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Reducing Stress of Inservice Teachers

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REDUCING STRESS OF INSERVICE TEACHERS

by

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Jeffrey R. Curley

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ABSTRACT

Reducing Stress of Inservice Teachers

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A prototype treatment developed to significantly reduce symptoms of stress among inservice teachers was tested in this experiment. Thirty participants selected for high stress levels were randomly assigned to treatment and control groups. They were assessed on environmental, personality, and emotional variables, using self-report and expert-judge measures, both pre- and posttreatment. The experimental treatment was holistic, incorporating all processes previously found to be related to reducing teacher stress. At posttreatment, the treatment group averaged 1.02 standard deviations lower on the stress measures than the control group. Significant differences in the posttest means, favoring the experimental group, were found for 23 of the 39 variables measured on the three self-report instruments. As a group the participants demonstrated substantially lower stress levels than the control group after the treatment, with a substantial decrease from their pretreatment stress levels. Since the control group received no treatment, some of the difference may be due to Hawthorne Effect.

(91 pages)

CHAPTER I

STATEMENT OF THE PROBLEM

Occupational stress is a serious threat to teacher mental health. A review of the literature revealed that this assertion is supported by virtually everyone who has studied or written about this problem (Phillips & Matthew, 1980). In addition to the psychological trauma and physical effects experienced by teachers under stress, the practical problems caused by teacher turnover and loss promise to become increasingly serious as teachers move into the decade of the 1990s (Dworkin, 1987). Studies by the National Commission on Excellence in Education (1983), the National Center of Educational Statistics (1982), and the Rand Corporation (Darling-Hammond, 1984) predict a critical shortage of teachers in several subject areas as well as in special education. There is also evidence that many academically able teachers are leaving education to avoid high stress levels (Schlechty & Vance, 1981).

A recent search of the ERIC database located over fifty references that describe variables related to teacher stress. These variables include such symptoms as physical depletion, feelings of hopelessness, emotional drain, negative self-concept, feelings of failure, loss of idealism, and negative attitudes toward work. A substantial amount of descriptive and correlational research has been carried out to identify variables that relate to the incidence and severity of teacher stress (Fimian & Blanton, 1986; Wangberg, 1984; Dunham, 1983; Clagett, 1980). Although an excellent source of ideas, descriptive and correlational studies such as those located in the ERIC database cannot demonstrate a

cause-and-effect relationship between specific treatment strategies and changes in levels of teacher occupational stress. An extensive literature review has failed to produce any research or developmental projects using an experimental design that have developed treatments for teacher stress and tested these treatments in the field to establish their validity by demonstrating reductions in the severity of stress symptomatology. This is a serious gap in our knowledge of teacher stress and in our ability to treat it successfully. The broad goal of this research is to take significant steps toward filling this gap.

CHAPTER II

REVIEW OF LITERATURE

The Concept of Stress

The construct of stress is one that the human sciences have borrowed from the physical sciences. The term originally referred to strain, pressure, or force upon a system. Stress as a construct applied to humans may be generally defined as a state of arousal or mobilization, a degree of agitation that is experienced internally and that is often noted by an external observer. The view of stress as a syndrome of physiological responses originated with Cannon's (1929) research on the homeostatic mechanisms related to the now familiar fight-or-flight reactions to stressful stimuli. Following Cannon's earlier work, Selye (1956) reported research about specific and general adjustment reactions of the body to stressful events. His general adaptation syndrome (GAS) is defined as a nonspecific reaction to stress that is also an attempt to adapt and maintain homeostasis. While this nonspecific response of the body to any demand is essential to life, Selye noted the destructive effects on the body when stress is not controlled. Additional problems arise when stress is elicited by symbolic threats to which a physiological response may be inappropriate, resulting in residual tension and arousal. The GAS is comprised of three distinct stages: (a) an alarm reaction caused by sudden exposure to a stressor, (b) a stage of resistance in response to prolonged stressors, and (c) the stage of exhaustion. Signs of the alarm reaction diminish as homeostatic mechanisms adjust to the stressor. This

adjustment, however, uses energy that may be needed for other vital functions. Limits are, therefore, evident in the adaptive capacity of the organism. At the point of exhaustion the alarm reaction may reappear. If the coping resources of the organism have been severely overtaxed, continued stress will usually result in serious malfunction.

Following Selye's demonstration of this adaptive syndrome of physiological responses to stressful events, an obvious dichotomy was evident in the distinction between stress, and the events or stressors that could evoke such a syndrome. While physicists define stress as a force that is applied, Selye describes stress as the body's reaction to a force. This distinction between the body's reaction to stressors and the essentially different evocative agents that could result in a final common pathway of nearly identical reactions has had tremendous heuristic power.

Over a quarter-century has elapsed since Selye (1956) began his famous experiments on the effects of stressors on bodily processes. His establishment of a final common pathway of physiological responses evoked by stressful events has provided an anchor for an enormous body of theory and research directed toward identifying unique evocative agents that result in stress. While the excitement of discovery has prompted research along many lines of inquiry during this period, a critical mass of knowledge seems to have been achieved in recent years which has allowed several integrative theories to emerge (Derogatis, 1987; Lazarus, 1966, 1981; Osipow & Spokane, 1983; Pettegrew & Wolf, 1982). These theories relate many of the variables shown by previous research to have stress-inducing potential. One's current stress level

is described by interactional stress theory to be determined by an interaction between the stressful events taking place in the environment, the nature and intensity of resulting emotional response, and personality characteristics employed in coping with stressful events. The exact nature of these interactions is not yet completely known; researchers are becoming confident, however, that stress from these three domains is at least additive (Derogatis, 1987).

Environmental events. Over the last three decades, research on the impact of life events (Holmes & Rahe, 1967) has shown that events confronting us in our various environments have a significant impact on our physical and psychological well-being. In our complex society, an individual may be required to function in multiple environments, which may exert potentially powerful stress-inducing influences. The environmental domain is firmly established as a source of stressors. Research has focused on the three primary areas of health quality, relationships with significant others, and occupational satisfaction.

Our sense of well-being and a satisfying life adjustment is determined most fundamentally by the quality of our health. Disease and illness present great obstacles to the achievement of optimal adjustment and productivity. A universal prescription for behaviors that will generate good health has not been attained. Some habits and behaviors that promote good health and others detrimental to health have been identified. Adopting a proper diet (Selye, 1970, 1975), engaging in physical exercise (Noel, 1987), and avoiding chemical stressors (Noel,

1987) have all been shown to promote well-being through managing environmental conditions.

Relationships with significant others represent another potential for stressful life events (Brallier, 1982). Harmonious relationships are central to well-being and overall adjustment throughout the life span. Relationships with parents, spouses, children, and extended family members may contribute to stress-related disorders (LeShan, 1977). Developmental stages such as the familiar adolescent rebellion, mid-life crisis, or decline of later years may also present characteristic problems that impact interpersonal relations. Home life always represents a potential for stressors, and this aspect of the environment merits much consideration and effort to insure positive life experiences.

Occupational satisfaction reflects a third life-event area potentially capable of inducing stress. Occupations play a major role in achieving a sense of well-being. If satisfaction is high, this pleasure can serve as a buffer against stress in many life environments. Alternatively, problems with performance, co-workers or management, remuneration inequities, and a multitude of other problems may result in high levels of stress. Resolving conflicts or changing jobs have been the two most widely used means of reducing occupational stressors. Work environment stress has been hypothesized to result from a poor person-environment fit (French, 1976) and is a major cause of physiological and psychological strain. This stress may be managed by developing

coping resources to counter the effects of occupational stressors (Lazarus, Averill, & Opton, 1974; Roskies & Lazarus, 1980).

Emotional responses. Even when environmental situations are benign, they can evoke intense emotional responses such as anxiety, depression, and hostility. People who are emotionally reactive in such negative ways tend to see even benign events as potentially dangerous or threatening. It is not generally possible, therefore, to specify the external conditions that determine when a stress reaction will occur, since one's interpretation of environmental conditions as threatening may produce a stress reaction irrespective of commonly benign characteristics of a situation. In the above discussion of the relationship between environmental stressors and physiological responses to stress, an external situation was identified as potentiating the response, with the duration of response contingent upon contiguity with the stressor. Emotional reactivity has been described much less clearly, while being implicated in explaining how we move from short-range emergency reactions, or patterns of physiological mobilization, to long-range disease processes (Lazarus, 1978; Levi & Kagan, 1971; Luborsky, Docherty, & Penick, 1973; Stahl, Grim, & Neikirk, 1975). The problem is that the relationship between emotional status and stress does not have a measurement strategy adequate for quantification. While objective measures of physiological changes are readily available, they do not always correlate with emotional status (Duffy, 1962; Lindsley, 1951; Malmo, 1959; Selye, 1976). Selye (1976), for example, distinguishes between distress and eustress. In distress, the body goes

through the nonspecific response and heads toward exhaustion and disease. In eustress, the nonspecific response causes less damage, and more pleasure and sense of growth are evident. Selye concludes that one's mental attitudes play a large part in determining whether adapting to change is successful.

