

**THE EFFECTS OF AN INTERVENTION PROGRAM ON  
STRESS MANAGEMENT WITH SCHOOL PERSONNEL**

by

**Delores Leary Wilson**

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APPROVED:

~~Jim C. Fortune~~  
Co-Chairman

~~Robert Richards~~  
Co-Chairman

~~Houston Conley~~

~~Kenneth Underwood~~

~~Ulysses Spiva~~

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Committee Co-Chairmen: Jim Fortune and Robert Richards  
Education and Administration

(ABSTRACT)

This study describes the effects of a structured employee wellness program as related to stress management in an elementary school of thirty-eight staff members. The study was designed to measure the residual effects of the intervention program after subjects completed the sustained personal program of stress management with emphasis on relaxation techniques. The research design in which the wellness program tested was a behavioral modification study which used subjects as their own controls across two baseline stress assessments.

The instruments used to measure the perceived sources of stress, levels of stress, subjects knowledge of stress and identified symptoms of stress were: 1)the General Well-Being Schedule; 2)How to Manage Stress Computer Program Tests; 3)State-Trait Anxiety Inventory

and 4) Personal Exit Interviews. These assessment instruments, except for the interviews, were used before and after each intervention treatment.

In addition to the above measures, other criterion data included observations during the intervention program and after individual and group activities. These observations were done to show how school employees succeed in using stress management and relaxation techniques after exposure to the specific interventions.

Analysis was made using network comparisons across both assessment periods. The networking included the implementation of Stress Managing Techniques and How to Manage Stress Computer Program.

To My Husband

Whose unselfish love,  
patience, encouragement and support  
made it possible for me to achieve a goal  
and whose understanding and underlying pride  
in my success was always present in the pursuit of a goal.

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## CHAPTER I

### INTRODUCTION

"Wellness programs at the school work site can help reduce absenteeism and improve performance on the job - in and out of the classroom. A healthier staff gets more done. Fewer substitutes in the classroom mean more time on task for the students and thus more learning. Reduced incidence of job burn-out and turnover also contributes to keeping educational resources focused where they should be" (Barbour, 1985).

Americans are living in the middle of a wellness revolution which emphasizes stress reduction. Individuals are exercising, dieting, meditating, eliminating habits such as smoking and building new ones that offer the promise of healthier, fuller and more enjoyable lives. The wellness revolution is rooted in a large body of medical research which tells individuals that what is done strongly affects how long and how well they will live (John Hancock Mutual Insurance Company).

Doctors, drugs and hospitals help individuals deal with illness. Sensible preventive maintenance, that is, getting adequate rest, eating properly, watching weight, exercising and avoiding harmful substances - all help individuals to achieve wellness. Learning to live with life and learning to deal with the stresses of every day living is a fundamental part of the total well-being (The Wellness Revolution).

Health management programs in school systems have been slow developing. Most school districts have done little to establish such programs. The establishment of health management programs would assist schools to develop healthier staffs as well as enjoy a more productive efficient school. A school staff that practice wellness will, by its example, provide one of the most effective ways of developing good health habits in pupils.

Schools may do well to take lessons from big corporations when it comes to establishing workplaces where employees may go to practice wellness activities. The establishment of areas for employees to practice wellness activities is important since the school, as a work site, will always house tensions, anxiety and stress. According to Mark Tager, as a national average for school districts:

- One in six employees has hypertension;
- One in ten has problems with alcohol or drugs;
- Half are obese;
- Almost a quarter of the male employees will die of cardiovascular disease before age 65 (Barbour, 1985).

Providing a place to practice wellness techniques is not enough. It is important that the individuals who work in the schools learn methods-physical and mental- that can be used to cope with the tensions, anxieties and stressors and avoid their most destructive aspects (Barbour). In addition to developing intervention techniques for good physical and mental well-being, developing a wellness program at the school work site will help in the reduction of the health care cost. In 1982, the United States spent more than \$320

billion for health care (Barbour, 1985). According to a Cooper and Lybrand Study, private companies are paying employees as much as 25 percent of their total payroll for health care, including hidden or forgotten items such as:

- Absenteeism;
- Disability;
- Turnover;
- Decreased productivity; and
- Replacement/recruiting (Barbour, 1985).

Generally, health management programs are conducted in different ways since there is no single blueprint for success. Different schools or school systems should develop their own approach to establish effective health management programs at the school work site. A specific program was developed and implemented for the personnel at Diggs Park Elementary School. The intervention program was designed to develop relaxation techniques and stress reduction. Some of the relaxation and stress reduction techniques that were presented included: 1) methods of breathing 2) nutrition and exercising, 3) meditation and 4) an interactive computer program on how to reduce stress.

According to research done by American Family Institute (AFI), the physical response to stress is automatic. Individuals can teach themselves how to handle the stressors. Relaxation training, systematic desensitization and meditation are effective self

management procedures for coping with stress and anxiety (Vattano, 1978). When these procedures are learned, the state of emotions is less likely to affect the body's health. Research has shown that doctors are beginning to realize that the best treatment for stress is not tranquilizers, which only treat some of the symptoms, but reducing the reaction to stress. (Whittlesey, 1986).

#### Statement of the Problem

It is not known if the residual effects of stress management exists. Therefore, this study measured the effects of the stress management intervention program in reducing levels of stress of school personnel.

#### Purpose of the Study

School personnel differ with regards to the amount and kind of activities they consider worth doing to meet the exigencies of their daily lives and to assure their future security. School districts have done little to develop wellness programs with emphasis on techniques stressing degrees of coping with personal and professional sources of stress whether internal or external. Less has been done in the area of teaching school personnel how to deal with their stress and to develop methods of coping with stress by developing techniques for relaxing. The purpose of this study was to research, design, describe and measure the effects of the stress management intervention program in the reduction of stress with utilization of relaxation techniques.



### Significance of the Study

According to the American Family Institute, individuals do not have to fall victim to stress diseases. Individuals may change the method of how their bodies react to stressors. They can learn stressreduction with practice. Individuals can learn to react less to the smaller stresses of daily life. Many doctors now believe that modifying the body's response to stress can help prevent or slow down the development of many stress-related diseases.

A design and testing model for work site health promotion at an elementary school could provide answers to the growing problems related to teacher and other staff job-connected to stress and burnout. This primary concern could be extended to provide valuable information for school administrators and school boards who are perplexed by the rising costs of employee health care, absenteeism, and lost employee productivity.

In this chapter, an introduction of the wellness concept as related to stress management is made. Additionally, a general overview of a wellness program as the treatment was presented. The study was incorporated into a structured intervention program to provide program ideas, techniques and answers for the reduction of escalating health care cost, lost productivity, absenteeism, sickly employees, job stress and burnout. As previously stated, it has been shown that public school employees are not immune to these detrimental entities. The subsequent chapters attempt to incorporate a comprehensive

approach to designing, implementing and analyzing results.

### Research Hypotheses

This study tested a behavioral modification program using subjects as their own controls across two baseline stress assessments as reported by employees at Diggs Park Elementary School. The residual effects of the intervention on the ability of subjects to maintain a sustained personal program of stress management as measured by the 1) General Well-Being Inventory, 2) the State Trait Anxiety Inventory 3) pre and post tests from the computer program - How to Manage Stress and 4) personal interviews were used and studied.

Based on the above description of the methodology used, three research hypotheses were tested:

1. There will be no statistically significant ( $p < .05$ ) differences between the subjects reported level of stress before and after the intervention program as assessed by the pre and post assessments.  
The research hypothesis is that the scores on the GWBS will increase after the intervention program.
2. There will be no statistically significant ( $p < .05$ ) differences between the subjects identified knowledge of stress management and prevention as measured by the pre and post assessments. The research hypothesis is that the scores on the How to Manage Stress Computer Tests will increase after the intervention program.

3. There will be no statistically significant ( $p < .05$ ) differences between the subjects identified symptoms of stress, stress management and prevention techniques before and after the stress intervention program as measured by pre and post assessments.

The research hypothesis is that the scores on the STAI will increase after the intervention program.

The study was set up with a one group - a single subject research design. Treatment was given for a twelve-week period. The design was ABA - Baseline, Treatment, Baseline. Frequency distributions, matrix, chi square, T-test and ANOVA comparisons and interpretations were made to determine the effect of the intervention program.

### Definition of Terms

For the purpose of this study the following definitions apply:

1. Behavior Modification: Is an observable response to activity when change or modification is caused by influence and can be measured by quantifiable effects.
2. Coping with stress: Methods and techniques used for dealing with stressors.
3. Distress: Stress response which is unfavorable and potentially disease-producing (Morse, 1979).
4. Intervention: To change a behavior by the way of

modification.

5. Intrapersonal Conflict: The perceived sources of stress resulting from conflicting demands made upon job tasks and individuals' beliefs and goals (Swent, 1978).
6. Job Event: Job event refers to the perceived sources of stress resulting from job related activities engaged in by instructional personnel.
7. Job Stress: Job stress is the condition in which some factor or factors at work interact with the worker to disrupt psychological or physiological hemostasis.
8. Residual: Residual is an internal aftereffect of experiences that influence later behavior (Webster, 1975).
9. Stress: Stress is the nonspecific response of the body to any demand made upon it (Selye, 1975).
10. Stress Management: Techniques used to control the stressors placed upon the body. This may include meditation, biofeedback, nutrition and exercise.
11. Wellness: Wellness is synonymous with the term health, health promotion, and lifestyle intervention... "A state of complete physical, mental and social well - being, not merely the absence of disease or infirmity" (Hamm, 1985).
12. Relaxation Response: This is the utilization of mind and body control (Carlton and Brown).

### Limitation of the Study

This study was limited to members of the Diggs Park Elementary School staff for the school year 1987-1988 who volunteered. The membership of the staff was thirty-eight. The findings were based solely upon response provided by subjects participating in the program. The findings of this study were generalized only to those employees volunteering.

### Overview of the Study

Chapter One provided a framework for the behavioral modification study of the effects of a stress management intervention program as perceived by the staff in Diggs Park Elementary School. It consists of background information on the topic of stress; a statement of the need for such a study; the hypotheses tested; definition of terms, and limitation of the study.

Chapter Two gives a review of the literature on stress, particularly as it relates to the work site and to public schools.

Chapter Three contains a discussion of the research design and methodology used in this study as well as a description of the population and measurement instrumentation.

Chapter Four presents an analysis of the data as well as discussion of the results.

Chapter Five contains the summary, findings, conclusions and recommendations based on the analysis of the data generated by this study.

CHAPTER II  
REVIEW OF LITERATURE AND RESEARCH  
INTRODUCTION

This chapter presents a review of the literature, as researched, concerning the wellness concept in general and specifically the stress management/relaxation component in a wellness program. Wellness ideology is embedded in the central theme of "choice". Individuals exposed to wellness ideas activities or programs have the ability to decide- make a choice - about their own personal lifestyles. The choices individuals make about exercising, eating, smoking, emotional outlooks, and personal attitudes will determine how they feel, look, work, and live (Kaldy, 1985).

**WELLNESS IN THE WORKPLACE**

In a document published in 1972 by the Department of Health, Education and Welfare, it was concluded that work accounts for many mental disorders and physiological diseases, including heart attacks, hypertension, cancer, and high blood pressure. While causal factors correlating work conditions with both mental and physical disorders are often ignored, this correlation is too convincing to dismiss. When individuals work together; conflict, anxiety, frustration and aggression creep into their lives with few outlets to relieve pressures and stress (Gmelch, 1982).

It is important to identify the sources of stress at work in order to design an intervention program which will eliminate occupational diseases. A study by Cooper and Marshall identifies some sources of stress at work as well as individual characteristics, symptoms of ill health and occupational diseases in a review of literature relating to coronary heart disease and mental ill health. See Figure I (Cooper and Marshall, (1976).

Research has shown that the same sources of stress provoke different reactions in different individuals. An individual's susceptibility is determined by both genetic and developmental characteristic. According to Gmelch, a great deal of research has been conducted to try to determine the relationship between different individuals' dispositions and their consequent vulnerability to stress related illnesses.

