

and exercises that simulated this worst case scenario. After 1989, however, the global

instability that accompanied the break up of the Soviet Union led to a host of global re-
quirements and operations unimagined only a few years before. Such operations as those
in Bosnia, Macedonia, Haiti, Ruwanda, and Somalia took their place as routine part of a
soldier's life. For good or bad the United States had become the world's policeman and
the Army's part of that beat steadily grew in both magnitude and number. The soldiers of
the 716th military police battalion felt the impact of this shift in operations. During the
time of the study, scheduled major deployments for the battalion included Operation
Bright Star in the Sinai, a rotation to the Joint Readiness Training Center in Louisiana, and
a division exercise in Korea. Some elements of the battalion were also alerted for duty in
Bosnia, Honduras, Baharain, and Nogales, Arizona. Each of these deployments repre-
sented potential increased stress due to the inherent danger of the job, a change in daily
routines, increased pressure to perform, and physical separation from families and friends.

Another category of stressors was career issues. Career issues included such
things as reassignment to a different job or unit, promotion to a higher rank, disciplinary
actions, and required schooling. Listed separately are the three major career transitions of
PCS, ETS, and retirement.

PCS or permanent change of station indicates that a soldier will be leaving Fort
Campbell and transferring to another installation. The soldier will remain in the Army and
probably be doing similar tasks but will be doing them somewhere else. PCS is a part of
military life and it is unofficial Army policy to rotate soldiers about every 2 to 3 years.
Some soldiers indicated where they were transferring to as if to add additional meaning
such as "PCSing to Korea", "PCSing to Germany" or "PCSing to Johnson Island."

ETS or "expiration term of service" means that the soldier is separating from the Army after a term of enlistment has expired. Soldiers will face the "reenlist or ETS" decision initially at the 3-year mark. Because subsequent enlistment terms are for 3, 4, 5, or 6 years, this decision may be faced several times in a career. Some soldiers indicated that the decision was the stressor; others simply indicated ETS.

Retirement from the Army is generally a mixed blessing. Retirement eligibility at a relatively young age has long been considered one of the prime benefits of military service. Normally, a soldier is eligible to retire with a decent pension and many valuable benefits after 20 years of honorable service. Because many service members enlist in their late teens, it is not uncommon for soldiers to retire before the age of 40. This, however, can be a time of personal and family crisis for the potential retiree. A dramatic change in lifestyle including a job search, selection of a retirement home, and adjustment to civilian life are all potential sources of anxiety.

About 10% of the responses focused on family/relationship issues. This category included divorce, arrival of a new baby, a death in the family, and husband's impending retirement.

There was a small percentage of responses dedicated to health and fitness issues such as "knee surgery," or "health." One soldier indicated that a required 12-mile road march was a future stressor; while another listed the APFT, or Army physical fitness test. Because the Army has dramatically reduced its size in the past few years, it has become much more selective in retention of soldiers. Among the methods used to "keep the best" are discriminators such as the physical fitness test and the weight control regulations. For a soldier on the margin in these areas, the possibility exists for unfavorable efficiency

reports, failure to get promoted, and possible separation. One respondent indicated the qualified future stressor as "the possibility of a new job, depending on weight control results." The "other" category included those who responded with "no comment" or "n/a."

From a qualitative standpoint, the open-ended questions yielded insights into how, immediately after the training, the participants planned to use what they learned in the workshop back on their jobs. The leadership-oriented nature of the workshop was emphasized by responses such as: "help soldiers deal with the stress of being arrested and assist coworkers deal with daily stressors;" and, "I now realize I can reduce my own stress before I transfer it to my subordinates for no reason;" and, "help soldiers break down large problems into smaller steps;" and, "listen more to what soldiers are saying about their problems;" and, "watch soldiers more carefully and have a better understanding of their emotions." These responses all indicate that participants saw the workshop as a means of helping them perform their leadership responsibilities.

Additionally, participants saw the workshop as helping them on a more personal level. Some of their responses about implementation plans included: "I'll use the planning sheet to help plan my transition;" and, "If I can stay fit, I can reduce stress;" and, "learn to be more patient in some situations;" and, "I'm not going to use it in my job because it doesn't bother me much, but I plan to use it with my family;" and, "stress is a reminder of the constant planning that is needed for retirement;" and, "this can help me adjust to some upcoming events and try to keep the stressors in check."

When asked about how they actually used what they learned in the workshop 6 to 8 weeks later, many of those who had been trained on the model were able to respond using concepts from the model such as "prioritize," "delegate," and "relaxation." Many of

them expressed a general heightening of awareness with responses such as "able to detect stress," "learned to look at things more openly," "identify people with stress," and "ability to realize stress." In contrast, both the placebo group and the untrained group had more difficulty responding to this question. In fact, 54% of the placebo group and 46% of the untrained group either left the response blank or said "nothing,' or "I haven't used any-thing."

<div align="center">

Results on Questions Relating to
Training Value

</div>

Participants in the study were asked to estimate their confidence in their ability to understand sources of stress and reactions to stress (see figures 14 and 15). Immediately
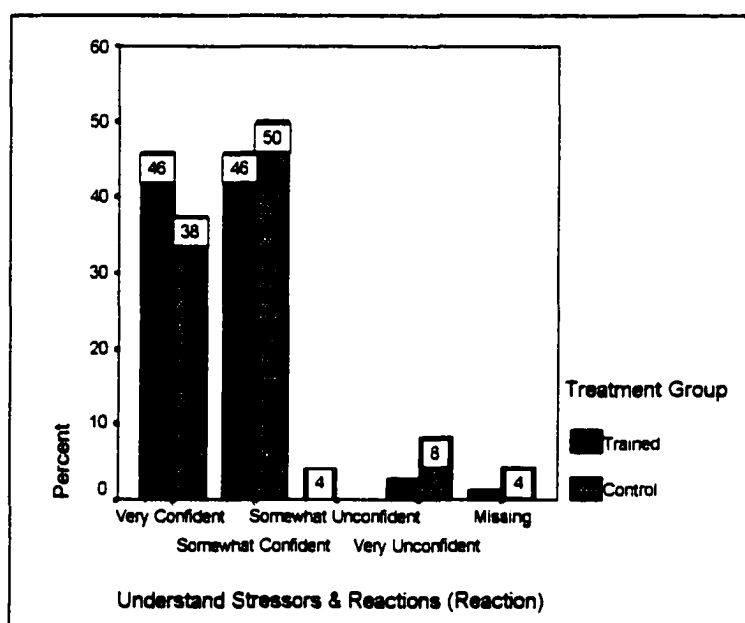

Figure 14. Confidence in understanding stressors and reactions (reaction).

after the training. an amazingly high percentage (92%) of the trained groups expressed

that they were very confident or somewhat confident. The control group also expressed

high (88%) confidence. Even more remarkably, 6 to 8 weeks after training the trained and

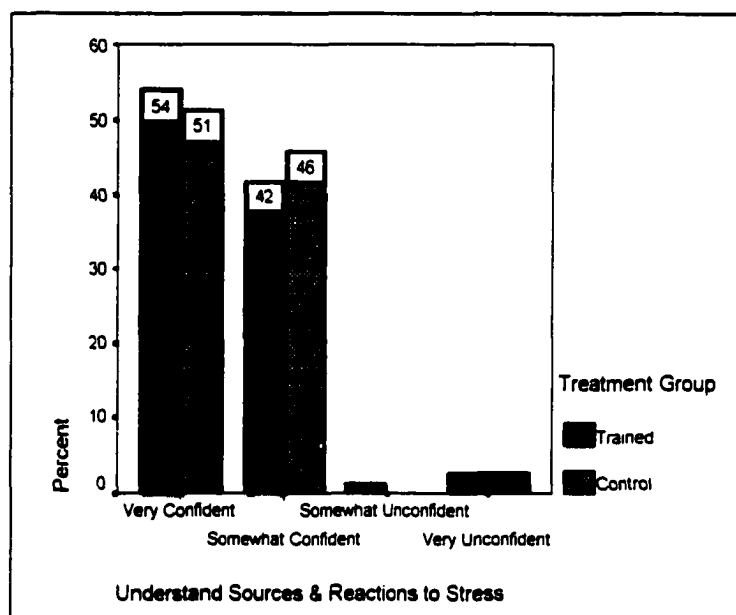control groups expressed even greater confidence with 96% and 97%, respectively.

Figure 15. Confidence in understanding stressors and reactions (follow-up)

Participants in the study were also asked to estimate their confidence in their ability

to develop and apply strategies to manage stress (see figures 16 and 17). Immediately af-

ter the training, a high percentage (91%) of the trained groups expressed that they were

very confident or somewhat confident. For the control group a lower number (79%) ex-

pressed confidence. Six to 8 weeks after training, however, the control groups expressed

even greater confidence than the trained group with 97% and 95%, respectively.

Figure 18 shows how participants responded when asked, during the follow-up phase, if

they had experienced a major stressor since the training. The distribution of responses in-

dicates that stress occurred about equally in both the trained and control groups.
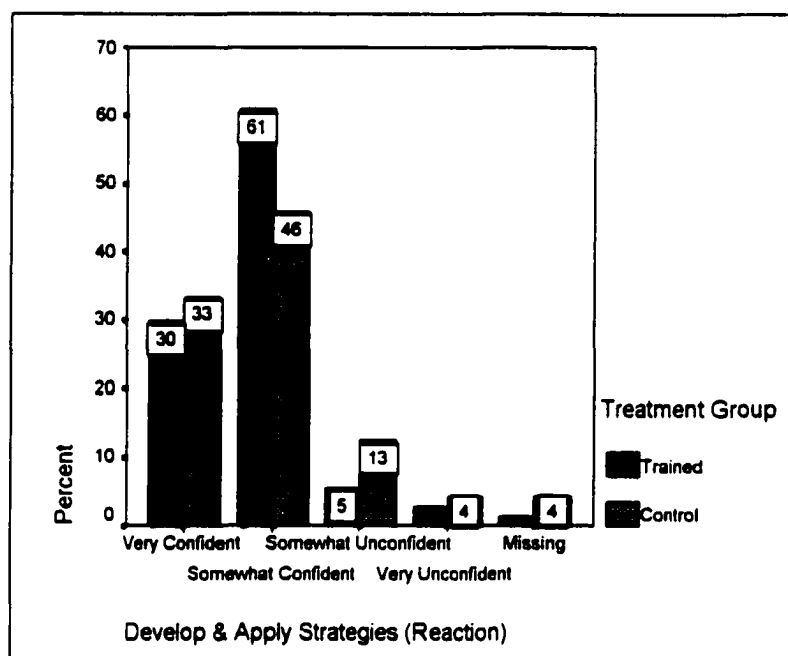
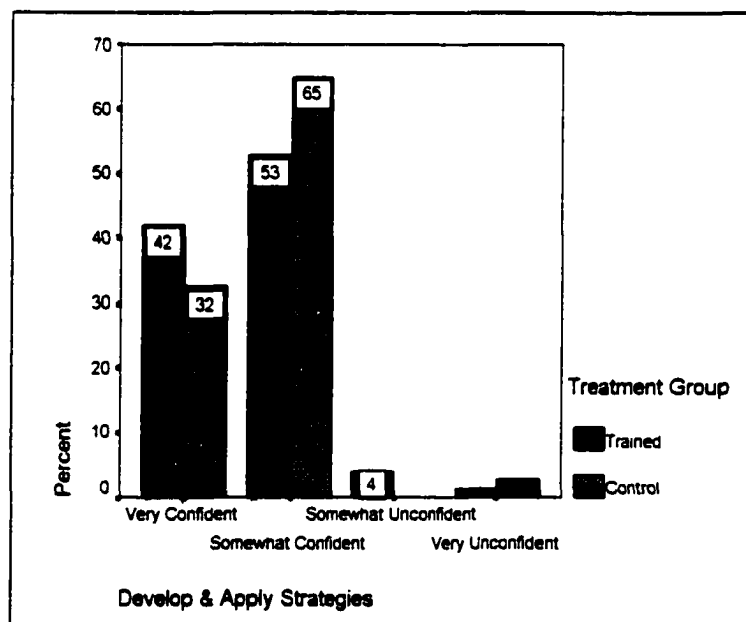*Figure 16.* Confidence in ability to develop and apply strategies (reaction).

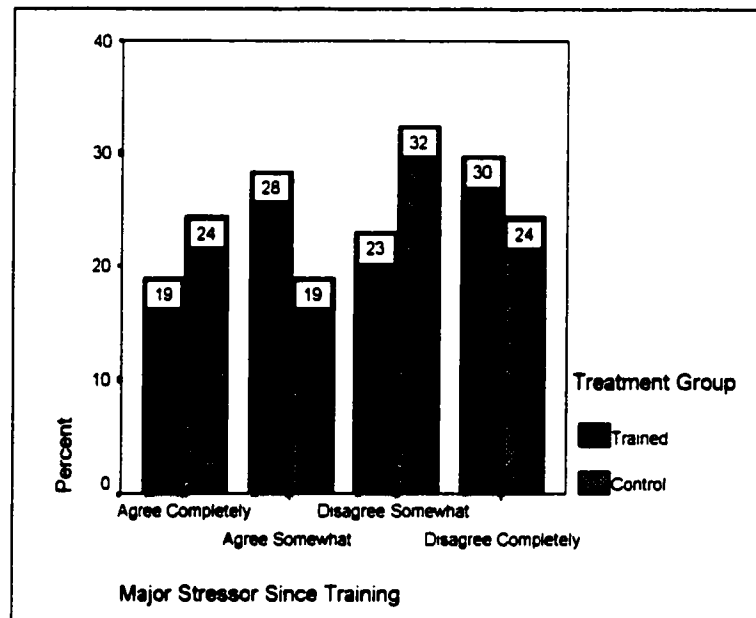*Figure 17.* Confidence in ability to develop and apply strategies (follow-up).

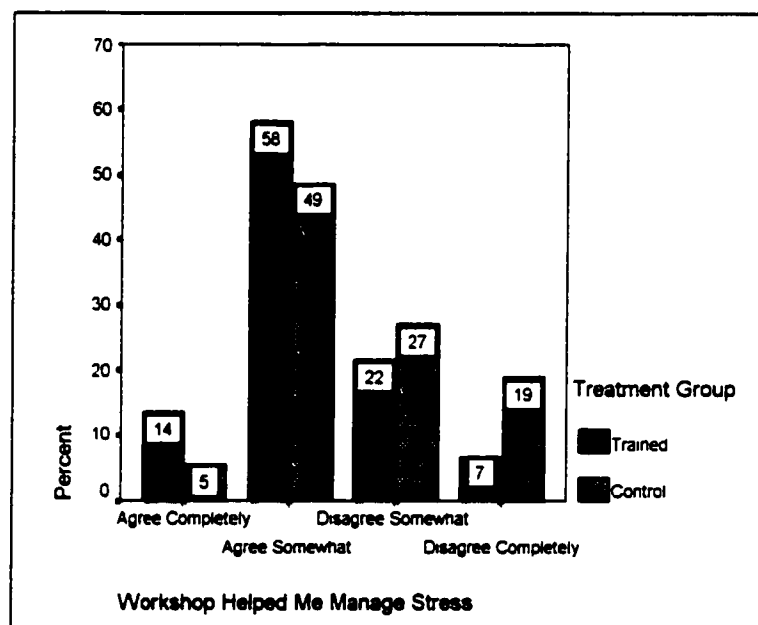*Figure 18.* Major stressor since training.

Figure 19. Agreement that the workshop helped manage stress.

Six to 8 weeks after the training the participants were asked if they agreed or disagreed with the statement "The workshop helped me manage stress in my life." Here a significant difference in the groups is seen (see Figure 19). Of those who were trained, 72% agreed somewhat or agreed completely. Only 54% of those in the control groups showed agreement. In fact, 19% of the control group participants disagreed completely compared to 7% of those who received the training.

Results of Self-Assessments

One of the anticipated outcomes of the study was a lessening of the stress levels for those subjects who had been trained using the stress-and-performance-for-leaders model compared to those who had not been so trained. In order to determine if this had occurred, an analysis of variance was performed using the variable of "time," which consisted of the pretest results and the posttest results for the 10 dimensions of stress. The subjects were differentiated by groups (training groups and control groups) to see if any changes in stress level could be attributable to treatment group (see Appendix G).

A significance factor of $p = .071$ was obtained using the general linear model and testing for the between-subjects effects. This is not statistically significant and, therefore, it cannot be concluded that the differences in stress levels are attributable to groups. Subsequent tests for the individual dimensions of stress were conducted and similarly no statistically significant differences were found for any of the following measures: adaptation ($p = .103$), overload ($p = .594$), deprivation ($p = .152$), nutrition ($p = .875$), self-perception ($p = .084$), Type A behavior ($p = .768$), anxious reactivity ($p = .115$), control ($p = .275$), and occupational stressors ($p = .115$). There was also no statistically

significant difference between treatment groups in terms of their ability to predict their level of stress (p = .663).

The only dimension with a statistically significant difference between treatment groups was frustration (p = .048). An examination of the questions relating to this dimension may provide some insight. The instrument asked subjects, "How often do you . . . feel stifled or held back in your personal or professional life? Feel a need for greater accomplishment? Feel as though your life needs guidance or direction? Notice yourself getting impatient? Find yourself feeling you are in a 'rut?' Find yourself disillusioned? Find yourself frustrated? Find yourself disappointed? Find yourself feeling inferior? Find yourself upset because things haven't gone according to plan?"

Participants in the stress-and-performance-for-leaders training were encouraged to take control of the circumstances causing their stress by developing strategies to alter their demands and capabilities. It appears that this empowerment succeeded in getting participants to feel that they could indeed do something about the stress in their lives. It follows that persons who sense they have a degree of control over their stress level will not feel as frustrated by external forces because they feel they can change conditions that might lead to stress.

Another interesting way to view the data is by plotting a profile of the self-assessment responses. This was done during the workshop for each individual. Figure 20 shows the group means for each dimension plotted for the trained groups, the control groups, and the pilot test group of university students.