Much of the confusion expressed by psychophysiologists (Alexander & Selesnick, 1966; Ax, 1953; Funkenstein, King, & Drollete, 1956; Lipowski, Lipsitt, & Whybrow, 1977; Schacter, 1957) concerning the potential for emotional mediation of stress reactions may have resulted from a dualism inherent in employing mechanistic models to conceptualize the problem. The division of nature into independent realms (i.e., mind and matter) has been commonplace since the philosophy of Descartes and Newtonian physics and has strongly influenced the development of health-care views (i.e., the medical model) (Brallier, 1982). Psychosomatic medicine, however, has been suggesting an interactive relationship between mind and body, helping researchers to recall that the distinction is more suited to utilitarian purposes than to the clarification of human psychophysiological processes. In the physical sciences, modern quantum physics (Bohr, 1934) entertains the notion of a cosmic wholeness--that the universe is an indivisible reality without separate objects and events. This notion applied to human science would suggest an inseparable mind-body unity. This does not imply that one theory has any more "truth" than the other. Is it more true to classify rabbits according to their meat or according to their fur? It depends on what you want to do with them. An important implication here, for understanding emotional responses, is the validation of the clinical

method as a means of inquiry into the human condition. While scientific methodology continues to provide checks on self-deception, those adopting a holistic orientation may not rely exclusively on physiological or other mechanistic proofs to substantiate experienced phenomena. Phenomenological inquiry into the role of emotions in predisposing one to stress has proven enlightening in studies of human psychological processes.

In studies of psychological responses to stressful life events using clinical methods, common qualities of conscious experience were found among patients (Horowitz, Wilner, & Alvarez, 1979). Two major response sets were abstracted from in-depth evaluations and psychotherapy interviews--intrusion and avoidance. These response sets, and the way in which they were experienced, have been described in previous research (Horowitz, 1976; Janis, 1969; Lazarus, 1966; Lindemann, 1944). Intrusion is characterized by unbidden thoughts and images, troubled dreams, strong pangs or waves of feelings, and repetitive behavior. Avoidance responses include ideational constriction, denial of the meanings and consequences of the event, blunted sensations, behavioral inhibitions or counterphobic activity, and awareness of emotional numbness. It has been suggested (Derogatis, 1987) that these response sets, which describe closely the emotions of anxiety and depression, along with hostility are applicable and valid indices of emotional distress across a broad spectrum of human experience. These three affective experiences are essentially universal indicators of emotional distress and dissociation, appearing as central phenomena in many formal psychiatric disorders. Even when sub-clinical

in intensity, these basic negative human emotions are experienced as unpleasant and tax the psychological integrity of the person involved. Cannon's (1929) fight-or-flight response, and Selye's (1956) general adaptation syndrome suggest that fundamental neuroendocrine mechanisms mediate the relationship between these three basic emotional experiences and the class of phenomena referred to as stress. Negative emotions have, therefore, been linked to environmental stressors as a subjective awareness of the body's physiological response.

An interaction between these two processes has also been noted in a reverse direction. Human psychological processes involved in exacerbating the perception of environmental threats have provided a view of the role of emotional reactivity in long-range disease processes. Since the turn of the century, psychologists, using other than mechanistic conceptualizations, have described unintegrated components of mentality. For example, Freud's (1963) unconscious--a realm of mind with its own wishful impulses and mode of expressions, Jung's (Jacobi, 1973) autonomous psyche, Sullivan's (1940) automatisms, and Berne's (1972) scripts all point to the potential for involuntary reactive emotional processes. These may be differentiated from objective emotions, which are reactions or responses to real danger in the external world. Self-generated emotional responses, or neurotic emotions, constitute a class of stressors originating in an internal, rather than external domain. Since the person is not consciously aware of these repressed or dissociated mental components, internal stressors may be constellated as response sets, or activated by external cues. They consequently interfere with an accurate perception of external

environmental threats or dangers. The degree of emotional reactivity cannot be accurately assessed, however, without knowledge of the nature and intensity of current environmental pressure and the individual's characteristic style of personality.

Personality characteristics. The third component in interactional stress theory represents the long-standing character traits we refer to as personality. One of the most heuristic studies, stimulating renewed interest in the relationship between personality and health patterns, was Friedman and Rosenman's (1974) work correlating personality patterns and cardiovascular heart disease. Additional evidence is accumulating that suggests that personality patterns may be associated with heart disease, cancer, and arthritis, as well as ulcerative colitis, migraine, asthma, and other disorders thought to be psychosomatic or stress induced (Pelletier, 1977). Friedman and Rosenman (1974) noted two traits, that if occurring together define their Type-A personality--excessive competitive drive, and a continual sense of time urgency to meet deadlines.

Driven behavior results from a compulsive need to be involved in constructive behavior. This further results in an intense pattern of activities that the person initiates to satisfy the need to be improving. People with this characteristic are typically invested in tangible accomplishments as a source of self-worth and well-being. Leisure activities may be experienced as threatening, and if hobbies are adopted they are pursued with the same driven quality. Rather than

becoming a source of relaxation, leisure activities often become additional sources of stress-inducing challenges.

Time pressure is another hallmark of the popular conception of stress. It is seen in situations in which an important task must be completed in a limited and perhaps insufficient amount of time. The setting of a deadline significantly increases the physical, psychological, and emotional resources a person must expend to accomplish the task. The high level of tension and emotion inherent in such a bind, along with the resulting fatigue, generally dissuades people from committing to such unpleasant situations unless they are imposed from without. Some people, however, react positively to time-induced pressure and actively seek out this type of stimulation. Rewards include heightened emotional tone, excitement, averting the possible agony of defeat, and personal satisfaction with high performance under pressure. These people may have a high achievement ethic, imputing a sense of social responsibility to their efforts, and on another level perhaps a feeling that high achieving makes them better people. Although an effective strategy for getting much accomplished in the short run, chronic utilization of the Type-A personality style exacts a large toll from one's physiological resources and psychological integrity. Research shows that this strategy places its users at risk for a host of stress-related disorders (Derogatis, 1987).

An obverse corollary to personality characteristics that lead to stress is one's potential for relaxation. This area consists of our capacity for healthy diversion from routine. External interests, even if minor and seemingly insignificant, can serve as important buffers

against stress. These stress-reducing activities represent a broad range of behaviors that deflect and diminish excessive stress. Daydreaming, singing, music, television, reading, sports, bird-watching, and innumerable kinesthetic, creative, social, and imaginative diversions contribute to recreational "micro-flow" experiences (Csikszentmihalyi, 1975) that help break stressful routines. Additionally, therapeutic procedures, such as meditation, autogenic relaxation training, neuromuscular exercises, and stretching exercises, have been suggested to improve one's relaxation potential (Girdano & Everly, 1979; Grasha, 1987; Noel, 1987; Benson, 1975; Pelletier, 1977).

Another area of personality functioning is role definition, which refers to consistent representations of self that one makes both privately and publicly. Some role definitions appear to have high stress-deflecting properties, whereas others appear to be highly stress inducing. Psychologists have pointed to the self-concept as playing an important role in personal stress and its management. A self-image is formed by evaluating personal power and self-worth based on input from the significant others in one's life. Beginning at an early age information is accumulated from these sources, and one slowly forms a relatively stable self-concept. Unhappily, the formation of a poor self-concept can lead to increased stress and the risk of various diseases (Girdano & Everly, 1979). Perceptions of helplessness and self-devaluation, for example, may have etiological relevance in the development of cancer. Research has shown that progress in the treatment of cancer has been made when self-perception enhancement has been used as a psychological intervention (LeShan, 1977; Simonton &

Simonton, 1975). There are many identified role definitions that have been related to the capacity to enhance or reduce stress and that, if uncontrolled, may result in serious malfunctions (Derogatis, 1987).

As noted above, preceding a discussion of these three domains that interactively determine one's stress level, the exact nature of the relationship between environmental, emotional, and personality-based sources of stressors is incompletely known. Substantial evidence, however, exists to suggest that stressors from these three sources may potentiate one another and are at least additive. It follows that assessment and treatment of persons experiencing high levels of stress may benefit from consideration of these three sources and their possible interactions.

Stress in Education

A survey of recent studies on teacher stress shows that a number of specific stressors have been identified in educational settings (Beasley, 1984; Goodman, 1980; Schnacke, 1982; Schwanke, 1981; Schwartz, 1983). Many stressors appear consistently in these studies and may be subsumed under the general categories of environmental and personality induced stressors.

Environmental stressors that have been identified include: conduct and discipline of pupils, misbehavior and poor student attitudes, personal teaching competence, disagreements with supervisors and administrators, lack of administrative support, poor organizational structure, and nonparticipation by teachers in decision making.

Additional stressors include accountability laws, large classes, low salaries, intense pupil dependence, and declining community support.

Sources of personality induced stressors have been recognized as factors compounding the effects of those originating in the environment. These are seen to be related to the teacher's perception of self. Identified factors that may be implicated in this domain include: negative teacher self-perceptions, negative life experiences, low teacher morale, and a struggle to maintain personal values and standards in the classroom (Goodman, 1980; Schnacke, 1982; Schwanke, 1981).

Emotional response sets that may contribute to teacher stress have rarely been identified. This may be due to an unrecognized need to identify this class of stressors separately from a rather complex interactive perspective relating environmental and personality variables. Negative emotions such as anxiety, depression, and hostility, however, have been reported as effects of teacher stress.

Effects of stress in education. Many negative effects are reported due to excessive stressors in the educational profession. As in other helping professions, the effects of stress assume various psychological and physiological manifestations. Pratt (1978) and Dunham (1977) noted a correlation between amounts of stress in teachers and anger, self-doubt, lack of confidence, exhaustion, depression, hypertension, neurodermatitis, ulcers, migraines, colitis, absenteeism, and early retirement thought to be a sign of job-related stress. Others have found excessive tension to be the most common symptom associated with teacher stress (Kyriacou & Sutcliffe, 1978). The increasing number

of teachers who simply choose to leave the classroom for another job have caused much concern. Many of these who are opting for careers outside education are the brightest teachers (Schlechty & Vance, 1981). A corollary is the concern regarding the availability of equally competent teachers to serve as replacements.