Stress related illnesses were recorded in studies by Friedman and Roseman (1974) by behavior types. They showed distinctive "Type A" and "Type B" personalities. Type A is more susceptible to high blood pressure and increased cholesterol levels which contribute to agglutinate stress-related illness, or coronary heart disease. Recent findings from a twenty-two year research project found that Type A's were twice as likely as Type B's to develop coronary heart disease. This is because anxiety causes the release of adrenaline in the body, which "has adverse effects" for coronary heart disease and can be triggered for sudden death (Roseman, 1985). Type A's are

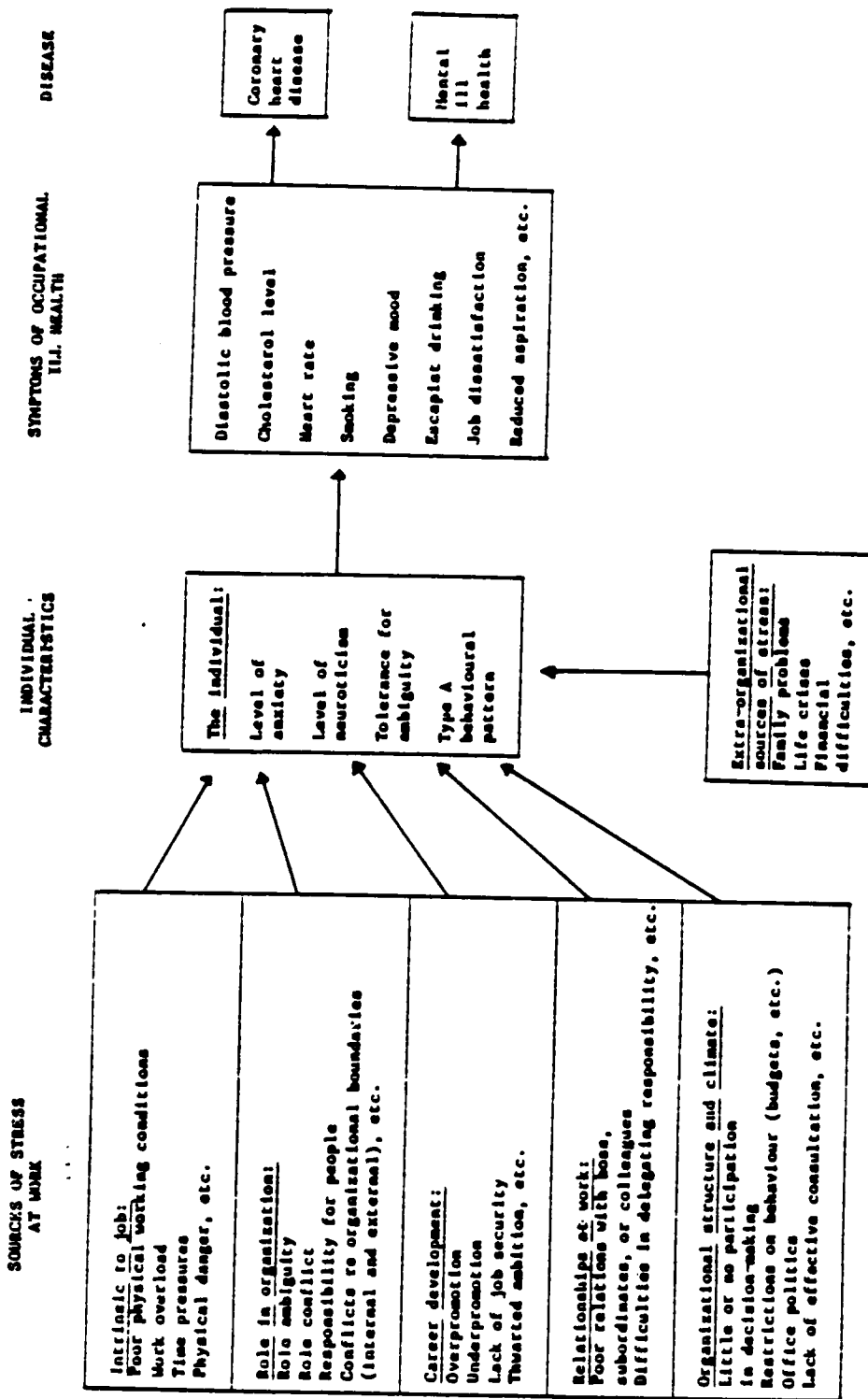


Figure 1. A Model of Stress at Work (Cooper and Marshall, 1976:12)



known for being anxious, stressed and almost always in a hurry which gives them the susceptibility to have a heart attack (Roseman, 1985). Sally Squires stated in her article "Type A people usually have aggressive competitive personality traits, are hard driving, demands perfection, are ambitious, are constantly on the go and are usually "Workoholics."

The Type B person is usually calm, slow paced, is not a perfectionist, is relaxed, in control, easy going, understanding, confident and is usually happy on the job as well as enjoys leisure and weekends. According to Roseman's research, the Type B's handle stress better, not because they don't care, but because they are usually striving for personal excellence (Witkin-Lanoil, 1985). "Type B people are compatible with achievement, hardwork and success. Type B's can do and achieve as much as Type A's, although their goals are often more realistic and less demanding".

According to Dr. Friedman, Type A's can become Type B's with practice (Witkin-Lanoil). Becoming a Type B person can be done by re-examining success to identify the real reason for their creativity, decision-making ability organization, leadership, broad perspective and determination (Ledger Star, 1985).

### What Is Stress?

Stress is one of the focal points of daily conversations as

well as headlined through television, radio and newspapers. There are increasing numbers of conferences, stress centers and university courses related to the topic of stress. Yet there are few people who define the concept the same way or even bother to attempt clear-cut definitions "(Selye, 1976).

The business man thinks of stress as frustration or emotional tension, the air traffic controller as a problem in concentration, the biochemist as purely chemical event and the athlete as muscular tension. This list could be extended to almost every human experience or activity and most people-be they chartered accountants, businessmen or surgeon- would think of their own occupation as the most stressful (Selye).

Selye formulated the definition of stress as "the monopolistic result of demand upon the body", be it as mental or semantic demand for survival and the accomplishment of aimless. "It was the formulation of this definition, based on objective indicators such as bodily and chemical changes which appear after any demand, that has become so popular that it is often referred to as "stressology" and has come out of the stage of vague cocktail party chitchat into the domain of science."

Public schools are not immune to the health problems facing business and industry. "School administrators, like their peers in the corporate world are susceptible to the hazards of executive stress and burnout" (Koff, 1981). Teachers suffer chronic illness due

to stress of accountability, declining enrollments, less mobility, and higher costs of living (Frey, 1983).

### Why A Stress Intervention Program?

Systematic research on stress in a school setting, especially with elementary teachers is notably lacking (Pellegreu and Wolfe, 1982). Most of the literature available consists of workshops, personal reports, observations and techniques designed to remedy the problem rather than correct them (Quick and Quick, 1979). School personnel can easily identify daily stresses, including disruptive students, lack of administrative support, and student verbal and or physical abuse (Chickon and Koff, 1978). Little empirical information exists concerning teachers perception of the assets of classroom teaching and the factors that would improve their job satisfaction.

There are several compelling reasons for focusing on wellness efforts on the school as a work site. According to the American Health Association (HIAA) and the American Council of Life Insurance (ACLI) "Schools are one of the largest employers in the country. Improving the health of such a substantial part of the workforce would significantly affect national health care cost "(HIAA. ACLI, 1985).

Charles Barbour (Health Insurance Association of America and the American Council of Life Insurance, 1985) commented on the difficult

aspects of evaluating existing wellness programs in a precise manner. He stated:

" In an educational setting, measures of productivity may be artificial and therefore misleading. Sometimes finding volunteers for control group studies is difficult. Sometimes privacy issues constrain research and analysis. Yet keeping in mind that evaluators face these difficulties and that many real program results (such as improved morale) are intangible. The program administrator will find clear-headed analysis is possible."

" Attempts to quantify the human rewards that stem from wellness at the school work site programs will probably fall short of creating a precise picture of what has happened; but school building staff will let it be known whether or not the bottom line is success. Judging from national experience in wellness at school work site programs, the result will be positive."

According to an extensive survey conducted by the Control DataCompany of Staywell (1983), which was to give marketing and management accurate information, it was discovered that from 1982:

"People with poor health habits have higher health care costs;

Longer hospital stays;

Lower productivity;

More absenteeism; and

More chronic health problems than those who do not."

Staywell also found that smokers have 25% higher health care costs and 114% longer hospital stays than non-smokers. People who do not exercise have 36% higher health care costs and 54% longer hospital stays than people who do. Research has also shown why over 10 percent of the Gross National Product is spent on medical care - and the "lion's share" of this tab is paid through business employee insurance plans (Gechtel, 1982). These cost realities are the reasons why wellness and employee health have become a major concern to individuals and their work site employers.

Studies indicate that people involved in prolonged, constant, intensive interaction with people in an emotionally charged atmosphere are susceptible to stress. This atmosphere is characteristic of the teaching profession. Maslack and Jackson (1981) classified three distinct aspects of the stress syndrome--emotional exhaustion, negative attitudes towards clients, and loss of feeling of accomplishment in the job. Studies by Anderson (1980); Crane (1981); Ivancevick and Schwab (1981); McIntyre (1981); Schwab (1980); Schwab and Ivancevick (1982) have applied the research of Maslack to the teaching profession (Goldberger, 1982).

Public schools have also been involved in wellness programs and studies. The rising health care costs and ramifications to the

budget of replacing such employees with substitute teachers has encouraged school boards and administrators to seek solutions (Koonce). Fairfax County, Virginia spent over 3.3 million dollars for substitute teachers in 1982 (Sherre, 1983); New York City topped \$16 million for the same expense in the 1978-1979 school term. Other districts also felt the pinch: Jefferson County, Kentucky, \$1.6 million in the 1978-1979 school term; Chicago, \$5 million; Clark County, Nevada, \$1.4 million; and Detroit City, \$7.4 million during the 1983-1984 school term.

Recent studies have shown that teaching is perhaps the most stressful profession today. In the past, it was once thought that policemen, firemen, and air traffic controllers faced higher levels of stress, and had more stress related illnesses and problems.

Research indicates that perhaps teachers face greater stress because the kinds of stress that police and firefighters face are high intensity but short duration forms of stress, where teaching is a different form of stress. Teaching is more a low level stress that continues unabated year after year. Now research is finding this chronic exposure to stress has a more devastating effect on the body than other forms of stress which are high intensity and short duration (Bates, 1984).

According to Koonce (1986) Lloyd J. Kolbe (1985), the associate director for the University of Texas Center for Health Promotion, Research and Development, states that "programs for health promotion

in most public schools have not been structured to simultaneously improve the health of school faculty, administrators, and staff". The interrelationships among school health promotion and educational outcomes are depicted by Kolbe in Figure 2. The components of the school health promotion program should provide an equal effect on both student and faculty health-related behaviors. The research indicates that school health promotion programs usually are implemented without integrating the components depicted in Figure 2. Staff, faculty, and administrators are left out of the school health promotion picture.

School Health Promotion Outcomes

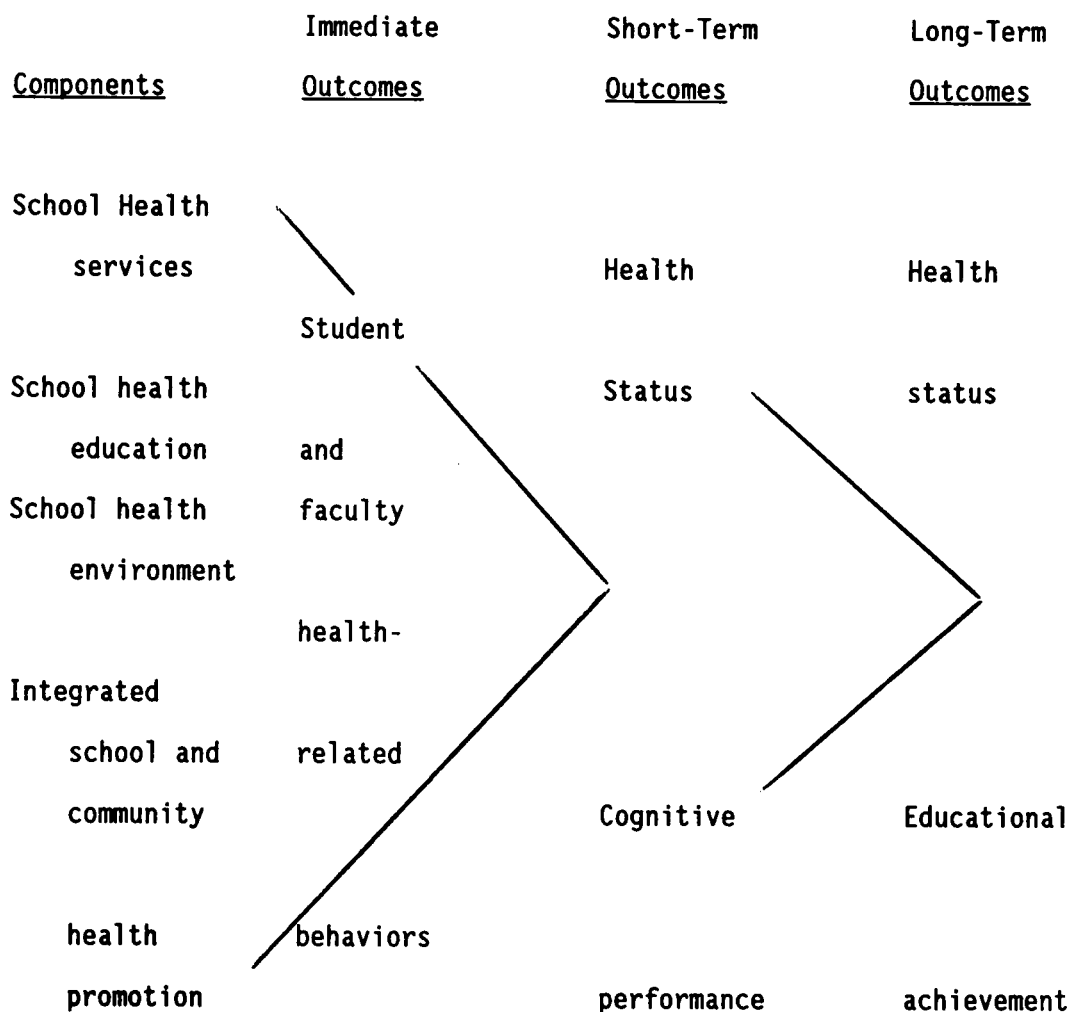


FIGURE 2

SCHOOL HEALTH PROMOTION TO IMPROVE  
HEALTH AND EDUCATIONAL OUTCOMES

-KOLBE (1985)



## EXPERIMENTAL STRESS MANAGEMENT RESEARCH

A few years ago stress was labeled the disease of the 1980s. Today stress management is fast becoming the boom industry of the decade according to Newsweek. Hundreds of companies now provide their workers with stress management programs - with everything from counseling to exercise to juggling (Penelope Wang and others, 1988).