Personal Stressor Profile Summary Sheet

EXERCISE	1	2	3	4	5	6	7	8	9	10
	Adaptation	Frustration	Overload	Depri-vation	Nutrition	Self-Perception	Type A Behavior	Anxious Reactivity	Control	Occupational Stressors

Scores Indicative of

High Vulnerability to Stressors

Moderate Vulnerability to Stressors

Low Vulnerability to Stressors

+400	+40	+40	+40	+40	+40	+40	+40	+40	+40
+350	+35	+35	+35	+35	+35	+35	+35	+35	+35
+300	+30	+30	+30	+30	+30	+30	+30	+30	+30
+250	+25	+25	+25	+25	+25	+25	+25	+25	+25
+50	+15	+15	+15	+15	+15	+15	+15	+15	+15
+100	+10	+10	+10	+10	+10	+10	+10	+10	+10

~~~~~~ trained ━━━ control ———— students

Figure 20. Personal stressor profile summary sheet (groups).

Results on Questions Relating to Instructional Design

Immediately following the training, participants were asked to comment on the degree to which the instructional design's relevance and applicability. Specifically, the soldiers were asked to indicate the degree to which they agreed or disagreed with the statement, "The content of this workshop is relevant to my job." Figure 21 shows 94% of those in the training groups and 92% of the control group agreed either completely or somewhat with the statement. Although the trained groups were more prone to completely agree (53% to 42%), the high rate of perceived relevance is indicative of the notion that these soldiers consider stress management critical to performance of their jobs as leaders.

The control group received training on combat stress in lecture format and although the application was less immediate, the participants were probably able to project

this training into their future potential roles as combat leaders. Another consideration is

that the control group received feedback on their pretraining self-assessments of stress. It

is likely that the combination of these two factors gave the training relevance even for the
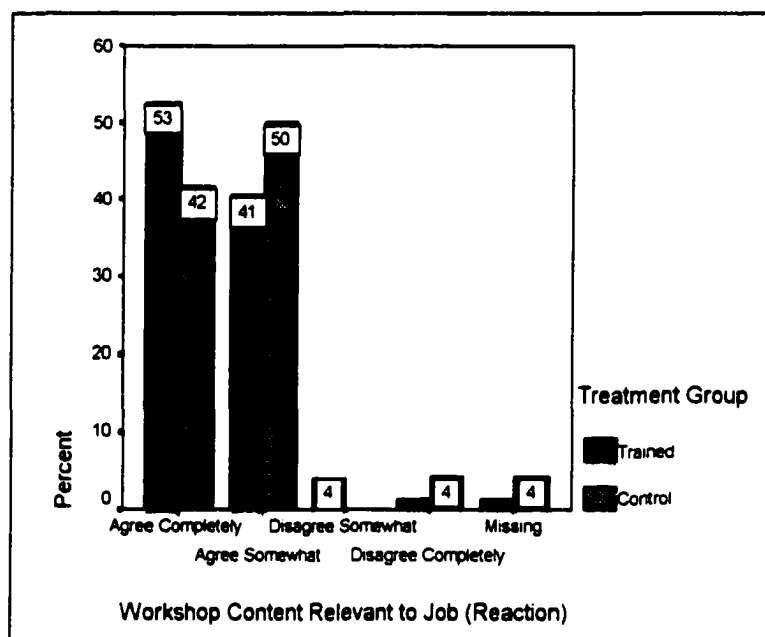
control group.

Figure 21. Relevance of workshop content.

The similarity of response between the trained and control groups was even closer

when participants were asked to comment on the helpfulness of the training activities.

Again, the soldiers were asked to indicate the degree to which they agreed or disagreed

with the statement, "The activities in this workshop helped me learn the material." As

shown in Figure 22, 95% of those in the training groups and 93% of the control group

agreed either completely or somewhat with the statement. Nobody in either group disa-

greed completely. The large satisfaction rate with the activities of the workshop is reflec-

tive of a number of factors. The type of "soft skill" training presented to the participants
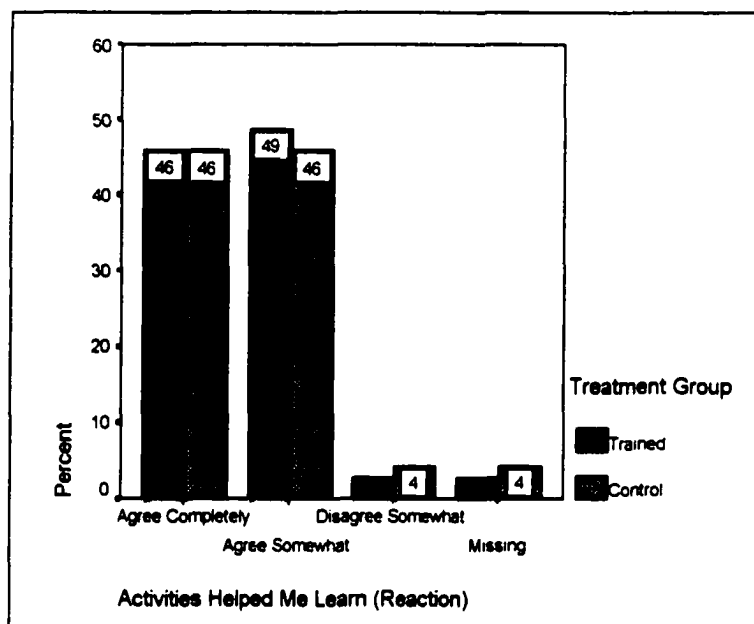
Figure 22. Helpfulness of workshop activities.

represented a departure from the normal mode of Army instruction. Most training that

these soldiers receive is skill mastery in which they are presented with a task to learn,

conditions under which the task must be performed, and specific standards or performance

that must be achieved. The psyche of the soldier often views training as an enemy to be

conquered. In the training presented in this study, soldiers were exposed to a model of

training more typically found in corporate or university settings. Positive results may be

the result of the novelty of this approach for participants. The focus of the training was

their stress and the stress of their subordinates--a very personal topic.

Results of Stress Prediction Exercise

Of critical concern in the study was the question of whether or not the workshop

helped learners to create conditions necessary for them to manage their own stress and the

stress of those whom they lead. By using correlation analysis, the study found that participants who were trained using the stress-and-performance-for-leaders model were able to accurately assess their stress levels while those who were not trained were not able to do so (see Appendix H).

Learners' reactions were solicited immediately following training. Participants were asked to predict the amount of stress for some future stressor. Those in the training groups showed correlation highly significant at the .01 level (2-tailed) for adaptation (r = .330), frustration (r = .474), overload (r = .394), anxious reactive personality (r = .338), and the variable PRESUM (r = .391). PRESUM was a composite variable derived by adding all pretest dimensions except adaptation. Those in the training group also showed correlation significant at the .05 level (two-tailed) for control (r = .174). Among these participants, there was positive but not statistically significant correlation for deprivation (r = .134), nutrition (r = .173), self-perception (r = .186), Type A personality (r = .137), and occupational stressors (r = .179).

For the control groups, the only statistically significant correlation with predicted stress was for the Holmes-Rahe scale or adaptation (r = .512), which was significant at the .05 level (two-tailed). Five of the dimensions showed positive, but not statistically significant, correlation including overload (r = .199), nutrition (r = .194), Type A personality (r = .183), anxious reactive personality (r = .155), and POSTSUM (r = .035). POST-SUM was a composite variable derived by adding all posttest dimensions except adaptation. In the control group analysis, the other five dimensions showed negative, but not statistically significant, correlation including frustration (r = -.024), deprivation (r =

-.232), self-perception (r = -.059), control (r = -.175), and occupational stressors (r = -.015).

Approximately 6 to 8 weeks after training a follow-up was conducted. Participants were asked to predict the amount of stress for some future stressor. Those in the training groups showed correlation highly significant at the .01 level (two-tailed) for adaptation (r = .430), frustration (r = .354), overload (r = .361), deprivation (r = .390), self-perception (r = .333), anxious reactive personality (r = .410), occupational stressors (r = .384), and the variable POSTSUM (r = .421). Those in the training group also showed correlation significant at the .05 level (two-tailed) for Type A personality (r = .266). Among these participants, there was positive but not statistically significant correlation for nutrition (r = .119) and control (r = .174).

For the control groups, the only statistically significant correlation with predicted stress was for self-perception (r = -.457), which was highly significant at the .01 level (two-tailed). Those in the control group also showed correlation significant at the .05 level (two-tailed) for POSTSUM (r = .376). The remaining nine dimensions showed positive, but not statistically significant, correlation including adaptation (r = .292), frustration (r = .259), overload (r = .157), deprivation (r = .266), nutrition (r = .323), Type A personality (r = .098), anxious reactive personality (r = .300), control (r = .250), occupational stressors (r = .188), and POSTSUM (r = .035).

CHAPTER V

DISCUSSION, CONCLUSIONS, REFLECTIONS,

AND RECOMMENDATIONS

Discussion

This was a qualitative study with certain quantitative aspects. The purpose of this study was to examine the applicability of the concepts of stress management training to a selected U.S. Army professional development program. More specifically, the study (a) focused on the perceptions and attitudes of actual participants in a program incorporating the concepts of stress management collected over a 3-month period, (b) identified issues and problems surrounding the training for stress management in the Army, and (c) made recommendations about how to introduce adult learning concepts into training for soldiers.

This study was conducted by means of conducting a model training program in stress management for Army leaders, a pretest and posttest to gather information on the participants levels of stress before and after training, and collecting information regarding participants reactions to the training. The organization selected for study participation was the 716th Military Police battalion stationed at Fort Campbell, Kentucky. Of the 125 soldiers initially participating in the study, 111 soldiers' responses were usable and formed the basis for the findings.

The stress-and-performance-for-leaders workshop was found to be useful in training soldiers to identify the sources of stress and their reactions to stress using a modified critical incident technique. It also helped soldiers to develop strategies to manage their stress and the stress of their subordinates.

Summary of Conclusions

Participants in the workshop were asked to describe a future stressful event in questions asked both immediately after training and during a follow-up survey 6 to 8 weeks after training, depending on their availability. In both cases job performance issues made up the largest segment of the responses with 44% and 35%, respectively. One would expect a high volume of job performance issues considering the workshop was conducted as part of the unit training schedule, on duty time, and in a classroom setting normally used for work-related training. The fact that follow-up response was lower than immediate reaction response could be attributable to normal "distancing" from training as time passes. The single most frequent response was "deployment." Deployments have become much more frequent since the end of the Cold War and soldiers throughout the Army experience them as a major stressor because they create family separations and cause soldiers to perform a variety of extraordinary tasks. The other major categories of stressors were career issues, family or relationship issues, and health issues.

Although this study produced the ranking of stressors for soldiers described above, the ranking is of less importance than the conclusion that soldiers experience a *variety* of stressors. Moreover, one cannot conclude from the ranking that any given stressor is more important than others except in numerical terms. For an individual soldier, the

stressor is unique and must be managed with the same care regardless of its ranking on a hierarchy of stressors.

Participants in the study were asked to estimate their confidence in their ability to understand sources of stress and reactions to stress. Immediately after the training, an amazingly high percentage (92%) of the trained groups expressed that they were very confident or somewhat confident. The control group also expressed high (88%) confidence. Even more remarkably, 6 to 8 weeks after training the trained and control groups expressed even greater confidence with 96% and 97%, respectively. This indicates that either this group was extremely well trained already in stress management or they have an inflated sense of self-confidence. A little bit of each is probably true.

Participants in the study were also asked to estimate their confidence in their ability to develop and apply strategies to manage stress. Immediately after the training, a high percentage (91%) of the trained groups expressed that they were very confident or somewhat confident. For the control group a much lower number (79%) expressed confidence. Six to 8 weeks after training, however, the control groups expressed even greater confidence than the trained group with 97% and 95%, respectively.

Optimistically, this could represent the phenomenon that occurs wherein learners actually master a skill after the training session has taken place through application and reflection. However, because the control groups expressed even more confidence than the trained groups, this idea must be discounted.

Six to 8 weeks after the training the participants were asked if they agreed or disagreed with the statement "The workshop helped me manage stress in my life." Here a significant difference in the groups is seen. Of those who were trained, 72% agreed

somewhat or agreed completely. Only 54% of those in the control groups showed agreement. In fact, 19% of the control group participants disagreed completely compared to 7% of those who received the training. This indicates that even after some period of time had passed, the workshop participants attributed some of their ability to manage stress to the training.

One of the anticipated outcomes of the study was a lessening of the stress levels for those subjects who had been trained using the stress-and-performance-for-leaders model compared to those who had not been so trained. Self-assessments were completed by study subjects in all treatment before and after the training. There was no statistically significant difference between the treatment groups.

In this study certain hypotheses were posed and evaluated using statistical analysis in order to provide greater understanding of the impact of the stress-and-performance-for-leaders workshop on military leaders. These hypotheses were:

1. Participants trained in the stress-and-performance-for-leaders model will have lower stress than those not trained in the model. This hypothesis was rejected because no statistically significant difference was found between the trained groups and the control groups.

2. Participants trained in the stress-and-performance-for-leaders model will exhibit greater awareness of their own level of stress than those not so trained. This hypothesis is not rejected because there was a statistically significant correlation for the trained participants' ability to know their stress level and the actual stress level as indicated by the self-assessment instruments. There was no such correlation for those participants in the control or untrained groups.

3. Participants trained in the stress-and-performance-for-leaders model will exhibit a greater ability to develop and apply strategies to deal with stress than those not so trained. This hypothesis is neither accepted nor rejected because evidence exists to support a greater ability; that is, the results of Hypothesis 2. However, the self-reported data expressing ability to develop and apply strategies are mixed.

Reflections

Because the workshop is based on principles of adult learning that focus on individual experiences and problem-centeredness, often the responses of workshop participants are unpredictable. The action plan developed in the workshop provides each participant a personal, targeted vehicle for coping with a future stressful event. These plans usually focus on work or personal crises. A unique application for the action-planning module surfaced in Uruguay. We were conducting a stress-and-performance-for-leaders workshop at the American Embassy in Montevideo as part of the SOUTHCOM Commander-in-Chief's health promotion traveling team. The participants consisted mainly of embassy employees of the State Department and local nationals. At one point in the workshop I, as the workshop facilitator, asked if anyone would like to share with the group their "future stressful event." A nervous Latin woman rose and began to express the anxiety, near panic, which had gripped her for some time. "What is it that is causing such distress for you?" I asked her. "Oh, my daughter is going to have her *la quinceañera* and I have never had to plan one before." With some background on South American traditions, I knew that the *la quinceañera* or 15th birthday is a very special celebration. It is more important than the American "Sweet 16" party. It symbolizes the social

presentation of the young lady; it is more like a debutante ball or coming out party. Second only to the wedding, the parents of the girl must put on a display of means intended to inform all local society that their daughter is worthy of notice. The woman in the workshop had clearly let her perception of the demands of this event overwhelm her perceived capability to host the party. She appeared visibly shaken. I asked the group if we could try to help her and they responded marvelously. Using the model of the workshop as a guide, the various participants who had been through the experience before structured responses in terms of demand, capability, and response-related strategies. Even those who had never hosted a 15th birthday party were able to contribute with the names of good local florists, caterers, or bands. After just a few minutes, the woman had a plan on paper specifically designed to deal with her stress in accomplishing an important task in her life. Through the give-and-take of group process, the plan was elegant yet practical and carried with it the goodwill of fellow participants who shared their own experiences to assist another. The facilitator should trust the group to come up with a constellation of strategies because the sum of the knowledge of the group is always greater that any one person.

On a similar health promotion trip to Brazil, the team was working out of the U.S. Consulate in Rio de Janeiro. Again the audience was mostly employees of the State Department and local nationals. As part of the workshop, we gave participants feedback on the health risk appraisal (HRA) that they had taken earlier in the day. The HRA consists of a paper-and-pencil questionnaire on lifestyle, some physical measurements such as height and weight, and blood draw to determine cholesterol level. The outcome of this screening is a computer printout that highlights key risk factors and gives an estimate of longevity based on Centers for Disease Control (CDC) statistics. While giving the

debriefing, I walked participants through their individualized printouts with some examples explaining along the way what each area meant. We had done this same procedure approximately 50 times before throughout South and Central America, as well as in Europe and the United States. However, on this day in Rio, one participant misinterpreted the words I was speaking. Among other health tips and warnings, the CDC risk appraisal uses the information provided by the participant to calculate the probability of death within the next year. The CDC printouts were distributed to the participants and the team began to debrief results section by section. Suddenly, one man read his printout and became quite agitated. He began talking to others in the audience. After my portion of the debriefing was concluded, I approached the man to determine the source of the problem. His printout, like that of all others in his age group contained the health warning, "AIDS is the number one cause of death in your age group. Make sure you are taking precautions to avoid this disease." The man had apparently stopped reading at the word "AIDS." I reassured the man that this did not mean that he had AIDS and, in fact, we had no way of knowing whether he did or not. He had mentally linked the cholesterol blood draw with the printout's pronouncement of "AIDS." He was not to be calmed. After my training partner finished her portion of the debriefing, she joined me in talking to the man. He explained to my partner that although he was quite sexually active he was not homosexual, did not associate with homosexuals, and did not even know any homosexuals. He was getting worse. Finally, we had the physician on our team talk to the man. He was finally consoled enough to return to work. About 20 minutes later one of his co-workers summoned our physician. The man had fainted at his desk. The facilitator should be sensitive to a wide range of possible responses that participants may experience to physical

or mental health information provided in the workshop and the workshop must strive for crystal clarity when providing potentially sensitive feedback to participants. In the present study a number of participants approached me after the session concerned about high scores on their self-assessments. I found it important to interpret and normalize their scores in order to put them at ease and to ensure they would focus on constructive responses to the training.

During one part of the workshop, participants are asked to share with the group their own reactions to stress. The list usually includes "get angry," "yell at kids," "smoke," "drink," "can't sleep," "sleep too much," "over eat," and so forth. After a dozen or so workshops I thought I had heard everything. In a workshop in Darmstadt, Germany, conducted on a Sunday afternoon with spouses of deployed soldiers, I heard perhaps the strangest response to this question. I had solicited the reactions, and as each participant shouted out her reply, I dutifully recorded it on a butcher paper sheet. I was getting the normal list of reactions until one woman said, as if it were just another normal reaction, "can't take a shower." I stopped writing, and slowly turning toward the source of the voice said, "What did you say?" "Can't take a shower," the young woman answered, "I can't take a shower because of the stress I've been under." I was intrigued. "Could you explain that a little bit more?" I asked. She went on to explain that since her husband had been gone, deployed to the desert for Desert Shield, she had felt guilty about taking a shower because she felt he was not able to take a shower, so she had developed a sort of "shower aversion" that prevented her from showering. From a soldier's perspective, I assured her that whenever her husband had the opportunity to take a shower he would without hesitation and that he would probably want her to do the same. Interestingly, another

woman stated that she also felt guilt, but her empathic acting out took the form of taking long hikes with a weighted backpack to simulate her husband's load bearing requirements in the desert. No matter how many times one has facilitated the workshop, each new group has the potential to provide interesting and enlightening perspectives on the nature of stress and stress management. In the present study no extreme reactions were noted.

