A SCHOOL-BASED, STRESS-INOCULATION APPROACH TO STRESS MANAGEMENT TRAINING WITH ADOLESCENTS: EFFECTS ON LOCUS OF CONTROL, SELF-CONCEPT, STATE-TRAIT ANXIETY, AND SOCIAL BEHAVIOR

By

LAWRENCE CURTIS KUBIAK

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1987
This dissertation is dedicated to my loving wife Vicki without whose patience, understanding, and support my educational dreams would not have been realized.
ACKNOWLEDGMENTS

I extend appreciation to all those whose assistance enabled me to complete this dissertation. Dr. James Archer, Dr. Peggy Fong, Dr. Jim Morgan, and Dr. Lionel Beaulieu ably guided me as a doctoral committee and gave freely of their time and expertise. Dr. Sid Bradley and the other staff of the Child and Family Enrichment Center in Dowling Park, Florida, provided support and understanding throughout the dissertation process. The students at Suwannee High School who volunteered to participate in the study and the staff there who assisted in making it a reality are commended for helping to make the application of the training a rewarding time for me. Finally, special thanks go to my wife Vicki and children, Stephen and Stephanie, for the understanding, patience, and support that allowed me to complete the dissertation.
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapters</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I INTRODUCTION TO THE STUDY.</strong></td>
<td>1</td>
</tr>
<tr>
<td>Stress in Adolescence</td>
<td>4</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>5</td>
</tr>
<tr>
<td>Stress Management with Adolescents</td>
<td>6</td>
</tr>
<tr>
<td>Proposed Model for Stress Management with Adolescents</td>
<td>10</td>
</tr>
<tr>
<td>Relevant Variables</td>
<td>13</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>15</td>
</tr>
<tr>
<td>Importance of the Study</td>
<td>15</td>
</tr>
<tr>
<td>Research Questions</td>
<td>16</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>17</td>
</tr>
<tr>
<td><strong>II REVIEW OF THE LITERATURE</strong></td>
<td>21</td>
</tr>
<tr>
<td>Introduction</td>
<td>21</td>
</tr>
<tr>
<td>Adolescence</td>
<td>21</td>
</tr>
<tr>
<td>Models of Stress and Anxiety</td>
<td>24</td>
</tr>
<tr>
<td>Stress Management Strategies</td>
<td>29</td>
</tr>
<tr>
<td>Cognitive Restructuring</td>
<td>29</td>
</tr>
<tr>
<td>Problem-Solving Training</td>
<td>33</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>40</td>
</tr>
<tr>
<td>Relaxation Training</td>
<td>44</td>
</tr>
<tr>
<td>Specific Effects of Stress Reduction Techniques</td>
<td>46</td>
</tr>
<tr>
<td>Stress Inoculation Training</td>
<td>49</td>
</tr>
<tr>
<td>Assessment of Stress</td>
<td>59</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>60</td>
</tr>
<tr>
<td>Anxiety</td>
<td>63</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>64</td>
</tr>
<tr>
<td>Social Behavior</td>
<td>66</td>
</tr>
<tr>
<td>Summary</td>
<td>67</td>
</tr>
<tr>
<td><strong>III METHODS AND PROCEDURES</strong></td>
<td>74</td>
</tr>
<tr>
<td>Introduction</td>
<td>74</td>
</tr>
<tr>
<td>Research Design</td>
<td>74</td>
</tr>
<tr>
<td>Description of the Population and Sample</td>
<td>75</td>
</tr>
<tr>
<td>Sampling Procedures</td>
<td>77</td>
</tr>
<tr>
<td>Treatment and Control Conditions</td>
<td>77</td>
</tr>
</tbody>
</table>
Instrumentation .............................................. 81
Self-Concept .............................................. 81
Anxiety ...................................................... 84
Locus of Control ........................................... 87
Social Behavior ............................................ 89
Procedures ............................................... 94
Research Hypotheses ...................................... 96
Data Analyses ............................................. 98
Limitations ............................................... 98

IV DATA ANALYSES ........................................ 103
Introduction ............................................... 103
Descriptive Data .......................................... 103
Hypothesis Testing ......................................... 105
Summary of Results ........................................ 108

V SUMMARY, DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS ..................................... 110
Summary .................................................... 110
Discussion of Limiting Factors ............................ 111
Discussion of Results ....................................... 114
Recommendations for Future Research ..................... 119
Conclusions and Implications of SIT with Adolescents ........................................ 122

APPENDICES
A TRAINING MODEL ......................................... 124
B INFORMED CONSENT FORM ............................... 202
C PILOT STUDY DATA ....................................... 204
D OUTLINE FOR SIT STRESS MANAGEMENT CLASSES ........................................ 208
E OUTLINE FOR SMT STRESS MANAGEMENT CLASSES ........................................ 214
REFERENCES .................................................. 218
BIOGRAPHICAL SKETCH ..................................... 230
Abstract of Dissertation Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

A SCHOOL-BASED, STRESS-INOCULATION APPROACH TO STRESS MANAGEMENT TRAINING WITH ADOLESCENTS: EFFECTS ON LOCUS OF CONTROL, SELF-CONCEPT, STATE-TRAIT ANXIETY, AND SOCIAL BEHAVIOR

By

LAWRENCE CURTIS KUBIAK

May, 1987

Chairman: Dr. James Archer
Major Department: Counselor Education

The purpose of this study was to investigate whether a school-based, stress-inoculation training (SIT) program was effective in (a) increasing perceived internal locus of control, (b) enhancing self-concept, (c) reducing state and trait anxiety, and (d) improving self-perceived social behavior among adolescents. It was hypothesized that a comprehensive approach to stress management incorporating somatic, behavioral, and cognitive strategies would be an effective means of helping adolescents develop better means of coping with stress.

Volunteers were drawn from six health education classes and each student was randomly assigned to a treatment or control group during the regularly scheduled class time. A total of 112 students completed the study. A randomized,
post-test only, control group research design was used. Training in both SIT and the stress management training (SMT) normally provided to the health education classes was taught by the researcher or a trained associate in 10, twice-weekly, 50-minute sessions. Dependent variables were measured through the use of the Nowicki-Strickland Locus of Control Scale, the State-Trait Anxiety Inventory, the Piers-Harris Children's Self-Concept Scale, and the Jesness Behavior Checklist.

The results were analyzed using one-way ANOVAs and indicated no significant differences at the .05 level between the treatment and control groups. It was concluded that SIT was not effective with this population under these conditions in significantly increasing locus of control, self-concept, self-perceived social behavior, and in reducing levels of state and trait anxiety. Healthier scores for the treatment group suggested that changes in research design and measurement may produce greater benefit in future SIT treatment with adolescents. Recommendations for future research were included.
CHAPTER I
INTRODUCTION TO THE STUDY

During the Conference on Research Directions for Understanding Stress Reactions in Adolescence sponsored by the National Institute on Mental Health (NIMH), Dr. Beatrix Hamburg made the following observations regarding adolescence:

Coming of age in America is increasingly lengthy and apparently increasingly complicated. In the early days of this country, adolescence was a fleeting period. At times it was omitted entirely. When individuals could do the tasks of adults they did so, even if they were barely able. Regardless of age, their childhood was over when they could engage in full time productive labor. Now we're talking about a period roughly 10 years long, from ages 10-20. This period encompasses a time of maximum biological change, a significant role change, and a great deal of adapting at all levels of biological and psychosocial response.