A recent study of a California Corporation showed that stress-induced jobs have caused health-care cost of stress to double in the last five years...with billions at stake. Large companies are developing cost-effective formulas for stress management. Many large corporations, such as A T and T, include stress reduction as part of a more comprehensive "wellness" programs. Weeden and Company, a Wall Street trading firm, hired Intervention Health System, a massage clinic, to give on-the-job- "acupressure" to the staff. With the increase of such companies, the question some researchers ask is, Do these stress management programs work? According to Wang and others: "many corporations cite figures showing improved productivity and reduced absenteeism." Presently there is no study known that has demonstrated the cost-effectiveness of these programs.

"Medical experts maintain that companies can design an effective stress-management program by following some basic guidelines. They should do an initial "stress audit" to evaluate sources of tension in the workplace. To be of lasting value, a

regimen should include follow-up evaluation and reinforcement" (Wang).

### School Site Wellness Programs

A few school systems have developed wellness programs for school personnel for much the same rationale as that of business and industry. The reasons for developing such programs include the reduction of high health costs and lost of productivity. These programs have included activities such as wellness nights, nutrition programs, workshops, lectures as well as health screenings (blood pressure, pulse rate, weight, body fat, cholesterol and others) and seminars related to dieting, stress, fitness, substance abuse, and others.

Waynesboro High School developed a "Wellness Night" program. This program involved not only staff members but included citizens, students as well as school personnel.

The State Department of New York developed a Physical Fitness/Heart Disease Intervention Program in 1981. This program includes physical exercise activities as well as educational seminars. The intervention program resulted in a difference of missed 46.5 hours following completion of the program compared to 73.5 hours for all New York State employees during that same year (Young, 1981).

A wellness program was organized by Deep Creek High School in Chesapeake, Virginia. The Deep Creek High School program was organized for faculty and staff members. The program was a cooperative effort of this school and Lifestyle Plus Center of Chesapeake General Hospital. The networking of the two agencies resulted in the development of an in-house wellness committee. The wellness committee organized an aerobic exercise program, a walking program as well as other health activities. As a result of the group risk appraisal it was found that 70% of the teachers who took the appraisal had moderately high to high stress along with other high risk areas. The profile also identified 58% of the faculty and staff interested in stress management programs as well as 26% interested in blood pressure management (Koonce).

Dallas Independent School System developed a very elaborate Wellness Program. They chose the Personalized Aerobics Life-Style System as a model for their wellness program. It consisted of eight parts which included an evaluative instrument, a nine-item checklist, to measure participants ability to manage stress. The results were based on how the participants changed. According to Blair (and others, 1984) the teachers in the treatment group appeared to have increased their fitness knowledge, exercised more, and showed an improvement on general well-being and self-concept scales.

Additional research conducted in the school work site included studies done by Sharp, Calder, Croyle, Mitchell and others. Their

evaluations were done through pre and post survey data that school personnel in the treatment school completed. Most studies showed improved physical fitness, lost weight, higher level of general well-being and that participants were better able to handle job stress.

Calder completed a stress intervention program using 1730 volunteer teachers from the Dallas Independent School District during the 1982-1983 school year. The intervention treatment included counseling to establish stress management goals. In Calder study, it was found that higher stress levels had links to demographic characteristics of teachers (race, teaching experience and gender) and to characteristics of their work environment (Koonce).

Mitchell's study, *The Effects of a Wellness Program on Secondary Teachers Management of Job Related Stress*, revealed through a post-hoc ANOVA comparison that only one significant difference was not directly related to the wellness program. Her population included an experimental group which consisted of 58 teachers who received regular exercise and aerobic exercise programs as the wellness intervention modality and a control group composed of 56 participants who did not formally exercise during the 20-week experiment. The Maslach Burnout Inventory and the Schedule of Recent Experience were the dependent variables to measure management.

The effects of stress management training, a component of wellness, was assessed by Sharp (1982) in her study of sixty

volunteer public school teachers over a four-week period. The assessment measure used for treatment effects was the State Trait Anxiety Inventory (STAI). The teacher Anxiety Observation Scale was also used to measure teachers' responses to student behaviors. Results showed the control group had remained unchanged on all measures and the treatment groups indicated that the stress management training lowered teacher anxiety and produced an improvement in teacher classroom responses.

According to research conducted by Koonce, (1986) he found that forty-two volunteers from the Greensboro, North Carolina Public Schools were used in Oakland's (1981) study on stress levels in public school teachers. This measured various self-control relaxation strategies (i.e., progressive muscle relaxation training and relaxation response training). Blood pressure, heart rate, and the State-Trait Anxiety Inventory (STAI) were included as dependent measures. From the training in relaxation for five weeks, it was shown that significant decreases in self-reported state anxiety were found when compared to the control group."

Croyle (1982) also found positive results in stress reduction due to progressive muscle relaxation techniques. Croyle studied twenty-five teachers who were trained during five three-hour workshops. The Teacher Stress Survey, a 50 item likert type scale, was used to measure educational stress. Pre and post Teacher Stress Survey results were analyzed by a t-test and indicated

a "significant decrease in scores -- suggesting vulnerability to stress decreased" after participation in the intervention program.

"According to the American Academy of Family Physicians, two-thirds of office visits to family doctors are promoted by stress related symptoms. Particularly affected is the teaching profession and other helping professions" (Tupes, 1985).

More medical insurance claims are being filed by teachers than those from other professions. The number of teachers qualifying for a "breakdown" pension has tripled. Some surveys indicate that 90 percent of all teachers feel some stress and 95 percent indicate the need for stress management courses (Tupes).

According to research presented by Koonce in his wellness program, "An excellent opportunity to pursue work site health activities is to implement wellness programs for our nation's public school employees." Improvements in their health would significantly affect the health care cost, as well as provide practice wellness opportunities by providing effective ways of developing good health habits in students.

According to Gmelch, the key to stress management and alleviation rests with the wise old adage that suggests that one should have "the courage to change the things that can be changed, the serenity to accept the things that cannot be changed, and the wisdom to know the difference." There is a need to identify the

causes of stressors that can be controlled and resolved. Those that are inherent in jobs and cannot be controlled must be lived with. The idea is to attack their symptoms rather than their causes.

Hans Selye pointed out in his research that despite everything that has been written and said about stress and coping behaviors, not one ready-made solution suits everyone. Since there are differences in responses, the best information an individual can receive is to raise the level of consciousness of stress so that stressors can be recognized and alleviated before stress problems occur.

Stress is a multidimensional phenomenon, and if its detrimental effects are to be reduced, the individual's entire style of living must change to some degree. There must be a reduction in the stressfulness of the environment and this must be accompanied by an attempt to change some stress-producing personality characteristic. One or several techniques of relaxation must be mastered, and nutritional and exercise patterns must be altered (Girdano and Everly, 1979).

The need to improve public education should be evident to all. Stress intervention will have to become a major focal point of the educational systems throughout the country. In an extensive recent research study (PGTA, 1985) conducted in Prince George County, Maryland, nearly half of the public school educators cited low pay, high stress, large classes, and disciplinary problems as the reason they are considering leaving the teaching profession. Twenty-two

percent of the seventy percent responding have received professional counseling or medical attention because of job related stress during the 1984-1985 school year.

Individual intervention is an important aspect dealing with stress. Ryerson (1981) indicated that training school staff in stress-reduction technique often has a short-term effect. Long-term results can be achieved by alleviating or reducing those sources of organizational stress contributing to the accumulation of teacher stress.

Employees will find different stressors identified as well as different coping solutions, when they develop personal and professional techniques to control their stress. They must realize that they are responsible for their reactions to the stressors.

Given the number of roles school personnel are called on to play (Edgerton, 1977) and the number of interactions they enter into each day, there is no way they can always be successful. Programs of stress management should help these individuals set realistic standards for themselves. Teachers, especially, must get rid of the myth of the "super teacher" and begin to focus on and feel satisfied with the successes they do have. Instead of thinking about what went wrong on a given day, they should learn to think about what went right. Stress management programs can help teachers identify their problems, find ways to deal with them, and provide support for each other.



### Blood Pressure and Stress

According to Herbert Benson, humans react in predictable ways to acute and chronic stressful situations. When humans are faced with situations that require behavioral adjustments, the involuntary respond with increased blood pressure, heart rate, rate of breathing, blood flow to the muscles and metabolism prepare them for conflict or escape.

High blood pressure is very dangerous because it increases the rate of development of a disease called atherosclerosis. The higher the blood pressure, the greater risk of atherosclerosis (Benson, 1975).

Blood pressure is an extremely fluctuating physiologic function. Blood pressure is measured when the heart muscle is contracted - systolic blood pressure. When the heart is relaxed between beats, diastolic blood pressure is measured. When individuals are actively exercising or emotionally upset, the bloodpressure is higher than when the individuals are resting quietly or sleeping. Blood pressure is generally expressed by two numbers, as 120/80 which represent the "normal range" (Whittlesey, 1986).

Research indicates that following routine conditioning through aerobic exercise training, blood pressure is lower at an absolute workload than it was before conditioning (Matthews, 1976). Four recent studies used blood pressure as a physiological data-gathering

instrument to analyze the effectiveness of wellness programs: Blair (1984) tested 19 subjects on resting blood pressure measurements before and after a seven (7) week aerobic exercise program; Prothro (1983) in her investigation of a holistic wellness program and the intervention's effect on a delinquent female population. Researchers at the University of San Francisco used blood pressure as a physiological data gathering instrument. They divided college students who volunteered for the program. They were placed into groups to study the effects of a fourteen-week exercise program (Koonce, 1986).

#### SUMMARY

In summarizing the cited research, there is a need for special training and preparation for working closely with people. Such training should focus on the personal stress involved in the work. Professionals and paraprofessionals as well as other school staff members need to be made aware of the importance and relevance of their psychological state to their work with other people.

It was emphasized that stress is a sociological phenomenon that should not be overlooked. How society views this phenomenon will greatly influence its prevalence and visibility.

All staff working in the school environment has serious ramifications for the educational profession and public at large. Therefore, all staff members need to develop stress management techniques needed for coping and alleviating stress that is negative.

## CHAPTER III

### RESEARCH METHODOLOGY

Chapter III presents a description of the methodology and the procedures that were utilized in this study. This chapter is divided into six (6) sections. The first section describes the population. The second section describes the intervention program components. The third section discusses the research design. The next section discusses the instruments used to determine the residual effects of the intervention on the ability of subjects to maintain a sustained personal stress management program. Statistical treatment of the data is presented in section five, followed by the summary in section six.

#### IMPLEMENTING AN INTERVENTION PROGRAM

##### Selection of the Population

This study was conducted with the faculty and staff members of Diggs Park Elementary School located in Norfolk, Virginia. The Stress Intervention program was open to all teachers, teacher assistants, administrators, secretaries, cafeteria personnel, custodial personnel, and support personnel at Diggs Park Elementary School during the 1987-1988 school year. The actual population in this research included all of the school personnel mention above who

volunteered during the 1987-1988 school year. The study design is a one group-single subject research design. Each individual served as a control of him or herself.

Diggs Park is a small elementary school located near a housing project in the City of Norfolk. Diggs Park Elementary School houses pre-kindergarten through fifth grades. During the 1987-1988 school year, there were thirty-eight faculty and staff members at this school.

### The Intervention

The components of the intervention program included educational seminars to provide general information concerning the holistic approach to life-style management as well as topics related to relaxation and time management as indicated in figure 3. The computer program "Stress Management" presented structured step by step activities designed to self-motivate subjects to understand the wellness concept and to enjoy doing something healthy for their bodies, minds and total well-being.