The workshop has not always been successful. In the wake of the Gulf War, elements of U.S. Forces in Europe were formed into Task Force Bravo for Operation Provide Comfort designed to relieve the suffering of the Kurdish people in Northern Iraq. After some months on the ground, the task force commander invited V Corps' Desert Calm team to visit the task force and provide training as indicated. Just getting to the training site proved to be a challenge. The task force was operating out of a former Iraqi army base near Zakho, Iraq. The team had to fly by military aircraft to Ankara, Turkey, transfer to a jam-packed cargo plane and fly into the U.S. Marine-operated airfield at Sirsenk, Iraq. We then had to notify Task Force Bravo of our arrival by radio and wait for a tactical helicopter to transfer us to the base. Conditions all along the way were hot, dirty, dusty, and oppressive. We arrived at the task force base and things were even worse. Everybody in the organization appeared fatigued and unwell. Living conditions were primitive and dirty. The dining arrangements were so bad that during our brief stay a mutiny of sorts took place in which the Marine element revolted and took over food service operations from the Army. This was a welcome change for all because the marines had access to fresh fruits, vegetables, and meat from their ships in the nearby Mediterranean. The land immediately surrounding the compound had been indiscriminately strewn with antipersonnel land mines by the previous occupants, Saddam Hussein's soldiers. Although

the U.S. forces were being careful to use cleared lanes for safe passage, each day saw casualties among the local populace.

Aside from the physical conditions, the aspects of the job at hand provided little comfort to the troops. Their mission was to provide security and logistic support to the agencies who were giving food and other supplies to displaced Kurdish refugees. The plight of these homeless people in a harsh land was wearing on the young Americans. One helicopter crew chief related to me a story of how his aircraft was hovering low and kicking out bundles of blankets when a woman threw something up and into the open door. The crew chief caught the bundle and discovered it was a baby whose mother knew that the child stood a better chance of life with the Americans than with its own people. We drove through the refugee camp in a HMMWV (high mobility, multi-purpose, wheeled vehicle) and the children swarmed around us. I will never forget the kids grabbing my arm and saying in English, "Don't go, don't go!" The team stayed in Zakho only a few days. The task force members were there for months. Under these conditions, the team found it impossible to conduct a normal stress-and-performance-for leaders training session. The unit was neither physically nor mentally prepared to do anything beyond mission essential requirements. This condition is described in the workshop as "being beyond Point C." We did sit down and discuss stress and performance with representatives of the various elements including U.S. Army, Navy, Air Force, and Marines, and the Italian army. The participants have to be ready for training. They must be relatively free from immediate concerns for their health and safety.

Another case of a less-than-successful training effort occurred at the start of the deployment for Operation Desert Shield. As mentioned above, the Army in Europe had to

send a sizable contingent to Saudi Arabia as part of the troop build-up. Among the troop

list was the requirement for an armored cavalry regiment (ACR). Since early in the Cold

War there had been two armored cavalry regiments in Europe along the NATO/Warsaw

Pact border: the 2nd ACR in the South and the 11th ACR in the North. Over the years,

these two units had gained their reputations as the cutting edge of democracy guarding

freedom's frontier. They patrolled the border standing eyeball-to-eyeball with East Ger-

man, Czechoslovakian, and Soviet counterparts. Short of a shooting war, the "cav" be-

came the place to be and duty with one of the cavalry regiments was essential to the career

of a combat arms leader. When Desert Shield began, however, there was a need for only

one regiment to deploy to the combat zone and the 2nd ACR got the call.

I had been scheduled to conduct training with the 11th ACR for some time and the

training date fell just a few days after the regiment got the news that they were not going

off to war. Many soldiers might have been happy to know that they were not going in

harm's way. Many others would consider it the luck of the draw and figure that their

number just was not up. But the troops of the 11th ACR took the news as a personal in-

sult. Generations of cav soldiers had been telling each other that they were the best, the

meanest, the toughest, the fiercest, the best trained, best equipped, most motivated fight-

ing force in the history of warfare. To be told that they were not needed in this fight was

too much to take. As we entered the training site, the officer's club at Fulda, Germany,

one could cut the air of depression with a knife. We tried to conduct the normal

stress-and-performance-for-leaders workshop but the participants were like zombies.

There was a fatalistic, pessimistic tone to all replies and questions. In our posttraining dis-

cussions the facilitators remarked on the mood that hung like pall over the group. They

were grown men behaving like children who were not allowed out to play. We both evaluated the workshop as fruitless. In the weeks and months to come the unit would be the source of many cases of indiscipline including spouse abuse, child abuse, fatal drunk driving, suicide, and a gruesome love-triangle, decapitation murder. When the regiment finally was sent to Kuwait as a security force after the Gulf War, they became notorious as the unit that had an accidental explosion in their motor pool, which destroyed more M-1 Abrams tanks (14) than the entire Iraqi Army had been able to during the war. Organizational factors may make training difficult or impossible. These factors should be fully understood before training and addressed directly in the training design and implementation.

Although not its primary aim, the workshop can be used as a vehicle for individual counseling. Often, participants will consult one of the trainers with personal concerns either during discussion or after the session. During a workshop in Saudi Arabia, a young soldier approached one of the facilitators at a break. He was despondent about not being able to make the first day of hunting season. Apparently, the young man had gone hunting with his father on opening day for so many years it had become a family tradition. Now, as a new Army recruit, he was missing it for the first time in his memory. Not only was he missing the bonding event with his father, he was halfway around the world serving as part of a deterrent force to Saddam Hussein's most recent test of American will.

The team also became a source of referral for others in the unit. During the same deployment to Saudi Arabia mentioned above, a unit chaplain approached our female team member. The chaplain, a Catholic priest, asked if she could speak with a staff sergeant who was enraged over some news he had received from home station. The unit had been notified that the staff sergeant's wife had been raped during his absence and they were

preparing to send him back to Fort Benning, Georgia, in emergency status. After speaking

with the staff sergeant for a few minutes, it became obvious to our team member that he

was intent on "straightening out" his wife upon his return to Fort Benning because she

"must have been asking for it." Because she had background as an Army nurse and

training in counseling and suicide intervention, our team member was able to calm down

the soldier. She helped him to see that his wife was probably in bad shape at this point and

really needed his understanding and acceptance, regardless of the circumstances. She also

assisted in contacting the family advocacy office and hospital at Fort Benning as well as

facilitating a telephone conversation between the soldier and his wife.

In Frankfurt, Germany, during the Gulf War, we conducted many workshops for

family members of deployed soldiers. During one such session we found the wife of a

deployed senior officer who said she was not getting any sleep. She had tried muscle re-

laxation and breathing exercises as presented in the workshop, but she still could not get

any sleep. Eventually, we added the workshop concept of controlling thoughts during re-

laxation to her routine. She reported that with our help she was finally able to relax and

get to sleep.

We have also used the workshop within the context of organization development

interventions. At the request of the Commander-in-Chief, United States Southern Com-

mand in Panama, we conducted a series of stress-and-performance-for-leaders workshops

for each of the functional directorates of the command. These off-site conferences were

conducted in the same manner as the normal workshop but expanded by following up the

individual-focused session with a group problem solving session involving the entire or-

ganization. With the basics of the stress and performance model understood by all

participants, we progressed to identifying the organizational stressors and developed an organizational action plan to address them. Just as in the individual component, the organizational action plan identified demand, capability, and response-related strategies. An added benefit of this approach was the public dialogue on organizational issues and concerns which necessitated careful facilitation. These sessions were extremely well received throughout the command and formed the basis for many substantive changes in the various organizations. As in most efforts of this type, the degree to which senior leaders embraced the program was critical to success. The commander-in-chief and his directors initiated the program with an off-site workshop of their own. In the present study, no formal effort was made to address organizational issues. However, many organizational issues surfaced during the course of the workshops. Some of these were the high OPTEMPO and PERSTEMPO, impending unit reorganization, and unclear guidance regarding upcoming deployments. Even when focused on the individual level, the workshop can be a source of information about the organization as a whole.

Another example of how the workshop can be used to further organizational objectives was seen in one of the pilot tests. A series of workshops was conducted for the Enlisted Personnel Management Directorate (EPMD) of the Total Army Personnel Command in Washington, D.C. Over 950 suggestions for organizational improvement were developed by participants. These suggestions were analyzed and presented to the organization's leadership for action. Although the leadership had requested the stress-and-performance-for-leaders workshops to usher in a major organization-wide reorganization, a number of unexpected concerns surfaced including the perception of racial and sex discrimination on the part of many employees. I found that participants were anxious to talk

openly about the organization to me as an outsider. Once the workshops were complete, the commanding general assembled his key directors and I presented preliminary findings in a "hot wash" briefing. All individuals present seemed amazed at the depth and insight contained in the briefing. This was possible only because the workshop provided a viable framework for getting to the organizational culture through the perspective of participants' stress. The workshop can be used as an organization development intervention to diagnose a wide range of issues rapidly.

Most workshops have been conducted on an episodic basis. That is, they were conducted at the request of commanders to meet a particular crisis or as an opportunity for the professional development of their subordinates. An exception to this was the 97th General Hospital in Frankfurt, Germany, that presented the workshop routinely during monthly in-service training. The hospital commander became familiar with the workshop in other organizations and requested that we present the workshop monthly during "briefing day." The hospital commander initiated "briefing day" to combat the endless requirements for annual briefings in a multitude of subjects including safety, SAEDA (subversion and espionage directed against the United States), and RREO (race relations and equal opportunity). He found that on any given day, he was losing large numbers of his workforce to these mandatory briefing. As an alternative, he set up 1 day a month on which a 12th of the workforce would receive all of their required briefings. He also introduced the day's agenda with a deal of gallows humor about how everyone look so happy to be there, and so forth. The hospital commander was certain that all of his people could benefit from the workshop and from the positive reactions we received, he was right.

The workshop is a powerful stimulus for individual change and growth as well as a counseling tool as demonstrated during one of the pilot tests for this study. A university undergraduate class on *Leadership: Theory and Practice* was the setting for presentation of a modified version of the workshop. The stress and performance workshop was presented as one of the classes for this course. On a subsequent graded requirement to reflect on the first 10 lessons of the course and identify the most useful ones, an unusually high number of students reported that the stress and performance class stood out. Of the 22 students enrolled in the course, 16 named this class as both helpful and stimulating. A review of class records indicated that 4 students had been absent on the day of the class, making the effective positive response rate 89%. I conducted follow-up sessions with the 16 students and found that the worksheets they had completed in the class were relevant to their life situations and could be used to devise action plans for important events in their futures. The format of the present study did not present opportunities for counseling; however, this workshop could be quite useful to unit leaders as a starting point for the counseling and interpersonal communication process.

Policy Guidelines

The Army would benefit from the adoption of key elements developed in this study. Training is a major function of all Army organizations and commanders are constantly looking for ways to improve training in order to increase combat readiness and care for their troops. The following suggestions for policy guidelines move Army policy in those directions.

Use of Adult Learning Principles

A greater portion of Army training should be conducted using principles of adult learning including decreasing learner dependency on the trainer, assisting learners to use resources, including the experience of other persons, assuming responsibility for their choices and progress, and facilitating self-reflection, problem-posing, and a positive self-concept in a climate supportive of changes, risk-taking, and examining perspectives. While this type of training is not totally absent in Army training it is rare. Current Army leaders continually call for "thinking outside the box" and innovation but lock step, pedagogical training diminishes the possibility for these outcomes in a way that andragogy does not. The present study reinforces the notion that soldiers exposed to adult learning models respond positively and constructively.

Training in the Stress and Performance Model

There are ample opportunities for Army leaders to receive training in the stress-and-performance-for-leaders model presented in this study. Army leadership training is presented in a progressive, sequential manner that develops leadership skills by building on previous training and experiences. These training opportunities occur during officer and noncommissioned officer basic courses and at career development courses throughout the careers of Army leaders.

The model presented in the current study also offers added benefit for leaders in that it can be used as a general tool for analysis of organizational situations. Starting from the assumption that optimal performance is achieved when stress is neither too little nor too great, leaders can account for performance anomalies by examining them from the

perspectives of demands, capabilities, and responses. By doing this, leaders will be able to develop effective action plans that will simultaneously achieve the highest levels of performance and keep stress in check for their and their subordinates.

Based on extrapolations from World War II, Korea, Vietnam, and the Arab-Israeli wars, the U.S. Army predicted that battle fatigue casualties would be in excess of 25% of all evacuated causalities in a major regional conflict such as the Persian Gulf War. However, psychiatric battle casualties were much lower on the order of only 3%. The Army has yet to provide an explanation for this anomaly other than to suggest the shortness of the war and the generic "high quality soldiers" as probable causes. A review of Army training over the last twenty years reveals a shift towards practices, policies, and techniques which, if viewed from the perspective of the stress-and-performance-for-leaders model, predict lower stress for combatants.

For example, in the 1970's Army field training exercises usually lasted no longer than 36 hours. In this relatively short time, units could use their "first team" to perform all critical functions without concern for rest. However, in the early 1980's the Army began to shift to a doctrine of "tough, realistic training" which included extended field training exercises in which leaders had to employ sleep plans as a key element of success. In the stress model this is viewed as "setting limits" and it decreases the perceived demand for the individual.

Another example is the after action review (AAR) which has become part of the way the Army does business. Twenty years ago, evaluators were uses as referees to assess success or failure during exercises. Each unit and leader nervously awaited the "verdict" which could make or break careers. Again, as part of the rebirth of the Army

that came about through the introspection following Vietnam, new doctrine declared that following a training exercise, all players would discuss from their own perspectives what happened, what went well, what did not go well, and what could be learned from the experience. In the language of the model this is "talking it out," and it serves to normalize reactions to stress and reinforce successful coping with stress.

These examples and may others paved the way for employment of Army forces who would succeed tactically with lower stress casualties than in any previous conflict. That is exactly what happened in the Persian Gulf War.

Individual Perspective

Because the Army is a large organization there is a constant drive for standardization in training. Unfortunately, this often translates into prescribed and rigid lesson plans. Additionally, the ever-fluctuating pool of trainers necessitates training that can be delivered by virtually anyone. A key finding of the present study was that lists of most prevalent stressors are not as important as individual responses to stressors. Therefore, any training involving control of stress must focus on those individual reactions to stress and the development of targeted strategies to control it.

Recommendations for Practice

Curriculum and Instruction

The selection of learning activities was based on the objectives, effective design processes, and specific information regarding an Army combat unit environment. Learning activities should include lectures, discussions, structured exercises, skill practice labs, role plays, and accompanying worksheets (job aids) for learners' later reference. This

course should be experiential and hands-on, with opportunities for learners to gain knowledge, apply knowledge to their work situations, practice skills and receive feedback, and make action plans for transfer of the skills and knowledge to the workplace. Learners can also "wrestle" with concepts that will challenge their internal attitudes about stress and performance and its importance of both to the organization.

The facilitator should select instructional strategies which demonstrate trust of the group to come up with a variety of stress management approaches. The adage that "there is no one best way" clearly is applicable in the case of individual stress and performance issues.

The facilitator should enter the workshop experience without preconceived notions about potential participant responses. In particular, the facilitator should be cognizant of the fact that feedback or discovery of personal information may produce strong reactions in participants. By providing clarity on feedback and dealing with anomalous situations as they arise, the facilitator can maintain control of the process while allowing participants to experiment with their reactions. The workshop can be a powerful stimulus for individual change and growth as well as a counseling tool. No matter how many times one has facilitated the workshop, each new group has the potential to provide interesting and enlightening perspectives on the nature of stress and stress management.

The conditions for learning must be present for the workshop to be fully successful. Participants must be relatively free from immediate concerns for their health and safety. At the same time the facilitator should not shy away from performing the workshop because conditions are not perfect. Army leaders exist in a variety of settings and human resource development practitioners need to be open to the possibility of conducting

training unusual environments. The stress-and-performance-for-leaders workshop has been conducted successfully in an aircraft hangar in Saudi Arabia, at a squad base camp on the Macedonian border, in large theaters, and in small tents. The workshop has been presented on four continents and has even been conducted in Spanish with the assistance of a translator. In short, the workshop can be employed wherever soldiers are found.

The facilitator, as well as the training organizer, must take into account those organizational factors that may make training difficult or impossible. Such factors as structure, communication networks, symbols, and other cultural variables should be fully understood before training and addressed directly in the training design and implementation.

Senior leaders must be involved in planning and must support the program. My experience has shown that when senior leaders are actively involved in the workshop planning and execution, the training is smoother, participants are more engaged, and the senior leaders themselves view the training as more beneficial. Even when focused on the individual level, the workshop can be a source of information about the organization as a whole which commanders can use in subsequent training or development activities.

Evaluation