Since this is such a long period, the quality of life and the experience of adolescence have value in their own right. . . . This lengthy transition period may represent a critical learning period, a rehearsal for the behaviors and coping styles that will characterize their adult functioning. All of these reasons make adolescence one of the most crucial as well as one of the most fascinating periods of the life span. (Hamburg, 1981, p. 113)

There are several major sources of stress for adolescents. One is stress induced within the family. Teenagers are experiencing increasing stress due to changes in the family; since 1970 more teenagers are reared in one-parent homes due to divorces, illegitimate births, and desertions. With over 50% of the mothers of school-age children working, children are often receiving less attention, affection, and
guidance (Bronfenbrenner, 1977). According to Sorosky (1977), the effects of divorce are particularly damaging to adolescents and produce behavioral disorders, neurotic conflicts, or psychotic breakdowns among approximately 30% of them.

A second major source of stress is school-based, and at times it is exacerbated by family problems. Family difficulties may lead to a decline in academic performance and an increase in aggressive behavior, withdrawal, or truancy (Sorosky, 1977). Doll and Fleming (1966) maintained that one-half of American unemployment involves males who dropped out of school at age 16 and who might otherwise have been successful in vocational courses. They reported that 75% of adolescents who sought psychiatric help listed educational stress as a primary reason for doing so. The stress of competition and achievement in school correlated highly with suicide attempts (Wenz, 1979).

Interpersonal skill deficits are a third major source of stress for adolescents. The results of these deficits were cited by Glenn and Warner (1977) who reported increases in alcoholism, illegitimate births, juvenile delinquency rates (up to 300% higher in some areas), dropout rates, suicide, and needed remedial social-psychological assistance (one-third of today's adolescents need such assistance). They believed these problem dependencies are attributable to an individual's lack of habilitative intra- and interpersonal skills.
A fourth major source of stress among adolescents is rapid cultural change and fluctuating values. Although adolescents are relatively invulnerable to disease and disease-related mortality, they expose themselves to high risks of accidents and violent death, drug and alcohol abuse, pregnancy, and sexually transmitted diseases (DHEW, 1979, pp. 43-52). Rutter (1980) found an increased risk during adolescence, not only for such disorders as depression, suicide, and anorexia nervosa, but also delinquency and drug abuse. Mechanic (1983) implied that these risks were influenced by discontinuities during adolescence that are increasing, due to rapid cultural change, absence of agreed-upon expectations or standards, and high rates of disruption in family life.

Unfortunately, adolescents must first manifest the symptoms of anxiety before services can be offered to help them cope with stress. This conditional situation inhibits early intervention when such services are likely to be the most effective. Community mental-health centers provide a major portion of the psychological treatment for children and adolescents, and yet the Report of the Joint Commission on the Mental Health of Children (National Institute of Mental Health, 1972) indicated that care is being given to only one-third of those who need it. The Commission's report recognized the ineffectiveness of community mental-health centers (CMHCs) in reaching all those in need and recommended school-based intervention as more comprehensive.
Schools are the main institution with a sustained influence over children during their vital years. The schools day by day deal with many times more emotional and behavioral disturbances in children than do CMHC's. It is estimated that the mental health clinics are seeing 1 out of 14 disturbed children, while school systems are seeing almost 14 out of 14. They are, because of their daily influence upon children, strategic agencies for primary prevention in mental health. The task of education is to deal with the total child—his emotional as well as intellectual development. It is doubtful that any other agency can so effectively serve this group. (National Institute of Mental Health, 1972, p. 5)

**Stress in Adolescence**

The history of scientific investigation regarding adolescence emphasizes that stress is intrinsic during that period of the life span. At the turn of the century, G. Stanley Hall (1904) wrote a two-volume work on adolescence in which he referred to that age as one of storm and stress that also served as a key to the nature of crime.

More recent literature describes adolescence as a less volatile period of life. For example, in a longitudinal study, Offer (1969) examined a group of middle-class Midwestern children and found little justification for viewing them as being in a state of turmoil. Anxiety and distress may have been manifest in rebelliousness but they were not intense or maladaptive traits; rather, they were of a milder, more transient variety. To the extent that life proceeds smoothly and the adolescent is actively involved in peer activities and in positively rewarding experiences, the period of adolescence can be resolved successfully.
Adolescents typically search for a meaningful identity, and successful achievement of this encourages growth. However, adolescents protected from manageable adversities and the normal demands of adolescence that might facilitate the development of coping capacities have more difficulties in adult life (Mechanic, 1983). The implication is that the physiological, developmental, cognitive, and behavioral demands during adolescence can increase the risk for depression, delinquency, drug abuse, suicide, and other mental health problems. Therefore, it is not stress avoidance but the effective management of stress and anxiety that is the goal of prevention. As Epstein (1967) has noted,

the viewpoint that emerges ... is that the ability to tolerate stress is acquired, not through previous security, but through inoculations with increasing amounts of stress. More specifically, our theory suggests that a child who is to enter a world where he must deal with anger, frustration, and uncontrolled emotion should have some exposure to such experiences in the home at levels that are not devastating if he is not to be devastated when he experiences them in the outside world. (p. 74)

**Statement of the Problem**

Adolescence is a period during which unique stressors increase the individual's risk for a variety of problems such as drug abuse, suicide, accidents, and early pregnancy. Breakdowns in traditional familial and cultural support systems often leave adolescents with few resources for combating the debilitating effects of stress. The challenge to professionals is how to help adolescents learn to manage
stressors effectively. Therefore, the basic problem addressed in this study was determining how effective SIT could be in promoting an internal locus of control, increasing self-concept and social behavior, and reducing levels of state and trait anxiety.

**Stress Management with Adolescents**

There is evidence that stress management programs with adolescents can be effective. For example, Stevens and Pihl (1982) taught coping skills to 48 ninth-grade students at risk for failing courses in school. Subjects were randomly assigned to three groups: (a) a coping skills training group, (b) a counselor-intervention group, and (c) a control group. Following a nine-week, twice-weekly intervention program, the students given coping skills training showed significant improvement in social problem solving (SPS) ability and self-concept when compared to the other two groups.

Richardson, Beall, and Jessup (1982) studied the effectiveness of a three-week stress management unit for high school students. This consisted of fifteen 50-minute class sessions covering various cognitive, affective, and behavioral components in stress management. They found that deep breathing, autogenic training, muscle relaxation, and imagery skill practice produced a measurable reduction in heart rates, although no significant improvement was seen in muscle tension. The researchers attributed this latter result to the muscle site selected for study.
Relaxation therapies also have been used for the treatment of anxiety-related academic difficulties. Padawer (1977) found that relaxation was more effective than remedial education in improving attention, memory, and concentration among poor readers in an inner-city school. Khan (1978) found that electromyograph (EMG) biofeedback and relationship therapy decreased state anxiety (but not trait anxiety), and increased Wechsler Intelligence Scale for Children--Revised (WISC-R) scores among children diagnosed as having problems with high anxiety. Palmari (1980) found that the combination of cue-controlled relaxation and cognitive therapy was more effective than either cognitive therapy alone or remedial education in improving scores on the Peabody Individual Achievement Test (PIAT) and teachers' ratings of aggressiveness and attentiveness. The results of several studies, therefore, indicated significant effects for relaxation in improving behaviors associated with learning. This is likely due to the fact that poor learning ability is often accompanied by feelings of anxiety in the learning situation.

Richards and Siegel (1978) reviewed and critiqued several treatments used for anxiety in adolescents. They emphasized that when children suffer from anxiety, there are always social skills deficits which must be remediated before treatment can be completed. They also criticized many stress management approaches which utilized only a
single modality and thus failed to achieve long term effectiveness.

Petersen and Spiga (1982) stated that stress in adolescence is linked to more than the physiological changes of puberty. They believed a lack of experience leads to deficits in skill and judgment which in turn promote feelings of worthlessness and ultimately engenders stress and anxiety. They believed a comprehensive approach to adolescent stress management should consider all the new expectations for the adolescent, together with the individual's skills, self-esteem, and social supports.