### Research Design

Since there was only one group-single subject control, all subjects were pretested. Each subject was administered the General Well-Being Schedule, the Trait Anxiety Subscale of the State-Trait Anxiety (STAI), the pre and post computer stress program tests and an

**STRESS MANAGEMENT  
BEHAVIOR MODIFICATION INTERVENTION TREATMENT**

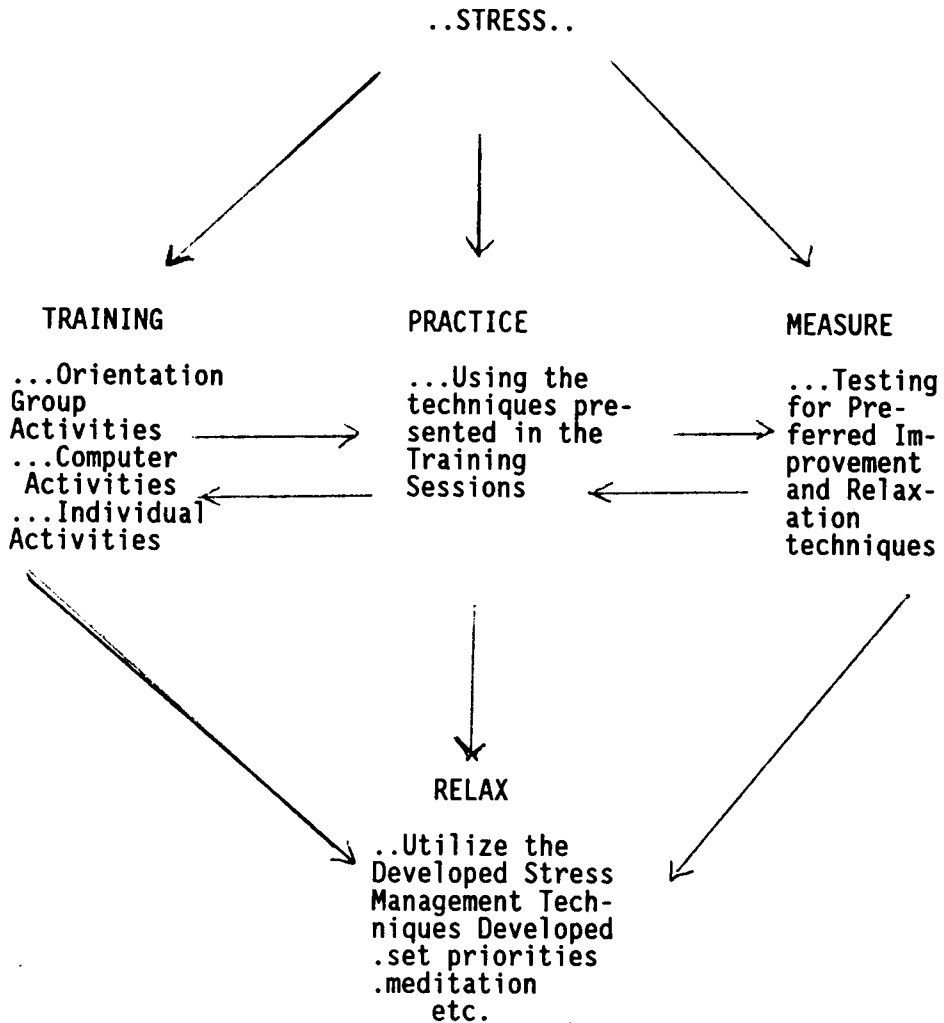


Figure 3

exit interview session.

The wellness seminars, handout materials and computer program included the following topics:

- I. Orientation to Intervention Program
- II. Securing Demographic Information
- III. Pretest to determine participants knowledge and feelings as related to their general well-being and stress levels.

#### IV. Seminars

- A. Wellness Overview and Relaxation Techniques  
Dr. Robert Richards
- B. Becoming Aware of Stressors and Knowing What to do About Them - Dr. Gloria Boxie
- C. General Health/Holistic Health - Dr. Glenn Koonce
- D. The Art of Managing Time - Dr. Gloria Boxie
- E. The Art of Relaxation - Stress Intervention Techniques - Dr. Robert Richards

#### V. Structured Computer Program - "How to Manage Stress"

- A. How to Identify Personal Stressors
- B. How to Respond Positively in Stressful Situations
- C. How to Use Relaxation Techniques to Cope With Stress
- D. How to Use Relaxation Techniques to Cope With Stress Part II.

- VI. Blood Pressure Readings
- VII. Post Tests
- VIII. Exit Personal Interviews

### Research Instruments

Four types of instruments were used in this study to collect data during the intervention program. These instruments were:

1. General Well-Being Schedule (GWBS)
2. State Trait Anxiety Subscale of the State Trait Anxiety Inventory (STAI)
3. "How to Manage Stress" Computer Program Tests
4. Exit Interviews

There is a tendency for individuals to have high blood pressure when they are stressful. Because of this concept, part of the intervention program was to monitor participants' blood pressure twice a week. The pressure readings were taken on Mondays and Fridays to determine which day if any indicated a lower reading. The blood pressure measurements and recordings were taken by the Public Health Nurse, who works in Norfolk Public Schools. The nurse used a sphygmometer and stethoscope on each participant's left arm. The blood pressure measurement was selected because this type of assessment was identified in the review of literature as a method used in similar studies to assess stressful situations and because of

the simplicity of measurement.

#### General Well-Being Schedule (GWBS)

The use of the General Well-Being Schedule (GWBS) was an initial effort directed toward the use of a highly structured instrument for assessing self-representation of subjective well-being and distress. The instrument was developed in 1970 for the National Center for Health Statistics (NCHS) by Dr. Harold Dupuy. Between the years of 1971 and 1975, 6,900 adults were assessed by the NCHS on how well they coped with life. Since that time the GWBS has been used in research to provide useful data in the measurement of population changes in regards to well-being over a period of time (Chilton, 1983). Blair used the GWBS in his study of the Dallas Independent School District. Blair indicated that all of the General Well Being...indicated an improvement in the treatment groups. One of the most important clinical uses of the GWBS was made in the Sacramento, California Division of Mental Health. It was initially administered to patients upon admission to various mental health programs, weekly thereafter until treatment was terminated, and again at a three month posttreatment follow-up (Fazio, 1977).

#### Trait Anxiety Subscale of the State-Trait Anxiety Inventory (STAI)

Koonce stated in his study that the State-Trait Anxiety



Inventory was used as a dependent variable by Sharp (1982) and Oakland (1981) in their separate studies on strategies to reduce stress. Murray (1982) used the STAI in his stress reduction study involving hospital staff members. Prothro (1983) studied delinquent female behavior and its relationship to stress. Her study involved a holistic wellness intervention program and included a measurement on the STAI.

Theodory and Day described the Trait-Anxiety Subscale as correlating significantly with other measures of stress and anxiety such as, the test by the Institute for Personality and Ability Testing (IPAT) ( $r=+.75$ ) and the Taylor Manifest Anxiety Scale ( $r=+.80$ ). The researcher used the pre and post data from the STAI to analyze the differences in the subjects' emotional reactions as expressions of personality states. (Spielherger, 1983).

The assessment instrument used for measurement of hypothesis three for the Wilson's intervention program was the State - Trait Anxiety Inventory (STAI Form Y) because the instrument is a self-evaluation questionnaire and because the STAI had been used extensively in research to investigate the effects of anxiety or stress performance in many areas. It has also been used to make the distinction between the concepts of stress and anxiety, and to differentiate between stress as a transitory emotional state. Additionally, the STAI has been used in investigations of stress related psychiatric and medical disorders and as an outcome measure

in research on biofeedback and various forms of treatment (Spelberger, 1983).

### Data Collection

This research experiment began March, 1988 and ended May, 1988 (twelve-week intervention program). The procedural time-line is diagrammed in figure 4. Post evaluations were done at the end of each presentation. The demographic data forms collected were kept by one person and the information concerning individual who answered was kept confidential. Each participant was given a code number. That number was used throughout the study.

### Data Analysis

Different statistics were used to investigate each of the three research questions. The statistic was selected based on the measurement characteristics of the data. Descriptive statistics were used to describe the study sample.

### Research Question One

There will be no significant ( $p > .05$ ) differences between the subjects reported level of stress before and after the intervention program as assessed by pretest and posttest assessments. The research hypothesis is that the scores on the General Well-Being

**INTERVENTION PROGRAM SCHEDULE**

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Week 1	Pre Assessments Orientation
	1. General Demographic Information
	2. General Well-Being Schedule
	3. State Trait Anxiety Inventory

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Week 2	4. Treatment / Intervention
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Week 3	5. Treatment / Intervention
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Week 4	6. Treatment / Intervention
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Week 5	7. Computer Program Orientation
	8. Computer Program Pretest

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Weeks 6- 8	9. Computer Program -Intervention -Posttest
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Weeks 9-10	10. Post Test (Total Battery)
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Week 12	11. Interviews
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Figure 4

Schedule will increase after the intervention program. T-test analysis was used.

### **Research Question Two**

There will be no significant ( $p > .05$ ) differences between the subjects identified knowledge of stress management and prevention as measured by the pre and post assessments. The research hypothesis is that the scores on the How to Manage Stress Computer Tests will increase after the intervention program. T-tests analysis was used.

### **Research Question Three**

There will be no significant differences between the subjects identified symptoms of stress, stress management and prevention techniques before and after the Stress Intervention Program as measured by pre and post assessments. The research hypothesis is that the scores on the STAI will increase after the intervention program. Data was analyzed using analyses of frequencies.

**SUMMARY**

Chapter III has been concerned with the development and rationale for the methods that were used to design, collect, and analyze the relevant material and to answer the research questions posed by this study.

The subjects served as their own control. The pretest-post test design was used to measure each individual's baseline information. The study incorporated the use of four instruments to assess mental and physical well-being: (1) General Well-Being Schedule (GWBS) (2) Trait Anxiety Subscale of the State Trait Anxiety Inventory (STAI), (3) How to Manage Stress Computer Tests and (4) Exit Interviews. These instruments were subject to t-tests, ANOVA and Chi Square for data computation and analyzed from the results tabulated.

The results of applying these methodologies to the research design provided a basis on which the researcher could provide scientific inquiry to the problems identified in Chapter I.

CHAPTER IV  
ANALYSIS AND DISCUSSION OF DATA  
INTRODUCTION

This Chapter presents the findings of the intervention investigation based on the three hypotheses which were tested and the analysis of data collected from the population.

The purpose of the intervention program was to research, design, describe and measure the effects of a stress management intervention program in the reduction of stress with utilization of relaxation techniques. The treatment for the intervention study was a twelve-week stress management intervention program. The following hypotheses were tested:

1. There will be no significant ( $p < .05$ ) differences between the subjects reported reaction to stress before and after the intervention program as assessed by the pre and post assessments.
2. There will be no significant ( $p < .05$ ) differences between the subjects identified knowledge of stress management and prevention as measured by the pre and post assessments.
3. There will be no significant ( $p < .05$ ) differences between the subjects identified knowledge of stress management and prevention before and after the subjects intervention program as measured by pre and post tests.

### DEMOGRAPHIC CHARACTERISTICS

The population of the study included school personnel in the Diggs Park Elementary School who volunteered. The makeup of the population was mostly black females representing 63.6 percent of the population. White females made up 27.3 percent of the population and black males made up 9.1 percent of the population, as indicated in Table 1.

The mean age of the respondents was 38.9 years. The largest percent of subjects (33.3) percent were between the ages of 31-40 category while 30.3 percent were in the age category of more than 50 years of age as indicated in Table 2. The largest percent of participants taking part in the intervention program were classroom teachers (48.5) while 24.4 percent of the participants were paraprofessional. See Table 3.

Four (4) persons or twelve (12.0) percentage of the personnel taking part in the intervention program worked less than two years; five (5) or fifteen point two (15.2) percent worked three to five year and eleven or thirty-three point three percent (33.3%) worked 11 - 20 years. See Table 4.

Classroom female teachers respondents were in the majority in this program (.45) followed by female paraprofessionals (.24). See table 5. There was an even number of black and white female classroom teachers. There were eight black paraprofessional. See Table 6.