Coping with stress in education. Three alternatives for coping with teacher stress are evident (Jones & Emanuel, 1981): staying in education without attempting changes, staying and attempting changes, or leaving the field. For those who will endeavor to improve their conditions, two promising areas of change have been suggested: managing the environmental situations that produce stress, and achieving greater internal self-regulation of stress physiology (Barrow, 1981). Opportunities obviously exist in both areas. External changes suggested for alleviating environmental stressors include: improvement of the organizational structure, raising the status and power of the professional teacher, and establishing support networks (Spaniol, 1979; Bundy, 1981; Partin & Gargiulo, 1980). Personal strategies that have been suggested include: relaxation therapy, good nutrition, exercise, and improved communication skills (Lipovenko, 1981).

Summary

In summary, the emerging comprehensive views of the concept of stress and the concomitant identification of stressors from many dimensions in the teaching profession suggest the futility of trying to deal with a complex problem with univariate intervention strategies.

Stress operates in many dimensions and not always predictably. How we react to environmental stressors is determined by our ability to relax, our diet and patterns of physical activity, and our ability to modify our lifestyles. Because stress reactions occur in various ways and on various levels, stress management must be conceived and implemented from a holistic consideration of the numerous and varied sources of stressors identified to be contributing to teacher stress. Similarly, interventions would benefit from an incorporation of as many proven means shown to be effective in reducing the resulting stressful reactions as are practicable. What is needed is an approach to controlling stress and tension that deals with the complete lifestyle of the person, incorporating interventions at several levels--physical, psychological, and social.

CHAPTER III

METHODOLOGY AND PROCEDURES

The serious threat to teacher mental health caused by occupational stress was addressed by this study. A literature search revealed that the problem of teacher stress has been seen by virtually everyone who has studied and written in this area.

Purpose and Objectives

The purpose of this study was to develop and validate a treatment program that was designed to significantly reduce symptoms of occupational stress in inservice teachers whose pretreatment assessment was indicative of serious stress levels. Specific objectives were:

1. Identify variables that have been found to be related to teacher stress in previous research and select the most important as independent variables.

2. Identify and evaluate treatments that have been employed or proposed to reduce the severity of teacher stress.

3. Develop a prototype treatment that focused on the most important causal factors and the most promising treatment strategies that have emerged from previous research as described above.

4. Identify measures of stress that have been developed to date and evaluate them in terms of reliability, validity, and theoretical foundations. Select measures used for screening and pre- and post-measurement of the dependent variable.

5. Screen teachers in local school districts to locate individuals showing symptoms of excessive stress. A combination of

instruments was used for initial screening and measurement of the dependent variable.

6. Conduct a pilot study with a sample of teachers showing serious stress symptoms. Administer the prototype treatment and collect data on both formative and summative evaluation.

Hypotheses. The following null hypotheses were evaluated:

Hypothesis 1. There will be no difference between the stress level of teachers who complete the experimental treatment and comparable control-group teachers.

Hypothesis 2. There will be no difference between the pre-treatment and post-treatment stress level of teachers who complete the experimental treatment.

Population and Sample

The target population for this research is public school teachers in the United States who are experiencing serious levels of occupational stress. The accessible population was public school teachers in northern Utah. Teachers from mid and high schools gained admission to the program through a three-stage process: (a) submitting an application after hearing a presentation about the program at school faculty meetings, (b) scoring in the top thirty on a screening measure indicating stress level, and (c) being randomly assigned to treatment (n = 15) or control (n = 15) conditions. Participants completing the treatment received four units of graduate credit in education, and those in the control group were given priority for the treatment during a replication. Demographic information is summarized in Table 1.

Table 1

Summary of Demographic Information

	Treatment (n = 15)	Control (n = 15)
Male/Female	6/9	6/9
Average Age	38.1, SD = 8.28	38.1, SD = 6.99
Married/Divorced	15/0	13/2
Average Number of Children	2.5	3.1
Average Years Teaching Experience	9.5	9.1
Number of Schools of Employment	2.1	2.2
Percentage of Spouses Employed	60%	73%
Average Years Spouses Employed	9.2	9.5
Previous Mental Health Care	27%	20%
Alcohol use (moderate)	27%	40%
Non-prescription Drug Use	0	0
Percentage Caucasian	100%	100%

Design

This study used an experimental design to assess the effectiveness of a stress reduction treatment for inservice teachers (Borg, 1987). An initial presentation of the program was made to teachers from three local middle schools and three high schools. Teachers who believed they were experiencing high levels of stress were invited to participate in

the program. Applications, including an informed consent statement (see Appendix A), and envelopes addressed to the researcher were provided. Self-selected applicants drawn from this accessible population were then administered a screening measure (TSM, see instrumentation section). Thirty teachers showing the highest levels of stress on this measure ($M = 224.38$, $SD = 42.81$) were randomly assigned to a treatment group ($n = 15$) or control group ($n = 15$).

All participants completed a pretreatment test battery and a video-taped clinical interview. Members of the treatment group were asked to sign an additional informed consent form (see Appendix B). The treatment group was then exposed to twelve two-hour stress reduction classes extending over a fourteen week period. No treatment was administered to the control group teachers; they were, however, given an opportunity to participate in the treatment during a replication phase of the research.

The treatment was administered by two clinical psychologists, each with over twenty years of clinical experience. They were assisted by the author, who had prior group facilitation experience. The treatments were administered in the context of a facilitator led workshop, utilizing short lectures, experiential activities, and group feedback discussion. After the treatment was completed, all teachers in the experimental and control conditions completed a post-treatment battery and a final video-taped clinical interview.

Treatment

The treatment package has been built upon the above theory and previous correlational research with attention to variables and proposed treatments that have been found related to teacher stress and its remediation. It included twelve two-hour sessions to be carried out over a fourteen week period (see Appendix E).

The treatment was a holistic approach which addresses the participants' environmental conditions, personality characteristics, and emotional well-being. It included working toward personal change as well as changing the environment and the way it is coped with. Treatment objectives for each person were as follows:

a. To provide an understanding of what stress is, how it originates and what it can do;

b. To help the teacher assess his or her personal sources of stress and current responses to stressful situations;

c. To teach a variety of stress-management techniques;

d. To supply guidelines for developing specific plans to improve individual stress management.

The treatment incorporated stress management strategies aimed at coping with short-term stress(ors) and resisting long-term disease processes (Adams, 1980; Brown, 1984; Selye, 1976). Short-term strategies included:

a. Dealing with excessive time constraints (Brown, 1984): Using force-field analysis to find more efficient ways of accomplishing tasks.

b. Setting priorities (Grasha, 1987): Categorizing and organizing tasks according to degree of urgency. Giving oneself permission to decide that some tasks may be unimportant.

c. Quick relaxation techniques (Grasha, 1987): Learning to quickly recognize tension and to counter this stress response with relaxation.

d. Coping with inadequate resources (Brown, 1984): Using force-field analysis to help find ways of accomplishing tasks when resources appear inadequate. Deciding which tasks must be done if adequate resources are not available.

e. Readjusting self-expectations (Grasha, 1987): Evaluating one's needs for achievement, perfection, and approval and testing their logic and possibility for realization.

f. Seeking social support (LaRocca, House & French, 1980): Evaluating the need for support, present resources and possible new sources. Developing methods to invite and encourage other people to provide support.

g. Dealing assertively with administrative problems (Bower & Bower, 1976): Learning to accept one's right to be assertive and distinguish appropriate situations and methods.

h. Coping with classroom problems and conflicts (Grasha, 1987): Using brainstorming, force-field analysis and other techniques for handling student discipline, motivational and other problems.

The treatment package also included methods for managing stress based upon long-term changes in lifestyle. Strategies for long-term stress management included:

a. Reducing the use of chemical stressors (Noel, 1987): Understanding the ways in that chemicals contribute to stress, and making decisions and time lines for elimination.

b. Adopting a proper diet (Selye, 1970, 1975): Learning about the effect of diet upon stress, and planning for appropriate improvement.

c. Engaging in physical activity (Noel, 1987): Learning how exercise reduces stress, and planning personal exercise programs.

d. Employing relaxation techniques (Benson, 1975): Using systematic relaxation and meditation on a long-term basis to manage habitual stress responses.

e. Coping with disappointment (Noel, 1987): Controlling the ways one thinks about disappointing circumstances. Understanding their meaning and managing anger and frustration.

f. Seeking emotional support (Noel, 1987): Defining oneself as deserving emotional support, and developing networks of friends and relatives.

g. Managing time (Noel, 1987): Setting priorities on tasks to be done. Using time management techniques to plan, organize, and carry out schedules.

Various processes were used in the 12 two-hour treatment sessions, including lecture-discussion, small-group sharing of progress and problems, audio-visual presentations, written test evaluations, and homework. Activities from the past week(s) were reviewed at the beginning of each session. Session content was as follows:

Session 1, Introduction: Administrative details, program content, and processes to be followed are covered in a general manner. The two clinicians manage the group forming process while establishing norms of participation, respect, and openness; not least, modeling the relaxation response.

Session 2, Concept of Stress: Stress, distress, eustress, and Type A and B personality characteristics, are covered in lecture-discussion aided by a slide presentation and testing instruments. Stages, common causes, consequences, and symptoms of stress are presented in the context of the public school setting.

Session 3, Task-Based and Role-Conflict Stress: Task-based and role-related stress are compared relative to the specific tasks that teachers must perform. A clear identification of each participants' unique stressors is facilitated with force-field analysis planning sheets and stress logs, which are subsequently assigned as homework for all remaining sessions. Group members share individual analyses in small groups.