In summary, research in stress management with adolescents suggests that (a) stress is found in many subcategories of adolescents; (b) coping-skills training can improve social problem solving and self-concept; (c) a stress management approach utilizing cognitive, affective, and behavioral components can significantly lower heart rates; (d) relaxation training can reduce anxiety-related academic problems; and (e) social-skills training is a necessary component of stress management training (SMT). An early-intervention, comprehensive approach to adolescent SMT is needed, not only to treat effectively the multiple problems and concerns of adolescents, but also to prepare them for later stressors.

Research in the epidemiology of contagious diseases has shown the efficiency and cost-saving aspects of intervening early (e.g., immunizations) to prevent the occurrence of
diseases rather than later treating existing conditions. This knowledge has been only slowly applied to the mental health field. Schools are in a prime position to provide preventive mental-health programming for children. As discussed previously, adolescence is a time of many stresses with few available resources. It seems clear that better stress management and coping skills, with the accompanying more positive self-esteem among adolescents, are essential.

The effectiveness of school-based, primary prevention efforts was studied by Baker, Swisher, Nadenicheck, and Popowicz (1984). They selected 40 studies on the basis that the (a) studies were controlled experiments with empirical comparisons among treatment and control conditions and (b) treatment conditions had goals and involved participants which allowed the studies to be classified as primary prevention. The studies included a range of subjects (e.g., elementary to college level) as well as a wide range of treatments including decision-making skills, values clarification, drug education, and problem-solving skills. The overall primary prevention strategy effect size (i.e., .91) was large and indicated the overall effectiveness of these programs. Therefore, the evidence suggests that school-based, skill-building programs have promise as a means to assist adolescents in developing coping skills, and thereby potentially reducing such problems as suicide, drug abuse, and other mental health problems.
Proposed Model for Stress Management with Adolescents

A useful way to understand stress in adolescence is from an interactional or transactional perspective. In this approach the stress response is viewed as part of the ongoing person-environment transaction. The three major interacting factors include environmental stressors, perceptions or cognitions regarding those stressors, and the stress response itself. Stress occurs when demands exceed the perceived psychological resources of the individual. Coping may involve relaxation to lessen physical tension, actual physical escape from a stressor, cognitive restructuring so that a stressor is viewed in a less threatening manner, and/or utilization of problem-solving strategies. Stress-management models typically reflect an emphasis on one or more parts of an interactional model.

The most promising stress-management training model that incorporates the interactional perspective is Stress Inoculation Training (SIT). Jaremko (1984), drawing upon his earlier collaboration with Donald Meichenbaum, proposed SIT as a generic approach for preventing stress-related disorders. SIT provides an integrated conceptualization of stressful events, stress, and coping. The model sets the stage for teaching coping skills and the application of coping to increasingly larger numbers of stressors.

In the SIT model, a stressful event initiates the stress cycle by stimulating psychophysiological activity. Two appraisal processes essential in determining whether an
event becomes a stressor are the person's assessment of the amount of internal or external demands and the assessment of his/her resources to cope with these demands. An imbalance between these two will stimulate the stress cycle.

Because no one coping strategy works at all times, clients are encouraged to develop a broad range of coping skills. At times, physical activities such as relaxation training, diaphragmatic breathing, or autogenics succeed while on other occasions a cognitive approach that reappraises a stressor may be more effective. An important component in SIT is the training of active, instrumental skills such as assertiveness, problem solving, and communication.

There are three major phases in SIT. First, a client is helped to reconceptualize the nature of his/her stress. A client is taught that personal reactions can exacerbate the stress response; therefore, self-monitoring is essential. Second, the client learns specific stress-coping skills. Third, the coping skills are applied to increasingly stressful events. Role play and in vitro exposure can set the stage for gradual exposure to in vivo stressors.

Adolescence is a period during which perceptions and cognitions regarding self and others are particularly crucial in light of increased stress for achievement, peer acceptance, or vocational planning. The sense of control over life and feelings about self are often tied to
cognitions. Feeling that one has few resources or skills from which to draw can also lead to increased stress. Meichenbaum's (1985) SIT approach is a unique and useful strategy for helping adolescents develop more rational cognitions regarding stressors, incorporate somatic and behavioral skills to broaden their repertoires in approaching stress, and for gradually exposing them to increasingly stressful situations so that a sense of mastery over stress can be promoted.

The emphasis in this model is on skill-building that has immediate and useful application towards effectively managing stress, rather than a mere intellectual understanding of stress management. As a result of SIT treatment, participants should feel more confident and competent in dealing with future stress because there is a closer match between their abilities and life's demands. This should be reflected in a transition toward a more internal locus of control. In addition, as a result of improved social functioning through training in assertiveness and social problem solving, participants should feel better about themselves and experience an improved self-concept. Anxiety, which is stress perceived as threatening, will be reduced through not only the somatic and behavioral training, but also through cognitive restructuring that instructs participants in how to perceive stress less as a threat and more as a challenge to be met.
Relevant Variables

In addition to exposure to stress in gradually increasing amounts and learning to manage this, it is essential that youth incorporate the notion of control over their lives and develop a sense of competence. Much human misery appears to be the result of a lack of competence; that is, a lack of control over life, of effective coping strategies, and of lowered self-esteem that accompanies these deficiencies (Ryan, 1971). In a review of progress in the area of primary prevention, Bloom (1979) found research converging on the point that competence building is perhaps the single most effective preventive strategy for dealing with individual and social issues in most communities. Ryan (1967) used "power" in a similar fashion when he stated that in order to be mentally healthy, a person "must be able to perceive himself as at least minimally powerful, capable of influencing his environment to his own benefit, and further . . . this sense of minimal power has to be based on the actual experience and exercise of power" (p. 50). He goes on to contend that competence, power, and self-esteem are closely linked, and that their loss may constitute a powerful stressor. Developing a sense of control over life is critical in dealing with life's stress. Werner (1981) emphasized the need for "a sense of coherence, a feeling of confidence that one's internal and external environment is predictable, that probably things
will work out, and that, in a sense, we have some control over our small world" (p. 140).

A sense of control over life, along with positive perceptions of self derived from success in meeting challenges, is crucial in the effective management of stress. These concepts are embodied in the constructs of locus of control and self-concept, which serve as dependent variables in this study.

Some of the greatest sources of stress among adolescents are peer and general interpersonal relationships (Petersen & Spiga, 1982). The crucial need to be accepted and to feel part of a group may be made difficult by an adolescent's poorly developed interpersonal skills. Therefore, improved social skills should enhance adolescent relationships and reduce stress. A measure of social behavior (Jesness Behavior Checklist) was used in this study to determine changes in interpersonal effectiveness.

In this study, the variables included not only state and trait anxiety (as would be expected in most stress management training programs), but also locus of control, self-concept, and self-perceived social behavior as being essential components in prevention activities. The emphasis is not only to reduce stress but also to enhance the individual's sense of competence and control over life and perceptions of self as a capable and worthwhile individual able to function effectively in social situations.
Purpose of the Study

The purpose of this study was to determine whether a school-based, stress-inoculation training program is effective in increasing perceived internal locus of control, enhancing self-concept, reducing anxiety level, and improving perceived social behavior among early adolescents. SIT is an approach developed by Donald Meichenbaum. It emphasizes restructuring cognitions about stressors, learning a variety of skills for reducing stress levels, and applying what is learned in increasingly stressful situations.