Table 1

Demographic Characteristics of the Respondents  
Gender and Race

SEX	RACE		TOTAL	PERCENT
	WHITE	BLACK		
MALE	0	3	3	9.1
FEMALE	9	21	30	90.9
TOTALS	9	24	33	100



TABLE 2

CHARACTERISTICS OF RESPONDENTS  
GENDER AND AGE

SEX	AGES < 30	AGES 31 - 40	AGES 41 - 50	AGES > 50	TOTALS
MALE	1	0	0	2	3
FEMALE	5	11	6	8	30
TOTAL	6	11	6	10	33
PERCENT	18.2	33.3	18.2	30.3	

Table 3  
 CHARACTERISTICS OF RESPONDENTS  
 AGE AND JOB POSITION

AGE	JOB POSITION*					TOTALS
	ADM	CT	RT	PP	SW	
<b>&lt; 30</b>						
FREQUENCY	0.0	4.0	0.0	2.0	0.0	6.0
PERCENTAGE	0.0	12.0	0.0	6.1	0.0	18.2
<b>31 - 40</b>						
FREQUENCY	0.0	7.0	1.0	2.0	1.0	11.0
PERCENTAGE	0.0	21.0	3.0	6.1	3.0	33.3
<b>41 - 50</b>						
FREQUENCY	0.0	2.0	1.0	3.0	0.0	6.0
PERCENTAGE	0.0	6.1	3.0	9.1	0.0	18.2
<b>&gt; 50</b>						
FREQUENCY	1.0	3.0	1.0	1.0	4.0	10.0
PERCENTAGE	3.0	9.1	3.0	3.0	12.1	30.3
TOTALS	1.0	16.1	3.0	8.8	5.0	33.0
PERCENTAGE	3.0	48.5	9.1	24.2	15.2	100.0

**\*NOTE**

ADM - ADMINISTRATION  
 CT - CLASSROOM TEACHERS  
 RT - RESOURCE TEACHERS  
 PP - PARAPROFESSIONALS  
 SW - SERVICE WORKERS

Table 4

CHARACTERISTICS OF RESPONDENTS  
POSITION AND TENURE

JOB POSITION *	TENURE					TOTAL
	NUMBER OF YEARS IN SERVICE					
	< 2	3-5	6-10	11-20	>20	
ADM	0.0	0.0	0.0	0.0	1.0	1.0
CT	2.0	2.0	4.0	5.0	3.0	16.0
RT	0.0	0.0	0.0	3.0	0.0	3.0
PP	2.0	2.0	3.0	1.0	0.0	8.0
SS	0.0	1.0	0.0	1.0	3.0	5.0
TOTAL	4.0	5.0	7.0	11.0	7.0	33.0

\*NOTE

- ADM - ADMINISTRATION
- CT - CLASSROOM TEACHERS
- RT - RESOURCE TEACHERS
- PP - PARAPROFESSIONALS
- SW - SERVICE WORKERS

Table 5  
 CHARACTERISTICS OF RESPONDENTS  
 SEX AND JOB POSITION

JOB POSITIONS*						
SEX	ADM	CT	RT	PP	SS	TOTAL
MALE	0.0	1.0	0.0	0.0	2.0	3.0
PER- CENTAGE	0.0	3.0	0.0	0.0	6.1	9.1
FEMALE	1.0	15.0	3.0	8.0	3.0	30.0
PER- CENTAGE	3.0	45.0	9/1	24.2	9.1	90.0
TOTALS	1.0	16.0	3.0	8.0	5.0	
PERCENTAGE	3.0	48.5	9.1	24.2	15.2	

\*NOTE

ADM - ADMINISTRATION  
 CT - CLASSROOM TEACHERS  
 RT - RESOURCE TEACHERS  
 PP - PARAPROFESSIONALS  
 SW - SERVICE WORKERS

TABLE 6

CHARACTERISTICS OF THE RESPONDENTS  
JOB POSITION AND RACE

JOB POSITION	RACE		
	WHITE	BLACK	TOTAL
ADMINISTRATION	0	1	1
CLASSROOM TEACHERS	8	8	16
RESOURCE TEACHERS	1	2	3
PARA- PROFESSIONALS	0	8	8
SERVICE WORKERS	0	5	5
TOTALS	9	24	33

### PERCEIVED CAUSES OF STRESS

The participants responded to the Job Stressor rating scale to indicate the job stressors that affected them most. They were to rate the instrument on a scale of 1-5 the stressor that affected them most with one (1) the lowest and five (5) the highest priority of ranking.

Analysis of that portion of the questionnaire dealing with the respondents' perceived causes of job stress yielded the data as indicated in Table 7. Participants with the greatest number of years in service were classroom teachers while participants with 11-20 years of tenure showed the greatest participation. See Table 8.

Student misbehavior was given top priority in the ranking of stressors. See Table 7. This identification was not unforeseen since in the Johnson and Richards study was about a group of classroom teachers who listed classroom discipline as a pressing concern. Also, the findings on ordering the stressful conditions in a central midwest study indicated that teachers perceived lack of time to accomplish tasks followed by disruptive students nonteaching duties... lack of support from parents and community as the most stressful events in their jobs. Halpert (1976), Pratt (1978) and Kyriacou and Sucliffe (1978) all had previously noted that both American and British teachers had experienced stress as a result of

Table 7  
RANKING OF JOB STRESSORS\*

STRESSORS	$\bar{X}$	SD	RANK
Student misbehavior	3.15	1.20	1
Intensity of work demands	2.86	1.31	2
Lack of respect and parental support	2.81	1.31	3
Lack of student motivation	2.75	1.28	4
Inadequate compensation	2.80	1.27	5
Meaningless job demands	2.20	1.20	6
Large class size	2.18	1.33	7
Lack of administrative support	2.16	1.18	8
Uncooperative personnel	1.84	1.25	9

**\*NOTE**

Participants were to rate the items on the Job Stressor Inventory as related to their job stress on a scale of one to five. One had the lowest stress value while five had the highest stress value. These ratings were ranked.

Table 8

CHARACTERISTICS OF THE RESPONDENTS  
POSITION AND TENURE

JOB* POSITION*	NUMBER OF YEARS IN THIS POSITION					TOTAL
	< 2	3-5	6-10	11-20	> 20	
ADM	0.0	0.0	0.0	0.0	1.0	1.0
CT	2.0	2.0	4.0	5.0	3.0	16.0
RT	0.0	0.0	0.0	3.0	0.0	3.0
PP	2.0	2.0	3.0	1.0	0.0	8.0
SW	0.0	1.0	0.0	1.0	3.0	5.0
TOTALS	4.0	5.0	7.0	11.0	7.0	33.0

\*NOTE

- ADM - ADMINISTRATION
- CT - CLASSROOM TEACHERS
- RT - RESOURCE TEACHERS
- PP - PARAPROFESSIONALS
- SW - SERVICE WORKERS



student misbehavior. The study further revealed intensity of work as the second highest stressor. Table 9 presents additional data analysis for perceived stressor according to gender. The greatest stress differences between male and female are the stressors student motivation, student misbehavior and intensity of the job.

When comparing age and intensity, participants with the lowest rating fell between the ages of 31-40 while the participants with the highest rating fell at the age level of less than 30. See Table 10. Thirty nine percent of the participants rated the stressor intensity in the middle range (3). See Table 11.

When job stressors were ranked by race, the greatest difference occurred in the stressor motivation followed by compensation and respect. See Table 12. There was little difference in the job stressor when analyzed by age. See Table 13. When job stressors were analyzed by position, misbehavior was rated as the top stressor among the school administrator, classroom teachers and service workers. See Table 14. There was little difference identified in job stressor and tenure. The greatest differences in the identified stressors occurred between the age group of less than 39 years with the stressor intensity, followed by more than (50) years in the area of behavior. See Table 15. The stressor large class size received generally a low rating as well as the stressor administrative support. See Tables 16, 17 and 18.

Table 9  
PERCEIVED JOB STRESSORS BY GENDER\*

STRESSORS	X MALES	X FEMALES	SD (M)	SD (F)	RANK (M)	RANK (F)
INTENSITY	3.33	2.82	1.53	1.30	1.5	5
MISBEHAVIOR	3.33	3.15	.58	1.26	1.5	1
MOTIVATION	1.67	2.87	.58	1.28	7.5	2
ADMINISTRATIVE SUPPORT	2.33	2.15	.58	1.23	5.0	8
COMPENSATION	2.67	2.82	.58	1.33	3.5	4
RESPECT	2.67	2.83	.58	1.45	3.5	3
MEANINGLESS JOBS	1.67	2.25	.58	1.24	7.5	6
LARGE CLASS SIZE	1.67	2.23	.58	1.38	7.5	7
UNCOOPERATIVE PERSONNEL	1.67	1.87	.58	1.31	7.5	9

N = 33  
MALES = 3  
FEMALES = 30

\*NOTE

Ratings one to five were used to rank stressors by gender.  
The larger the number-the higher the perceived stress.

Table 10

## JOB STRESSORS - INTENSITY AND AGE

INTENSITY	AGE				TOTAL
	< 30	31-40	41-50	> 51	
	*F - %	F - %	F - %	F - %	F - %
1 - LOWEST RATING	0-(0 )	4-(40)	2-(33)	1-(10)	7-(22)
2 - LOW RATING	1-(17)	1-(10)	1-(17)	2-(20)	5-(16)
3 - MIDDLE RATING	3-(50)	2-(20)	2-(33)	5-(50)	12-(38)
4 - HIGH RATING	0-(0 )	1-(10)	0-(0)	1-(10)	2-(6)
5 - HIGHEST RATING	2-(33)	2-(20)	1-(17)	1-(10)	6-(19)
TOTALS	6-(100)	10-(100)	6-(100)	10-(100)	32-(100)

NOTE

F = FREQUENCY

Low ratings indicate little stress while the high ratings indicate high stress levels. Intensity was identified as a high stressor.

Table 11

INTENSITY	FREQUENCY	PERCENTAGE
1 - LOWEST RATING	7.0	21.2
2 - LOW RATING	5.0	15.2
3 - MIDDLE RATING	13.0	39.4
4 - HIGH RATING	2.0	6.0
5 - HIGHEST RATING	6.0	18.2
TOTALS	33.0	100.0

NOTE

Participants rated intensity as a job stressor with a rating of 1-5. The one (1) rating indicate low stressor. A five (5) rating indicated high stressor.

Table 12

## JOB STRESSOR BY RACE

* 1	$\bar{X}$ WHITE	SD WHITE	$\bar{X}$ BLACK	SD BLACK	RANK WHITE	RANK BLACK
1	3.11	1.36	2.72	1.34	4	3
2	3.27	1.50	3.10	1.10	3	1
3	3.55	1.23	2.45	1.17	1.5	5
4	2.27	1.56	2.12	1.03	8	6
5	2.94	1.46	2.75	1.22	5	2
6	3.55	1.50	2.52	1.24	1.5	4
7	2.61	1.26	2.04	1.16	6	7.5
8	2.55	1.42	2.04	1.30	7	7.5
9	2.0	1.58	1.76	1.12	9	9

\* - STRESSORS

- 
- 1 - INTENSITY
  - 2 - MISBEHAVIOR
  - 3 - MOTIVATION
  - 4 - ADMINISTRATIVE SUPPORT
  - 5 - COMPENSATION
  - 6 - RESPECT
  - 7 - MEANINGLESS JOBS
  - 8 - LARGE CLASS SIZE
  - 9 - UNCOOPERATIVE

Table 13

## JOB STRESSORS BY AGE

STRESSORS	AGES < 30		AGES 31 - 40		AGES 41 - 50		AGES > 50	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
INTENSITY	3.6	1.1	2.6	1.6	1.8	.96	2.9	1.5
MISBEHAVIOR	2.9	1.4	3.0	1.1	3.0	1.1	3.3	1.1
MOTIVATION	3.1	1.6	2.8	1.4	2.5	.95	2.6	1.1
ADMINISTRATIVE SUPPORT	2.3	1.3	2.1	1.2	2.5	.57	2.2	1.3
COMPENSATION	3.1	1.4	3.0	1.4	2.2	.50	2.7	1.2
RESPECT	3.0	1.4	2.4	1.4	2.0	1.2	3.3	1.2
MEANINGLESS JOBS	2.1	1.2	2.4	1.2	1.8	.95	2.2	1.3
LARGE CLASS SIZE	2.3	1.6	2.1	1.3	2.0	1.2	2.3	1.4
UNCOOPERATIVE PERSONNEL	1.6	1.2	1.7	1.3	2.0	.82	2.3	1.4

## \*NOTE

The high means ( $\bar{x}$ ) indicate more perceived stress while the lower means ( $\bar{x}$ ) indicate less stress.

Table 14

## JOB STRESSORS BY POSITION

	ADM	CT	RT	PP	SS
*	$\bar{X}/SD$	$\bar{X}/SD$	$\bar{X}/SD$	$\bar{X}/SD$	$\bar{X}/SD$
1	3/	3.06/1.56	2.33/1.15	3.0/1.06	2.1/.14
2	3/	3.15/1.35	3.66/1.15	2.8/1.03	3.2/1.0
3	4/	2.87/1.54	2.66/.577	2.5/.92	2.6/1.3
4	3/	1.96/1.07	4.33/1.15	2.0/.92	1.6/.54
5	3/	2.72/1.36	3.0/1.0	2.6/1.06	3.2/1.8
6	4/	2.81/1.51	3.0/1.73	2.6/1.18	2.7/1.5
7	5/	2.09/1.21	2.35/1.15	2.12/.99	2.0/1.2
8	1/	2.60/1.59	2.33/1.15	1.9/1.12	1.8/.83
9	1/	1.76/1.14	4.0/1.73	1.62/.91	1.4/.54

## \* - STRESSORS

- 1 - INTENSITY  
 2 - MISBEHAVIOR  
 3 - MOTIVATION  
 4 - ADMINISTRATIVE SUPPORT  
 5 - COMPENSATION  
 6 - RESPECT  
 7 - MEANINGLESS JOBS  
 8 - LARGE CLASS SIZE

- ADM - ADMINISTRATIVE SUPPORT  
 CT - CLASSROOM TEACHERS  
 RT - RESOURCE TEACHERS  
 PP - PARAPROFESSIONALS  
 SS - SERVICE WORKERS

NOTE

Higher means ( $\bar{X}$ ) indicate more stress while lower means ( $\bar{X}$ ) indicate less stress.