Session 4, Assertiveness Life Style: The importance of allowing one's self to be assertive is discussed, along with confusions regarding the right to be assertive, myths regarding assertiveness, definitions of assertiveness versus aggression, and the relationship of those behaviors

to self-confidence. Assessment instruments are used to help participants obtain a more objective picture of their ability to be assertive.

Session 5, Relaxation and Breathing: Experiential breathing and relaxation processes are introduced. The participants are guided through regulated and pausing breathing sequences to experience and learn this way of countering the stress response. A process of systematic relaxation of all muscle groups is then practiced. Tapes of a guided relaxation process are provided and members are encouraged to practice regularly until a "relaxation response" becomes quite familiar and automatic.

Session 6, Meditation: Meditation is described as an alternative to relaxation and as a way to achieve a deeper level of relaxation and of contact with the self. Participants are then led through a meditation experience of about twenty minutes duration. They are assigned to practice at home each day for a minimum of twenty minutes twice a day. All subsequent sessions are initiated with a short session of guided relaxation or meditation in which various techniques and approaches are demonstrated.

Session 7, Nutrition: A nutritional evaluation inventory is distributed and discussed relative to the participants current diet. This is followed by a lecture-discussion of nutritional habits important in stress management, and individual commitment to make changes determined beneficial by each participant.

Session 8, Exercise, Mini-Relaxation and Stretching: A physical exercise evaluation is distributed as a stimulus to individual

assessment of needs in this area. A group discussion provides insight into personal needs for more exercise, and methods that those more successful have used to adopt exercise programs into a busy schedule. Mini-relaxation and stretching exercises are taught in a demonstration of deskside relaxation, focusing on common symptoms of stress and techniques of quieting responses.

Session 9, Holistic Living, Mind & Body: The concept of mindfulness, defined as awareness of self and environment, awareness of choice and personal creativity is discussed. The importance of making a balance in one's life is also made, along with ways of achieving such a balance. Several goals of holistic living are defined and ways to work toward those goals are discussed and shared.

Session 10, coping with Disappointment, and Chemical Stressors: The place of disappointment in the development of stress is discussed. Participants are encouraged and helped to discuss and to evaluate their customary ways of coping with disappointments and to develop new, more productive ways of coping. The endocrine system is briefly described to show how sympathomimetic agents such as caffeine and nicotine trigger an elevated baseline of activity. Alternatively, agents that reduce this baseline of stress are discussed, such as alcohol, minor tranquilizers, barbiturates and narcotics.

Session 11, Support Systems, Life Stressors, and Teacher Stress: A discussion is held to help participants develop increased awareness of the importance of having an adequate social support system. It is emphasized that such support is necessary both at work and in one's

personal life, and that separate systems may be needed for each of these areas.

It is emphasized that all the information about stress that had been given thus far in the workshop, along with the various coping ideas and techniques need to be utilized from day to day in order to keep one from being overloaded and in order to maintain balance in one's life.

Session 12, Understanding Situations, Letting Go Resentments, and Where To From Here: A review of the experiences and learnings from the previous sessions is held. Time is taken for planning ways that individuals may extend their learnings and habits into the future.

Associations between measurement variables and treatment strategies are somewhat tenative since previous researchers have used different terminology and concepts. Apparent relationships, however, are presented in Table 2.

Table 2

Treatment Strategies Related to Sessions and Test Battery

Treatment	Strategy	Variables	
1. Introduction:	To manage group forming processes, and to model the relaxation response.	DSP:	depression**
			anxiety**
			relaxation potential**
		OSI:	psychological strain**
2. Concept of Stress:	To provide an understanding of what stress is, how it originates, and what it can do. To help the teacher assess his or her personal sources of stress and current responses to stressful situations.	DSP:	depression**
			anxiety**
			attitude posture
			hostility
			driven behavior
			health posture
			time pressure
		OSI:	physical strain**
			psychological strain**
			role boundary**
			responsibility
		TSM:	illness symptoms
3. Task-based and Role-Conflict Stress	Using force-field analysis to find more efficient ways of dealing with excessive time constraints (Brown, 1984).	DSP:	role definition**
			hostility
			vocational satisfaction
		OSI:	role insufficiency**
			role ambiguity**
			role boundary**
	Categorizing and organizing tasks according to degree of urgency, and giving oneself permission to decide that some tasks may be unimportant (Grasha, 1987).	TSM:	nonparticipation**
			role overload**
			task stress**
			role conflict
			role preparedness
			role ambiguity
	Using force-field analysis to help ways of accomplishing tasks when resources appear inadequate. Deciding which tasks must be done if resources are inadequate (Brown, 1984).		

(Table continues)

Table 2 (continued)

		Evaluating one's need for achievement, perfection, and approval and testing their logic and possibility for realization (Grasha, 1987). Setting priorities on tasks to be done. Using time management techniques to plan, organize, and carry out schedules (Noel, 1987).	
4.	Assertiveness Life Style:	Learning to accept one's right to be assertive and to distinguish appropriate situations and methods in dealing assertively with administrative problems (Bower & Bower, 1976).	DSP: attitude posture OSI: rational/cognitive coping TSM: nonparticipation**
5.	Relaxation and Breathing:	Learning to quickly recognize tension and to counter this stress response with relaxation (Grasha, 1987). Using systematic relaxation on a long-term basis to manage habitual stress responses (Benson, 1975).	DSP: relaxation potential** OSI: psychological strain** interpersonal strain** recreation self-care TSM: life satisfaction**
6.	Meditation:	Using systematic meditation on a long-term basis as a deeper form of relaxation and contact with self to manage habitual stress responses (Benson, 1975).	DSP: relaxation potential** OSI: psychological strain** self-care TSM: life satisfaction**
7.	Nutrition:	Learning about the effect of diet upon stress, and planning for improvements in adopting a proper diet (Selye, 1970, 1975).	DSP: health posture OSI: physical strain** self-care

(Table continues)

Table 2 (continued)

8.	Exercise, Mini-relaxation, and Stretching:	Continuing to emphasize quick relaxation responses (Grasha, 1987). Learning how exercise reduces stress, and planning personal exercise programs (Noel, 1987). Re-emphasizing and supporting development of systematic relaxation and meditation to counter stress (Benson, 1975).	DSP: relaxation potential** health posture OSI: physical strain** recreation self-care
9.	Holistic Living, Mind and Body:	To supply guidelines for developing general plans to improve stress management. To evaluate one's need for achievement, perfection, and approval and testing their logic to help in readjusting self-expectations (Grasha, 1987).	DSP: role definition** OSI: psychological strain** TSM: life satisfaction**
10.	Coping with Disappointment and Chemical Stressors:	Controlling ways one thinks about disappointing circumstances, understanding their meaning, and managing anger and frustration (Noel, 1987). Understanding the ways in which chemicals contribute to stress, and helping to eliminate their use (Noel, 1987).	DSP: depression** anxiety** health posture OSI: physical strain** responsibility rational/cognitive coping

(Table continues)

Table 2 (continued)

11.	Support Systems, Life Stressors, and Teacher Stress:	Evaluating the need for social support present resources and possible sources. Developing methods to invite and encourage other people to provide support (LaRocco et al., 1980).	DSP: domestic satisfaction** vocational satisfaction OSI: vocational strain** interpersonal strain** social support
		Using brainstorming, force-field analysis and other techniques for handling student discipline, motivational, and other problems (Grasha, 1987).	TSM: peer support** management style** school stress** supervisory support job satisfaction
		Defining oneself as deserving emotional support, and developing networks of friends and relatives (Noel, 1987).	
12.	Understanding Situations, Letting Go Resentments, and Where To From Here:	Continued emphasis on readjusting one's expectations (Grasha, 1987), and long-term planning to consolidate gains made in stress reduction Neol, 1987).	DSP: depression** anxiety** hostility OSI: psychological strain** interpersonal strain** TSM: life satisfaction**

*Note: DSP = Derogatis Stress Profile, OSI = Occupational Stress Inventory, TSM = Teacher Stress Measure.
**After treatment difference between experimental and control groups, $p < .05$.

Data and Instrumentation

Multiple outcome measures of the dependent variable were used on the recommendation of Bergin and Lambert's (1978) review of therapeutic outcome research. Ratings were completed by participants, treatment facilitators, and an independent rater. The Teacher Stress Measure (TSM), Derogatis Stress Profile (DSP), and Occupational Stress Inventory (OSI) were used to provide participant self-report measures. Semi-structured clinical interviews by the treatment facilitators provided expert judgment on participant stress levels. Fiscal restraints prohibited the employment of additional experienced clinicians not involved in the research to conduct the interviews. Additionally, a third clinical psychologist with commensurate experience, blind to the interview sequence, independently rated a sample of experimental and control group pre- and post-treatment interview tapes to provide a reliability check on the clinical assessment. The unit of observation was the entire interview, which has precedent in the psychotherapy process literature (Kiesler, 1973). Two tapes of each clinician's pre- and post-treatment interviews, for both experimental and control groups (N = 16), were randomly selected and assessed by the independent rater. The rater used the Structured Clinical Stress Interview and rating scales developed for the clinical assessment (see Appendix C). The rater was blind to whether individual tapes were pre- or post-treatment interviews, or from experimental or control groups. Correlations between ratings by the treatment facilitators and the independent rater provided a check on the validity of the expert judge ratings of stress level.