Importance of the Study

Thoresen and Eagleston (1983) studied the effects of chronic stress on children and adolescents. They stated that informing youth of the value of relaxation, having close friends, and changing self-talk will be ineffective unless incorporated as skills on the part of youth. They discussed the fact that little was being done at either the elementary or secondary school level to accomplish this. The treatment employed in this study not only taught skills and more effective strategies for managing stress, but also encouraged the translation of those skills into the real life problems of participants. The treatment was intended to be useful to adolescents who wished to learn more about effectively managing the multiple stressors they faced as well as to prepare them for stressors in the future. The treatment was intended to be of value to schools and
guidance personnel who were seeking means of assisting students in managing stress in a comprehensive, skill-building way that was geared to the individual and which built competence by encouraging students to confront stressors in graduated doses. It was also intended to be of interest to parents who were concerned about preparing their children to manage stress better and thus lead more responsible, productive lives. The study was also designed to be of interest to communities who were concerned about dealing with the alarming rise in teenage pregnancy, drug abuse, suicide and other manifestations of poor stress management. The multiple skills needed to manage stress well, such as assertiveness, social problem solving, cognitive restructuring, and relaxation were seen as crucial in a person's overall mental health as well.

Research Questions

This study was designed to answer the general research question of whether participation in an SIT stress-management training program could enhance an adolescent's abilities to manage stress when compared to a control group. The specific research questions addressed in the study were as follows:

1. Does participation in an SIT stress management program produce a difference in locus of control for adolescents?

2. Does participation in an SIT stress management program produce a difference in trait anxiety for adolescents?
3. Does participation in an SIT stress management program produce a difference in state anxiety for adolescents?

4. Does participation in an SIT stress management program produce a difference in self-concept for adolescents?

5. Does participation in an SIT stress management program produce a difference in the self-perceived interpersonal functioning of adolescents?

Definition of Terms

1. Adolescence is the period in life approximately between the ages of 10 and 20 which entails considerable biological and role changes as well as much adaptation at all levels of biological and psychosocial responding (Hamburg, 1981). In this study, the 14-15 year-old age group was used.

2. Cognitive Restructuring is an approach used in both cognitive therapy and SIT to make clients aware of the roles that thoughts and emotions play in potentiating and maintaining stress and to assist them in replacing faulty cognitions with more rational ones (Meichenbaum, 1985).

3. Locus of Control is a construct representing the degree to which a person believes that personal life events are dictated by the person's actions. An external locus of control is characteristic of those who feel their life events are dictated by forces outside themselves, such as by luck, chance, or fate. An internal locus of control is
found in those believing that events in life are dependent upon their own behaviors. Locus of control was measured in this study by the Nowicki-Strickland Locus of Control Scale (Nowicki & Strickland, 1973).

4. **Self-Concept** is a relatively stable set of self-attitudes reflecting both a description and an evaluation of a person's own behavior and attributes (Piers, 1984). It was measured in this study by the overall self-concept score on the Piers-Harris Children's Self-Concept Scale (Piers, 1984).

5. **Social Behavior** is an indication of the effectiveness with which a person is able to communicate individual needs and get them met through interpersonal relationships. In this study it was measured through the self-report scores of seven subscales on the Jesness Behavior Checklist: considerateness, independence, sociability, calmness, effective communication, insight, and anger control (Jesness, 1971).

6. **State-Anxiety** is a condition characterized by subjective feelings of tension, apprehension, nervousness, and worry, and by activation or arousal of the autonomic nervous system (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). State-anxiety was measured in this study by the state-anxiety score on the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

7. **Stress** is a condition that occurs when there is an imbalance between the demands of the environment and the
response capability of the individual (Cox, 1978). In this study, the transactional model of stress was utilized in which stress response is viewed as part of an ongoing person-environment interaction. The three interacting factors included environmental stressors, cognitive mediation, and the stress response.

8. **Stress Inoculation Training** is a generic approach for preventing stress-related disorders through cognitive restructuring, coping-skills training, and gradual introduction to increasingly stressful situations (Jaremko, 1984). In this study, it refers to a stress inoculation training approach including cognitive restructuring, relaxation training, assertiveness, and problem solving.

9. **Stress Management Training** is a curriculum of traditional response and stimulus-based orientations to stress and its management. In this study it meant the curriculum for the control group which was based on the *Teenage Health Teaching Modules: Handling Stress* by Jacqueline Sowers (1983).

10. **Stressors** are situations or stimuli that are objectively characterized by some degree of physical or psychological danger (Spielberger, 1979, p. 7).

11. **Trait-Anxiety** is a condition characterized by relatively stable individual differences in anxiety proneness and in responding to anxiety situations with elevations in the intensity of state-anxiety reactions (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983).
Trait-anxiety was measured in this study by the trait-anxiety scale of the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

Chapter II is organized into four major sections in which the relevant literature supporting this study is discussed: (a) Adolescence, (b) Models of Stress and Anxiety, (c) Stress Management Strategies, and (d) Assessment of Stress. In the section on Adolescence, a model for conceptualizing adolescence and the stress that accompanies this period is examined. In the Models of Stress and Anxiety section, several theoretical conceptualizations of stress are discussed with special emphasis on the transactional model. In the Stress Management Strategies section, the three major foci for intervention are examined: (a) somatic (i.e., relaxation training), (b) behavioral (i.e., assertiveness and social problem solving), and (c) cognitive (i.e., cognitive restructuring). The SIT approach is proposed as a comprehensive model for incorporating all three. The Assessment of Stress section includes a review of the three major theoretical constructs used to measure stress in this study: (a) locus of control, (b) self-concept, and (c) anxiety.

Adolescence

Petersen and Spiga (1982) proposed a model for understanding the stress experienced by youth in
adolescence. In their view, a model for explaining adolescent stress must consider not only stressors at the time, but also individual characteristics. They reported that the six developmental stresses most prominent at this time are puberty, cognitions, peer group, school, parents, and society. At puberty, adult appearance and size, reproductive capacity, and the asynchrony among body parts can produce stress for adolescents, especially when the onset is either early or late.

The peer group, which assumes a large role during adolescence, alternately pushes for conformity and presses for experimentation. The attendant conflict can lead to great levels of stress. School can also be a major source of stress, especially in the transition from middle to high school. Relationships with parents also change: parents must respond to the adult size of the adolescent, interactions between parent and child may have sexual overtones, and the child's entry into adolescence may signal advancing age to a parent. In addition, adolescence reminds parents that potentially painful separation is pending.

Petersen and Spiga (1982) cited four mediators to the stress adolescents experience. The timing of development is an important factor in coping, with boys generally doing better with early onset of puberty and girls doing better with a normally timed onset. Preparation for these experiences leads to better coping and adaptation. Individual vulnerability may amplify the effect of any
stressor, and when social supports, especially parents, are available, stress can be moderated and coping enhanced.

The response of adolescents to stress involves a complex interplay between behavioral and physiological factors. Much of the adolescent's effort is directed at mastering the stresses accompanying puberty. The individual masters stress by reducing to tolerable limits the intrapsychic and affective arousal induced by stressors, by altering the perception of a stressor as a threat, or by removing the threat. Coping with stress is an interactive process between the individual's behaviors and both his/her intrapsychic and external environments. A person's actions change these environments which in turn alters the perception of stress.

Increased physiological arousal is a common response to the stress of adolescence. While low levels of physiological arousal facilitate cognitive functioning, higher levels impair it and may also affect emotional behavior.

The model proposed by Petersen and Spiga (1982) indicated that the physiological, affective, and behavioral responses of the adolescent are the outcome of various interacting forces. Puberty may influence a person's psychological status through the meaning it has, both socially and psychologically; therefore, both person and context must be considered in assessing an adolescent's response to stress.
Models of Stress and Anxiety

The concept of stress in the literature has been used to describe a variety of physiological, cognitive, and behavioral phenomena. There is, however, no generally accepted definition that satisfactorily encompasses the range of events included within the term "stress."