For this study, the stress-and-performance-for leaders workshop was not integrated within the framework of a comprehensive program. Future efforts in organizational settings must include an evaluation component. The proposed evaluation strategy for the stress-and-performance-for-leaders workshop consists of six components. First, immediately following training, the administrator should have participants complete a learner reaction sheet to gather learners' perceptions about course content, learning

activities, instructor skills, environment, and other factors that support learning as well as overall satisfaction. This information will be used to refine design and delivery methods.

Second, a knowledge test should be administered prior to or at the beginning of the workshop (to establish baseline data) and at the conclusion of the course to measure knowledge gain. These data will be used to refine design and delivery methods to assist learners to achieve greater knowledge retention.

Third, skill mastery assessments should be administered at the end of each learning event. The nature of each skill mastery assessment will depend on the specific nature of the skill being measured and what is an appropriate measure. For example, if the skill in question is mental or analytical, the learners might be asked to analyze a problem and provide the analysis result; the result would be checked against quality criteria. Likewise, if the skill in question is interpersonal, the learners might be asked to demonstrate that skill in a role-play situation.

Fourth, an attitude assessment should be administered at the beginning of the course (to establish baseline data) and at the conclusion of the course to measure change in attitude. These data will be used to determine if attitude toward skills has changed in a positive direction and to refine course design and delivery if necessary.

Fifth, an assessment should be made of application on the job, 3 to 6 months after course delivery. This assessment process will determine what skills are being applied and how learners are applying them, and what factors on the job are helping and hindering that process. Strategies should include interviews with learners to "observe" their application of stress control skills and a survey of supervisors.

Finally, a review of warfighting (business) indicators will determine how this intervention has responded to warfighting (business) needs. These indicators will include: percentage of soldiers from trained units with indiscipline factors such as alcohol and drug abuse, spouse and child abuse, inappropriate violence (assaults, homicide), and suicide compared to Department of Defense averages; end-of-year statistics showing the number of early discharges in "trained" units compared to those in "untrained" units; unit averages for early discharges; and questions in after-action reviews (AARs), which address the degree to which soldiers felt strengthened rather than weakened by the operation.

By following these evaluation steps, the training activity design should address client and learner needs and be consistent with good practices of leadership and the behavioral sciences. It should also validate the initial work done in this area, fill in the gaps, and build additional robustness into the design of this program. Additionally, it should give both Army leaders and human resource development practitioners practice in developing comprehensive training programs.

Areas for Further Research

The scope of the present research has permitted a broad, but only superficial, description of the nature of stress management training in the worksite. More research is necessary to make this description complete and also to analyze the dynamics of stress management training in the military more completely. The following approaches are suggested:

1. In this study some of the findings are quite tentative. A follow-up study should be made using these tentative findings as hypotheses. Soldiers and their leaders in a

representative number of military units would be interviewed intensively and asked questions specific to the hypotheses. An example of the type of hypothesis that might be formulated is the following: Stress management training conducted by unit leadership is more effective in raising awareness that training conducted by outside "experts." If this and other hypotheses are substantiated, the interviewer can then ask further questions in an attempt to uncover attitudes responsible for the differences.

2. Case studies should be made of individual stress management training programs with intensive interviewing of trainers, learners, and unit leaders. These studies would attempt to prove or disprove some of the tentative findings of the present study, but would also have as their object the complete description of the people and processes within various unit environments.

3. A more extensive study of the stressors of learners should be made, employing a large number of the type of situational questions used in the present research. The content for these items could be obtained from two sources: from critical incidents obtained in the study suggested below, and from soldiers and their leaders who are asked to describe specific hypothetical situations where a soldier would be under stress. These situational questions could be used in a mailed questionnaire type study, but in this case they would have to be framed quite carefully to ensure absolute clarity. Additionally, such aspects as gender differences with respect to stressors should be examined.

4. In an attempt to understand more completely the process of stress in the military as a distinct phenomenon, a study should be made comparing military stress management training with stress management training in the civilian arena. Much of the data for this study could be collected by mailed questionnaire from corporations, nonprofit

organizations, academic institutions, and the like. The study would be oriented toward discovering differences between military and civilian programs in such areas as learning objectives, resources for training, target audience, learning activities, and evaluation. One of the hypotheses to be investigated might be that stress management training in the military is focused more on the team or group while similar training in the civilian setting is focused more on the individual.

5. A much enlarged critical incident study should be made. This would be devoted to the collection of a great many incidents from soldiers, leaders, and trainers. This study would investigate the possibility of collecting incidents in group interviews rather than in time-consuming individual interviews. Enough incidents would be collected so that they could be classified into areas of behavior. An attempt would then be made to develop critical requirements for soldiers in control of stress, which would be useful in the selection and training of soldiers for unique missions.

6. Studies should be made of military units to identify informal "stress management trainers"; that is, members of military units, such as sergeants, who assist soldiers in learning how to control stress without having official status as a designated trainer. In the present study informal interviews with participants indicated that there are individuals who might be characterized as informal "stress management trainers." The study would identify such individuals and assess their impact on the ability of soldiers to identify stress and develop strategies to control or manage stress in their lives.

REFERENCES

Anderson, V. L. (1986). The effects of mediation on teacher perceived occupational stress and trait anxiety (Doctoral dissertation, Indiana University of Pennsylvania, 1986). *Dissertation Abstracts International, 57*(03), 934A.

André, R. (1995). Diversity stress as morality stress. *Journal of Business Ethics, 14*, 489-496.

Argyris, C., & Schon, D. (1978). *Theory in practice: Increasing professional effectiveness.* San Francisco: Jossey-Bass.

Bandura, A. (1977). *Social learning theory.* Englewood Cliffs, NJ: Prentice Hall.

Bennis, W. (1976)). *The unconscious conspiracy: Why leaders can't lead.* New York: Anacom.

Benson, H. (1996, October). Mindful healing: An interview with Herbert Benson. *Technology Review,* pp. 33-40.

Brammer, L., & Abrego, P. (1981). Intervention strategies for coping with transitions. *The Counseling Psychologist, 9*(2), 19-36.

Brookfield, S. (1983). *Adult learners, adult education and the community.* Chicago: Follet.

Chang, C. Y. (1996). A study of the effects of a stress management program on job-related stress perception of business executives (Doctoral dissertation, Drake University, 1996). *Dissertation Abstracts International, 56*(10), 3816A.

Chein, I. (1984). *A brief guide to the art of interviewing.* New York: New York University, Department of Psychology.

Cockerill, E. E. (1962). *The use of the record in teaching in the graduate curriculum* (Teaching Method Series, No. 1). Pittsburgh, PA: Council on Social Work Education.

Comish, R., Swindle, B., & Daboval, J. (1994). Managing stress in the workplace. *National Public Accountant, 39*(9), 24-39.

117

Crago, D. A. (1995). The use of stress inoculation training with a military population (locus of control) (Doctoral dissertation, California School of Professional Psychology, 1995). *Dissertation Abstracts International, 56*(04), 2319B.

Darkenwald, G. G. (1980). Field research and grounded theory. In H. Long (Ed.), *Changing approaches to shaping adult education* (pp. 63-77). San Francisco: Jossey-Bass.

Darkenwald, G. G. & Merriam, S. B. (1982). *Adult education: Foundations of practice.* New York: Harper & Row.

Digliani, J.A. (1994). Stress inoculation training: the police (Doctoral dissertation, Colorado State University, 1995). *Dissertation Abstracts International, 56*(04), 2363B.

Department of the Army. (1988). *Training the force* (Field Manual 25-100). Washington, DC: Staff.

Department of the Army. (1991). *Soldier performance in continuous operations* (Field Manual 22-9). Washington, DC: Staff.

Department of Defense. (1996). *Defense '96.* Washington, DC: Staff.

Department of Defense. (1986). *DOD Directive 1010.10, Health Promotion.* Washington, DC: Staff.

Dunham, J. (1984). *Stress in teaching.* New York: Nichols.

Flanagan, J. C. (1954, July). The critical incident technique. *Psychological Bulletin, 51,* 164-175.

Friedman, M., & Rosenman, R. H. (1974). *Type A behavior and your heart.* New York: Knopf.

Fritz, R. (1994, May). How to de-stress yourself. *Supervisory Management,* pp. 10-12.

Gardner, J. W. (1995). *Self-renewal: The individual and the innovative society.* New York: W. W. Norton & Co.

Girdano, D. A., Everly, G. S., Jr., & Dusek, D. (1997). *Controlling stress and tension* (5th ed.). Boston: Allyn & Bacon.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* New York: Aldine.

Holmes, T. H., & Rahe, R. H. (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research, 11*, 213-218.

Isaac, S. (1971). *Handbook in research and evaluation for education and the behavioral sciences.* San Diego, CA: Edits.

Ingraham, L. H. (1978). *The boys in the barracks.* Washington, DC: Walter Reed Institute of Research.

Jung, C. G. (1971). Psychological types. In J. Campbell (Ed.), *The portable Jung* (pp. 178-269). New York: Viking Press.

Karmel, L. J., & Karmel, M. O. (1978). *Measurement and evaluation in the schools* (2nd ed.). New York: Macmillan.

Kelly, J. M. (1977, February). Get a grip on stress. *HRMagazine,* pp. 51-54.

Kerlinger, F. N. (1973). *Foundations of behavioral science research* (2nd ed.). New York: Holt, Rinehart & Winston.

Kidd, J.R. (1973). *How adults learn.* Chicago: Follett.

Knowles, M. S. (1980). *The modern practice of adult education.* Chicago: Follett.

Knox, A.B. (1978). *Adult development and learning.* San Francisco: Jossey-Bass.

Kohl, F. E., & Carter, G. L., Jr. (1972). *A critical incident study of the professional adult educator (extension agriculture agent).* Unpublished paper, University of Wisconsin.

Kolb, D. (1981). Learning styles and disciplinary differences. In A. Chickering (Ed.), *The modern American college: Responding to the new realities of diverse students and a changing society* (pp. 232-255). San Francisco: Jossey-Bass.

Labovitz, S., & Hagedorn, R. (1976). *Introduction to social research.* New York: McGraw-Hill.

Lewin, K. (1951). *Field theory in social science.* New York: Harper & Row.

Lindeman, E. (1961). *The meaning of adult education.* Montreal: Harvest House.

Lippitt, G. (1982). *Organizational renewal: A holistic approach to OD.* Englewood Cliffs, NJ: Prentice Hall.

Lyon, L. A. (1976). A comparative analysis of aerobic conditioning, resistance training and a structured stress management program in the attenuation of the adult psychophysiological response to cognitive stress (Doctoral dissertation, University of Maryland, 1976). *Dissertation Abstracts International, 57*(03), 2209B.

Manuso, J. S. J. (1984). Stress. In M. P. O'Donnell & T. H. Ainsworth (Eds.), *Health promotion in the workplace* (pp. 362-390). New York: John Wiley & Sons.

Maslow, A. (1968). *Toward a psychology of being.* Princeton, NJ: Van Nostrand.

McCarthy, M. (1988, April 7). Stressed employees look for relief in worker's compensation claims. *Wall Street Journal*, p. 34.

Mezirow, J. (1978a). Perspective transformation. *Adult Education, 28*(2), 100-110.

Mezirow, J. (1978b). The transformation process. In *Education for perspective transformation: Women's reentry programs in community colleges* (pp. 11-17). New York: Center for Adult Education, Teachers College, Columbia University.

Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education, 32*(1), 3-24.

Mullins, C. H. (1995). The effects of three stress reduction strategies on anxiety and self-esteem (Doctoral dissertation, University of Arkansas, 1995). *Dissertation Abstracts International, 55*(08), 2287A.

Nadler, L. (1982). *Designing training programs: The critical events model.* Reading, MA: Addison-Wesley.

Nadler, L., & Nadler, Z. (1991). *Developing human resources* (3rd ed.). San Francisco: Jossey-Bass.

National Council on Compensation Insurance. (1991). *Issues report 1991.* Boca Raton, FL: Staff.

Northwestern National Life. (1991). *Survey of working Americans on workplace stress.* Minneapolis, MN: Staff.

Oaklief, C. R. (1976). *The critical incident technique: Research applications in the administration of adult and continuing education.* Paper presented at the Adult Education Research Conference, Toronto, Canada.

O'Toole, J. (1981). *Many dimensional man: Decentralizing self, society and the sacred.* New York: Harper/Colophon Books.

Patton, M. Q. (1980). *Qualitative evaluation methods*. Beverly Hills CA: Sage.

Pelletier, K., & Lutz, R. (1988). Healthy people, healthy business. *American Journal of Health Promotion, 2,* 5-12, 19.

Pestonjee, D. M. (1992). *Stress and coping: The Indian experience*. New Delhi: Sage.

Peters, T., & Waterman, R., Jr. (1982). *In search of excellence*. New York: Harper & Row.

Pool, J. I. (1996). Cognitive restructuring and meditation training as stress management intervention in postcardiac adjustment (Doctoral dissertation, Lehigh University, 1996). *Dissertation Abstracts International, 56*(10), 5779B.

Powell, T. J., & Enright, S. J. (1990). *Anxiety and stress management*. London: Routledge.

Prince, H. T. (1981). Individual stress and adjustment. In The Associates, Department of Behavioral Sciences and Leadership, *Leadership in organizations* (pp. 101-126). Garden City Park, NY: Avery.

Quick, J. C., Bhagat, R. S., Dalton, J. E., & Quick, J. D. (1987). *Stress: Health care systems in the workplace*. New York: Praeger.

Ramsay, R. F., Tanney, B. L., Tierney, R. J., & Lang, W. A. (1996). *Suicide intervention workshop*. Calgary: Living Works Education.

Schell, B. H. (1997). *A self-diagnostic approach to understanding organizational and personal stressors: The C-O-P-E model for stress reduction*. Westport, CT: Quorum Books.

Schlossberg, N. (1981). A model for analyzing human adaptation to transition. *The Counseling Psychologist, 9*(2), 2-18.

Selye, H. (1974). *Stress without distress*. Philadelphia: J. B. Lippincott.

Senge, P. (1994). *The fifth discipline: The art and science of the learning organization*. New York: Doubleday.

Shay, J. (1994). *Achilles in Vietnam: Combat trauma and the undoing of character*. New York: Simon & Schuster.

Smith, R. M. (1982). *Learning how to learn*. Chicago: Follett.

The soldiers almanac. (1997). *Soldiers Magazine: The Official U.S. Army Magazine,* *52*(1). Washington, DC: Headquarters, U.S. Army.

Stone, F. (1995, November). Change overload: Trying to do too much with too little. *Supervisory Management,* p. 1.

Swafford, C. W. (1993). The presence of anxiety in first-year associate degree nursing students and the effectiveness of a stress management program (Doctoral dissertation, University of Tennessee, 1993). *Dissertation Abstracts International,* 53(07), 3404B.

Toffler, A. (1980). *The third wave.* New York: Bantam Books/William Morrow.

Toffler, A. (1970). *Future shock.* New York: Random House.

Tracy, L. (1994). *Leading the living organization: Growth strategies for management.* Westport, CT: Quorum Books.

Trist, E. (1970). Between cultures: The current crisis in transition. In W. Schmidt (Ed.), *Organizational frontiers and human values* (pp. 27-45). Belmont, CA: Wadsworth.

Vroom V. H., & Yetton, P. W. (1978). *Leadership and decision making.* Pittsburgh: University of Pittsburgh Press.

Wagner, R. H., Jr. (1995). Identifying curriculum components for baccalaureate leadership training programs (Doctoral dissertation, Texas A&M University, 1995). *Dissertation Abstracts International,* 55(10), 3084A.

Washburn, S. S. (1996). Stress management training: Massed versus distributed practice for child care workers (Master's thesis, University of the Pacific, 1996). *Masters Abstracts International,* 34(01), 413.

Weybrew, B. B. (1992). *The ABC's of stress: A submarine psychologist's perspective.* Westport, CT: Praeger.

APPENDIX A

STRESS-AND-PERFORMANCE-FOR-LEADERS

WORKSHOP: LESSON OUTLINE

123

PROGRAM TITLE: Stress & Performance for Leaders

LESSON: 1. Develop and apply control of stress strategies

Objectives of this lesson:

Terminal:
Given a Stress & Performance Worksheet, a Stress Response Worksheet, a Stress Strategy Worksheet, a pencil or pen; develop and apply control of stress strategies so that Stress & Performance Worksheet is completed, Stress Response Worksheet is completed, Stress Strategy Worksheet is completed, the selected strategy addresses demand, capability and response; and dysfunctional stress is removed to enhance performance.

Enabling:
Define stress operationally
Describe the relationship of stress and performance
Describe sources of stress
Identify constructive and destructive responses to stress
Describe strategies to manage stress in terms of demand, capability and response
Commit to using the Control of Stress methodology
Advocate using the Control of Stress methodology with subordinates

SUMMARY OF MATERIALS

Overhead Transparencies: Lesson Cover Slide, The Army Imperatives, Far Side Cartoon, Coping Mechanisms, Performance Under Stress, Stress Curve, Functional and Dysfunctional Stress, Stress & Performance Worksheet, Demand-Capability-Response Model, Stress Response Worksheet, Demand Related Strategies, Capability Related Strategies, Response Related Strategies, Stress Strategy Worksheet

Handouts: For each learner: Stress & Performance Worksheet, Stress Response Worksheet, Stress Strategy Worksheet, pencil or pen

Other: Butcher paper and easel, smelly pens, overhead pens, overhead projector

TIME	MAJOR TOPICS	ACTIVITIES	SUPPORTING MATERIALS
5	Introduction	Lecture-discussion on the importance of using strategies to help manage stress	OH:Army Imperatives, Far Side Cartoon, Coping Mechanisms
10	Stress and Performance	Guided discussion on the nature of the relationship between stress and performance	OH: Performance & Stress Curve, Stress & Performance, Functional/Dysfunctional Stress
15	Sources of Stress	Structured exercise in which learners identify various stress	Stress & Performance Worksheets, Pen/ Pencil
		levels in their lives over the past year	OH: Stress & Performance Worksheet
15	Stress Defined Model	Lecture-discussion on the medical definition of stress and a more useful "operational" definition of stress	OH: Demand, Capabil- ity and Response
15	Responses to Stress	Guided discussion in which learners identify constructive and destructive responses to stress	Butcher Paper, Smelly Pens; OH: Stress Response Worksheet
25	Engineering Demand, Capability and Response	Guided discussion in which learners describe strategies to manage stress in terms of demand, capability and response strategies	Butcher Paper, Markers, OH: Demand Strategies, Capability Strategies, Response Strategies
30	Skill Lab	Using their own stress identified in Sources of Stress activity, learners develop strategies to control their future stress	Completed Sources of Stress Worksheet (Indiv- idual), Stress Strategy Worksheet OH: Stress Strategy Worksheet
5	Summary	Guided discussion in which learners develop a list of ways they can use the Control of Stress methodology at the individual, interpersonal and organizational levels	OH: Stress Strategy Worksheet

2:00 hr.

OH = Overhead Transparency

APPENDIX B

STRESS-AND-PERFORMANCE-FOR-LEADERS

WORKSHOP: INSTRUCTOR'S GUIDE

126

Stress & Performance
for Leaders

Training Program

INSTRUCTOR'S GUIDE

© bruce murphy, 1996

CONTENTS

◻ Overhead Transparencies

1. Lesson Cover Slide
2. The Army Imperatives
3. (Omitted)
4. Coping Mechanisms
5. Performance Under Stress
6. Stress Curve
7. Good Stress & Bad Stress
8. Stress & Performance Worksheet
9. Stress Model (Demand-Capability-Response)
10. Stress Response Worksheet
11. Demand Related Strategies
12. Capability Related Strategies
13. Response Related Strategies
14. Stress Strategy Worksheet
15. Action Plan Worksheet

Handouts

1. Stress & Performance Worksheet
2. Stress Response Worksheet
3. Stress Strategy Worksheet
4. Action Plan Worksheet

Other Materials & Equipment

- Overhead projector and screen
- Transparency marker pens
- Flip chart or chalkboard
- Flip Chart marker pens or chalk
- Pencil or pen for each participant
- Name tag for each participant (optional)

Workshop Goal & Objectives

Workshop Goal: Leaders of U.S. Army organizations who can develop and apply control of stress strategies