A literature search identified twenty-one measures that purported to measure the severity of teacher stress (Beasley, 1984; Collins & Masley, 1980; Decker & Williams, 1980; Derogatis, 1987; Farber, 1984; Folkman & Lazarus, 1982; Hock, 1985; Holmes & Rahe, 1967; Horowitz, Wilner, & Alvarez, 1979; Hudson & Meagher, 1983; Cichon & Koff, 1977; Maslach & Jackson, 1981; Oaster, 1982; Oliver & Shirom, 1983; Osipow & Spokane, 1983; Pettegrew & Wolf, 1982; Sarason, Johnson, & Siegel, 1978; Saunders & Watkins, 1980; Schwartz, 1983; Spielberger, 1984; Wilson, 1979). Each of these measures has been evaluated in terms of reliability, validity, and theoretical foundation. The measures to be included to screen potential subjects, and to be used for pre- and post-measurement of the dependent variable are:

Teacher Stress Measure (TSM). This is a seventy item self-report measure normed on a sample of 264 junior and senior high school teachers. The TSM contains items related to thirteen teacher stress variables: role ambiguity, role conflict, role overload, role preparedness, nonparticipation, school stress, management style, job satisfaction, life satisfaction, supervisory support, peer support, task stress, and illness symptoms. Alpha reliability coefficients for these scales ranged from .57 to .91. A median reliability for the thirteen scales was found to be .82 with only two scales with reliability coefficients below. 75. Concurrent validity for this measure was established by determining the correlation between teacher scores on the stress variables and on a priori grouping of participating schools into high stress and low stress schools. A discriminate function significantly differentiated the high stress and low stress groupings at

the p = .001 level. Evidence of construct validity has also been provided related to these scales. Stress is viewed from three conceptually distinct vantage points condensed from previous research--task-based stress, role-related stress, and work-events stress--all of which demonstrated good internal consistency (Pettegrew & Wolf, 1982).

Derogatis Stress Profile (DSP). This is a self-report instrument containing 77 items, with seven items relating to each of eleven variables. The variables are: time pressure, driven behavior, attitude posture, relaxation potential, role definition, vocational environment, domestic environment, health environment, hostility, anxiety, and depression. Alpha reliability coefficients for the eleven variables ranged from .79 to .99 and were based on: (a) responses of 847 employees of twelve major corporations in positions ranging from clerical to upper management, (b) 34 individuals who presented to a corporate medical office with stress related disorders, and, (c) a cohort of forty-three brittle diabetics. Test-retest coefficients, assessed seven days apart, on the sample of 847, ranged from .79 to .93. Coefficients on the sample of thirty-four paralleled the larger sample with temporal stability highest for personality factors and lowest for emotional responses.

Construct validity was demonstrated by testing the structural composition to determine whether the dimensions of the scale, which represent a kind of hypothesis matrix, would cluster and correlate. Factor analysis yielded essentially a reciprocal of three hypothesized domains and accounted for 68.1% of the variance. In a study

demonstrating predictive validity (n = 43) the DSP successfully discriminated diabetic individuals with good versus poor glycemic control--an important consideration for a psychological measure.

The model for the DSP was derived from Lazarus' (1966, 1981) interactional theory of stress that describes stress as comprised of the following domains: environmental events, personality mediators, and emotional responses. This interactive measurement is argued to represent the stress construct more meaningfully than any single component (e.g., life events, psychological symptoms, type A personality, physical symptoms, etc.). The eleven subscales reflect these three domains, are scaled to render them comparable, and are combined into a total stress score. A subjective stress score is also derived to provide an estimate of the respondent's conscious awareness of his or her stress status. The DSP measures stress in primary, secondary, and superordinate dimensions. Previous research has shown these dimensions to possess high stress-inducing properties. The DSP has been developed with rigorous adherence to psychometric tenets central to sophisticated psychological measurement. The author suggests that fundamental psychometric exercises and preliminary validation studies indicate high promise for the DSP as a measure of stress at the global clinical level of assessments with little variation across age and sex (Derogatis, 1987).

Occupational Stress Inventory (OSI). This is a self-report instrument containing 140 items, with ten items relating to each of fourteen variables: role overload, role inefficiency, role ambiguity,

role boundaries, responsibility, physical environment, vocational strain, psychological strain, interpersonal strain, physical strain, recreation, self care, social support, and rational-cognitive coping.

The OSI is a concise measure of three domains of occupational adjustment: occupational stress, psychological strain, and coping resources. Detailed information is provided by scales measuring specific attributes of the environment or individual that represent important facets of the domains. Two reasons are described as motivating the development of the OSI: (a) to develop generic measures of stressors that would apply across occupational levels and environments, and (b) to provide measures for an integrated theoretical model relating stress from the work environment, resulting psychological symptoms, and the level of an individual's coping resources. The first six scales comprise the Occupational Roles Questionnaire (ORQ); the next four, the Personal Strain Questionnaire (PSQ); and the final four the Personal Resources Questionnaire (PRQ).

The OSI was normed on a sample of 909 adult subjects employed in technical, professional, and managerial positions in schools, service organizations, and manufacturing settings. An internal consistency analysis was completed on a sample of 549 working adults, and 155 military and civilian physicians. Alpha coefficients for total scores were .89 (ORQ), .94 (PSQ), and .99 (PRQ). Coefficients for individual scores ranged from .71 to .94. As expected from the underlying model, a correlation of -.24 was found between PRQ and PSQ total scores, and -.25 between ORQ and PRQ total scores. High levels of coping were therefore

correlated with low levels of strain and stress. This finding was also supported by the pattern of correlation among individual scales.

Validity data for the OSI are derived from: (a) factor analytic studies, (b) correlational studies of the relationships of the scales to variables of practical and theoretical importance, (c) studies using the scales as outcome measures following stress reduction treatment, and (d) studies of the stress, strain, and coping model employing comparisons of criterion groups. Each of the three questionnaires (ORQ, PSQ, PRQ) were separately subjected to a confirmatory factor analysis using varimax rotation. A second and independent confirmatory factor analysis (Alexander, 1983) further tested the questionnaire, concluding that there was substantial agreement between the OSI scales and the patterns of factor loadings. Additionally, a number of correlational and multivariate studies have employed the OSI as an experimental measure and provide evidence of the relationship between the incorporated variables and the theoretical model. The author suggests that these studies provide support of the concurrent validity of the OSI (Osipow & Spokane, 1983).

The Structured Clinical Stress Interview. Recent meta-analytic studies (Edwards, Lambert, Moran, McCully, Smith, & Ellingson, 1984; Lambert, Hatch, Kingston, & Edwards, 1986) support the authors' view that interviews by experienced clinicians may assess stressors not probed by self-report measures--thus providing a more complete picture of the subjects' stress levels. The Structured Clinical Stress Interview (SCSI) was developed to provide a uniform format covering

participants' current or recent stressors, environmental context and possible precipitants, behavioral and physical symptoms, and self-rating of stress level. Interviews were conducted during the week before and after the treatment. The interviewers were blind to group assignment at the pretest but not the posttest, since they were involved in the treatment (fiscal restraints prohibited independent interviewers). A third clinician with over thirty-five years of experience, blind to groups and sequence, rated a random sample of pre- and posttest interview tapes (n = 16) on the SCSI to provide a reliability check. Videotapes of 4 pre- and 4 posttreatment interviews (SCSI) with the two clinicians were collapsed into a single group to provide an adequate number of cases. Correlations with the independent clinician's ratings yielded an r = .66. This correlation represents a minimum estimate of interrater reliability since the sample of interviews were divided between the two clinicans.

The above represent the most promising measures identified in an extensive review of contemporary instruments. Each self-report measure and the SCSI yielded total scores based on a five-point (SCSI, DSP, OSI) or six-point (TSM) scale. These provided the main indices of change and contrasted self-report with expert-judge ratings. To established concurrent validity for the self-report measures based on the clinical interviews and to provide a rationale for including all measures in an assessment battery, correlations were computed between pretest scores across groups (N = 30). Ninety-five percent confidence intervals were determined based on Fisher's Z transformations used to provide a normal distribution. The results presented in Table 3 show correlations

Table 3

Pearson r Correlations Between Measures On Pretests

(N = 30)

Measure	SCSI	DSP	OSI
DSP	.58 P = .000 CI: .280 to .884		
OSI	.56 P = .001 CI: .245 to .762	.56 P = .001 CI: .255 to .767	
TSM	.57 P = .001 CI: .260 to .770	.58 P = .000 CI: .273 to .775	.72 P =.000 CI: .490 to .859

ranging from .56 to .72, suggesting that the measures are moderately correlated, but do not all measure the same construct. Correlations between the SCSI and the DSP, OSI, and TSM were moderate and consistant at .58, .56, and .57 respectively.

Data Analysis

The first hypothesis, which predicted no differences between the stress levels of participants who completed the treatment and a comparable control group, was examined using analyses of covariance (ANCOVAs) between group post-test scores from the DSP, OSI, TSM, and SCSI, with the pre-test scores entered as covariates. This analysis allowed the slope relating the pre-test and post-test to be estimated

rather than forced to be 1, as when gain scores alone are used as the dependent variable--thus providing a more sensitive test due to reduced error variance (Hendrix, Carter, & Hintze, 1978; Linn & Slinde, 1977).

The second hypothesis, which predicted no difference between the pre- and post-test stress level of participants who received the treatment, was examined using correlated means t-tests. Since the treatment spanned fourteen weeks, and concluded near the end of the school year--a period described by teachers as highly stressful--this analysis provided a direction of change (i.e., whether the treatment group improved, or the control group deteriorated).