Cannon (1939) stated that when an organism is confronted by a threatening stimulus, an emergency "fight-or-flight" reaction is immediately elicited. This reaction creates general sympathetic nervous system excitation and produces muscle activation, increased blood pressure, adrenalin secretion, and other physiological changes. The excitation requires some form of discharge, and in most animals results in an automatic, species-specific pattern of motor behavior involving either fighting or fleeing. While humans experience the same sympathetic excitation, our cultural norms often preclude such direct actions as fight or flight. Thus, a ready means of discharge is often unavailable. Therefore, learning to recognize the stressor and then engaging in some acceptable form of discharge should assist individuals in actively and effectively coping with stressors.

Laux and Vossel (1982) identified three main variations in the definition of stress: (a) stimulus-based, (b) response-based, and (c) interactional. Stimulus-based approaches may be subdivided into those that explicitly acknowledge the importance of individual appraisals of
events and those that ignore such mediating cognitive processes. In Spielberger's trait-state anxiety theory, stress is used to denote environmental conditions that are characterized by some degree of objective physical or psychological danger (Spielberger, 1972). He stated that stressful conditions must be perceived as threatening in order to evoke an anxiety reaction. On the other hand, objectively nonstressful situations may be considered threatening if a person for some reason perceives them as harmful. The appraisal of a situation as dangerous depends upon individual differences in personality, attitudes, and experience with similar situations in the past.

Holmes and Rahe (1967) presented a stimulus-based approach to stress that fails to allow for differences in individual appraisal of events. Their basic assumption is that the amount of adjustment required to cope with life-changes, regardless of the desirability of the changes, is associated with the occurrence of illness. Lazarus and Cohen (1978) have questioned the relevance of equating life-changes with stress and argue that assigning group-derived standardized scores for life-change events ignores differences in the way people are influenced by various events.

The most prominent response-based definition of stress was developed by Hans Selye. He defined stress as the state manifested by a specific syndrome consisting of all the nonspecifically-induced changes within a biological system
Selye saw the stress reaction as an adaptive syndrome of the organism in response to external stressors. The form this takes is known as the General Adaptation Syndrome (GAS). The GAS consists of three phases. The first phase, the alarm reaction, occurs upon confrontation with a stressor. The overall resistance to a stressor initially decreases although bodily defenses are mobilized. In the second phase, the stage of resistance, the organism adapts to the presence of the stressor and maintains itself even if the stressor increases in magnitude. However, the capacity of the organism to resist stress is finite so that the presence of a stressor over an extended time will deplete the organism's resistance capacity and eventually lead to breakdown or death in the third phase, the stage of exhaustion.

In the third general approach, stress is viewed as an interaction between the individual and the situation. Cox (1978) concluded that stress arises from the existence of a particular relationship between the person and the environment. Stress occurs when there exists a substantial imbalance between the demands of the environment and the response capability of the individual, between perceived demand and perceived response capability.

Coyne and Lazarus (1980) theorized that a person's response to environmental stressors is cognitively mediated by the evaluation of (a) how detrimental the stressors might be to well-being involving harm-loss, threat, or challenge
("primary appraisal") and (b) how well the person may summon coping resources, options, and constraints ("secondary appraisal"). They suggested that the major influences on secondary appraisal include an individual's "previous experiences with such situations; generalized beliefs about self and environment; and the availability of resources, such as the person's morale and assessments of health-energy, problem-solving skills, social support, and material resources" (p. 153). Furthermore, the more positive the appraisal of these factors, the firmer one's sense of "self efficacy," hence the more optimistic one's appraisal of a given situation. Thus, in order to reduce stress, one must (a) change the situation by means of direct action techniques and (b) change the individual's appraisal processes and ability to use cognitive coping and palliative coping procedures (Lazarus, 1981).

Lazarus and Launier (1978) indicated that adequate coping may at various times involve direct action to change a situation, escape from an intolerable situation, or relinquishment of certain goals. Direct action can take several forms, such as preparing for a stressor, collecting information and engaging in problem solving, actually avoiding or escaping the stressor, asserting oneself and trying to change the environment directly, or trying to influence significant others in the environment. When stress can not be altered or avoided, then palliative coping
modes can be used. This enables a person to feel better in the face of threat or harm without resolving the problem.

Stress and anxiety are often considered interchangeable and researched together. The study of anxiety has also been subject to much scrutiny with no consensus as to its precise meaning. Spielberger (1979) believed that the stress process is initiated by a situation or stimulus that is potentially harmful. If the stressor is interpreted by the individual as threatening, an anxiety reaction will result.

The components of anxiety have been specified by Spielberger, Gorsuch, and Lushene (1970). Their studies led to a two-factor theory. State-Anxiety (A-State) is conceptualized as a transitory emotional condition characterized by feelings of tension and apprehension and by activation of the autonomic nervous system. This state occurs in situations which the individual perceives as threatening. Trait-Anxiety (A-Trait) refers to individual differences in anxiety proneness. This characteristic involves a relatively stable tendency to respond to threatening situations with an A-State reaction. The probability of experiencing A-State reactions is greater in people who are high in A-Trait because their past experiences tend to make them perceive many events as threatening or dangerous.

Stress and anxiety have been conceptualized in many ways. Strategies for managing stress are also numerous, and
there is much conflict about the most effective approach. The three major categories of intervention are described in the next section.

**Stress Management Strategies**

**Cognitive Restructuring**

Cognitive restructuring is a generic term that refers to a variety of therapeutic approaches that attempt to modify a client's thinking by examining the premises, assumptions, and attitudes underlying cognitions. The focus is on irrational inferences and premises. It is a summary label for procedures including Ellis's rational-emotive therapy (RET) (Ellis & Harper, 1977), Beck's (1976) cognitive therapy, Goldfried's (1979) problem-solving training, and Meichenbaum's (1985) SIT.

Ellis and Harper (1977) contended that much, if not all, emotional suffering is caused by the irrational way individuals construe the world and the assumptions they make. Irrational thoughts about situations may precipitate debilitating emotions that could be avoided if more rational perceptions were employed. The tasks for an RET therapist are to identify the external events that are most stressful, to determine the thought patterns that promote emotional upset, and to assist the client in altering these beliefs and thoughts. The RET therapist encourages, goads, challenges, educates by means of a Socratic dialogue, provides information, conducts rational analyses, and assigns behavioral homework to help the client identify the
relationship between irrational thinking and emotional upset.

Aaron Beck's (1976) perspective on cognitive therapy suggested that "the individual's problems are derived largely from certain distortions of reality based on erroneous premises and assumptions" (p. 3). The goal in therapy, then, is to help clients unravel their distortions in thinking and learn more realistic ways to interpret experiences.

Goldfried (1979) proposed that a more systematic way to incorporate Ellis' approach with social learning theory was possible through systematic rational restructuring. The four steps include assisting clients to (a) recognize that self-statements mediate emotional arousal, (b) see the irrationality of certain beliefs, (c) understand that unrealistic self-statements mediate maladaptive emotions, and (d) modify unrealistic self-statements.

Meichenbaum (1985) took a more moderate view than the preceding theorists. He stated that "cognitions should not be viewed as entities antecedent to other psychological or physiological processes. Instead, cognition should be viewed as a set of relationships that are interdependent on other processes" (p. 58). He drew heavily from Beck in utilizing the core techniques of cognitive therapy which include (a) eliciting the client's thoughts, feelings, and interpretation of events; (b) gathering evidence with the client for or against such interpretations; and (c) setting
up personal experiments (homework) to test the validity of the interpretations and to gather more data for discussion. The therapist acts as a collaborator with the client in discovering answers to the problems rather than serving as an expert who has all the answers.

Most of the work with cognitive restructuring techniques has involved adults in therapy. The research relevant to adolescents is reviewed next.