Objectives: At the conclusion of the workshop, participants will be able to:

- Develop and apply control of stress strategies so that dysfunctional stress is reduced to enhance performance in themselves and their subordinates. The selected strategies will address demand, capability, and response;

- Define stress operationally;

- Describe the relationship between stress and performance;

- Describe sources of stress;

- Identify constructive and destructive responses to stress;

- Describe strategies to manage stress in terms of demand, capability, and response;

- Commit to using the Control of Stress methodology; and,

- Advocate using the control of stress methodology with subordinates.

Flow of the Workshop
(Story Board)

Introduction

Stress & Performance Model
- Stress & Performance Model
- Nature of Stress
- Good Stress vs. Bad Stress
- Sources of Stress

------------------ REFRESHMENT BREAK ------------------

Stress & Performance Model (continued)
- Defining Stress
- Responses to Stress
- Engineering Stress

Developing Personal Strategies
- Integration of the Stress Model
- Completing the Stress Strategy Worksheet
- Debriefing the Stress Strategy Worksheet
- Completing the Action Plan Worksheet

------------------ LUNCH BREAK ------------------

Special Cases of Stress (as requested)
- Combat Stress/Psychiatric Battle Casualties
- Suicide
- Family Stress of Deployment
- Control of Organizational Stress

I. INTRODUCTION MODULE
Standard Procedures

Shortcut Chart: Introduction Module

Time Required: 15 minutes
Format: large group

Timing	Activities
	large group, conference style
(15 min.)	1.1 Registration
5 min.	1.2 Introduction of Trainer and Background of the Workshop
10 min.	1.3 Introduction of the format of, and expectations for, the workshop

Materials and Equipment Required

Registration sheet

Name tags

Overhead projector, screen, and transparency marker pens
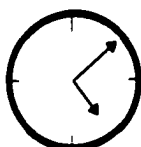

1.1 Registration

(15 min.)

1) A sign-in sheet should be placed near the entrance to the training room as many organizations will want accountability for the participants. Name tags (first name only) will be helpful in calling on participants by name. Arrange the room in conference style (horse-shoe) focusing on the overhead projector and the film screen.

2) Participants should have writing implements with them, but in case some don't, be ready to provide pencils.

3) Prepare for the formal opening of the workshop. Show transparency #1, "Title Slide."

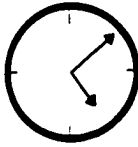## 1.2 Introduction of Trainer and Background of the Workshop

(5 min.)

1) If an organizer is present, he/she should introduce the trainer. Introductions should be brief. Mention the trainer's current position, and his/her experience and interest in the field of stress management.

2) Present information on the development of the workshop. Indicate that the workshop was originally developed in Germany during Operation Desert Storm to prepare soldiers for the stress of combat, and prepare their families for the stress of deployment separation.

3) Show transparency #2, "Army Imperatives" and make linkage to "competent confident leaders, maintaining a quality force, and tough, realistic training."

1.3 Introduction of the format of, and expectations for, the workshop

(10 min.)

4

1) Briefly outline the flow of the workshop. Tell participants that we will spend most of the time practicing skills that will help them and their subordinates control stress back on the job and in their lives.

2) Show transparency #4, "Coping Mechanisms." Begin to make the transition to the notion that we have some ability to control our reactions to stressful situations. Suggest that with successful coping strategies, a stressful event can strengthen us rather than weaken us. Conclude this section by relating this concept to the participants' personal experience.

We have all been in situations that were terribly stressful. We would rather never, ever, want to go through them again. But looking back we say, "I learned something from that ... I grew ... We came together as a family or as a team." If we can develop strategies to cope with the inevitable stress in our lives then we can ensure that stress serves to strengthen rather than weaken us.

II. STRESS & PERFORMANCE MODULE
Standard Procedures

Shortcut Chart: Stress & Performance Module

Time Required: 2 ¼ hours
Format: large group

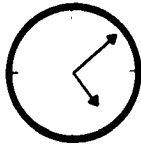| Timing		Activities
		large group, conference style
5 min.	2.1	Introduction to the nature of Stress
20 min.	2.2	Stress and Performance
20 min.	2.3	Good Stress vs. Bad Stress
20 min.	2.4	Sources of Stress
	15 min, refreshment break	
10 min.	2.5	Defining Stress
30 min.	2.6	Responses to Stress
30 min.	2.7	Engineering Stress

Materials and Equipment Required

Overhead projector, screen, and transparency marker
    pens
Chalkboard and/or flip chart (preferably both)
Chalk and/or flip chart marker pens
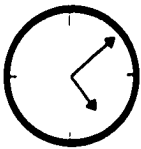

2.1 Introduction to the nature of Stress

(5 min.)

5

1) Link the individual nature of stress to scientific research about stress. Tell participants that although people are different, they generally respond to stress in characteristic ways.

2) Show transparency #5, "Performance Under Stress" (Selye's General Adaptation Syndrome, modified). Talk through the chart addressing the normal impact on performance during the three stages of adaptation to stress (Alarm, Resistance, and Exhaustion).

2.2 Stress and Performance
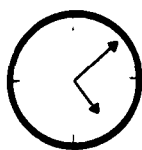
(20 min.)

6

1) Show transparency #6, "Stress Curve." Briefly orient particpants on the chart. Ask the question, "Where would you want to be on the stress curve?" With some groups, better results can be achieved by asking, "Where would you want your subordinates to be on the stress curve?"

2) Give participants a few moments to look at the chart and think about their answer. Then ask, "How many would like to be at *Point D*?" *Point D* is the least desirable point on the curve so ask the question, "What's wrong with *Point D*?" Comment on responses and solicit others.

3) Let participants discuss each of the points along the stress curve in the order *D, A, C, B*. Use the information on Shortcut Chart: Stress Curve.
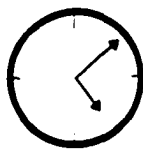
2.3 Good Stress vs. Bad Stress

(5 min.)

7

1) Acknowledge that all participants have probably heard of "good stress" and "bad" stress. Lay transparency #7, "Good Stress vs. Bad Stress," on top of transparency #6, carefully aligning the axes. After a few seconds, slowly remove transparency #6 from underneath. This can be done with a flair while referencing "high-tech learning materials."

2) Transition to strategies by asking the rhetorical question, "Now, if we want to control stress, doesn't it make sense to find out where we are on this curve and do things to be on the "good stress" side?"

Shortcut Chart: Stress Curve

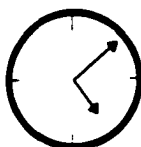| POINT	WHAT'S GOOD ABOUT IT	WHAT'S BAD ABOUT IT
Point D		Too much stress (burnout); Low Performance
Point A	Low Stress	Low Performance
Point C	High Performance	Moderately High Stress; Dangerously close to the "brink" (Exhaustion Phase); No extra performance for increase in stress
Point C	High Performance; Provides buffer for unanticipated stress; Optimizes stress/performance leverage	

2.4 Sources of Stress

(20 min.)

8

1) Distribute handout #1, "Stress & Performance Worksheet," to all participants. Put participants at ease by saying, "You don't have to put your name on this sheet, we're not going to collect them" At the same time show transparency #8, "Stress & Performance Worksheet."

2) Have participants complete blocks A,B, C, and D on handout #1 by talking them through each block. Give participants enough time to fill out each block, but don't let it drag out too long. Emphasize that their first reactions are best and that they need not write in complete sentences— this work-sheet is for their own reference only.

I'd like you to fill out Block A by putting in (today's day and month and last year). [Some participants will try to correct you on the year] That's right, one year ago today. Now place the letter "A" on the curve to indicate how much stress you had one year ago. Try to remember what was going on and what you were doing. (pause) Now go to Block B Least Stress. Think of the time in the past year when you have had the least amount of stress and put in Block B. Jot down a few words to remind you why that was the least stressful time. What was going on? Put a letter "B" on the curve to indicate how much stress you had at this least stressful time. (pause) Now go to Block C, Most Stress. Think of the time in the past year when you have had most amount of stress and put it in Block C. Jot down a few words to remind you why that was the most stressful time. What was going on? Put a letter "C" on the curve to indicate how much stress you had at this most stressful time. (pause) Finally, go to Block D Future Stress. Think of some event coming up that may be causing you some anxiety. Put it in Block D. Jot

down a few words to describe to describe why that is going to be a stressful time, Put a letter "D" on the curve to indicate how much stress you think you will have at this future stressful time. (pause)

15 min, refreshment break

2.5 Defining Stress

(10 min.)

1) Point out to participants that although we've been talking about stress for a while, we haven't yet defined the term "stress," and we will correct that now.

2) Tell participants that the medical definition of stress is "the non-specific response to a specific stimulus." (pause) Ask if this is a very useful definition of stress. Suggest that this kind of frustration has led us to a more useful, operational definition.

9

3) Introduce the stress Model by showing a covered up transparency #9, talking through each of the key points (*bold italics* below). As each key point is mentioned, move the cover to reveal that part of the model.

We all have *demands* things that we think we have to do. These come from our jobs, our families, kids, just living in society, and so forth. Most of these come from ourselves. Fortunately, we also have *capabilities* the ability to meet these demands. Our capabilities come from our education and training, reading, life experience, talking to others, and many other sources. Now, if these two are equal—for every demand you have exactly the right capability—no less, no more—then there is no stress! [Hold hands out in front of you as if balancing scales]. But that rarely happens.

> Usually, one or the other is greater, in a state of *imbalance.* It is that imbalance that creates the feeling inside us called *stress.* You can tell the amount of imbalance by the amount of stress you feel. You know that's true, look at your responses on the first handout. When we get that stress reaction activated, we want to get rid of it or have a response to it. These can be in the form of thoughts, actions, or physical responses.

4) Conclude this discussion by stating that is our responses to stress that cause most of the problems usually associated with stress.

2.6 Responses to Stress

(30 min.)

1) Distribute handout #2, "Stress Response Worksheet," to all participants. Put participants at ease by saying, "The are all common responses to stress and again, you don't have to put your name on this sheet." At the same time show transparency #10, Stress Response Worksheet."

2) Ask participants to look back at completed handout #1, Block C, "Most Stress." Have them try to remember what was going on during that time. Tell them to check off on handout #2 all of the responses they had during that most stressful time. Add that if they had any responses that aren't on the list to add them in the blank spaces provided. Give participants time to complete handout #2.

3) Once all participants are finished, check to make sure everyone has entered something on the checklist. Then say "Who would like to win $20?" Many hands should go up. Then ask, "Who would like to bet that there are two sheets here that have been filled out exactly the same?" Few, if any, hands will rise. Then say, "Okay, I'll make it easier. Who would like to bet that there is one item that has been checked on every sheet?"

Usually, there will be some takers. Ask individuals to tell the group which item they think it is. Repeat the response and check how many participants did not have that on their checklist. Ask the group why they think the bet could not be won. If they are having trouble, summarize with, "I said that these were all common responses to stress, but stress responses are very individual. You cannot predict the response to stress even if you know what the stressor is." [This exercise can be risky for the trainer and is related to group size. In a very large group there is a higher probability of two matching sheets, while in a very small group there is a higher probability of a common single response.]

4) Ask participants why it is important for leaders to understand the nature of the responses to stress. They should conclude that although the leader's responses to stress may be under control, they must observe their subordinates' responses for warning signs.

5) Complete the discussion of responses to stress by giving three caveats which are especially important for leaders. Under any of the following conditions, common responses to stress indicate a need for higher level care: (1) *Quantity* - most people will check 3 or 4 items in each column. If someone checks nearly every item, there is cause for concern; (2) *Intensity* - an unusually strong response. For example, dreams are a normal response, but if the individual is having nightmares every night to the point where he/she can't get any sleep, this is not normal; (3) Duration - any of these responses or a combination of responses persists for a long time (a month or longer after the stressful event).
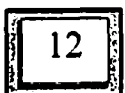
2.7 Engineering Stress

(30 min.)

9

1) Show transparency #9, "Stress Model," again. Ask participants how many of them have participated in any sort of "stress management" training before. Then ask what portion of this model their prior training focused on. They will reply the "response' portion.

2) Acknowledge the appropriateness of dealing with responses and assure participants that we will cover that in a few minutes. Invite participants to look at stress management in a different way. "Doesn't it make sense that if we can bring demand more in line with capability or bring capability more in line with demand, we'll have less of an imbalance and a lower level of stress to respond to?" Once an affirmative is generally acknowledged, proceed to discuss strategies to engineer stress.

3) Ask the question, "How can we alter our perception of demand?" If proper responses are forthcoming, record them on the flip chart. If not, go to the flip chart and draw a big blob. Then ask, "If this is the big blob of demand—all of the things that you think you have to do—what are some of the ways you can change its shape?" Use "Shortcut Chart: Altering Demand" to guide participants' discussion. After participants have discussed ways to alter demand, summarize by showing transparency #11, "Demand Related Strategies."

11

4) Next ask the question, "How can we alter our perception of capability?" If proper responses are forthcoming, record them on the flip chart. If not, ask, "If somebody doesn't know how to do something, how do you make sure they can?" Continue to stimulate discussion by focusing on the leadership dynamic in their organizations (e.g., motivation). After participants have dis-

12

cussed ways to alter capability, summarize by showing transparency #12, "Capability Related Strategies."

5) Finally, commence the discussion of response strategies by asking how the participants respond to stress and record answers on the flip chart. After participants have discussed ways to deal with stress response, summarize by showing transparency #13, "Response Related Strategies."

6) Summarize the Stress and Performance Module and ask the rhetorical question, "How can we integrate the three kinds of strategies for controlling stress?"

13

Shortcut Chart: Altering Demand

DEMAND

CLARIFY

1

3

PRIORITIZE

2

ALLOCATE

3

4

1

6

mine   yours

RESOURCES

3

SET LIMITS

5

2

4

III. CONTROL OF STRESS INTEGRATION MODULE
Standard Procedures

Shortcut Chart: Stress & Performance Module

Time Required: 1 hour

Format: large group

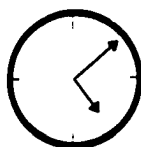| Timing		Activities
		large group, conference style
10 min.	3.1	Integration of the Stress Model
15 min.	3.2	Completing the Stress Strategy Worksheet
20 min.	3.3	Debriefing the Stress Strategy Worksheet
15 min.	3.4	Completing the Action Plan Worksheet

Materials and Equipment Required

Overhead projector, screen, and transparency marker pens

Chalkboard and/or flip chart (preferably both)

Chalk and/or flip chart marker pens

3.1 Integration of the Stress Model

(10 min.)

14

1) Distribute handout #3, "Stress Strategy Work-sheet," to all participants. Put participants at ease by saying, "Again, you don't have to put your name on this sheet." At the same time show transparency #14, Stress Strategy Worksheet."

2) Point out that this worksheet integrates the Stress Model and all of the strategies that we've already discussed.

3) Ask participants to look back at handout #1, "Stress & Performance Worksheet," and find *Point D, Future Stress*. Have participants transfer their description of point D from handout #1 to the top of handout #3. This becomes the stressor which they will now attempt to manage.

4) Very briefly, walk participants through the worksheet to show how they can identify categories and specific strategies for controlling stress. Emphasize that once they check a block for a category they should be very specific about the strategy. For example, if they check "Training," they should indicate exactly which course will help to enhance their capability in the "Specifics" section of handout #3.

3.2 Completing the Stress Strategy Worksheet

(15 min.)

14

1) Give participants plenty of time to complete this worksheet—IT IS THE MOST IMPORTANT PART OF THE WORKSHOP! Leave transparency #14 on the screen. The instructions may have to be repeated several times to ensure clarity.

2) As participants are completing their worksheets, walk around the room and see if anyone is having difficulty. Offer suggestions, help participants to clarify exactly what the stress is and what options they have for dealing with it.

3.3 Debriefing the Stress Strategy Worksheet

(20 min.)

14

1) After participants have completed handout #3, ask if someone would like to volunteer their *Point D* so that the class can work through an example. If there is a volunteer. Let them give the *Point D* (future stressful event) but let others in the group offer potential strategies. Record responses on transparency #14. If nobody volunteer a *Point D*, stimulate discussion by saying, "Who has a Point D that they think is too tough or doesn't apply to this model?" [This can be risky for the trainer and requires skill at thinking on one's feet] If nobody still volunteers, use an example you observed while walking around. [Do not identify the originator since the group is expressing a low degree of trust already]

2) Conclude this portion by commenting on how many possible strategies were developed. It is not likely that every one will work but there are a lot more chances for success than if the person had just "let stress happen." They have developed a "constellation of strategies" that will ensure successful coping mechanisms are in place.

3.4 Completing the Action Plan Worksheet

(15 min.)

15

1) Distribute handout #4, "Action Plan Worksheet," to all participants. At the same time show transparency #15, Stress Response Worksheet."

2) Have participants review handout #3 and identify which identified strategy looks like it has the highest probability of success. Have participants label that strategy #1. Then have them identify which one has the next best chance and label that #2. Have participants continue doing this until participants have prioritized all of their strategies.

3) Next, have participants transfer the strategies from handout #3 to handout #4 in order of priority. For each strategy, have participants identify the objective of that strategy. For example, "*Complete the Bradley Master Gunner Course*," in order to "*increase my capability to lead a mechanized infantry platoon.*"

4) Finally, have participants indicate a deadline or "suspense" date for completion of the action. Emphasize that the suspense should be realistic enough to be accomplished but soon enough to have immediate impact.

5) Close this portion of the workshop by calling for questions about anything that has transpired during the session. If additional modules are scheduled (e.g., Combat Stress, Suicide, family Stress of Deployment, or Control of Organizational Stress) briefly create a transition and preview of the module. Thank participants for their cooperation and end with a strong closing statement about their ability to control stress in their lives and in the lives of their fellow soldiers.

Stress & Performance for Leaders

716th Military Police Battalion
Fort Campbell, Kentucky

Transparency # 1

The Army Imperatives

- Balanced Force Mix
- Correct Doctrine
- Quality Force
- Competent, Confident Leaders
- Future Modernization
- Tough, Realistic Training

© bruce murphy, 1996

This Slide Omitted

Transparency # 3

Coping Mechanisms

Individual Strengthened

Individual Weakened

Stress

Successful Coping	REACTION	Unsuccessful Coping
Growth, happiness, security, strength, and greater interpersonal bonding	⬌	Anger, procrastination, withdrawal, cynicism, and low tolerance for innerconflict

© bruce murphy, 1996

Stress and Performance

Performance

High

RESISTANCE

ALARM

EXHAUSTION

Low

T-1   T-2   T-3   T-4

Time

© bruce murphy, 1996

Transparency # 5

Where do YOU want to be on the Stress Curve?

Performance

High

B

C

A

D

Amount of
Stress

Low

High

© bruce murphy, 1996

"Good" Stress vs. "Bad" Stress

FUNCTIONAL
(Motivating)

DYSFUNCTIONAL
(Threatening)

Performance

High

Low

Amount of
Stress

High

© bruce murphy, 1996

Transparency # 7

155

CAPABILITY

DEMAND

IMBALANCE

STRESS

RESPONSE

PHYSICAL

ACTIONS

THOUGHTS

© bruce murphy, 1996

Transparency # 9