Table 15

## JOB STRESSORS BY TENURE

	< 2 YEARS	3 - 5 YEARS	6 - 10 YEARS	11 - 20 YEARS	> 20 YEARS
*	$\bar{X}$ / SD	$\bar{X}$ / SD	$\bar{X}$ / SD	$\bar{X}$ / SD	$\bar{X}$ / SD
1	4 /1.15	2.8/1.48	2.14/1.21	2.81/1.32	2.91/1.29
2	3.8/.95	3.8/1.09	2.35/1.10	2.95/1.15	3.5/1.380
3	3.0/1.6	3.2/.450	2.14/1.46	3.09/1.30	2.33/1.21
4	2.0/1.6	1.6/.550	2.21/1.21	2.81/1.32	1.5/.8400
5	2.8/.95	2.6/1.56	2.64/1.31	3.18/1.25	2.5/1.510
6	3.5/.57	3.2/1.78	2.14/1.46	2.72/1.35	2.91/1.43
7	2 /1.15	2.6/1.14	2.21/1.29	2.45/1.37	1.5/.8360
8	2.0/1.4	2.8/.447	2.14/1.95	2.0/1.09	2.16/1.60
9	1.5/1.0	1.2/.445	1.42/1.13	2.45/1.50	2.00/1.26

\* - STRESSORS

- 
- 1 - INTENSITY
  - 2 - MISBEHAVIOR
  - 3 - MOTIVATION
  - 4 - ADMINISTRATIVE SUPPORT
  - 5 - COMPENSATION
  - 6 - RESPECT
  - 7 - MEANINGLESS JOBS
  - 8 - LARGE CLASS SIZE
  - 9 - UNCOOPERATIVE PERSONNEL



Table 16

## JOB STRESSOR COMPENSATION RATING\*

COMPENSATION	FREQUENCY	PERCENTAGE
1 - LOWEST RATING	6	18.2
2 - LOW RATING	8	24.2
3 - MIDDLE RATING	9	27.3
4 - HIGH RATING	6	18.2
5 - HIGHEST RATING	4	12.1
TOTAL	33	100.0

**\*NOTE**

Participants were to rate the job stressor compensation with a rating of one to five with one as low stress and five as high stress.

Table 17

## STRESSOR - LARGE CLASS SIZE RATING

LARGE CLASS SIZE	FREQUENCY	PERCENTAGE
1- LOWEST RATING	15	45.5
2 - LOW RATING	5	15.2
3 - MIDDLE RATING	8	24.2
4 - HIGH RATING	2	6.1
5 - HIGHEST RATING	3	9.1
TOTAL	33	100.0

Table 18

## JOB STRESSOR - ADMINISTRATIVE SUPPORT RATING\*

ADMINISTRATIVE SUPPORT	FREQUENCY	PERCENTAGE
1 - LOWEST RATING	12	36.4
2 - LOW RATING	9	27.3
3 - MIDDLE RATING	9	27.3
4 - HIGH RATING	0	0.0
5 - HIGHEST RATING	3	9.1
TOTAL	33	100.0

\*NOTE

Rating of one to five with one as low stress and five as high stress

### Hypothesis 1

There is no statistically significant ( $p < .05$ ) difference between the subjects reported levels of stress before and after the intervention program as assessed by the pretests and posttests assessments.

Each participant was given the GWB schedule before and after the intervention program. The GWB Schedule is a self reporting instrument designed to assess selected aspects of self-representation of subjects well - being and distress. The assessment was analyzed using the number crunchier statistical system (NCSS). The sub scale of this instrument was used for analyses. This subscale contained eighteen items. The first fourteen (14) items include six (6) responses option items while the next four (4) items had (0-10) rating bar. Six subscales measured health worry, energy level, satisfying interesting life, depressed - cheerful mood, emotional - behavioral control, and relaxed versus tense - anxious. The GWBS is scored in a positive direction in that a high score reflects a self - representation of well being. Table 19 shows the overall numbers and percent distribution of the GWB Schedule totals.

The average scores for both pre and post assessments of GWB Schedule indicated that the participants were generally:

1. In good spirits.

Table 19

Number, percent and distribution of study sample by total General Well-Being (GWB) Schedule

VARIABLES	Pretest		Posttest	
	Percent	N	Percent	N
Positive well-being				
101 - 110	6.0	2	0	0
91 - 100	10.0	3	0	0
81 - 90	13.0	4	13.0	4
76 - 80	13.0	4	6.5	2
71 - 75	16.0	5	55.0	17
Problem indicative of stress				
66 - 70	13.0	4	13.0	4
61 - 65	0	0	6.5	2
56 - 60	3.0	1	3.0	1
Clinically Significant of stress				
51 - 55	3.0	1	0	0
41 - 50	10.0	3	3.0	1
26 - 40	10.0	3	0	0
00 - 25	3.0	<u>1</u>	0	<u>0</u>
		31		31
Mean GWB Score	69.32		72.45	
SD	20.34		8.74	

2. Only a little bothered by nervousness.
3. Under some pressure of stress.
4. Fairly happy with their personal life.
5. Only a little bothered by illness and pain.
6. Interested in life a good bit of the time.
7. Generally not concerned about their health.
8. Feeling more relaxed than tense.
9. Feeling more energetic than listless.
10. Feeling more cheerful than depressed.

Items with scores indicating some problems indicative of stress (scores between 60-66) were:

1. Feeling worn-out.
2. Not feeling emotionally stable a good bit of the time.
3. Feeling downhearted and blue.
4. Worried about losing control of their mind.
5. Not in firm control of behavior and feelings.

Using the dependent t-Test it was revealed that there were no significant differences between the six subscale scores used in the analysis. The six subscales include the following areas.

1. Health concerns.
2. Energy level.
3. Satisfying interesting life.
4. Cheerful - depressed mood.
5. Relaxed vs tensed and anxious.

## 6. Emotional behavior - in control

See Table 20 for statistical data.

### Hypthesis 2

There will be no significant ( $p < .05$ ) differences between the subjects identified knowledge of stress management and prevention as measured by the pre and post assessments.

The instrument used to measure the participants knowledge level related to stress management and prevention were the pre and post computer tests.

The **How to Manage Stress** computer program was designed to show participants how to recognize the causes of their stress, how to use simple relaxation techniques, and how to balance stress with periods of relaxation. The **How to Manage Stress Computer** program included pre and posttests that allowed participants to see how much they learned about how to manage stress so that stress does not hinder performance on or off the job. Analysis of the the test assessments data revealed that participants who completed the computer program learned 1) How to identify personal stressors; 2) How to respond positively in stressful situation and 3) How to use relaxation techniques to cope with stress. There were significant differences shown when analyzing data using paired t-test for all pre

Table 20

## Subscale of General Well-Being Schedule

Subscale	PRETEST		POSTTEST		
	X	SD	X	SD	T
Health Concerns	7.83	4.03	7.93	3.16	-.104
Energy	11.96	4.56	11.57	2.61	.307
Satisfying Life	6.75	2.23	6.38	1.89	.123
Cheerful/ Depressed	16.83	5.49	18.16	3.15	-1.160
Relaxed/ Tensed	14.70	5.27	16.38	3.41	-1.490
Emotional Behavior	11.51	2.95	12.19	1.95	-1.06
Total Scores	69.32	20.34	72.45	8.74	.787



Table 21

## Computer Test Results

	Pretest		Posttest		T
	X	SD	X	SD	
Test I Introduction	4.212	1.293	6.03	1.286	-7.45
Test II Awareness	5.393	1.028	6.48	.712	-6.19
Test III Relaxation Techniques	5.812	1.306	6.86	.846	-6.84
Test IV Positive Attitude and Lifestyle	5.812	.9979	7.12	.5713	-6.36

and post test assessment. See Table 21.

Participants gained knowledge while studying the different techniques presented in the stress intervention program. The greatest percentage gained for participants occurred in the posttest (76%) of the participants taking posttest IV. They scored in the "good grasp" of subject range (80-100%) while 90% of the participants scored (80-100) on the posttest for measurements test II. The largest percent of participants scoring in the "Below 70%", "Review Needed" range (58%) occurred in pretest I-Introductions. See Table 22.

### Hypothesis 3

There are no significant ( $p < .05$ ) differences between the subjects identified symptoms of stress, stress management and preventive techniques before and after the stress intervention program as measured by pre and post assessments using the STAI. The research hypothesis is that the scores on the STAI will increase after the intervention program. Analysis of the data revealed an increase in the post test assessment. Results appeared to indicate that there were significant differences between the pre and post administration. The means, standard deviations and t scores are reported on Table 23.

Each STAI item is given a weighted score of 1 to 4. A rating

Table 22

## Scoring Range of Computer Tests

	Test I		Test II		Test III		Test IV	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
<b>80-100%</b>								
Good Grasp of Subjects	6	12	13	29	9	22	24	30
<b>70-79 %</b>								
Basic Under- standing of Subject	8	13	16	4	11	7	4	1
<b>Below 70%</b>								
Review Needed	19	8	4	0	12	2	4	0
<b>N=</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>32</b>	<b>32</b>	<b>31</b>	<b>32</b>	<b>31</b>

**Note**

Test I - Introduction

Test II - Awareness

Test III - Positive Attitudes and Life  
Styles - Part 1Test IV - Positive Attitudes and Life  
Styles - Part 2

Table 23

Means, Standard Deviation and t-Test Results

STAI TEST SCORES	PRETEST		POSTTEST		T
	X	SD	X	SD	
TOTAL STAI ADJUSTED SCORES	36.62	9.86	39.56	6.84	2.031 *

\*NOTE

There is a significant difference at  $L = .05$  for one tailed test. Each STAI item is given a weighted score of one to four. The scoring weights for the anxiety - absent items are reversed. To get an adjusted score, the weighted scores are added for the twenty items that make up each scale.

indicated the presence of a high level of anxiety for eleven t-anxiety items. These items include the following feeling by participants.

1. Feel nervous and restless
2. Wished they could be as happy as others
3. Are "calm, cool, and collected"
4. Feel that difficulties are piling up so that they cannot overcome them
5. Worry too much over small things
6. Have distrusting thoughts
7. Lack of self-confidence
8. Feel inadequate
9. Unimportant things run through their minds
10. Take disappointments keenly
11. Get in a state of tension

As reported on Table 24, nineteen participants showed high levels of anxiety and twenty-nine some anxiety. Sixteen participants showed high levels of anxiety while twenty-four showed some anxiety on the posttests. If participants had a high rating, on nine items, this was indicative of the absence of anxiety in these areas. The areas included items such as pleasant feelings, satisfaction with self, happy, secure, content and steadiness. See Table 25.

### Blood Pressure and Work Stress

Work stress may have a direct bearing on individuals blood

Table 24

Frequency Rating of Four's and Three's Indicating  
Presence of High Level Stress \*

Variable	Pretest		Posttest	
	Frequency		Frequency	
	4's	3's	4's	3's
Nervous	5	7	0	2
Wish to be happy	0	4	0	8
Failure	0	2	3	3
Difficulties	1	5	3	1
Worry	1	5	0	3
Disturbing Thoughts	3	7	5	7
Lack of Self Confidence	1	1	2	3
Content	0	9	0	8
Unimportant Thoughts	2	3	0	8
Disappointments	2	6	1	7
Tension	4	3	2	2

Note:

\* Ratings of 4 equal highest level of stress

\* Ratings of 3 equal high level of stress

**Table 25**  
**STAI**  
**Frequency Rating of Four's and Three's**  
**Absence of Anxiety**

Variables	Pretest		Posttest	
	Frequency of		Frequency of	
	4's	3's	4's	3's
Pleasant	0	6	0	3
Satisfied	0	4	14	17
Rested	1	12	8	15
Calm	1	12	8	11
Content	0	9	12	8
Secure	0	6	16	8
Make Decision	5	4	9	7
Content	0	9	12	8
Steady	1	4	15	5

**NOTE:**

High scores equal absence of anxiety

4= Highest score for absence of anxiety

1= Lowest score

pressure. Participants indicated an interest in their blood pressure readings therefore, blood pressure readings were taken every Monday and Friday. The results were recorded. As in the wholistic wellness programs conducted by Blair (1984); Prothro (1983) and Koonce (1986) part of the Wilson's intervention program included blood pressure readings on Monday and Friday of each week of the intervention treatment. The resulting data indicated no real difference in the blood pressure readings on Mondays or Fridays.

#### Reactions to the Follow-up Interview Survey

At the conclusion of the Stress Intervention Program participants were personally interviewed. Each participant was interviewed using the same five questions. Four of the question asked for specific information while the fifth question was open-ended.