Feindler, Marriott, and Iwata (1980) sought to replicate the Anger Control Training Program in a larger group setting. A public junior high school was chosen for a group format in twice-weekly 50-minute sessions. Thirty-six adolescents were chosen from an in-school sample of 100 students in a behavior modification program for multiply suspended students. Students were randomly assigned to one of three treatment groups or to one of three non-contact control groups. All subjects were given a pre- and post-test administration of the Means-Ends Problem Solving Inventory, the Jesness Behavior Checklist, and the Self-Control Rating Scale (completed by teachers). During the 12-session program students were taught both general and specific self-control strategies for dealing with disruptive incidents. Analyses revealed significant change for treatment subjects on several dependent measures. The anger-control training appeared effective in reducing the frequency of severe occurrences of disruptive and aggressive behavior and the resulting school suspensions.
Kanter and Goldfried (1979) compared three groups (cognitive restructuring, self-control desensitization, and their combination), with a waiting-list control in reducing interpersonal anxiety. Subjects consisted of 18 males and 50 females from a university community. Most of the women were homemakers with an average age of 35. Assessment included behavioral, self-report, and physiological measures. A five-minute interaction with two confederates (one male and one female) was videotaped and rated on a 15-item anxiety checklist. The self-report measures included the State-Trait Anxiety Inventory, the Social Avoidance and Distress Scale, the Fear of Negative Evaluation Scale, the S-R inventories of anxiety, and the Jones irrational beliefs test. The physiological measure was a 30-second pulse count taken prior to telling a subject about the interaction, immediately before the interaction, and after it. All measures were taken before the interaction, after it, and at a nine-week follow-up. Treatment involved seven weekly group sessions, each lasting one and one-half hours. A standard hierarchy of 12 anxiety-arousing social situations was used. Cognitive restructuring involved helping the clients recognize their unrealistic and self-defeating thoughts and images and replacing them with coping strategies. The three treatment groups showed more improvement than did the waiting-list controls. Therefore, cognitive restructuring represents one potential procedure for use in treating social anxiety.
**Problem-Solving Training**

While some cognitive restructuring therapists emphasize problem solving, others are more concerned with coping skills. The problem-solving approach teaches clients to stand back and systematically analyze a problem situation in the absence of acute stress; the coping-skills approach concentrates on what the client must do when immediately confronted with an acutely stressful situation. In a prevention paradigm, both approaches are needed so that a client is optimally equipped to reduce not only the immediate stress, but also be able to analyze the situation and plan more effective strategies for the future.

A person's daily life is replete with situational problems which must be solved in order to maintain effective functioning. Even with most factors held equal, the effectiveness with which such problems are handled varies tremendously among individuals. Competent individuals may be conceptualized as those who manage well the problems encountered in daily living by consistently choosing the most expedient course of action. Behavior that is described as "abnormal" or "emotionally disturbed" may be more accurately defined as ineffective behavior and its consequences.

D'Zurilla and Goldfried (1971) noted that ineffectiveness in coping with problem situations is often a sufficient condition for an emotional disorder requiring psychological treatment. They contended that general...
effectiveness may be most efficiently facilitated by training a person in the skills that allow him/her to deal independently with critical daily problem situations. In order to improve the general daily effectiveness of at-risk groups such as adolescents, problem solving should be taught. Adolescence is an age in which youth struggle with issues of independence and self-control. Problem-solving training can be effective because its aim is to assist clients to select consistently the most beneficial behavior. In a sense, problem solving has the potential for allowing a client to function as his/her own therapist.

D'Zurilla and Goldfried (1971) identified the following general stages in problem solving: (a) general orientation (i.e., "set" and attitudinal factors), (b) problem definition and formulation, (c) generation of alternatives, (d) decision making (i.e., evaluation and selection), and (e) verification. They cautioned that problem solving rarely proceeds through these in a stepwise fashion; rather, the stages usually overlap and interact with each other.

It has long been recognized that an individual's general orientation or set in approaching a situation greatly influences the way in which he/she will respond to that situation. In order to achieve a proper "problem-solving set," D'Zurilla and Nezu (1982) proposed four important components: (a) identifying a problem situation when it occurs, (b) recognizing that problems in living are
normal and that problem solving is a viable means of coping with them, (c) having the belief that one is capable of solving a particular problem effectively, and (d) attempting to "stop and think" when confronted with a problem instead of responding in an automatic, habitual manner. Only when a problem solver recognizes the problem and attends to the relevant information is he/she prepared to deal effectively with it. Meichenbaum, Henshaw, and Himel (1979) reviewed several studies that compared the thought processes of individuals who cope well to those who do poorly under stress. They found that a common characteristic associated with effective coping was the adoption of an appropriate "problem-solving set." The more competent individuals accepted stressful situations and viewed it positively as a challenge, whereas the less effective individuals were more likely to perceive the situation negatively as a threat or as an aversive experience.

The second stage in problem solving involves problem definition and formulation. Its purpose is to assess the problem and identify a realistic goal or objective. Formulation of the problem leads to the description of the desired outcome. This goal is important because it provides direction for generating alternatives as well as criteria to be used in evaluating alternatives in the decision-making stage. The two most important considerations in setting the problem-solving goal are (a) that it be stated in concrete,
behavioral terms and (b) that it be realistic and attainable.

Nezu and D'Zurilla (1981) conducted an experiment designed to assess more specifically the following question relative to the problem definition stage: What were the effects of training in problem definition skills on decision-making effectiveness? Three groups of college students were given different levels of instruction in problem definition and formulation (PDF): (a) specific training in PDF, (b) general guidelines for PDF, and (c) no instruction in PDF. After training the subjects were presented with eight socially oriented test problems along with a list of possible solutions, varying in degree of effectiveness. Subjects were asked to choose the best solution. Those given specific training in PDF skills did significantly better on the decision-making task than subjects who received no training.

The third stage in problem solving is the generation of alternatives. The function of this stage is to make available as many solutions as possible and to maximize the likelihood that the "best" solution will be among the alternatives. To accomplish this purpose, brainstorming and the strategy-tactics procedure have been recommended. Brainstorming has four basic rules: (a) Criticism is ruled out until later, (b) "free-wheeling" is welcomed, (c) quantity is desired, and (d) combination and improvement are sought. Since research has not established a clear
superiority for any one of these procedures, D'Zurilla and Goldfried (1971) recommended that all should be included in training situations.

The fourth problem-solving stage is decision making. The purpose is to evaluate the available alternatives and select the "best" or most effective one. Effectiveness is based upon the value and likelihood of anticipated consequences. Nezu and D'Zurilla (1981) investigated the effects of training in decision making when subjects were asked to choose the best solution from among a list of alternatives for socially oriented test problems. College student subjects were divided into three groups: (a) specific training in decision making (DM), (b) utility-rule only where subjects were simply taught the general definition of DM based upon a utility approach, and (c) no instruction in DM. After training, the subjects were presented with 12 socially oriented test problems and a list of possible solutions. The subjects were asked to choose the best solution for each problem. The results showed that subjects given specific training in DM made choices that were significantly more effective than those made by the other two groups. Not only did those trained show a higher average of effective solutions, they also selected a greater number of superior solutions.

The fifth and final stage in problem solving involves solution implementation and verification. D'Zurilla and Nezu (1982) stated that no empirical studies had been
conducted to support the importance of this stage in the problem-solving process. However, they suggested that no studies are necessary to show that without real-life testing and application, problem solving is nothing more than a cognitive exercise.

Several researchers have explored the effectiveness of problem-solving training (PST) in reducing levels of stress and anxiety. Mendonca and Seiss (1976) researched whether PST and anxiety management training would reduce anxiety caused by vocational indecision in college students. Thirty-two undergraduates with this kind of anxiety were divided into five groups: anxiety management, problem solving, anxiety management and problem solving, discussion placebo, and no-treatment control. Outcome measures included frequency and variety of vocational-search behavior, state and trait anxiety, and problem solving. The problem-solving measure was a timed, written test involving imaginary role playing in response to tape-recorded vignettes of common problem situations in a college setting. Results showed a significant improvement for the problem-solving group in the area of problem solving but not in anxiety reduction or vocational-search behavior.