```
┌─────────────┐                            ┌─────────────┐
│   DEMAND    │ ──────►  IMBALANCE  ◄────── │  CAPABILITY │
└─────────────┘                            └─────────────┘

                         STRESS
                            │
                            ▼
                   ┌─────────────────┐
                   │    RESPONSE     │
                   └─────────────────┘
```

THOUGHTS

[] Feel Invincible
[] Fear
[] Irritability
[] Restlessness
[] Over Excited
[] Grief
[] Sadness
[] Depression
[] Moodiness
[] Guilt
[] Apathy
[] Isolation
[] Feeling Alone
[] Dreams
[] Sleep Difficulty
[]

ACTIONS

[] Hyperactivity
[] Crying Spells
[] Can't Rest or Relax
[] Outbursts of Anger
[] Frequent Arguments
[] Less Efficient
[] Poor Communications
   (Written or Verbal)
[] Increased Use of Alcohol,
   Tobacco, or other Drugs
[] Withdrawal (Limit Contact
   with Others)
[]
[]
[]

PHYSICAL

[] Headaches
[] Fatigue
[] Appetite Change
[] Muscle Soreness
[] Startle Reflex
[] Nausea
[] Diarrhea
[] Lower Back Pain
[] Poor Judgment
[] Confusion
[] Loss of Objectivity
[] Difficulty Solving
   Problems
[]
[]

© bruce murphy, 1996

159

© bruce murphy, 1996

Demand Related Strategies

- Clarify
- Prioritize
- Allocate
- Resources
- Set Limits

Transparency # 11

Capability Related Strategies

- Training
- Coaching
- Resources
- Health
- Inoculation

Transparency # 12

Response Related Strategies

- **Constructive vs. Destructive**
- **Support Group (talk it out)**
- **Time Out/Refocus**
- **Behavior Modification**
- **Relaxation**

Transparency # 13

© bruce murphy, 1996

DEMAND

FUTURE STRESS: _____

CAPABILITY

☐ Clarify
☐ Prioritize
☐ Allocate
☐ Resources
☐ Set Limits

STRESS

RESPONSE

☐ Constructive vs Destructive
☐ Support Group (Talk it Out)
☐ Relaxation
☐ Time Out/Refocus
☐ Behavior Modification

☐ Training
☐ Coaching
☐ Resources
☐ Health
☐ Inoculation

Specifics

Specifics

Specifics

© bruce murphy, 1996

163

Action Plan

Future Stressful Event or Situation (Point D): (When) _____

(Describe): _____

Action	Objective	Suspense
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

© bruce murphy, 1996

Transparency # 15/Handout #4

APPENDIX C

MEASUREMENT OF STRESS INSTRUMENT

(PRE- AND POSTTEST)

164

(Adapted from Girdano, Everly, and Dusek, 1997)

SELF-ASSESSMENT EXERCISE 1

A list of events follows. Check each event that has happened to you <u>during the last twelve months</u>.

	Life Event	*Point Value*
_____	Death of spouse	100
_____	Divorce	73
_____	Marital separation	65
_____	Jail term	63
_____	Death of a close family member	63
_____	Personal injury or illness	53
_____	Marriage	50
_____	Fired from work	47
_____	Marital reconciliation	45
_____	Retirement	45
_____	Change in family member's health	44
_____	Pregnancy	40
_____	Sex difficulties	39
_____	Addition to family	39
_____	Business readjustment	39
_____	Change in financial status	38
_____	Death of a close friend	37
_____	Change to different line of work	36
_____	Change in number of marital arguments	35
_____	Mortgage or loan payment over 25% of salary	31
_____	Foreclosure of mortgage or loan	30
_____	Change in work responsibilities	29
_____	Son or daughter leaving home	29
_____	Trouble with in-laws	29

_____	Outstanding personal achievement	28
_____	Spouse begins or stops work	26
_____	Starting or finishing school	26
_____	Change in living conditions	25
_____	Revision of personal habits	24
_____	Trouble with boss	23
_____	Change in work hours, conditions	20
_____	Change in residence	20
_____	Change in recreational habits	19
_____	Change in church activities	19
_____	Change in social activities	18
_____	Mortgage or loan payment under 25% of salary	17
_____	Change in sleeping habits	16
_____	Change in number of family gatherings	15
_____	Change in eating habits	15
_____	Vacation	13
_____	Christmas season	12
_____	Minor violations of the law	11

Score: _____

SELF-ASSESSMENT EXERCISE 2

Choose the most appropriate answer for each of the following ten statements and write the letter of your response to the left of the question.

How often do you...

1. _____ Feel stifled or held back in your personal or professional life?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

2. _____ Feel a need for greater accomplishment?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

3. _____ Feel as though your life needs guidance or direction?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

4. _____ Notice yourself getting impatient?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

5. _____ Find yourself feeling you are in a "rut"?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

6. _____ Find yourself disillusioned?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

7. ____ Find yourself frustrated?
  a) almost always
  b) often
  c) seldom
  d) almost never

8. ____ Find yourself disappointed?
  a) almost always
  b) often
  c) seldom
  d) almost never

9. ____ Find yourself feeling inferior?
  a) almost always
  b) often
  c) seldom
  d) almost never

10. ____ Find yourself upset because things haven't gone according to plan?
  a) almost always
  b) often
  c) seldom
  d) almost never

SELF-ASSESSMENT EXERCISE 3

Choose the most appropriate answer for each of the following ten statements and write the letter of your response to the left of the question.

How often do you...

1. _____ Find yourself with insufficient time to do the things you really enjoy?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

2. _____ Wish you had more support/assistance?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

3. _____ Lack sufficient time to complete your work most effectively?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

4. _____ Have difficulty falling asleep because you have too much on your mind?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

5. _____ Feel people simply expect too much from you?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

6. _____ Feel "overwhelmed"?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

7. ____ Find yourself becoming forgetful or indecisive because you have too much on your mind?
   a) almost always
   b) often
   c) seldom
   d) almost never

8. ____ Consider yourself to be in a high pressure situation?
   a) almost always
   b) often
   c) seldom
   d) almost never

9. ____ Feel you have too much responsibility for one person?
   a) almost always
   b) often
   c) seldom
   d) almost never

10. ____ Feel exhausted at the end of the day?
   a) almost always
   b) often
   c) seldom
   d) almost never

SELF-ASSESSMENT EXERCISE 4

Choose the most appropriate answer for each of the following ten statements and write the letter of your response to the left of the question.

How often do you...

1. _____ Feel that your work is not stimulating enough?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

2. _____ Lose interest in your daily activities?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

3. _____ Find yourself becoming restless during your daily routine?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

4. _____ Have difficulty falling asleep because you have too much on your mind?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

5. _____ Feel "insulted" by the simplicity of your work?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

6. _____ Find yourself becoming anxious from lack of stimulation?
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

7. ____ Find yourself becoming bored?
a) almost always
b) often
c) seldom
d) almost never

8. ____ Feel that your usual activities aren't challenging enough?
a) almost always
b) often
c) seldom
d) almost never

9. ____ Find yourself daydreaming during your work?
a) almost always
b) often
c) seldom
d) almost never

10. ____ Feel lonely?
a) almost always
b) often
c) seldom
d) almost never

SELF-ASSESSMENT EXERCISE 5

Choose the most appropriate answer for each of the following ten statements and write the letter of your response to the left of the question.

1. _____ How many cups of caffeinated coffee do you drink in an average day?
   a)   0 or 1
   b)   2 or 3
   c)   4 or 5
   d)   more than 5

2. _____ How many cigarettes do you smoke in an average day?
   a)   0 to 10
   b)   11 to 20
   c)   21 to 40
   d)   more than 40

3. _____ Do you add salt to your food?
   a)   Yes
   b)   No

4. _____ How many cups of caffeinated tea do you drink in an average day?
   a)   0 or 1
   b)   1 or 2
   c)   3 or 4
   d)   more than 4

5. _____ How many soft drinks do you consume during an average day?
   a)   0 or 1
   b)   1 or 2
   c)   3 or 4
   d)   more than 4

6. _____ How much alcohol (liquor, wine, or beer) do you consume during an average week?
   a)   0 or 7 drinks
   b)   8 to 15 drinks
   c)   15 to 21 drinks
   d)   more than 21 drinks

7. _____ Do you eat a nutritionally balanced diet?
   a) No
   b) Yes

8. _____ All together, how many pastries, pieces of pie, pieces of cake, donuts, or candy bars do you eat in an average day?
   a) 0
   b) 1 or 2
   c) 3 or 4
   d) more than 4

9. _____ Do you eat a well-balanced breakfast most mornings?
   a) No
   b) Yes

10. _____ How many slices of white bread do you eat during an average day?
   a) 0
   b) 1 or 2
   c) 3 or 4
   d) more than 4

SELF-ASSESSMENT EXERCISE 6

Choose the alternative that best summarizes how you generally behave and place your answer in the space provided.

1. _____ When I have a difficult task, I try my best and will usually succeed.
   a) almost always
   b) often
   c) seldom
   d) almost never

2. _____ I am at ease around members of the opposite sex.
   a) almost always
   b) often
   c) seldom
   d) almost never

3. _____ I feel that I have a lot going for me.
   a) almost always
   b) often
   c) seldom
   d) almost never

4. _____ I have a high degree of confidence in my abilities.
   a) almost always
   b) often
   c) seldom
   d) almost never

5. _____ I prefer to be in control of my own life as opposed to having someone else make decisions for me.
   a) almost always
   b) often
   c) seldom
   d) almost never

6. _____ I am comfortable and at ease around my superiors.
   a) almost always
   b) often
   c) seldom
   d) almost never

7. _____ I am often overly self-conscious or shy when among strangers.
- a) almost always
- b) often
- c) seldom
- d) almost never

8. _____ Whenever something goes wrong, I tend to blame myself.
- a) almost always
- b) often
- c) seldom
- d) almost never

9. _____ When I don't succeed, I tend to let it depress me more than it should.
- a) almost always
- b) often
- c) seldom
- d) almost never

10. _____ I often feel that I am beyond help.
- a) almost always
- b) often
- c) seldom
- d) almost never

SELF-ASSESSM

Place your answer to each of the followir
fore each number.

1. ____   I have no patience with tardin
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

2. ____   I hate to wait in lines.
   a)   almost aiways
   b)   often
   c)   seldom
   d)   almost never

3. ____   People tell me that I tend to g
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

4. ____   Whenever possible, I try to ma
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

5. ____   I feel guilty for taking time off f
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

6. ____   People tell me I'm a poor loser
   a)   almost always
   b)   often
   c)   seldom
   d)   almost never

7. ____ I tend to lose my temper or get irritable when I'm under a lot of pressure.
   a) almost always
   b) often
   c) seldom
   d) almost never

8. ____ I tend to race against the clock.
   a) almost always
   b) often
   c) seldom
   d) almost never

9. ____ I hate to wait or depend on others in order to do what I want to do.
   a) almost always
   b) often
   c) seldom
   d) almost never

10. ____ I catch myself rushing when there is no real need to do so.
   a) almost always
   b) often
   c) seldom
   d) almost never

SELF-ASSESSMENT EXERCISE 8

Choose the response that best summarizes how you usually react during anxious moments and place the letter of that response in the space provided.

When I'm anxious I...

1. _____ Tend to imagine all of the worst possible things happening to me as a result of whatever "crisis" made me anxious to begin with.
   a) almost always
   b) often
   c) seldom
   d) almost never

2. _____ Do everything I can to resolve the problem immediately; if I don't I'll go crazy worrying about it later.
   a) almost always
   b) often
   c) seldom
   d) almost never

3. _____ Will relive the crisis over and over again in my mind, even though it may be over and resolved.
   a) almost always
   b) often
   c) seldom
   d) almost never

4. _____ Will be able to clearly picture the crisis in my mind hours or even days after it's over.
   a) almost always
   b) often
   c) seldom
   d) almost never

5. _____ Get the feeling that I'm losing control.
   a) almost always
   b) often
   c) seldom
   d) almost never

6. _____ Feel my stomach sinking, my mouth getting dry, or my heart pounding.
   a) almost always
   b) often
   c) seldom
   d) almost never

7. _____ Tend to make "mountains out of molehills."
   a) almost always
   b) often
   c) seldom
   d) almost never

8. _____ Have trouble falling asleep at night.
   a) almost always
   b) often
   c) seldom
   d) almost never

9. _____ Have difficulty in speaking or notice my hands and fingers trembling.
   a) almost always
   b) often
   c) seldom
   d) almost never

10. _____ Notice my thoughts "racing."
    a) almost always
    b) often
    c) seldom
    d) almost never

SELF-ASSESSMENT EXERCISE 9

Answer each question and place the letter of your response in the space to the left.

1. _____ How often do you feel yourself feeling helpless or hopeless?
   a) almost never
   b) seldom
   c) often
   d) almost always

2. _____ How often do you find yourself in a situation that seems out of your control?
   a) almost never
   b) seldom
   c) often
   d) almost always

3. _____ How often do you find yourself needing to have your life well planned and organized?
   a) almost never
   b) seldom
   c) often
   d) almost always

4. _____ How often do you find yourself feeling sad or depressed?
   a) almost never
   b) seldom
   c) often
   d) almost always

5. _____ How often do you find yourself fearful of losing control over your life?
   a) almost never
   b) seldom
   c) often
   d) almost always

6. _____ How often do you find yourself feeling insecure?
   a) almost never
   b) seldom
   c) often
   d) almost always

7. ____ How often do you find yourself needing to control the people around you?
   a) almost never
   b) seldom
   c) often
   d) almost always

8. ____ How often do you find yourself needing to control your environment?
   a) almost never
   b) seldom
   c) often
   d) almost always

9. ____ How often do you feel the need to have your daily activities highly structured?
   a) almost never
   b) seldom
   c) often
   d) almost always

10. ____ How often do you feel secure?
    a) almost never
    b) seldom
    c) often
    d) almost always

SELF-ASSESSMENT EXERCISE 10

Choose the response that best answers the question and place the corresponding letter in the space provided.

Questions 1-7: During the typical course of your job, how often do you...

1. _____ Face important time deadlines that you have difficulty meeting?
   a) once a day or more
   b) more than once a week but less than once a day
   c) once a week
   d) less than once a week

2. _____ Feel less competent than you think you should?
   a) once a day or more
   b) more than once a week but less than once a day
   c) once a week
   d) less than once a week

3. _____ Wish your work could be less complex?
   a) once a day or more
   b) more than once a week but less than once a day
   c) once a week
   d) less than once a week

4. _____ Feel overwhelmed by your job?
   a) once a day or more
   b) more than once a week but less than once a day
   c) once a week
   d) less than once a week

5. _____ Feel as though you're in the wrong job?
   a) once a day or more
   b) more than once a week but less than once a day
   c) once a week
   d) less than once a week

6. _____ Feel frustrated by "red tape"?
   a) once a day or more
   b) more than once a week but less than once a day
   c) once a week
   d) less than once a week

7. _____ Perceive yourself as lost in bureaucracy?
  a) once a day or more
  b) more than once a week but less than once a day
  c) once a week
  d) less than once a week

8. _____ I feel guilty for taking time off from work.
  a) almost always true
  b) usually true
  c) seldom true
  d) never true

9. _____ I have a tendency to rush into work that needs to be done before knowing the procedure I will use to complete the job.
  a) almost always true
  b) usually true
  c) seldom true
  d) never true

10. _____ Whenever possible, I will attempt to complete two or more tasks at once.
  a) almost always true
  b) usually true
  c) seldom true
  d) never true

Personal Stressor Profile Summary Sheet

Personal Stressor Profile Summary Sheet

EXERCISE:	1	2	3	4	5	6	7	8	9	10
	Adaptation	Frustration	Overload	Depri-vation	Nutrition	Self-Perception	Type A Behavior	Anxious Reactivity	Control	Occupational Stressors
Scores Indicative of:	•400 • • • •	•40 • • • •	•40 • • • •	•40 • • • •	•40 • • • •	•40 • • • •	•40 • • • •	•40 • • • •	•40 • • • •	•40 • • • •
High Vulnerability to Stressors	•350 • • • •	•35 • • • •	•35 • • • •	•35 • • • •	•35 • • • •	•35 • • • •	•35 • • • •	•35 • • • •	•35 • • • •	•35 • • • •
	•300 • • • •	•30 • • • •	•30 • • • •	•30 • • • •	•30 • • • •	•30 • • • •	•30 • • • •	•30 • • • •	•30 • • • •	•30 • • • •
	•250	•25	•25	•25	•25	•25	•25	•25	•25	•25
Moderate Vulnerability to Stressors	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •
	•200 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •	•20 • • • • •