#### Personal Interviews

When personal interviews were held with participants, the following information was given as shown in Table 26. The personal interviews were conducted with each subject face-to-face for at least a half-hour. These interviews took place immediately after the program. Because of the number of subjects and the questionnaire



Table 26

Frequency of Responses to Personal Interviews  
Question Number 1

<u>Response</u>	<u>Frequency of Responses</u>	<u>Rank of Response</u>
Excellent	11	1.0
Informative	10	2.5
Enlightening	10	2.5
Very good	8	4.0
Interesting	4	5.5
Helpful	4	5.5
Learned a lot	3	8.0
Worthwhile	3	8.0
Worth my time	3	8.0
Beneficial	2	11.0
Too many meetings	2	11.0
Preventive	2	11.0
Atmosphere	1	15.0
Instructive	1	15.0
OK	1	15.0
Came at a good time for me	1	15.0
Educational	1	15.0

involved, three trained assistants participated in the data collection. The assistants were given instruction prior to conducting the interviews.

### Interview

- 1) When participants were asked, "What did you think of the stress Intervention Program?" The answers ranged from a high number of respondents saying the program was excellent, informative, enlightening, very good to low response of educational, came at a good time for me, good atmosphere and too many meetings. Table 26 summarizes the responses for question number one.
- 2) What problems, if any, did you encounter with the Stress Intervention Program was the second interview question asked. The following responses were given. The response none had the highest frequency followed by time not long enough, problem with the computer program, too much information given, too many meetings to not being able to find time for the twenty minute relaxation time suggested.
- 3) When asked, "Would you have changed anything (format, procedures, timeline, etc.) in the Stress Intervention Program? If so, what would you have changed?" The responses ranged from not anything (13), time of meeting (4), scheduling for the computer program (3), to start the program earlier in

the school year (2) and allow more time for an intervention program..

- 4) When asked, "Do you think your involvement in the intervention program changed you in any way?" If so, what? The responses revealed that 70% of the participants said that the program change them in some way. Participants indicated that they learned to relax, they were more in control with their feelings, they were more aware of ways to deal with their stress; more aware of self and others and more aware of alternatives methods of handling problems.
- 5) When asked, the open-ended question, "What other comments do you wish to share about your experiences in relationship to this study?" The responses as indicated on Table 27.

**Table 27**  
**Frequency of Responses to Personal Interview Question Number 5**

---

Response	Frequency	Rank
Developed a positive attitude about good health	12	2
Learned how to relax	8	3
Can deal with stress better	13	1
Speakers were excellent	7	4.0
Like positive staff inter action	2	7.5
Repeat program again next year	2	7.5
Like monitoring my blood pressure	3	6.5
Stress management programs should be part of the school system wellness programs	3	6.5
The scheduling of the program was too rushed (not enough time)	4	5.0

## CHAPTER V

### SUMMARY, CONCLUSIONS RECOMMENDATION AND FUTURE IMPLICATIONS

#### Research Overview

Stress has become a recognized national occupational hazard in the corporate world as well as in the school setting. Research has shown that individuals with stress react differently to the same stressful events and that there are as many different ideas about stress as there are people who experience change in their lives. These differences occur because stress is the way people react both physically and emotionally to change. This may be due to the continued sense of being geared up and unable to relax.

Because of the number of individuals who are concerned about stress and stress management, stress topics are discussed, studied, researched and published in books, educational publications, clinical journals as well as newspapers and magazines. Additionally, stress intervention has been the topic for talk shows, seminars, workshops and television specials as well as researched for clinical studies and writings. The intent of such widespread awareness is to help people understand how to manage their stress and to provide a more relaxed and positive life style.

This stress intervention program at the worksite was designed to describe and measure the effects of such a program and to

provide a program of intervention which would cause a reduction of stress with the utilization of the techniques learned.

The residual effects of the intervention program on the ability of subjects to maintain a sustained personal program of stress management was measured by 1) General Well-Being Schedule, 2) State Trait Anxiety Inventory, 3) How to Manage Stress Computer Program Tests, and 4) Personal Exit Interviews. These assessment instruments, except the interviews, were used before and after each intervention treatment. It was hypothesized that there would be no statistical difference between the subjects pre and post assessments with the alpha level set at .05. The research hypotheses stated that there will be an increase in the post assessments after the intervention.

During this study participants were able to identify stressors associated with their occupation. The results indicated that the participants had little knowledge of stress management techniques prior to the intervention program. Data Analysis revealed significant increases in participants knowledge level after the intervention program. Data were received from pretest information before the intervention and at the conclusion of each component of the intervention program.

## COMMENTS

The following information gives a summary of the researcher's comments, recommendations, suggestions and a final note.

It was observed by this researcher that there were indications that staff morale and school climate improved during this intervention program. These changes as noted included more smiling, talking among staff, helping and supporting each other. These changes in the morale may be attributed to the fact that participants had proof that someone cared about them and was concerned about their general welfare.

Additionally, the extra attention given to the participants was an indication that the Hawthorn Effect was operative. Participants felt positive about themselves and worked harder because of the special attention given to them.

The difference by sex comparison may vary because of the size of the male population. As indicated in the demographic part of this research study, there were few males participating in this intervention program. In some areas of the research, the results may have been different had there been a more even distribution of male participants. However, in a school setting, the male faculty population is usually much smaller than that of the female population.

It also appeared that, as a result of this intervention

program, group dynamics played an important role. As participants worked and studied together, they stayed on task more. When individuals worked individually-especially with the computer program-there appeared to be a breakdown in participation. The group dynamics worked well in that participants helped each other by encouraging each other and by giving each other constant support. This type of group support appeared to have the same effects as in other group programs such as weight watchers, smoking cessation, alcohol-drug control programs, etc. Further study may be conducted in the areas of intervention programs for stress management designed for individual versus group comparison.

Other observations worth noting follow:

1. It was interesting to note that participants learned how to recognize their stressors and how to manage stress but did not always display use of techniques learned to cause a change in their general well being. An obvious conclusion could be that knowledge alone does not change human behavior.
2. The study revealed that participants anxiety levels regarding stress were reduced. Perhaps interventions which raise concern about health would provide better motivation to change behavior. Fear could possibly be a better motivator than knowledge in this case.



The following recommendations are based on the findings from the data and the conclusions of this study:

1. Opportunities should be provided for all school personnel to participate in a wellness program which may include topics such as:

- Hypertension control
- Stress/anxiety management
- Nutrition
- Heart attack risk reduction
- Depression
- Exercise - fitness
- General health maintenance
- Alcohol-drug control
- Weight control

It is necessary to include topics such as those listed above since research has shown that stress related problems may lead to many physical disorders. Additionally, there should be no rigid prescribed program designed for everyone since individuals react differently to specific problems. Additionally, staff and participants should provide for modifying programs.

2. A study of techniques to reduce stress in children is

needed. Such a study could address stressful events in lives of children and test interventions specifically of value to youngsters. Early intervention may be as effective to successful schooling as a head start may be in learning.

3. As better methods and greater understanding of stress management are verified, school personnel should be involved in alternatives to help them learn how to improve stress management.

### SUGGESTIONS

Future implication of research in the area of stress intervention and management may include:

1. Research to determine additional techniques designed to alleviate high stress levels among school personnel.

2. Research to study the effects of lengthier intervention programs. Such studies could be expanded throughout the school year. Also, different types of stress intervention techniques might be designed for different times during the school year.

3. The specific computer program used in this intervention program was well received. It proved to be educational and

interesting for the participants as indicated in the answers to the interview questions. It was found however, to be a very time consuming part of the intervention program which may have caused some concerns. There is a need to develop an intervention stress management program which would allow a longer time span to implement this computer program. The program is so designed that the use of it could be an intervention stress management program within itself. A study utilizing the computer program as single intervention is needed.

#### **A FINAL NOTE**

The search for good health arises from the instinct to survive. This universal instinct is a strong motivator. Employers and supervisors who demonstrate a knowledge of this fact by responding to the need of employees to live and live well will be rewarded by the gratitude of those they supervise. Attention to basic human needs is the basis of successful leadership.

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# APPENDIX

# DEMOGRAPHICS

CODE NUMBER \_\_\_\_\_

## SELF REPORTED SURVEY

Please complete this form.

Please note that this information is confidential.

Please place a check mark (x) by your answers.

1. SEX  
 MALE  
 FEMALE
2. RACE  
 WHITE  
 BLACK  
 OTHER
3. AGE  
 30 OR UNDER  
 31-40  
 41-50  
 51 OR OVER
4. JOB POSITION  
 ADMINISTRATION  
 CLASSROOM TEACHER  
 RESOURCE TEACHER  
 PARAPROFESSIONAL  
 SUPPORT STAFF
5. LENGTH OF EXPERIENCE  
 IN PRESENT POSITION  
 2 YEARS OR LESS  
 3-5 YEARS  
 6-10 YEARS  
 11-20 YEARS  
 21 OR MORE YEARS
6. PHYSICAL ACTIVITY  
 LITTLE OR NO ACTIVITY  
 OCCASIONAL PHYSICAL  
 ACTIVITY  
 REGULAR PHYSICAL  
 ACTIVITY - AT LEAST  
 THREE (3) TIMES A  
 WEEK
7. HOW OFTEN DO YOU USE  
 DRUGS OR MEDICATION  
 WHICH AFFECTS YOUR  
 MOOD OR HELPS YOU SLEEP?  
 ALMOST EVERY DAY  
 SOMETIMES  
 RARELY  
 NEVER

## CONSENT FOR PRE AND POST TEST / ASSESSMENTS

I understand that the Trait-Anxiety Schedule of the State Trait-Anxiety Inventory, the General Well-Being Schedule and the How to Manage Stress computer program test will be used in a research project that will test the effectiveness of an intervention stress management / relaxation program designed for school personnel.

I understand that all information will be recorded only by participant's code number. No names will be used and no one except the health professional selected will have access to participant's names, with code numbers. The information will not be released to anyone including the building principal.

I AGREE TO PARTICIPATE IN THIS STUDY.

---

PARTICIPANT'S SIGNATURE

---

DATE

**SELF-EVALUATION QUESTIONNAIRE**

STAI Form Y-2

Name \_\_\_\_\_ Date \_\_\_\_\_

**DIRECTIONS:** A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

ALMOST NEVER  
SOMETIMES  
OFTEN  
ALMOST ALWAYS

- |   |   |   |   |   |
|---|---|---|---|---|
| 21. I feel pleasant .....   | ① | ② | ③ | ④ |
| 22. I feel nervous and restless .....   | ① | ② | ③ | ④ |
| 23. I feel satisfied with myself .....  | ① | ② | ③ | ④ |
| 24. I wish I could be as happy as others seem to be .....   | ① | ② | ③ | ④ |
| 25. I feel like a failure .....   | ① | ② | ③ | ④ |
| 26. I feel rested .....   | ① | ② | ③ | ④ |
| 27. I am "calm, cool, and collected" .....  | ① | ② | ③ | ④ |
| 28. I feel that difficulties are piling up so that I cannot overcome them .....                   | ① | ② | ③ | ④ |
| 29. I worry too much over something that really doesn't matter .....                              | ① | ② | ③ | ④ |
| 30. I am happy .....  | ① | ② | ③ | ④ |
| 31. I have disturbing thoughts .....  | ① | ② | ③ | ④ |
| 32. I lack self-confidence .....  | ① | ② | ③ | ④ |
| 33. I feel secure .....   | ① | ② | ③ | ④ |
| 34. I make decisions easily .....   | ① | ② | ③ | ④ |
| 35. I feel inadequate .....   | ① | ② | ③ | ④ |
| 36. I am content .....  | ① | ② | ③ | ④ |
| 37. Some unimportant thought runs through my mind and bothers me .....                            | ① | ② | ③ | ④ |
| 38. I take disappointments so keenly that I can't put them out of my mind .....                   | ① | ② | ③ | ④ |
| 39. I am a steady person .....  | ① | ② | ③ | ④ |
| 40. I get in a state of tension or turmoil as I think over my recent concerns and interests ..... | ① | ② | ③ | ④ |



**General Well-Being Schedule**

---

Appendix E is designed to collect information about your health and feelings. Please write and code your ID number in the lower left hand corner of the green answer sheet in the section marked 'IDENTIFICATION NUMBER' using a number 2 pencil, and code your ID number at the bottom of this page where indicated. Answer questions 1-4 on this page; respond to all remaining questions on the answer sheet provided by blackening the one most appropriate response.

---

For questions 1-4, please circle the appropriate response on this page according to the scale shown after each question. Your responses should reflect your feelings DURING THE PAST MONTH.

1. How concerned or worried about your health have you been?

0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Not  
concerned  
at all

Very  
concerned

2. How relaxed or tense have you been?

0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Very  
relaxed

Very  
tense

3. How much energy, pep, vitality have you felt?

0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

No energy  
at all,  
listless

Very  
energetic,  
dynamic

4. How depressed or cheerful have you been?

0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Very  
depressed

Very  
cheerful

---

Your ID Number:     /    /    /    /    

For questions 5-18, please blacken the appropriate response on your answer sheet on the basis of your feelings DURING THE PAST MONTH.