To determine whether the measure employed provided comparable data for assessing treatment effects, an effect size (ES) was computed for each measure. This unit of analysis is a statistic expressed as the difference between post-test control and treatment-group means which have been adjusted for the pre-tests, divided by a pooled standard deviation derived from combining control group pre- and post-test scores, and treatment group pre-test scores: $ES = (M_{c,adj} - M_{c,adj})/SD_{pooled}$. Findings were thus transformed into a common metric (standard deviation units), rendering an index of the magnitude of effect or change.

To provide information concerning differences between the experimental and control groups on the subscores obtained from the self-report measures, ANCOVAS were computed between groups on posttreatment mean scores with pretreatment scores entered as covariates. This analysis, which indicated variables showing significant change at the posttest, will be used, along with data from participant feedback forms

completed after each session, to suggest possible refinements in the treatment program and the instrumentation. However, because of the small number of cases, and the low reliability of some of the subscores, data in Table 3 should be regarded as tentative.

CHAPTER IV

RESULTS

Hypothesis 1

After the treatment, the experimental group demonstrated substantially lower stress levels than control group members. Significant differences between experimental and control groups in adjusted means were found on the OSI, DSP, TSM, and SCSI (see Table 4). Computation of effect sizes for the above measures indicates how many standard deviations the treatment group differed from the control group at posttreatment. A substantially lower stress level, averaging 1.02 SD, was found to be associated with participation in the treatment.

Hypothesis 2

The experimental group demonstrated a substantial decrease in their stress level after the treatment. Table 3 shows that DSP means decreased from 152.60 pretreatment to 117.30 posttreatment. Similar decreases in means were observed on the OSI, TSM, and SCSI, with all four p's significant at the .001 level.

Control group means on the DSP decreased from 142.40 to 132.87 pre to posttreatment, an improvement significant at the .05 level. On the SCSI, however, a significantly higher stress level was indicated at posttreatment, (.05 level). The OSI and TSM showed very small changes that were not statistically significant.

Table 4

Summary of: t-tests, ANCOVAs, and Effect Sizes.

	DSP	OSI	TSM	SCSI
	t-tests: Control group pre-post			
t(14)	2.21	-0.25	1.39	-2.27
p	.04	.80	.19	.04
M_{pre}, SD	142.40, 24.01	360.53, 38.66	232.40, 34.98	42.20, 6.98
M_{post}, SD	132.87, 25.26	362.07, 36.31	224.90, 43.60	48.47, 9.56
	t-tests: Treatment group pre-post			
t(14)	3.98	4.20	5.56	3.89
p	.001	.001	.001	.001
M_{pre}, SD	152.60, 24.08	377.47, 26.68	260.53, 29.18	50.60, 11.16
M_{post}, SD	117.30, 43.00	348.20, 29.37	208.70, 40.80	40.00, 10.38
	ANCOVAs between treatment and control posttests			
F (1,27)	6.02	8.35	12.68	10.22
p	.021	.008	.001	.004
$M_{c,adj}$	137.68	368.05	238.18	50.25
$M_{t,adj}$	112.45	342.22	195.49	38.22
SD_{pool}	25.24	34.37	38.79	9.86
	Effect sizes			
ES	1.00	0.75	1.10	1.22

[a] $M_{c,adj}$ and $M_{t,adj}$ = posttest means adjusted for the pretest means (i.e., the covariate), SD_{pool} = pooled SDs from control pre- and posttests, and treatment pretests. On all measures higher scores indicate higher stress. All t-tests were two-tailed.

While the experimental group indicated higher stress levels than the control group on all pretreatment measures ($p = .16$, .17, .024, and .021 on the DSP, OSI, TSM, and SCSI respectively), they were significantly lower on all posttreatment means adjusted for pretreatment scores. A concern regarding internal validity in studies using samples selected for extreme scores is that statistical regression to the mean may account for treatment gains (Borg, 1983, 1987; Kazdin, 1980). Since the subjects with the highest scores were randomly assigned to treatment or control, both groups should have regressed a like amount. Had regression accounted for a significant increment of stress reduction in the treatment group, a similar change in the control group would be expected. However, while the treatment group's average means across measures dropped from 210.30 pretreatment to 178.55 posttreatment, corresponding control group means dropped only 1.3 points, from 193.38 to 192.08 during the same period. The relative stability of the control group average scores suggests that regression to the mean may have occurred in the context of a more stressful posttreatment environment, thus not detectable in score changes. However, large differences in experimental group scores also suggests that gain associated with the treatment was not confounded with regression effects.

CHAPTER V

SUMMARY AND CONCLUSIONS

The present study addressed the need for remediation of teacher stress with a complex, multifaceted treatment package. As many strategies as practicable were included in twelve two-hour sessions. This study represents an initial evaluation of the prototype treatment package using an experimental design.

Conclusions

The present study clearly demonstrates a reduction in teacher stress by subjects in the experimental treatment. Table 5 shows that significant experimental versus control differences were found on 23 of the 39 variables measured by the self-report instruments, many of which may be related to specific treatment content. Initial validation has been provided that the treatment package alters overall stress levels in the desired direction. A substantially lower stress level, averaging 1.02 SD was associated with participation in the treatment (see Table 4).

Limitations

This initial study was designed to assess the potential of the overall treatment. Precise information concerning the degree to which each variable contributed to stress reduction could not be assessed, because a large number of variables were covered in the treatment. Approximately 150 subjects would be required to employ a multiple regression analysis. Such an analysis would allow a determination of

Table 5

Variables and Significance of Changes Between Pre- and Posttreatment for Treatment vs. Control Group

Subscale		Treatment		Control		
	Alpha*	Mpre	Mpost	Mpre	Mpost	F**
DSP						
Time Pressure	.93	18.2	15.8	17.1	15.5	0.447(NS)
Driven Behavior	.88	12.9	10.3	12.2	11.7	2.975+
Attitude Posture	.86	16.1	13.5	15.5	14.5	2.977+
Relaxation Potential	.91	15.5	10.6	13.2	12.2	3.061+
Role Definition	.90	12.5	8.7	11.7	10.6	4.956++
Vocational Satisfaction	.79	13.3	11.7	12.5	11.7	0.293(NS)
Domestic Satisfaction	.86	12.5	8.8	11.1	10.4	3.570+
Health Posture	.85	11.7	9.1	11.3	10.2	0.139(NS)
Hostility	.81	10.6	8.7	10.7	10.9	4.596++
Anxiety	.84	18.3	12.6	16.3	14.8	3.667++
Depression	.85	11.1	7.6	10.9	10.4	5.237++
OSI						
Role Overload	.83	32.3	29.5	30.3	29.1	0.748(NS)
Role Insufficiency	.90	28.7	23.9	28.3	28.3	5.123++
Role Ambiguity	.78	26.5	22.3	23.3	23.5	0.107(NS)
Role Boundary	.82	26.3	20.1	25.7	23.0	6.666++
Responsibility	.71	29.4	24.1	28.3	26.9	1.981(NS)
Physical Environment	.85	15.7	14.5	14.5	14.9	1.666(NS)
Vocational Strain	.71	24.5	18.4	21.9	22.1	17.532++
Psychological Strain	.89	30.2	21.3	24.7	23.3	4.910++
Interpersonal Strain	.81	27.8	21.2	26.5	22.9	4.124+
Physical Strain	.87	28.0	21.9	22.6	22.9	6.159++
Recreation	.71	22.0	25.0	24.5	26.3	-0.392(NS)
Self-Care	.73	22.5	31.3	23.7	27.4	-4.807++
Social Support	.83	24.7	39.7	36.7	40.1	-0.582(NS)
Ration/Cog. Coping	.78	28.8	35.2	29.4	31.2	-7.410++
TSM						
Role Ambiguity	.79	15.3	12.1	12.8	11.6	0.199(NS)
Role Overload	.76	21.0	16.9	18.0	17.9	4.312++
Role Conflict	.82	20.7	17.3	18.5	17.7	4.253+
Nonparticipation	.76	19.1	13.5	17.1	16.3	4.767++
Role Preparedness	.57	15.1	12.9	15.0	14.6	7.173++
School Stress	.89	18.5	16.5	15.8	16.5	6.175++
Job Satisfaction	.86	18.1	15.1	16.5	15.1	0.300(NS)

(continued)

Table 5 (continued)

Subscale		Treatment		Control		
	Alpha*	Mpre	Mpost	Mpre	Mpost	F**
Management Style	.74	16.7	12.5	15.7	15.1	13.040+++
Life Satisfaction	.91	16.3	11.9	13.3	12.9	5.652++
Task Stress	.84	40.5	34.9	35.9	38.2	9.462+++
Supervisory Support	.89	12.1	9.7	9.7	8.7	0.593(NS)
Peer Support	.84	9.1	6.5	7.8	7.9	4.703++
Untilled	NA	21.9	17.2	20.8	19.8	3.893+
Illness Symptoms	.82	16.2	11.8	15.5	12.7	0.451(NS)

*Alpha = alpha reliability coefficients as reported in the test manuals.
** + p = <.10, ++ p = <.05, +++ p = <.01.

the amount of stress reduction variance attributable to each variable in the treatment.

A further limitation of this study is a potential internal validity threat. This is possible because the design used a no-treatment control group. Hawthorne Effect (i.e., treatment gains associated with attention from the researchers) is not controlled in such a design and may be confounded with treatment results. Additional internal validity threats include experimental mortality, compensatory rivalry by respondents receiving less desirable treatments, and resentful demoralization of respondents receiving less desirable treatments (Borg, 1984). Borg (1984) has developed a procedure that controls these threats to internal validity. This involves an alternate control treatment that appears similar but is designed to bring about changes in a set of dependent variables that are completely unrelated to those of the experimental treatment.