Another study of the efficacy of PST in reducing anxiety was conducted by Jannoun, Munby, Catalan, and Gelder (1980). They set out to replicate under more controlled conditions the findings of a previous study of 12 agoraphobic patients who were successfully treated with a
home-based, programmed-practice approach. This approach involved graded, in vivo exposure to feared situations with social reinforcement provided by a significant other. As a comparison treatment, the investigators used a problem-solving approach in place of exposure to the feared situations.

Twenty-eight agoraphobic patients were randomly assigned to the two treatment conditions and to one of two therapists. Each therapist treated seven patients in each treatment condition. Treatment was carried out in the home for a three-week period. In both conditions, the significant other was actively involved. Dependent measures included ratings of phobic severity and anxiety by an independent assessor and by the patients themselves, and by diary measures of time away from home and number of journeys made. Assessments were made before and after treatment and at three- and six-month follow-ups. Both treatments showed significant reductions in phobic severity and anxiety with no significant differences found between the two treatments. There were no significant differences between treatments in the average time away from home or number of journeys. Problem solving was therefore shown to be effective in reducing anxiety.

D'Zurilla and Nezu (1982) reviewed four studies that evaluated prevention programs based on problem-solving training with normal individuals. All showed promising results although there were some methodological problems.
Only one of the studies included a "vulnerable" population that would be an appropriate target for a prevention program. The authors concluded that while problem solving shows promise for prevention, there is no solid evidence concerning its effectiveness for this purpose.

The presence of interpersonal problem-solving deficits in atypical groups has frequently been reported in the literature. Freedman (1974) developed a set of typical interpersonal problem situations faced by high-school-aged males and administered the set to three samples of teenagers: a group of average high school students, a group of outstanding high school students, and a group of residents at a state training school for delinquents. The delinquent group was significantly poorer in providing effective solutions to problem situations than either of the other two groups. Platt, Spivack, Altman, Altman, and Peizer (1974) studied male and female adolescent patients at a private psychiatric hospital and found that three problem-solving-skills deficits distinguished this group from a group of matched normals: means-end thinking, alternative thinking, and perspective taking. Other researchers have found similar results with other troubled adolescent groups (Platt, Scura, & Hannon, 1973; Spivack & Levine, 1963).

**Assertiveness**

Alberti (1977b) stated that the concept of assertiveness training had its roots in behavior therapy, most notably in the works of Andrew Salter, Joseph Wolpe, and Arnold
Lazarus. It was initially developed as a treatment intervention for clients with neurotic social anxiety.

In his 1949 book, *Conditioned Reflex Therapy*, Andrew Salter commented upon the potential of assertion training in remediating a variety of client problems. His procedures for increasing "excitatory" behavior and decreasing "inhibitory" behavior were drawn from the classical conditioning work of Ivan Pavlov. Disinhibition involves a relearning process directed toward deliberate excitatory behavior. Repeated excitatory actions result in increased freedom and awareness of excitatory feelings, with a corresponding decrease in inhibitory actions and feelings. Thus, Salter's behavior-change procedures led to neural activity changes and a new freedom of thought, feeling, and behavior.

Joseph Wolpe (1958) was the first to use the term "assertive." His early work in deconditioning anxiety led to the concept of reciprocal inhibition in which the organism can unlearn anxiety through pairing anxiety-evoking stimuli with anxiety-inhibiting responses. For Wolpe, key responses that inhibit anxiety are relaxation and assertion. In systematic desensitization, the anxiety response is weakened by having a client relax while confronting a hierarchy of anxiety-provoking stimuli. Assertiveness, similarly, can be paired with an anxiety-inducing stimulus in order to inhibit and eventually overcome anxiety.
Alberti (1977b) noted that several divergent theoretical positions characterized the assertiveness field and were not easily reconciled. He offers the following as a general perspective:

1. Assertiveness is a characteristic of behavior, not of persons;

2. Assertiveness is a person-and-situation-specific, not a universal characteristic;

3. Assertiveness must be viewed in the cultural context of the individual, as well as in terms of other situational variables;

4. Assertiveness is predicated upon the ability of the individual to freely choose his/her action;

5. Assertiveness is a characteristic of socially effective, non-hurtful behavior. (Alberti, 1977b, pp. 357-8)

At a December 1975 meeting of the Association for Advancement of Behavior Therapy, a group of nationally known assertiveness-training professionals met to initiate work on a definition of assertiveness. The result was as follows:

We define assertive behavior as that complex of behaviors, emitted by a person in an interpersonal context, which express that person's feelings, attitudes, wishes, opinions or rights directly, firmly, and honestly, while respecting the feelings, attitudes, wishes, opinions and rights of the other person(s). Such behavior may include the expression of such emotions as anger, fear, caring, hope, joy, despair, indignance, embarrassment, but in any event is expressed in a manner which does not violate the rights of others. Assertive behavior is differentiated from aggressive behavior which, while expressive of one person's feelings, attitudes, wishes, opinions or rights, does not respect those characteristics in others. (Alberti, 1977a, pp. 367-368)

While assertiveness has been utilized successfully with a variety of problems and populations including women,
blacks, dysfunctional couples, the obese, and the unemployed, Alberti (1977b) noted that its use with adolescents has been limited. D'Amico (1977) reported a case study using a cognitive behavioral approach with a 12-year-old who had difficulty initiating any relationships with peers. Meichenbaum's SIT approach was utilized as a cognitive means to exclude any inhibitory anxiety. Because the student's self-concept was low, instruction was provided in the principle of assertiveness that all people are worthwhile and worthy of assertive behavior. Next, SIT was used to help the client change cognitions into those which promoted coping with the demands of an assertive situation and reinforcing a sense of self-worth. Individualized self-statements were developed for the student in each of the four areas outlined by Meichenbaum: (a) preparing for the assertive demand, (b) confronting and handling the assertive demand, (c) coping with the presence of interpersonal anxiety, and (d) reinforcing self-statements. This cognitive assertive strategy was learned and rehearsed in both overt and covert role-play situations. The final stage was in vivo applications in select target situations. Reports from the student and the teacher indicated that significant improvement was achieved.

McPhail (1977) developed a school-based program for teaching assertiveness to adolescents. The researcher began with 25 volunteers for a one-day off-campus program and moved to one half-day assertiveness training workshops in
the classroom. The basic group goals were to improve the following: "(a) The ability to say 'no'; (b) the ability to express both positive and negative feelings; (c) the ability to make requests, to ask for and accept favors; and (d) the ability to initiate, continue, and terminate general conversations" (McPhail, 1977, p. 217).

There were four major elements in McPhail's program. The first involved describing the characteristics and consequences of passive, aggressive, and assertive behavior, both didactically and through role play. The second step involved identifying and incorporating both the verbal and non-verbal elements of assertive behavior. The next step used the "Two-Step Process" of requiring students to ask themselves (1) what is it that I feel? and (2) what is it that I want? The final step involved behavior rehearsal of relevant situations and getting meaningful feedback from other group members. Evaluation consisted only of student self-reports and teacher opinions but was uniformly positive.

Relaxation Training

The term "somatic" when applied to SMT refers to a general category of techniques that focus on reducing stress by training in relaxation. This includes such approaches as biofeedback, autogenic training, progressive relaxation, deep muscle relaxation, meditation, and deep breathing.