5. How have you been feeling in general?
1. In excellent spirits
  2. In very good spirits
  3. In good spirits mostly
  4. Up and down in spirits a lot
  5. In low spirits mostly
  6. In very low spirits
6. Have you been bothered by nervousness or your "nerves"?
1. Extremely so; to the point where I could not work or take care of things
  2. Very much so
  3. Quite a bit
  4. Some; enough to bother me
  5. A little
  6. Not at all
7. Have you been in firm control of your behavior, thoughts, emotions OR feelings?
1. Yes, definitely so
  2. Yes, for the most part
  3. Generally so
  4. Not too well
  5. No, and I am somewhat disturbed
  6. No, and I am very disturbed
8. Have you felt sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile?
1. Extremely so; to the point that I have just about given up
  2. Very much so
  3. Quite a bit
  4. Some; enough to bother me
  5. A little bit
  6. Not at all
9. Have you been under or felt you were under any strain, stress, or pressure?
1. Yes; almost more than I could bear or stand
  2. Yes; quite a bit of pressure
  3. Yes; some, more than usual
  4. Yes; some, but about usual
  5. Yes; a little
  6. Not at all

---

For questions 14-18, respond on your answer sheet using the scale below, and based on your feelings DURING THE PAST MONTH.

1. All the time
  2. Most of the time
  3. A good bit of the time
  4. Some of the time
  5. A little of the time
  6. None of the time
- 
14. Have you been bothered by any illness, bodily disorder, pains, or fears about your health?
  15. Has your daily life been full of things that were interesting to you?
  16. Have you felt down-hearted and blue?
  17. Have you been feeling emotionally stable and sure of yourself?
  18. Have you felt tired, worn out, used-up, or exhausted?

CODE OR NAME \_\_\_\_\_

**Job Stressor Inventory**

Please check the appropriate box for each of the following items related to your job stress if any. One (1) is the lowest, two (2) next lowest, etc. with five (5) the highest level.

1. Intensity of work demands.    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
2. Student misbehavior    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
3. Lack of student motivation    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
4. Lack of administrative support    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
5. Inadequate compensation    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
6. Lack of respect and parental support    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
7. Meaningless job demands    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
8. Large class size    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_
9. Uncooperative    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_

How to Manage Stress Computer Test Number One (1)

Introduction Test

Code # \_\_\_\_\_

Test Score \_\_\_\_\_

1. Stress is the way you react - physically and emotionally - to:
  - A. conflict
  - B. stimulus
  - C. change
  - D. challenge
  
2. One of the key elements in positive stress is:
  - A. unrelieved tension
  - B. knotted stomach
  - C. post-stress relaxation
  - D. steady heartbeat
  
3. When stress becomes a constant ongoing cycle in your life:
  - A. you achieve more
  - B. your health suffers
  - C. your health improves
  - D. you live longer
  
4. Which symptom is not associated with positive stress tensions?
  - A. muscles tensed
  - B. stomach in knots
  - C. hands cold, clammy
  - D. heart pounding
  
5. Which symptom is not associated with negative stress tension?
  - A. blood pressure up
  - B. hands perspire
  - C. heart-rate soars
  - D. muscles knot

6. Which of the following health problems are associated with negative stress?
  - A. migraines
  - B. ulcers
  - C. heart attack
  - D. all of the above
  
7. Which of the following is not a weapon for combating negative stress in your life?
  - A. stress denial
  - B. stress awareness
  - C. relaxation techniques
  - D. a positive attitude and lifestyle
  
8. Which is not a part of the Stress Manager's Code?
  - A. Stress doesn't have to be a way of life.
  - B. Become aware of what causes stress and how you feel under stress.
  - C. Use simple relaxation techniques and develop a productive attitude and lifestyle.
  - D. Accept stress in you life as unpredictable and learn to bear up under it.

**SAMPLE TEST/REVIEW RESULTS**

Scores 1

You answered four questions on the first try.

Your score % 50

How do you rate?

80-100% --- You have a good grasp of the subject.

70--80% --- You have basic understanding of the subject but, may want to review the material again to improve your knowledge in some areas.

Below 70% - You probably need to review the material again to make sure that you fully understand the subject.

Code Number \_\_\_\_\_

How to Manage Stress Computer Test Number Two (2)

**AWARENESS TEST**

1. The things that make you feel stressed are called:
  - A. bugs
  - B. irritants
  - C. stressors
  - D. jams
  
2. The best way to manage minor hassles that cause stress in your life is to:
  - A. seek help
  - B. learn to avoid them
  - C. take a break
  - D. change your stress attitudes
  
3. When major changes occur in your life, the best way to reduce the stress they may cause is to:
  - A. don't make changes in the first place
  - B. seek help
  - C. take a break
  - D. control the lifestyle change
  
4. If you find yourself being "overloaded" with several different stresses at one time, the best thing to do is:
  - A. take a break
  - B. seek help
  - C. avoid all stressors
  - D. get tough



Awareness test (Continued)

5. When you take a break during a "stress overload" you should take the time to:
  - A. sleep
  - B. cry and scream
  - C. sort out priorities
  - D. allow one or two stressors to go away
  
6. When you feel helpless, one of the best things you can do is to:
  - A. take a break
  - B. seek help
  - C. quit
  - D. control your helpless feelings
  
7. The first thing to do when you feel you may be suffering from chronic depression or anxiety is to:
  - A. consider seeing a professional counselor
  - B. consult doctor to rule out any medical causes.
  - C. consult a friend
  - D. try to cure yourself

**Relaxation Techniques Test**

1. Relaxation helps you to:
  - A. rid your life of stress
  - B. forget about stress
  - C. combat negative stress
  - D. anticipate stress
  
2. Deep breathing can be done:
  - A. only with oxygen
  - B. anywhere, anytime
  - C. only at home
  - D. by qualified yoga experts only
  
3. The basic principle of "clearing your mind" is to focus on:
  - A. nothing
  - B. a particular source of stress
  - C. a peaceful, thought, word or image
  - D. your navel
  
4. Autogenics is:
  - A. relaxation exercises in your car
  - B. an automatic, preset relaxation method
  - C. mentally focusing on and relaxing parts of your body
  - D. coin-op genetics
  
5. The progressive muscular technique helps you feel the difference between tension and:
  - A. stasis
  - B. excitement
  - C. boredom
  - D. relaxation

**Relaxation Techniques Test (Continued)**

6. Stretching is a way to:
  - A. build up stress-fighting adrenaline
  - B. loosen up tight muscles
  - C. physically meditate
  - D. exert "mind over matter"
  
7. Visualization is a way to take mental:
  - A. bath
  - B. quiz
  - C. lunch
  - D. vacation
  
8. With Biofeedback technology a practitioner can translate your stress responses into:
  - A. words
  - B. medical terminology
  - C. signals you can see or hear
  - D. music

**Postive Attitude and Lifestyle**

1. Which is not an element in a positive attitude and lifestyle?
  - A. nutrition
  - B. support systems
  - C. inexhaustible energy
  - D. exercise
  
2. The main idea behind positive thinking is to develop an attitude of challenge, commitment and --- toward changes in your life.
  - A. control
  - B. resolve
  - C. avoidance
  - D. prevention
  
3. Which is not an element of positive thinking?
  - A. self talk
  - B. self punishment
  - C. rehearsal
  - D. action plans
  
4. Support systems can be found:
  - A. in companies
  - B. in community agencies
  - C. through health professionals
  - D. all of the above
  
5. Which of the following exercise programs is aerobic?
  - A. weight
  - B. running
  - C. sit-ups
  - D. stretching

6. Which is not one of our four basic food groups?

- A. dairy products
- B. grains
- C. proteins
- D. sugar

7. Doing "nothing at all" is...

- A. never good for you
- B. sometimes the best thing to do
- C. the only way to avoid stress
- D. a sure sign that you are lazy

**HOW TO MANAGE STRESS  
An Introduction**

**PHYSICAL SYMPTOMS OF POSITIVE STRESS**

**TENSION**

**Tense muscles...Pounding heart...Increased blood pressure...Cold and clammy hands...Tense stomach**

**RELAXATION**

**Relaxed muscles...Normal heartbeat...Blood pressure normal...Warm and dry hands...Relaxed stomach**

**PHYSICAL SYMPTOMS OF NEGATIVE STRESS**

**TENSION**

**Same as with Positive Stress**

**NO RELAXATION**

**Knotted muscles...Soaring heart rate...Soaring blood pressure...Sweaty hands...Stomach in knots**

**HOW TO MANAGE STRESS**  
**Awareness**

**FOUR COMMON STRESS SITUATIONS**

**SITUATION**

**SOLUTION**

**Minor Hassles**

Finding yourself, repeatedly, in the same stressful situations.

Take measures to avoid them.

**Major Lifestyle Changes**

Births, deaths, loss of or change in your job, etc.

Take control of new responsibilities and manage them. When making adjustments, continue to allow time for the things you enjoy.

**Stress Overload**

When you simply have too many things tugging at you at one time.

Call time out and take a break. Sit down for a minute and relax. Use the time to decide priorities; what needs to be done immediately; what can wait until later and so on.

**Feeling Helpless**

When you feel you may be suffering from chronic depression or anxiety.

First, consult your doctor to rule out any medical reason for the problem. Then consider seeing a professional counselor who can help you sort out your feelings.

### VISUALIZATION

1. Let your imagination run free.
2. Try to visualize yourself feeling warm, calm, and relaxed.
3. Picture a tranquil setting that has particular appeal and try to imagine all of the details.

### BIOFEEDBACK

Contact a certified Biofeedback practitioner.

### THE STRESS MANAGER'S CODE

1. Stress doesn't have to be a way of life.
2. Become aware of what causes stress and how you feel under stress.
3. Use simple relaxation techniques and develop a positive attitude and lifestyle.
4. You can manage stress and be in control.



HOW TO MANAGE STRESS  
Relaxation Techniques

DEEP BREATHING

INHALE

1. While sitting or standing, place your hands firmly and comfortably on your stomach.
2. Inhale slowly and deeply through your nose. Let your stomach expand as much as possible.
3. When you've breathed in as much as possible, hold your breath a few seconds.

EXHALE

1. With your hands on your stomach, exhale slowly through your mouth, pursing your lips as if to whistle.
2. When your lungs feel "empty" begin the inhale--exhale cycle again.
3. Try to repeat this cycle 3 or 4 times each session.

CLEARING YOUR MIND

1. Rid your environment of noise and interruptions as much as possible.
2. Loosen any tight clothing, kick off your shoes and relax yourself.
3. Close your eyes and begin to breath slowly and deeply. (Use the Deep Breathing technique)
4. Concentrate on one peaceful word, thought, or image. If other thoughts should enter your mind, don't be discouraged--relax, breathe deeply, and try again.
5. When the exercise is completed, stretch and exhale.

### AUTOGENICS

1. Loosen any tight clothing, close your eyes, and try to clear your mind. You may wish to breath deeply for a few moments and repeat a peaceful suggestion such as "I feel quiet," "My mind is at rest," or something similar.
2. Concentrate on your left arm and repeat to yourself, "My arm is warm and heavy," until it begins to feel warmer and heavier.
3. Then try the same command, focusing on your right arm, left leg, right leg, and so on, until you feel completely relaxed.
4. When you finish, breath deeply and stretch. Open your eyes; exhale slowly and notice how you feel.

### PROGRESSIVE MUSCULAR

1. Tighten your hand muscle and make a fist. Note how it feels. Hold the tension for a few seconds before relaxing.
2. Release your hand, relax your fist and let the tension slip away.
3. Note the difference between how your hand felt when tensed and when you released the tension.
4. As you progress, try this sequence on every major muscle group.

**STRETCHING****BACK STRETCH**

1. While sitting, stretch forward, rest your body on your lap and relax your head and neck.
2. Hold for about a minute, then press on your thighs to sit back up.

**NECK STRETCH**

1. While standing or sitting, slowly rotate your head in a circle to the right without moving your shoulders.
2. Then rotate to the left.
3. Repeat steps 1 and 2 five times.

**SHOULDER AND ARM STRETCH**

1. Hold your hands together with fingers interfaced and stretch overhead with palms upward.
2. Hold about 30 seconds.
3. Relax and repeat five times.

**PASSIVE BACK STRETCH**

1. Lie on the floor with your legs on a chair.
2. Relax, pressing your lower back onto the floor.
3. Rest in this position for several minutes.

**LEG STRETCH**

1. With one foot on a support, slowly lean forward.
2. Bend from your hips and keep your back straight.
3. Repeat the stretch five times on each leg.

**UPPER BODY STRETCH**

1. With feet comfortably apart, reach overhead and stretch to the side. (Try not to move your hips)
2. Hold for 30 seconds, then switch sides.

**THE STRESS MANAGER'S CODE**

1. Stress doesn't have to be a way of life.
2. Become aware of what causes stress and how you feel under stress.
3. Use simple relaxation techniques and develop a positive attitude and lifestyle.
4. You can manage stress and be in control.

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