An additional limitation rests with the form of measurement employed. Paper-and-pencil instruments provide self-report data and interview data are only two of the many useful tools in psychological research. Physiological measures may also prove valuable in indicating the intensity of arousal during activation of the GAS (Selye, 1956), while self-report measures may suggest whether the arousal is indicative of eustress or distress. Physiological measures might include blood pressure, galvanic skin response, distal skin temperature, and indices of adrenal and thyroid secretions. A thorough review of physiological measures related to stress may suggest a methodology that could add important additional information.

Discussion

Interestingly, treated participants scored significantly higher (i.e. less favorably) on the self-care and rational/cognitive coping subscales of the OSI after the treatment. This finding correlates with comments of participants on feedback forms from later sessions such as, "It all seems so helpful, but I need more practice on the things learned", "We covered it all - very quickly", or even "A little bit of ignorance is bliss". Taken together, these may suggest that a sense of overload and need for integration may have been caused by the numerous methods employed to reduce stress, paradoxically introducing a new source of stress. In response to a question on the feedback questionnaires asking which areas had been most beneficial, individual participants stressed different areas. This further suggests that increased reduction of stress in individual cases may be enhanced through idiographic pretreatment assessment, and a more focused treatment based on individual needs. An understanding of the process variables imbedded in the treatment package will require further research to determine whether specific factors emerge, thus allowing a better match to individual needs.

Suggestions for Further Study

With initial evidence supporting the efficacy of the prototype treatment, further constructive replications would determine the effectiveness of successive revisions of the complete treatment package designed to reduce teacher stress. Completion of two constructive replications would also control for unique characteristics of the

subjects, treatments, or research environment across experiments. Given these replications, considerable evidence would be available about the effectiveness of the overall program. This strategy would maximize the chance of success while minimizing the development cost. Then, with the main question resolved, whether the treatment package alters stress levels overall in the desired direction, interest might shift toward more specific concerns. Which of the variables covered in the treatment contribute most to stress reduction? Will a dismantling of components of the treatment package into multiple treatments aid in understanding the sufficient and necessary conditions of stress reduction? Ultimately, further research is needed to develop a treatment strategy which will vary specific aspects of the treatment with respect to subject variables to determine how to maximize stress reduction within teacher populations (Kazdin, 1980). More immediately, several analyses pertinent to the present study await additional funding and time to complete. Follow-up assessment to determine the durability of the reductions in stress over time are anticipated at approximately six months and one year, contingent upon grant funding for two replication phases allowing further investigation of this important area.

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APPENDICES

APPENDIX A

Application and Informed Consent Statement

Stress Program Application Form

Do not submit this form unless you want to take the course and are willing to participate as a member of either the experimental or control group.

Print your name	Your home address	Telephone

School where you teach	Grade level	Years in this district	Total years of teaching experience

The course will be conducted at Utah State University, one day per week from 4 p.m. to 6 p.m. It will start the week of January 18, and end the week of May 2, 1988. Please indicate your availability below. Make a check mark for each day and put an asterisk to indicate your first choice:

	Mon	Tues	Wed	Thurs	Fri
1. Can attend on days checked:					
2. Cannot attend on days checked:					

PLEASE RESPOND TO THE FOLLOWING QUESTIONS
CHECK ONE FOR EACH QUESTION

1. I can predict what will be expected of me in my work tomorrow.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

2. I find that I have extra work beyond what should normally be expected of me.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

3. There is a lot of strain on most faculty working in my school.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

4. I currently find my life very rewarding.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

5. Trying to complete reports and paper work on time causes me a lot of stress.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

6. I find that dealing with student discipline problems puts a lot of stress on me.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

I understand that the purpose of this project is to develop and evaluate a program designed to help teachers reduce and cope with job related stress. I understand that all information gathered in connection with this project that can be connected with a specific person will be kept strictly confidential.

I understand that I can withdraw from the project at any time without prejudice.

_____ _____

Your signature Date

APPENDIX B

Informed Consent Form

Teacher Consent Form for
Participation in Research

I _____, voluntarily agree to participate in the study entitled "Reducing Occupational Stress Among In-service Teachers" being conducted by Michael R. Bertoch, Ed.D., Walter R. Borg, Ph.D., Elwin Nielsen, Ph.D. and Jeff Curley, M.S. This study is sponsored by Utah State University College of Education in collaboration with the Department of Psychology.

I understand that:

1. Purpose

The purpose of the study is to develop a stress management program that will reduce the effect of stress on in-service public school teachers.

2. Description of Participant Requirements

I will be asked to complete stress measurement instruments and video-taped interviews prior, during, and after the stress management program. I will also be required to attend approximately 12 two-hour class sessions. The cost of the sessions will be underwritten by the College of Education. These sessions will cost nothing and university credit will be awarded for those completing all the sessions.

3. Risks

There are no risks to me by participating in this study. Whereas no assurance can be made concerning the results of the study, I understand that the purpose is to lower my stress level and that a variety of instructional experiences within the limits of the study will be employed to do so.

By signing this consent form, I acknowledge that my participation in this study is voluntary. I understand that I may revoke my consent and withdraw from this study at any time.

Records of this study will be kept confidential with respect to any written material. Results will be reported as group data and I will not be identified individually. I understand that the results will be made known to me upon request.

If I have any questions about my rights as a research subject, I may take them to the USU Human Rights Committee, Sydney Peterson, Chair (750-6924).

I have read this informed consent document, understand its content and freely consent to participate in this study under the conditions described in this document.

_____ _____
Date Research Subject

_____ _____
Date Witness

_____ _____
Date Principal Investigator

APPENDIX C

Structured Clinical
Stress Interviews

STRUCTURED CLINICAL INTERVIEW FOR STRESSED TEACHERS*

Subject: _____ I.D. No.: _ _ _ _

Interviewer #1: _____ Interviewer #2: _____

Date of
Interview #1: _ _ _ _ _ _
Month Day Year

Date of
Interview #2: _ _ _ _ _ _
Month Day Year

Time interview #1 began _____

ended _____

Time interview #2 began _____

ended _____

*Is your audio recorder hooked up?

I. INTERVIEW

A. INTRODUCTION FOR INITIAL INTERVIEW

I'm going to be asking you about problems or difficulties you may have had, and I'll be making some notes as we go along. Any information you give me will be strictly confidential. Do you have any questions before we begin?

B. INTRODUCTION FOR SECOND INTERVIEW

I'm going to be asking you about the same things (Dr. X) asked you about on (Date), but I don't know anything about what you said to him (her). You should just answer my questions as completely as you can, without trying to remember what you may have told (Dr. X). This is a test of the interview, not a test of your memory. Any information you give me will be strictly confidential. Do you have any questions?

II. DEMOGRAPHIC DATA (Ask during FIRST INTERVIEW ONLY)

A.	Sex		1 male 2 female
B.	What Is Your Age?	AGE:	_ _
C.	Are You Married?	MARITAL STATUS (most recent):	1 married (or livin together +1 years
	1. IF NO: Were you ever?		2 separated 3 divorced/annulled 4 widowed 5 never married

2. (Any children?)
Ages:

a.	____	f.	____
b.	____	g.	____
c.	____	h.	____
d.	____	i.	____
e.	____	j.	____

D. Ethnicity

1 Black, not of Hispanic origin
2 Hispanic
3 White, not of Hispanic origin
4 American Indian o Alaskan native
5 Asian or Pacific Islander

E. How long have you been teaching? _____

F. How many different schools have you worked at? _____

G. What kind of work does your spouse do? Does he/she work outside of your home?) _____

1. IF YES: How long has he/she worked there? _____

III. PAST PERIODS OF STRESS OR DIFFICULTY

A. Has there ever been a relatively long period of time when you were unable to work? _____

1. IF YES: When? Why was that? _____

_____

B. Have you ever seen anybody for emotional or psychiatric problems?

1 NO
2 YES

Treatment for emotional problems with a physician or mental health profession

1. IF YES: What was that for: (What treatment did you get: Any medication?) _____

_____

2. Was there (ever another) time when you, or someone else, thought you should see someone professionally because of the way you were feeling or acting?

3. IF GIVES AN INADEQUATE ANSWER, CHALLENGE GENTLY: e.g., "Wasn't there something else? People usually don't seek professional help just because they are tired or nervous."

C. Thinking back over your whole life, when were you most upset?

1. Why? What was that like? How were you feeling?

2. When were you feeling the best you have ever felt?

1. Tell me about it.

IV. CURRENT OR RECENT STRESSORS

		Interviewer's Rating of Subjects Stress Level Relevant to each Question*
A.	What aspects of your work are most stressful?	
B.	What aspects of your work are least stressful?	
C.	Can you think of ways in which your work causes stress that spills over into your home/personal life?	

		Interviewer's Rating
D.	What aspects of your home/personal life are most stressful?	
E.	What aspects of your home/personal life are least stressful?	
F.	Can you think of ways that your home/personal life causes stress that spills over into work?	
G.	How comfortable are relationships and feelings within your family?	
H.	How comfortable are relationships and feelings within your working environment?	
		Subscore
I.	How would you characterize your level of:	
	1. work stress? (i.e., very serious, serious, moderate, etc.)	
	2. home or personal stress?	