Low Vulnerability to Stressors	•150 • • • •	•15 • • • •	•15 • • • •	•15 • • • •	•15 • • • •	•15 • • • •	•15 • • • •	•15 • • • •	•15 • • • •	•15 • • • •
	•100	•10	•10	•10	•10	•10	•10	•10	•10	•10

APPENDIX D

PRETEST SURVEY

186

Stress Management Training (Advance Sheets)

Please fill in the following blanks as they apply to you.

SSAN: ☐☐☐ — ☐☐ — ☐☐☐☐

Age: ☐☐

Sex: male ☐ female ☐

MOS: ☐☐☐☐☐ (example, 11B20)

Time in Service: years ☐☐ months ☐☐

Time at Fort Campbell: months ☐☐

Pay Grade: ☐ — ☐ (example, E-6)

Marital Status: living as a couple ☐ single ☐

divorced/separated ☐ widowed ☐

The following pages contain items relating to how you perceive your level of stress. Please complete self-assessment exercises 1 through 10. It should take you about 15-20 minutes to complete. **Bring this packet** with you to the Stress Management Training scheduled for May 15th or 16th.

PRIVACY ACT STATEMENT

AUTHORITY: 10 USC 3012

PRINCIPAL PURPOSES: To obtain information and perform research regarding the effects of stress management training on stress risk factors.

ROUTINE USES: To evaluate the effects of differing methods of stress management training on stress risk factors on soldiers in the 101st Airborne Division (Air Assault). The research information may be used by the U. S. Army Physical Fitness School. The information may also be used for publication and abstracts in the professional literature. No attempt will be made to identify participants by name. Identification of participants will not be revealed in any published or unpublished literature.

DISCLOSURE MANDATORY OR VOLUNTARY: Disclosure of social security number and any other information to principal investigators in voluntary. Refusal to provide information may preclude participation in the research protocol.

APPENDIX E

TRAINING REACTION AND POSTTEST SURVEY

188

Stress Management Training (Reaction Sheets)

Please fill in the following blanks as they apply to you.

SSAN: ☐☐☐ — ☐☐ — ☐☐☐☐

Unit: HHD ☐   MPC ☐   101st MP Co ☐   194th MP Co ☐   Other _____ ☐

For each item below, indicate your confidence in your ability **to perform the task** by checking the appropriate box:

1. "Understand sources of stress and reactions to stress."

    ☐   ☐   ☐   ☐
    Very   Somewhat   Somewhat   Very
    Confident   Confident   Unconfident   Unconfident

2. "Develop and apply strategies to manage stress."

    ☐   ☐   ☐   ☐
    Very   Somewhat   Somewhat   Very
    Confident   Confident   Unconfident   Unconfident

For each item below, indicate the degree to which you **agree or disagree** by checking the appropriate box:

3. The content of this workshop is relevant to my job.

    ☐   ☐   ☐   ☐
    Agree   Agree   Disagree   Disagree
    Completely   Somewhat   Somewhat   Completely

4. The activities in this workshop helped me learn the material.

    ☐   ☐   ☐   ☐
    Agree   Agree   Disagree   Disagree
    Completely   Somewhat   Somewhat   Completely

5. Give an example of how you plan to use what you learned in this workshop back on your job. _____

   _____

6. Describe a future stressful event or situation (Point D): _____

   _____

7. What is your predicted amount of stress for this event or situation? ☐

   _____

PRIVACY ACT STATEMENT

AUTHORITY: 10 USC 3012

PRINCIPAL PURPOSES: To obtain information and perform research regarding the effects of stress management training on stress risk factors.

ROUTINE USES: To evaluate the effects of differing methods of stress management training on stress risk factors on soldiers in the 101st Airborne Division (Air Assault). The research information may be used by the U. S. Army Physical Fitness School. The information may also be used for publication and abstracts in the professional literature. No attempt will be made to identify participants by name. Identification of participants will not be revealed in any published or unpublished literature.

DISCLOSURE MANDATORY OR VOLUNTARY: Disclosure of social security number and any other information to principal investigators in voluntary. Refusal to provide information may preclude participation in the research protocol.

Stress Management Training (Follow Up Sheets)

Several weeks ago, you were involved in Stress Management Training. Please complete the following items

SSAN: ☐☐☐ — ☐☐ — ☐☐☐☐

For each item below, indicate your confidence in your ability *to perform the task* by checking the appropriate box:

1. "Understand sources of stress and reactions to stress."

☐	☐	☐	☐
Very Confident	Somewhat Confident	Somewhat Unconfident	Very Unconfident

2. "Develop and apply strategies to manage stress."

☐	☐	☐	☐
Very Confident	Somewhat Confident	Somewhat Unconfident	Very Unconfident

For each item below, indicate the degree to which you *agree or disagree* by checking the appropriate box:

3. Since the training, I have had a major stressor in my life.

☐	☐	☐	☐
Agree Completely	Agree Somewhat	Disagree Somewhat	Disagree Completely

4. The workshop helped me manage stress in my life.

☐	☐	☐	☐
Agree Completely	Agree Somewhat	Disagree Somewhat	Disagree Completely

5. Give an example of how you used what you learned in the workshop back on your job or in your own life. _____

6. Describe a <u>future</u> stressful event or situation (Point D): _____

_____

7. What is your predicted amount of stress for this event or situation? ☐
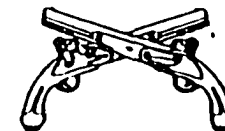   (scale 1 to 10, with 1 being lowest and 10 being highest)

The following pages contain items relating to how you perceive your level of stress. Please complete self-assessment exercises 1 through 10. It should take you about 15-20 minutes to complete. (SELF-ASSESSMENTS were attached - see Appendix C)

APPENDIX F

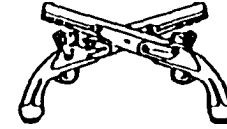MAJOR ACTIVITIES FOR THE 716th MP BATTALION

TASKINGS

MISSION	DATES	UNIT	LOCATION	REMARKS	STATUS (G.A.R.)
SEDRE	8-24 JUL	HHD (S3)/ 3/101ST	FT. EUSTIS, VA		A
391 MP BN/ 342 MP CO AT EVAL	31 JUL- 15 AUG	HHD/194TH	FT. MCCLELLAN, AL	HHD (S3)(3) 194TH (2)	A
BRIGHT STAR	13 SEP-19 NOV	194TH (-)	CLASSIFIED		A
NTC 98-02	27 OCT-23 NOV	HHD (S3)/ 2/101ST	FT. IRWIN, CA		A

716TH MILITARY POLICE BATTALION: AS OF 12 JUN 1997

TASKINGS

MISSION	DATES	UNIT	LOCATION	REMARKS	STATUS (G.A.R.)
JTF-B	28 MAR- 20 SEP	101ST	HONDURAS	1-92Y10 (SPC/PFC)	G
MFO	3 APR 97- 8 JAN 98	1/101ST	FTCKY	ATTACHED TO 1BDE	G
CUSTOMS	7 APR -27 JUN	MPC	NOGALES, AZ	1 - DOG HANDLER	G
EXPLOSIVE DOG	10 APR-9 JUL	MPC	BAHARAIN	1 - DOG HANDLER W/K-9	G
BIKE PATROL	1 MAY-30 JUN	101/194	FTCKY	AUGMENT BIKE PATROL	G
AT SPT	3 MAY- 28 JUN	194TH	FT INDIANTOWN GAP, PA	(2) MP	G

716TH MILITARY POLICE BATTALION: AS OF 12 JUN 1997

FY 97 101st ABN DIV (AASLT) EXERCISE SCHEDULE

FY 97	OCT	NOV	DEC	JAN 1997	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TNG CYCLES — 1st BDE	W 26 Sep 96	B 7	B 19 30	W 9	20	W	B 3	15	26	W W 3 10	W 21	B
2nd BDE	B 26 Sep 96	W 7	W 19 30	9	B 20		W 3	15	B	B 3 10	21	W
3rd BDE	B 26 Sep 96	7	W 19 30	B 9	W 20	B	3	15	W 26	B 3 10	B 21	
CTCs — JRTC & NTC												
Holiday												
DIV EXERCISE												
BCTP & JAXS												
UNIT DEPLOYMENTS												

June 1997
Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20 CONSA	21
22	23	24 SRT LFX	25	26	27	28
29	30					

May

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

July

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Printed by Calendar Creator Plus on 6/12/97

★ DIV RUN - SEE OP ORDER
★ HHD Chase? of CMD
☆ 101 ORGANIZ DAY (SEE MO: /LT OFF.)

July 1997
Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 PAYDAY ACTIVITIES	2 ACTS 1300-1700 WILSON THEATER	3	4 INDEPENDENCE DAY (HOLIDAY)	5
6	7 JONSA	8	9 PROMOTION/RECOGNITION BOARD	10	11 DIV LVL 1 BACO/SQ ARA	12 MFO (SQD+)
13 1/101 DEPLOYS FOR MFO	14 TNG WK 42	15 TCAP EXERCISE REHEARSAL	16 194 MP CO AND 101 MP CO CALL FOR FIRE	17	18 TCAP EXERCISE	19 MFO (SQD+) S3/QMO HAS LEAD
20	21 TNG WK 43	22 TAAS GRAD 48-97	23 UN 351 MP BN EVAL INTER	24	25 194 FAMILY AASLT DAY TAAS GRAD 48-97	26 SOLDER w/ 156 TRAIN UP
27	28 PLDC GRAD 0- 97 TNG WK 44	29 PU 1400-1600 WILSON THEATER	30 USS? INN 47 1000 1100 TAAS GRAD 50 97	31 194 ORGANIZATIONAL DAY		

*MOI IS PUBLISHED FOR BOARD

August 1997
Monthly Planner

MUST HAVE WARFIGHTER TEAM REGISTERED AT USAMPS' NCO

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 PAYDAY ACTIVITIES	**2**
3	**4** TAAS GRAD 51-97	**5**	**6**	**7** TAAS GRAD 52-97	**8**	**9**
10	**11** LETS 1300-1700 WILSON THEATER	**12** FPU 1300-1700 TAAS GRAD 53-97	**13** PROMOTION/NCO/SGM BOARD	**14** RAIL LOAD TRAINING	**15** PLDC GRAD 08-97 TAAS GRAD 54-97	**16**
17	**18**	**19** 194 SRP	**20** TAAS GRAD 55-97	**21** OS97 FINAL IPR 1000-1100	**22** DONSA	**23**
24	**25**	**26** TAAS GRAD 56-97	**27**	**28** FPU 1400-1600 WILSON THEATER	**29** DONSA	**30**
31						

	July					
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

	September					
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

• Printed by Calendar Creator Plus on 6/12/97

September 1997
Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 LABOR DAY (HOLIDAY)	2 SAFE EAGLE / SAFE EAGLE / TAAS GRAD 37 97	3	4	5 TAAS GRAD 38 97	6
7	8	9 TCAP COMMITTEE 1300-1500	10 194 ADV PARTY (DEP) BRIGHT STAR / PROMOTION/CC/SGM BOARD / TAAS GRAD 39 97	11	12	13 194 ADVON DEPLOYS (BRIGHT STAR) / MP BALL / BG ROBERTSON / USAC IOC
14	15 TAAS GRAD 60 97	16	17 194 MAIN BODY DEPLOYS (BRIGHT STAR)	18 TAAS GRAD 61 97	19 PLCC GRAD 09-97	20
21	22	23 TAAS GRAD 62 97	24 FTU 1300-1700 / 2 TEAMS + S3 DTS MDS	25	26	27
28	29	30				

APPENDIX G

GENERAL LINEAR MODEL ANALYSIS RESULTS

200

General Linear Model - Time - Pre/Post Sum by Group

Within-Subjects Factors

Measure: MEASURE_1

TIME	Dependent Variable
1	PRESUM
2	POSTSUM

Between-Subjects Factors

		Value Label	N
Treatment Group	1.00	Trained #1	24
	2.00	Trained #2	26
	3.00	Control #3	24
	4.00	Trained #4	24
	5.00	Untrained	13

Multivariate Tests[c]

Effect		Value	F	Hypothesis df	Error df	Sig.
TIME	Pillai's Trace	.000	.021[b]	1.000	106.000	.886
	Wilks' Lambda	1.000	.021[b]	1.000	106.000	.886
	Hotelling's Trace	.000	.021[b]	1.000	106.000	.886
	Roy's Largest Root	.000	.021[b]	1.000	106.000	.886
TIME * GROUP	Pillai's Trace	.010	.258[b]	4.000	106.000	.904
	Wilks' Lambda	.990	.258[b]	4.000	106.000	.904
	Hotelling's Trace	.010	.258[b]	4.000	106.000	.904
	Roy's Largest Root	.010	.258[b]	4.000	106.000	.904

Multivariate Tests[c]

Effect		Noncent. Parameter	Observed Power[a]
TIME	Pillai's Trace	.021	.052
	Wilks' Lambda	.021	.052
	Hotelling's Trace	.021	.052
	Roy's Largest Root	.021	.052
TIME * GROUP	Pillai's Trace	1.034	.105
	Wilks' Lambda	1.034	.105
	Hotelling's Trace	1.034	.105
	Roy's Largest Root	1.034	.105

a. Computed using alpha = .05

b. Exact statistic

c. Design: Intercept+GROUP
   Within Subjects Design: TIME

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.
TIME	1.000	.000	0	.

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

Within Subjects Effect	Epsilon[a]		
	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TIME	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the layers (by default) of the Tests of Within Subjects Effects table.

b. Design: Intercept+GROUP
Within Subjects Design: TIME

Tests of Within-Subjects Effects

Measure: MEASURE_1
Sphericity Assumed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
TIME	11.796	1	11.796	.021	.886
TIME * GROUP	586.879	4	146.720	.258	.904
Error(TIME)	60186.61	106	567.798		

Tests of Within-Subjects Effects

Measure: MEASURE_1
Sphericity Assumed

Source	Noncent. Parameter	Observed Power[a]
TIME	.021	.052
TIME * GROUP	1.034	.105
Error(TIME)		

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Transformed Variable	Type III Sum of Squares	df	Mean Square	F
TIME	TIME_1	11.796	1	11.796	.021
TIME * GROUP	TIME_1	586.879	4	146.720	.258
Error(TIME)	TIME_1	60186.61	106	567.798	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Transformed Variable	Sig.	Noncent. Parameter	Observed Power[a]
TIME	TIME_1	.886	.021	.052
TIME * GROUP	TIME_1	.904	1.034	.105
Error(TIME)	TIME_1			

a. Computed using alpha = .05

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	6401562	1	6401562	3788.629	.000
GROUP	15078.12	4	3769.529	2.231	.071
Error	179105.8	106	1689.678		

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Noncent. Parameter	Observed Power[a]
Intercept	3788.629	1.000
GROUP	8.924	.637
Error		

a. Computed using alpha = .05

APPENDIX H

CORRELATION ANALYSIS RESULTS

Correlations - All Groups - Pre-Test

Correlations

		Predicted Stress (Reaction)	Adaptation (pre)	Frustration (Pre)	Overload (pre)
Pearson Correlation	Predicted Stress	1.000	.379**	.293**	.309**
	Adaptation	.379**	1.000	.355**	.320**
	Frustration	.293**	.355**	1.000	.711**
	Overload	.309**	.320**	.711**	1.000
	Deprivation	.016	.354**	.586**	.451**
	Nutrition	.177	.075	.077	.146
	Self-Perception	.107	.157	.508**	.432**
	Type A	.153	.228*	.397**	.431**
	Anxious Reactive	.273*	.296**	.680**	.608**
	Control	.097	.319**	.351**	.243*
	Occupational	.115	.197*	.513**	.535**
	PRESUM	.263*	.415**	.842**	.789**
Sig. (2-tailed)	Predicted Stress	.	.000	.006	.004
	Adaptation	.000	.	.000	.001
	Frustration	.006	.000	.	.000
	Overload	.004	.001	.000	.
	Deprivation	.886	.000	.000	.000
	Nutrition	.101	.445	.421	.125
	Self-Perception	.329	.111	.000	.000
	Type A	.158	.019	.000	.000
	Anxious Reactive	.011	.002	.000	.000
	Control	.370	.001	.000	.010
	Occupational	.290	.043	.000	.000
	PRESUM	.014	.000	.000	.000
N	Predicted Stress	87	83	87	87
	Adaptation	83	106	106	106
	Frustration	87	106	111	111
	Overload	87	106	111	111
	Deprivation	87	106	111	111
	Nutrition	87	106	111	111
	Self-Perception	86	105	110	110
	Type A	87	106	111	111
	Anxious Reactive	87	106	111	111
	Control	87	106	111	111
	Occupational	87	106	111	111
	PRESUM	87	106	111	111

Correlations

		Deprivation (pre)	Nutrition (pre)	Self-Perception (pre)	Type A Behavior (pre)
Pearson Correlation	Predicted Stress	.016	.177	.107	.153
	Adaptation	.354**	.075	.157	.228*
	Frustration	.586**	.077	.508**	.397**
	Overload	.451**	.146	.432**	.431**
	Deprivation	1.000	.055	.297**	.314**
	Nutrition	.055	1.000	.004	.228*
	Self-Perception	.297**	.004	1.000	.357**
	Type A	.314**	.228*	.357**	1.000
	Anxious Reactive	.440**	.173	.553**	.438**
	Control	.296**	-.027	.286**	.118
	Occupational	.265**	.066	.373**	.288**
	PRESUM	.658**	.244**	.638**	.593**
Sig. (2-tailed)	Predicted Stress	.886	.101	.329	.158
	Adaptation	.000	.445	.111	.019
	Frustration	.000	.421	.000	.000
	Overload	.000	.125	.000	.000
	Deprivation	.	.569	.002	.001
	Nutrition	.569	.	.968	.016
	Self-Perception	.002	.968	.	.000
	Type A	.001	.016	.000	.
	Anxious Reactive	.000	.069	.000	.000
	Control	.002	.782	.002	.216
	Occupational	.005	.491	.000	.002
	PRESUM	.000	.010	.000	.000
N	Predicted Stress	87	87	86	87
	Adaptation	106	106	105	106
	Frustration	111	111	110	111
	Overload	111	111	110	111
	Deprivation	111	111	110	111
	Nutrition	111	111	110	111
	Self-Perception	110	110	110	110
	Type A	111	111	110	111
	Anxious Reactive	111	111	110	111
	Control	111	111	110	111
	Occupational	111	111	110	111
	PRESUM	111	111	110	111

Correlations

		Anxious Reactivity (pre)	Control (pre)	Occupational Stressors (pre)	PRESUM
Pearson Correlation	Predicted Stress	.273*	.097	.115	.263*
	Adaptation	.296**	.319**	.197*	.415**
	Frustration	.680**	.351**	.513**	.842**
	Overload	.608**	.243*	.535**	.789**
	Deprivation	.440**	.296**	.265**	.658**
	Nutrition	.173	-.027	.066	.244**
	Self-Perception	.553**	.286**	.373**	.638**
	Type A	.438**	.118	.288**	.593**
	Anxious Reactive	1.000	.325**	.526**	.822**
	Control	.325**	1.000	.253**	.529**
	Occupational	.526**	.253**	1.000	.663**
	PRESUM	.822**	.529**	.663**	1.000
Sig. (2-tailed)	Predicted Stress	.011	.370	.290	.014
	Adaptation	.002	.001	.043	.000
	Frustration	.000	.000	.000	.000
	Overload	.000	.010	.000	.000
	Deprivation	.000	.002	.005	.000
	Nutrition	.069	.782	.491	.010
	Self-Perception	.000	.002	.000	.000
	Type A	.000	.216	.002	.000
	Anxious Reactive	.	.001	.000	.000
	Control	.001	.	.007	.000
	Occupational	.000	.007	.	.000
	PRESUM	.000	.000	.000	.
N	Predicted Stress	87	87	87	87
	Adaptation	106	106	106	106
	Frustration	111	111	111	111
	Overload	111	111	111	111
	Deprivation	111	111	111	111
	Nutrition	111	111	111	111
	Self-Perception	110	110	110	110
	Type A	111	111	111	111
	Anxious Reactive	111	111	111	111
	Control	111	111	111	111
	Occupational	111	111	111	111
	PRESUM	111	111	111	111

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations - All Groups - Post-Test

Correlations

		Predicted Stress (post)	Adaptation (post)	Frustration (post)	Overload (post)
Pearson Correlation	Predicted Stress	1.000	.389**	.310**	.296**
	Adaptation	.389**	1.000	.456**	.382**
	Frustration	.310**	.456**	1.000	.711**
	Overload	.296**	.382**	.711**	1.000
	Deprivation	.338**	.392**	.671**	.617**
	Nutrition	.218*	.183	.113	.162
	Self-Perception	.351**	.217*	.473**	.446**
	Type A	.204*	.304**	.466**	.570**
	Anxious Reactive	.359**	.456**	.704**	.773**
	Control	.196	.261**	.467**	.497**
	Occupational	.317**	.403**	.585**	.593**
	POSTSUM	.398**	.485**	.818**	.848**
Sig. (2-tailed)	Predicted Stress	.	.000	.002	.004
	Adaptation	.000	.	.000	.000
	Frustration	.002	.000	.	.000
	Overload	.004	.000	.000	.
	Deprivation	.001	.000	.000	.000
	Nutrition	.035	.056	.239	.091
	Self-Perception	.000	.023	.000	.000
	Type A	.048	.001	.000	.000
	Anxious Reactive	.000	.000	.000	.000
	Control	.057	.006	.000	.000
	Occupational	.002	.000	.000	.000
	POSTSUM	.000	.000	.000	.000
N	Predicted Stress	95	95	95	95
	Adaptation	95	110	110	110
	Frustration	95	110	111	111
	Overload	95	110	111	111
	Deprivation	95	110	111	111
	Nutrition	94	109	110	110
	Self-Perception	95	110	111	111
	Type A	95	110	111	111
	Anxious Reactive	95	110	111	111
	Control	95	110	111	111
	Occupational	95	110	111	111
	POSTSUM	95	110	111	111

Correlations

		Deprivation (post)	Nutrition (post)	Self-Perception (post)	Type A Behavior (post)
Pearson Correlation	Predicted Stress	.338**	.218*	.351**	.204*
	Adaptation	.392**	.183	.217*	.304**
	Frustration	.671**	.113	.473**	.466**
	Overload	.617**	.162	.446**	.570**
	Deprivation	1.000	.056	.462**	.322**
	Nutrition	.056	1.000	.286**	.233*
	Self-Perception	.462**	.286**	1.000	.265**
	Type A	.322**	.233*	.265**	1.000
	Anxious Reactive	.568**	.224*	.606**	.561**
	Control	.372**	.200*	.510**	.195*
	Occupational	.433**	.213*	.429**	.514**
	POSTSUM	.710**	.378**	.685**	.659**
Sig. (2-tailed)	Predicted Stress	.001	.035	.000	.048
	Adaptation	.000	.056	.023	.001
	Frustration	.000	.239	.000	.000
	Overload	.000	.091	.000	.000
	Deprivation	.	.560	.000	.001
	Nutrition	.560	.	.002	.014
	Self-Perception	.000	.002	.	.005
	Type A	.001	.014	.005	.
	Anxious Reactive	.000	.019	.000	.000
	Control	.000	.036	.000	.040
	Occupational	.000	.025	.000	.000
	POSTSUM	.000	.000	.000	.000
N	Predicted Stress	95	94	95	95
	Adaptation	110	109	110	110
	Frustration	111	110	111	111
	Overload	111	110	111	111
	Deprivation	111	110	111	111
	Nutrition	110	110	110	110
	Self-Perception	111	110	111	111
	Type A	111	110	111	111
	Anxious Reactive	111	110	111	111
	Control	111	110	111	111
	Occupational	111	110	111	111
	POSTSUM	111	110	111	111

Correlations

		Anxious Reactivity (post)	Control (post)	Occupational Stressors (post)	POSTSUM
Pearson Correlation	Predicted Stress	.359**	.196	.317**	.398**
	Adaptation	.456**	.261**	.403**	.485**
	Frustration	.704**	.467**	.585**	.818**
	Overload	.773**	.497**	.593**	.848**
	Deprivation	.568**	.372**	.433**	.710**
	Nutrition	.224*	.200*	.213*	.378**
	Self-Perception	.606**	.510**	.429**	.685**
	Type A	.561**	.195*	.514**	.659**
	Anxious Reactive	1.000	.541**	.586**	.877**
	Control	.541**	1.000	.395**	.648**
	Occupational	.586**	.395**	1.000	.754**
	POSTSUM	.877**	.648**	.754**	1.000
Sig. (2-tailed)	Predicted Stress	.000	.057	.002	.000
	Adaptation	.000	.006	.000	.000
	Frustration	.000	.000	.000	.000
	Overload	.000	.000	.000	.000
	Deprivation	.000	.000	.000	.000
	Nutrition	.019	.036	.025	.000
	Self-Perception	.000	.000	.000	.000
	Type A	.000	.040	.000	.000
	Anxious Reactive	.	.000	.000	.000
	Control	.000	.	.000	.000
	Occupational	.000	.000	.	.000
	POSTSUM	.000	.000	.000	.
N	Predicted Stress	95	95	95	95
	Adaptation	110	110	110	110
	Frustration	111	111	111	111
	Overload	111	111	111	111
	Deprivation	111	111	111	111
	Nutrition	110	110	110	110
	Self-Perception	111	111	111	111
	Type A	111	111	111	111
	Anxious Reactive	111	111	111	111
	Control	111	111	111	111
	Occupational	111	111	111	111
	POSTSUM	111	111	111	111

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations - Treatment Groups - Pre-Test

Correlations

		Predicted Stress (Reaction)	Adaptation (pre)	Frustration (Pre)	Overload (pre)
Pearson Correlation	Predicted Stress	1.000	.330**	.474**	.394**
	Adaptation	.330**	1.000	.417**	.280*
	Frustration	.474**	.417**	1.000	.646**
	Overload	.394**	.280*	.646**	1.000
	Deprivation	.134	.364**	.614**	.472**
	Nutrition	.173	.080	.092	.062
	Self-Perception	.186	.075	.448**	.364**
	Type A	.137	.106	.347**	.359**
	Anxious Reactive	.338**	.301*	.736**	.605**
	Control	.251*	.286*	.410**	.347**
	Occupational	.179	.287*	.464**	.492**
	PRESUM	.391**	.398**	.827**	.749**
Sig. (2-tailed)	Predicted Stress	.	.007	.000	.001
	Adaptation	.007	.	.000	.018
	Frustration	.000	.000	.	.000
	Overload	.001	.018	.000	.
	Deprivation	.279	.002	.000	.000
	Nutrition	.161	.507	.435	.602
	Self-Perception	.134	.536	.000	.002
	Type A	.267	.378	.002	.002
	Anxious Reactive	.005	.011	.000	.000
	Control	.041	.016	.000	.002
	Occupational	.146	.015	.000	.000
	PRESUM	.001	.001	.000	.000
N	Predicted Stress	67	65	67	67
	Adaptation	65	71	71	71
	Frustration	67	71	74	74
	Overload	67	71	74	74
	Deprivation	67	71	74	74
	Nutrition	67	71	74	74
	Self-Perception	66	70	73	73
	Type A	67	71	74	74
	Anxious Reactive	67	71	74	74
	Control	67	71	74	74
	Occupational	67	71	74	74
	PRESUM	67	71	74	74

Correlations

		Deprivation (pre)	Nutrition (pre)	Self-Perception (pre)	Type A Behavior (pre)
Pearson Correlation	Predicted Stress	.134	.173	.186	.137
	Adaptation	.364**	.080	.075	.106
	Frustration	.614**	.092	.448**	.347**
	Overload	.472**	.062	.364**	.359**
	Deprivation	1.000	.161	.297*	.348**
	Nutrition	.161	1.000	.022	.253*
	Self-Perception	.297*	.022	1.000	.242*
	Type A	.348**	.253*	.242*	1.000
	Anxious Reactive	.461**	.013	.539**	.359**
	Control	.320**	.057	.378**	.150
	Occupational	.271*	.055	.367**	.390**
	PRESUM	.693**	.239*	.615**	.571**
Sig. (2-tailed)	Predicted Stress	.279	.161	.134	.267
	Adaptation	.002	.507	.536	.378
	Frustration	.000	.435	.000	.002
	Overload	.000	.602	.002	.002
	Deprivation	.	.171	.011	.002
	Nutrition	.171	.	.853	.030
	Self-Perception	.011	.853	.	.039
	Type A	.002	.030	.039	.
	Anxious Reactive	.000	.911	.000	.002
	Control	.005	.632	.001	.203
	Occupational	.019	.642	.001	.001
	PRESUM	.000	.040	.000	.000
N	Predicted Stress	67	67	66	67
	Adaptation	71	71	70	71
	Frustration	74	74	73	74
	Overload	74	74	73	74
	Deprivation	74	74	73	74
	Nutrition	74	74	73	74
	Self-Perception	73	73	73	73
	Type A	74	74	73	74
	Anxious Reactive	74	74	73	74
	Control	74	74	73	74
	Occupational	74	74	73	74
	PRESUM	74	74	73	74

Correlations

		Anxious Reactivity (pre)	Control (pre)	Occupational Stressors (pre)	PRESUM
Pearson Correlation	Predicted Stress	.338**	.251*	.179	.391**
	Adaptation	.301*	.286*	.287*	.398**
	Frustration	.736**	.410**	.464**	.827**
	Overload	.605**	.347**	.492**	.749**
	Deprivation	.461**	.320**	.271*	.693**
	Nutrition	.013	.057	.055	.239*
	Self-Perception	.539**	.378**	.367**	.615**
	Type A	.359**	.150	.390**	.571**
	Anxious Reactive	1.000	.473**	.522**	.824**
	Control	.473**	1.000	.277*	.619**
	Occupational	.522**	.277*	1.000	.660**
	PRESUM	.824**	.619**	.660**	1.000
Sig. (2-tailed)	Predicted Stress	.005	.041	.146	.001
	Adaptation	.011	.016	.015	.001
	Frustration	.000	.000	.000	.000
	Overload	.000	.002	.000	.000
	Deprivation	.000	.005	.019	.000
	Nutrition	.911	.632	.642	.040
	Self-Perception	.000	.001	.001	.000
	Type A	.002	.203	.001	.000
	Anxious Reactive	.	.000	.000	.000
	Control	.000	.	.017	.000
	Occupational	.000	.017	.	.000
	PRESUM	.000	.000	.000	.
N	Predicted Stress	67	67	67	67
	Adaptation	71	71	71	71
	Frustration	74	74	74	74
	Overload	74	74	74	74
	Deprivation	74	74	74	74
	Nutrition	74	74	74	74
	Self-Perception	73	73	73	73
	Type A	74	74	74	74
	Anxious Reactive	74	74	74	74
	Control	74	74	74	74
	Occupational	74	74	74	74
	PRESUM	74	74	74	74

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations - Treatment Groups - Post-Test

Correlations

		Predicted Stress (post)	Adaptation (post)	Frustration (post)	Overload (post)
Pearson Correlation	Predicted Stress	1.000	.430**	.354**	.361**
	Adaptation	.430**	1.000	.502**	.410**
	Frustration	.354**	.502**	1.000	.739**
	Overload	.361**	.410**	.739**	1.000
	Deprivation	.390**	.404**	.668**	.621**
	Nutrition	.119	.166	.229	.223
	Self-Perception	.333**	.203	.599**	.506**
	Type A	.266*	.241*	.423**	.584**
	Anxious Reactive	.410**	.478**	.760**	.793**
	Control	.174	.261*	.637**	.608**
	Occupational	.384**	.439**	.642**	.658**
	POSTSUM	.421**	.477**	.860**	.872**
Sig. (2-tailed)	Predicted Stress	.	.000	.005	.004
	Adaptation	.000	.	.000	.000
	Frustration	.005	.000	.	.000
	Overload	.004	.000	.000	.
	Deprivation	.002	.000	.000	.000
	Nutrition	.360	.164	.051	.058
	Self-Perception	.008	.085	.000	.000
	Type A	.037	.040	.000	.000
	Anxious Reactive	.001	.000	.000	.000
	Control	.176	.026	.000	.000
	Occupational	.002	.000	.000	.000
	POSTSUM	.001	.000	.000	.000
N	Predicted Stress	62	62	62	62
	Adaptation	62	73	73	73
	Frustration	62	73	74	74
	Overload	62	73	74	74
	Deprivation	62	73	74	74
	Nutrition	61	72	73	73
	Self-Perception	62	73	74	74
	Type A	62	73	74	74
	Anxious Reactive	62	73	74	74
	Control	62	73	74	74
	Occupational	62	73	74	74
	POSTSUM	62	73	74	74

Correlations

		Deprivation (post)	Nutrition (post)	Self-Perception (post)	Type A Behavior (post)
Pearson Correlation	Predicted Stress	.390**	.119	.333**	.266*
	Adaptation	.404**	.166	.203	.241*
	Frustration	.668**	.229	.599**	.423**
	Overload	.621**	.223	.506**	.584**
	Deprivation	1.000	.123	.550**	.274*
	Nutrition	.123	1.000	.182	.335**
	Self-Perception	.550**	.182	1.000	.312**
	Type A	.274*	.335**	.312**	1.000
	Anxious Reactive	.608**	.218	.649**	.486**
	Control	.476**	.081	.542**	.274*
	Occupational	.509**	.175	.515**	.545**
	POSTSUM	.732**	.369**	.726**	.643**
Sig. (2-tailed)	Predicted Stress	.002	.360	.008	.037
	Adaptation	.000	.164	.085	.040
	Frustration	.000	.051	.000	.000
	Overload	.000	.058	.000	.000
	Deprivation	.	.299	.000	.018
	Nutrition	.299	.	.122	.004
	Self-Perception	.000	.122	.	.007
	Type A	.018	.004	.007	.
	Anxious Reactive	.000	.064	.000	.000
	Control	.000	.494	.000	.018
	Occupational	.000	.139	.000	.000
	POSTSUM	.000	.001	.000	.000
N	Predicted Stress	62	61	62	62
	Adaptation	73	72	73	73
	Frustration	74	73	74	74
	Overload	74	73	74	74
	Deprivation	74	73	74	74
	Nutrition	73	73	73	73
	Self-Perception	74	73	74	74
	Type A	74	73	74	74
	Anxious Reactive	74	73	74	74
	Control	74	73	74	74
	Occupational	74	73	74	74
	POSTSUM	74	73	74	74

Correlations

		Anxious Reactivity (post)	Control (post)	Occupational Stressors (post)	POSTSUM
Pearson Correlation	Predicted Stress	.410**	.174	.384**	.421**
	Adaptation	.478**	.261*	.439**	.477**
	Frustration	.760**	.637**	.642**	.860**
	Overload	.793**	.608**	.658**	.872**
	Deprivation	.608**	.476**	.509**	.732**
	Nutrition	.218	.081	.175	.369**
	Self-Perception	.649**	.542**	.515**	.726**
	Type A	.486**	.274*	.545**	.643**
	Anxious Reactive	1.000	.656**	.628**	.882**
	Control	.656**	1.000	.573**	.732**
	Occupational	.628**	.573**	1.000	.805**
	POSTSUM	.882**	.732**	.805**	1.000
Sig. (2-tailed)	Predicted Stress	.001	.176	.002	.001
	Adaptation	.000	.026	.000	.000
	Frustration	.000	.000	.000	.000
	Overload	.000	.000	.000	.000
	Deprivation	.000	.000	.000	.000
	Nutrition	.064	.494	.139	.001
	Self-Perception	.000	.000	.000	.000
	Type A	.000	.018	.000	.000
	Anxious Reactive		.000	.000	.000
	Control	.000		.000	.000
	Occupational	.000	.000		.000
	POSTSUM	.000	.000	.000	
N	Predicted Stress	62	62	62	62
	Adaptation	73	73	73	73
	Frustration	74	74	74	74
	Overload	74	74	74	74
	Deprivation	74	74	74	74
	Nutrition	73	73	73	73
	Self-Perception	74	74	74	74
	Type A	74	74	74	74
	Anxious Reactive	74	74	74	74
	Control	74	74	74	74
	Occupational	74	74	74	74
	POSTSUM	74	74	74	74

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations - Control Groups - Pre-Test

Correlations

		Predicted Stress (Reaction)	Adaptation (pre)	Frustration (pre)	Overload (pre)
Pearson Correlation	Predicted Stress	1.000	.512*	-.024	.199
	Adaptation	.512*	1.000	.227	.332
	Frustration	-.024	.227	1.000	.782**
	Overload	.199	.332	.782**	1.000
	Deprivation	-.232	.345*	.555**	.448**
	Nutrition	.194	.060	.058	.270
	Self-Perception	-.059	.300	.617**	.548**
	Type A	.183	.413*	.465**	.521**
	Anxious Reactive	.155	.298	.609**	.643**
	Control	-.175	.359*	.256	.106
	Occupational	-.015	-.005	.588**	.606**
	PRESUM	.035	.421*	.866**	.855**
Sig. (2-tailed)	Predicted Stress	.	.030	.919	.401
	Adaptation	.030	.	.190	.052
	Frustration	.919	.190	.	.000
	Overload	.401	.052	.000	.
	Deprivation	.325	.042	.000	.005
	Nutrition	.413	.731	.731	.106
	Self-Perception	.804	.080	.000	.000
	Type A	.440	.014	.004	.001
	Anxious Reactive	.514	.082	.000	.000
	Control	.462	.034	.126	.530
	Occupational	.950	.976	.000	.000
	PRESUM	.882	.012	.000	.000
N	Predicted Stress	20	18	20	20
	Adaptation	18	35	35	35
	Frustration	20	35	37	37
	Overload	20	35	37	37
	Deprivation	20	35	37	37
	Nutrition	20	35	37	37
	Self-Perception	20	35	37	37
	Type A	20	35	37	37
	Anxious Reactive	20	35	37	37
	Control	20	35	37	37
	Occupational	20	35	37	37
	PRESUM	20	35	37	37

Correlations

		Deprivation (pre)	Nutrition (pre)	Self-Perception (pre)	Type A Behavior (pre)
Pearson Correlation	Predicted Stress	-.232	.194	-.059	.183
	Adaptation	.345*	.060	.300	.413*
	Frustration	.555**	.058	.617**	.465**
	Overload	.448**	.270	.548**	.521**
	Deprivation	1.000	-.146	.297	.257
	Nutrition	-.146	1.000	-.030	.190
	Self-Perception	.297	-.030	1.000	.560**
	Type A	.257	.190	.560**	1.000
	Anxious Reactive	.399*	.464**	.582**	.571**
	Control	.257	-.170	.117	.064
	Occupational	.258	.091	.382*	.107
	PRESUM	.599**	.255	.684**	.628**
Sig. (2-tailed)	Predicted Stress	.325	.413	.804	.440
	Adaptation	.042	.731	.080	.014
	Frustration	.000	.731	.000	.004
	Overload	.005	.106	.000	.001
	Deprivation	.	.387	.074	.125
	Nutrition	.387	.	.862	.260
	Self-Perception	.074	.862	.	.000
	Type A	.125	.260	.000	.
	Anxious Reactive	.014	.004	.000	.000
	Control	.125	.314	.491	.706
	Occupational	.123	.593	.020	.529
	PRESUM	.000	.128	.000	.000
N	Predicted Stress	20	20	20	20
	Adaptation	35	35	35	35
	Frustration	37	37	37	37
	Overload	37	37	37	37
	Deprivation	37	37	37	37
	Nutrition	37	37	37	37
	Self-Perception	37	37	37	37
	Type A	37	37	37	37
	Anxious Reactive	37	37	37	37
	Control	37	37	37	37
	Occupational	37	37	37	37
	PRESUM	37	37	37	37

Correlations

		Anxious Reactivity (pre)	Control (pre)	Occupational Stressors (pre)	PRESUM
Pearson Correlation	Predicted Stress	.155	-.175	-.015	.035
	Adaptation	.298	.359*	-.005	.421*
	Frustration	.609**	.256	.588**	.866**
	Overload	.643**	.106	.606**	.855**
	Deprivation	.399*	.257	.258	.599**
	Nutrition	.464**	-.170	.091	.255
	Self-Perception	.582**	.117	.382*	.684**
	Type A	.571**	.064	.107	.628**
	Anxious Reactive	1.000	.072	.544**	.827**
	Control	.072	1.000	.202	.374*
	Occupational	.544**	.202	1.000	.665**
	PRESUM	.827**	.374*	.665**	1.000
Sig. (2-tailed)	Predicted Stress	.514	.462	.950	.882
	Adaptation	.082	.034	.976	.012
	Frustration	.000	.126	.000	.000
	Overload	.000	.530	.000	.000
	Deprivation	.014	.125	.123	.000
	Nutrition	.004	.314	.593	.128
	Self-Perception	.000	.491	.020	.000
	Type A	.000	.706	.529	.000
	Anxious Reactive	.	.671	.000	.000
	Control	.671	.	.230	.023
	Occupational	.000	.230	.	.000
	PRESUM	.000	.023	.000	.
N	Predicted Stress	20	20	20	20
	Adaptation	35	35	35	35
	Frustration	37	37	37	37
	Overload	37	37	37	37
	Deprivation	37	37	37	37
	Nutrition	37	37	37	37
	Self-Perception	37	37	37	37
	Type A	37	37	37	37
	Anxious Reactive	37	37	37	37
	Control	37	37	37	37
	Occupational	37	37	37	37
	PRESUM	37	37	37	37

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations - Control Groups - Post-test

Correlations

		Predicted Stress (post)	Adaptation (post)	Frustration (post)	Overload (post)
Pearson Correlation	Predicted Stress (post)	1.000	.291	.259	.157
	Adaptation	.291	1.000	.365*	.292
	Frustration	.259	.365*	1.000	.666**
	Overload	.157	.292	.666**	1.000
	Deprivation	.266	.376*	.685**	.614**
	Nutrition	.323	.185	-.066	.036
	Self-Perception	.457**	.308	.199	.271
	Type A	.098	.436**	.540**	.553**
	Anxious Reactive	.300	.432**	.600**	.728**
	Control	.250	.260	.158	.239
	Occupational	.188	.298	.470**	.402*
	POSTSUM	.376*	.513**	.744**	.777**
Sig. (2-tailed)	Predicted Stress (post)	.	.101	.145	.382
	Adaptation	.101	.	.026	.079
	Frustration	.145	.026	.	.000
	Overload	.382	.079	.000	
	Deprivation	.135	.022	.000	.000
	Nutrition	.067	.272	.697	.833
	Self-Perception	.007	.063	.238	.105
	Type A	.587	.007	.001	.000
	Anxious Reactive	.090	.008	.000	.000
	Control	.161	.120	.351	.155
	Occupational	.295	.073	.003	.014
	POSTSUM	.031	.001	.000	.000
N	Predicted Stress (post)	33	33	33	33
	Adaptation	33	37	37	37
	Frustration	33	37	37	37
	Overload	33	37	37	37
	Deprivation	33	37	37	37
	Nutrition	33	37	37	37
	Self-Perception	33	37	37	37
	Type A	33	37	37	37
	Anxious Reactive	33	37	37	37
	Control	33	37	37	37
	Occupational	33	37	37	37
	POSTSUM	33	37	37	37

Correlations

		Deprivation (post)	Nutrition (post)	Self-Perception (post)	Type A Behavior (post)
Pearson Correlation	Predicted Stress (post)	.266	.323	.457**	.098
	Adaptation	.376*	.185	.308	.436**
	Frustration	.685**	-.066	.199	.540**
	Overload	.614**	.036	.271	.553**
	Deprivation	1.000	-.056	.218	.431**
	Nutrition	-.056	1.000	.536**	.069
	Self-Perception	.218	.536**	1.000	.180
	Type A	.431**	.069	.180	1.000
	Anxious Reactive	.466**	.250	.484**	.735**
	Control	.157	.374*	.462**	.048
	Occupational	.239	.276	.188	.454**
	POSTSUM	.656**	.402*	.574**	.712**
Sig. (2-tailed)	Predicted Stress (post)	.135	.067	.007	.587
	Adaptation	.022	.272	.063	.007
	Frustration	.000	.697	.238	.001
	Overload	.000	.833	.105	.000
	Deprivation	.	.741	.195	.008
	Nutrition	.741	.	.001	.685
	Self-Perception	.195	.001	.	.286
	Type A	.008	.685	.286	.
	Anxious Reactive	.004	.136	.002	.000
	Control	.353	.023	.004	.777
	Occupational	.155	.098	.265	.005
	POSTSUM	.000	.014	.000	.000
N	Predicted Stress (post)	33	33	33	33
	Adaptation	37	37	37	37
	Frustration	37	37	37	37
	Overload	37	37	37	37
	Deprivation	37	37	37	37
	Nutrition	37	37	37	37
	Self-Perception	37	37	37	37
	Type A	37	37	37	37
	Anxious Reactive	37	37	37	37
	Control	37	37	37	37
	Occupational	37	37	37	37
	POSTSUM	37	37	37	37

Correlations

		Anxious Reactivity (post)	Control (post)	Occupational Stressors (post)	POSTSUM
Pearson Correlation	Predicted Stress (post)	.300	.250	.188	.376*
	Adaptation	.432**	.260	.298	.513**
	Frustration	.600**	.158	.470**	.744**
	Overload	.728**	.239	.402*	.777**
	Deprivation	.466**	.157	.239	.656**
	Nutrition	.250	.374*	.276	.402*
	Self-Perception	.484**	.462**	.188	.574**
	Type A	.735**	.048	.454**	.712**
	Anxious Reactive	1.000	.300	.481**	.870**
	Control	.300	1.000	-.005	.461**
	Occupational	.481**	-.005	1.000	.609**
	POSTSUM	.870**	.461**	.609**	1.000
Sig. (2-tailed)	Predicted Stress (post)	.090	.161	.295	.031
	Adaptation	.008	.120	.073	.001
	Frustration	.000	.351	.003	.000
	Overload	.000	.155	.014	.000
	Deprivation	.004	.353	.155	.000
	Nutrition	.136	.023	.098	.014
	Self-Perception	.002	.004	.265	.000
	Type A	.000	.777	.005	.000
	Anxious Reactive	.	.071	.003	.000
	Control	.071	.	.977	.004
	Occupational	.003	.977	.	.000
	POSTSUM	.000	.004	.000	.
N	Predicted Stress (post)	33	33	33	33
	Adaptation	37	37	37	37
	Frustration	37	37	37	37
	Overload	37	37	37	37
	Deprivation	37	37	37	37
	Nutrition	37	37	37	37
	Self-Perception	37	37	37	37
	Type A	37	37	37	37
	Anxious Reactive	37	37	37	37
	Control	37	37	37	37
	Occupational	37	37	37	37
	POSTSUM	37	37	37	37

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).