If Reports Current Stress:

V. ENVIRONMENTAL CONTEXT AND POSSIBLE PRECIPITANTS

A.	How long has this been going on?	
B.	What was going on in your life when this (CURRENT stress) began?	

* 1 = Minimal or None
2 = Mild
3 = Moderate
4 = Severe
5 = Extreme or Catastrophic

		Interviewer's Rating
C.	Did anything happen or change just before all this started? (Do you think this had anything to do with your [CURRENT PROBLEMS]	

VI. BEHAVIORAL AND PHYSICAL SYMPTOMS OF STRESS

A.	Do you eat balanced meals? Regularly? (Explain) Right food? (Explain) Too much, too little?	
B.	Do you set time aside for fun? IF YES: How many hours per week?	
C.	Do you set time aside to be by yourself? How much?	
D.	Do you enjoy your own company?	
E.	Are you overweight or underweight? (IF gives obvious inadequate answer, challenge gently.)	
F.	Do you drink? IF YES: What have your drinking habits been like?	
G.	Have you taken any drugs? (What about marijuana, cocaine, other street drugs?)	
H.	Have you had difficulty sleeping?	
I.	Have you had a change of appetite?	

VII. RATING

A. How would you rate your: (Ask orally and decide what rating to give the answers.)

1. Overall stressor severity?

1	2	3	4	5
None or Minimal	Mild	Moderate	Severe	Extreme or Catastrophic

2. Overall level of function?

1	2	3	4	5
Superior	Very Good	Good	Poor	Very Poor or Grossly Impaired

APPENDIX D

Treatment Outline

STRESS REDUCTION: CLASS OUTLINE

SESSION I - INTRODUCTION

Objectives: 1) To provide participants with basic information about stress.

2) Participants will evaluate stress and its meaning in their own lives.

SESSION II - TASK BASED AND ROLE CONFLICT STRESS

Objectives: 1) To provide participants with basic information regarding short term, work related, task based and role conflict stress.

2) To help participants make decisions enabling the reduction of the above stress.

3) To develop group support for carrying out the decision made in the above process.

SESSION III - ASSERTIVENESS LIFE STYLE

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen and to provide support for continuing to work on eliminating work related, role conflict and task based stressors.

2) To provide participants with basic information regarding the importance of life style and personal health in combatting stress.

SESSION IV - RELAXATION

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen and provide support for continuing to develop assertive attitudes and skills as a means of handling stressors.

2) To help participants evaluate certain aspects of life style, specifically, levels of tension, and make decision about the degree to which physical tension is a problem for them.

3) To provide training in physical relaxation.

SESSION V - MEDITATION

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen and provide support for continuing effort on eliminating work related, task based and role conflict stressors. Continue working on assertiveness and on relaxation.

2) To provide participants with basic information regarding the importance of other aspects of personal health in combatting stress. Specifically, this session will focus on the use of meditation along with other aspects of relaxation and positive thinking.

3) To encourage group support for continuing to solve problems of task based and role conflict stress, as well as continue to practice relaxation and meditation.

SESSION VI - NUTRITION, EXERCISE, STRETCHING

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen and provide support for continuing efforts on eliminating work related, task based and role conflict stressors, along with continuing to work on assertiveness and meditation.

2) To provide participants with basic information regarding the importance of other aspects of personal health in combating stress. specifically, this session will focus on the importance of good nutrition, exercise and stretching.

3) To help participants evaluate certain of their customary nutritional habits and make decisions about which, if any, of these they wish to change.

4) To help participants evaluate their customary exercise habits and make decisions about which, if any, of these they wish to change.

5) To help participants learn additional techniques which may contribute to an optimistic, positive approach to life such as mini relaxation and stretching exercises.

6) To encourage continued group support for practicing assertiveness, meditation, dietary control and exercise control.

SESSION VII - HOLISTIC LIVING, MIND AND BODY

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen and to provide support for continuing work on meditation, nutrition and exercise.

2) To provide participants with basic information regarding the effect of the mind and of the concepts of mindfulness; defined as awareness, choice and personal creativity.

3) To help participants learn additional techniques which may contribute to an optimistic, positive approach to life, such as mindfulness.

4) To encourage continued group support for continuing the practice of assertiveness, meditation, dietary control, exercise habits and mindfulness.

SESSION VIII - ROLE OVERLOAD AND AMBIGUITY

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen about any of the topics presented and provide support for continuing work on assertiveness, meditation and nutrition.

2) To provide participants with basic information regarding the importance of other considerations in combatting stress. Specifically, this session will focus on the importance of short term stress related to work role overload and ambiguity.

3) To help participants evaluate their time constraints and their temporal and physical resources and make decisions about how these resources might be increased or managed, or how they may be more adequately dealt with on a personal basis.

4) To help participants evaluate their work roles and the ambiguous aspects of their roles which cause stress and make realistic appraisals of whether and how these ambiguous situations can be changed.

5) To plan changes and develop group support for carrying out the changes.

SESSION IX - TIME MANAGEMENT AND CAREER COMPATIBILITY

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen about any of the topics presented and provide support for continuing to work on assertiveness, meditation, exercise and nutrition.

2) To provide participants with basic information regarding the importance of time management in combatting stress.

3) To help participants evaluate their customary use of time and time management habits and make decisions about which, if any, of these they wish to change.

4) To provide participants with basic information regarding the effects of vocational choice and appropriateness of such choices in causing stress.

5) To help participants evaluate their career and the satisfaction and/or distress that it provokes.

6) To help participants make decisions about whether or not they wish to consider changing careers or altering their attitudes toward them.

7) To develop group support for carrying out the decisions.

SESSION X - COPING WITH DISAPPOINTMENT; CHEMICAL STRESSORS

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen about any of the topics presented and provide support for continuing to work on assertiveness, meditation, exercise and nutrition.

2) To provide participants with basic information regarding the importance of coping with disappointment in combatting stress.

3) To help participants evaluate their customary ways of coping with disappointments, learn productive ways of coping with disappointment, and practice new ways of thinking about their lives and their disappointments.

4) To provide participants with basic information regarding the importance of other aspects of personal health in combatting stress. Specifically, this session will also focus on the importance of avoiding the use of chemical stressors.

5) To help participants evaluate their customary use of all prescription and non-prescription drugs and make decisions about which, if any, of these they wish to change.

6) To develop group support for carrying out the decisions.

SESSION XI - DEVELOPING AND USING SUPPORT SYSTEMS; TWO CAREER FAMILIES; EVERYDAY LIFE STRESSORS

Objectives: 1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen about any of the topics presented thus far and provide support for continuing work on thinking habits, assertiveness, meditation, exercise and nutrition.

2) To provide participants with basic information regarding the importance of having an adequate social support system in combatting stress.

3) To help participants evaluate the adequacy of their support systems and make decisions about whether they need additional support to make decisions about their lives, and if so, how they might go about developing such support.

4) To provide participants with basic information regarding eliminating role conflict, task based stress, role overload and role ambiguity problems in non-work situations. Since they have already dealt with these issues in relation to work, it is assumed that participants will need less help in doing it with other aspects of their lives.

5) To provide participants with basic information regarding the common stressors that are experienced by men and women in two career families. Since many teachers are female, this problem is especially pertinent for teachers. It is also particularly pertinent to male teachers, since many of them have wives who work to supplement income.

6) To help participants evaluate their lives with regard to the issue of two career families and plan for changes to alleviate such stressors.

7) To develop group support for carrying out the changes.

SESSION XII - UNDERSTANDING SITUATIONS AND LETTING GO OF REGRETS AND RESENTMENTS; WHERE TO FROM HERE?

Objectives:

1) To help participants evaluate gains made during the past week, answer additional questions which may have arisen about any of the topics presented thus far and provide support for continuing to work on them, especially on their attempts to eliminate substance abuse.

2) To provide participants with basic information regarding levels of understanding themselves in relation to their world and the importance of letting go of resentments and regrets.

3) To help participants evaluate their levels of understanding and their habits of holding on to resentments and regrets and to make decisions about which, if any, of these they wish to change.

4) To help participants evaluate the total progress made in the workshop and consider resolutions to work on those areas where they need the most change or are still having difficulty.

5) To help participants make plans for continuing to change and to obtain support in their daily lives for making that change.

VITA

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University of Kansas, Lawrence, KS. Matriculated in Counseling Psychology Program, Ph.D., 1985-6.

Brigham Young University, Provo, UT. M.S. in Psychology with emphasis in clinical area, 1985.

California State University, Dominguez Hills, CA. B.A., Behavioral Science with emphasis in Psychology and Anthropology, 1971.

Fullerton College, Fullerton, CA. A.A. in Teacher Education, 1967.

Experience: Therapist, Bear River Mental Health Center. Psychotherapy with adolescents, adults, couples, and families. Assessment and treatment planning.

Therapist, Utah State University Psychological Clinic, 1987-88. Psychotherapy with children, adults, and couples. Assessment and treatment planning.

Research Assistant, Utah State University, 1987-88. Project staff member, outcome study of stress reduction (in press, 1988).

Counselor, University of Kansas Counseling Center, 1985-86. Psychotherapy with adolescents and adults.

Testing Supervisor, Educational Testing Service. Supervised administration of ETS examinations (i.e., GRE, GMAT, LSAT, etc.).

Group Facilitator, Brigham Young University Comprehensive Clinic. Lead semester length encounter groups for undergraduate students, 1984-5.

Vocational Counselor, Professional Rehabilitation Services, Del Mar, CA. Provided full range of services, from initial interview to job placement

Labor Relations Negotiator. Head negotiator for a municipal bargaining unit.

Municipal Administrator. Responsible for organizing monthly training, maintaining legal records, preparing summary reports, incident reports, and data processing forms.

Supervisor, State of California. Directed public safety personnel, organized duty assignments, and maintained reports and records.

Aquatics Director, St. Malo Association, Oceanside, CA. Responsible for budgeting, purchasing, contracting, staffing, and training.

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