Progressive relaxation is one of the major relaxation techniques. This strategy developed by Jacobson (1938) involves an elaborate system for teaching people to tighten
progressively and then relax major muscles of the body—hence, progressive relaxation. The technique is applicable to a wide variety of biopsychosocial problems and is easily taught to a broad range of individuals.

There is increasing evidence that the stress-dampening effects of meditation-like progressive relaxation derive from a simple set of general procedures that can be learned easily by the individual. A case for this has been made by Benson (1975), a Harvard cardiologist, who maintained that the various approaches to meditation are based on a series of innate, integrated physiological responses which counteract the fight-or-flight response. Benson described this general "relaxation response" as consisting of four basic elements: (a) a quiet environment, (b) a mental device, (c) a passive attitude, and (d) a comfortable position. The procedures for eliciting the response involve (a) sitting in a comfortable position in a quiet environment; (b) closing one's eyes; (c) deeply relaxing all muscles; (d) breathing through the nose and while breathing out, saying the word "one" silently; (e) continuing this practice for 10 to 20 minutes; and (f) when finished, sitting quietly for several minutes before opening one's eyes. Benson found the relaxation response to be effective for a number of conditions including decreased premature ventricular contractions in patients with ischemic heart disease (Benson, Alexander, & Feldman, 1975), headaches
Lehrer and Woolfolk (1984) reported that children can learn relaxation techniques at least as well as adults and in some cases better. This was indicated by high scores on hypnotizability scales for preadolescent children. They concluded from their review of the literature that, while somatic, cognitive, and behavioral approaches have all been shown effective, the particular combination of techniques that will maximally benefit a particular client is in doubt.

**Specific Effects of Stress Reduction Techniques**

An important issue in the stress management field is whether the various stress reduction techniques have specific effects. Lehrer and Woolfolk (1984) examined this question in a comprehensive review of the literature. The specific-effects hypothesis states that treatments oriented to a particular modality (i.e., behavioral, cognitive, or somatic) will have the greatest effect on symptoms related to that modality. Benson (1975) argued that all relaxation techniques produce a single "relaxation response." A compromise position was postulated by Schwartz, Davidson, and Goleman (1978) who found that the specific effects of various relaxation techniques may be superimposed upon a general relaxation response.

The hypothesis of specific effects would seem most relevant for the relaxation (somatic) vs. cognitive distinction, as cognitive therapies ostensibly do not
directly teach physiological arousal reduction and most relaxation therapies teach little about cognitive control. Lazarus (1977), however, argued that all stress reduction techniques are mediated by cognition.

There is considerable evidence to support the specific effects for cognitive interventions. Mitchell and White (1977) found improvements in latency of sleep onset for patients in a mental relaxation group suffering from "severe predormital insomnia" when compared with a self-monitoring control. Woolfolk and McNulty (1983) found evidence that sleep onset insomnia is largely mediated by presleep cognitive intrusions and that the cognitive components of treatment were more effective than somatic ones.

Lehrer and Woolfolk (1984) concluded that there was considerably more evidence for the cognitive effects of cognitive therapy as opposed to the somatic effects for relaxation therapy. However, when relaxation and cognitive training are combined, they are generally more effective than either therapy alone. Mitchell and Mitchell (1971) found the combined effects of relaxation, desensitization, and assertive training to be more effective in treating migraine headaches than any individual component. Anxiety-management training combines training in progressive relaxation with deep breathing and an imagined relaxing scene. Shoemaker (1977) found anxiety management training to be more effective than progressive relaxation training alone in reducing self-reported general anxiety among
neurotics. Goldfried and Trier (1974) found that specific training in applying progressive relaxation skills to public-speaking anxiety potentiated the effects of progressive relaxation.

The specific effects hypothesis suggests that behavioral interventions would be more effective with individuals suffering from various behavioral deficits, such as poor social skills. In reviewing the literature on assertion and social skills training, Lehrer and Woolfolk (1984) found that these techniques reduced anxiety as well as improved behavioral functioning. Behavioral treatments do have specific effects on behavior. Biran and Wilson (1981) reported greater effects for a form of exposure therapy than for RET in individuals afraid of heights. Lehrer and Woolfolk (1984) concluded that there is substantial evidence for specific behavioral effects for behavioral treatments when compared with treatments that are clearly somatic or cognitive.

In summarizing their literature review, Lehrer and Woolfolk (1984) concluded that "various relaxation techniques do have some distinguishing differences in their effects, but that these effects are superimposed upon a large (and often clinically much more significant) global relaxation response" (p. 463). For a problem that resides exclusively in one realm (i.e., cognitive, behavioral, or somatic), treatments specifically addressing that area are likely to be most helpful. However, to maximize potential
benefit, the "combination of techniques, if training is intensive and properly tailored to the individual, are more effective than is the application of single techniques" (p. 464). The treatment model used in this study incorporated somatic approaches such as deep muscle relaxation, progressive relaxation, and imagery; cognitive restructuring; and the behavioral approaches of assertiveness and social problem solving.

**Stress Inoculation Training**

To be effective, a stress management program should integrate somatic, cognitive, and behavioral strategies and be based on a model of stress that accounts for the interactions between the individual and the environment. Cox (1978), in his transactional model of stress, proposes that stress occurs as a result of this interaction between the person and his/her environment. Meichenbaum and Jaremko's (1983) stress inoculation training (SIT) promotes this kind of combined approach. Their SIT treatment procedures were designed to "facilitate adaptive appraisals, to enhance the repertoire of coping responses, and to nurture the client's confidence in his or her coping capabilities" (p. 102). SIT, then, was used in this study because it is a comprehensive, integrative approach that uses the transactional approach to stress.

Meichenbaum and Jaremko (1983) suggested several guidelines in establishing a stress prevention program. These include the following:
1. Coping is neither a single act nor a static process. As Lazarus (1981) noted, coping is a constellation of many acts that stretch over time and undergo changes. What may be a useful coping procedure at one point may prove to be ineffective at another time. Also, stress is usually multiply determined and has multiple and often long-term effects.

2. Individual differences play a crucial role in defining what will be appraised as stressful and the most adaptive coping response.

3. Cultural differences can play an important role in defining what will be appraised as stressful and in the nature of the coping process.

4. Stress prevention and training programs should foster flexibility in the coping repertoire of clients and should be tailored to individual needs. A flexible program seems to offer the best resistance to stress.

5. An individual appraises stressors and his/her ability to handle them will influence the level of stress. When a stressor is viewed as a problem-to-be-solved or as a challenge rather than as a personal threat, the stressor will prove manageable.

6. While the focus is often on the individual, there is evidence that the nature of social supports can often act as a buffer to stress. Cobb (1979) found that persons with supportive social networks are in better mental and physical
health and cope better with stress than individuals who are unsupported. Therefore, in order for stress to be reduced, interventions can occur at many levels, from the individual to society.

7. There is a need for a gradual exposure to more threatening stressful events. This can enable clients to receive feedback that will bolster their self-confidence as well as boost the defenses against high pressure situations. Because some of these efforts are likely to fail, a major focus should be on the processes of relapse prevention and treatment generalization.

Stress inoculation training originally referred to a relatively specific set of operations (Meichenbaum & Cameron, 1972). To evaluate the efficacy of a skills-training approach to anxiety management, a study was conducted using phobics as the target population. SIT was found to be more effective than systematic desensitization in treating phobias (Meichenbaum & Cameron, 1972). As a result, the general SIT paradigm (i.e., the educational-skills-training-application phase sequence) was soon applied to a variety of problems. In this transition, SIT became a generic term referring to a general treatment paradigm but not denoting a specific set of operations. SIT, then, is best viewed as a framework for integrating familiar assessment and treatment procedures. The therapist is not merely a technician, but rather a creative problem solver who is faced with the challenge of developing
interventions specifically tailored to the requirements of the individual client.

Meichenbaum and Cameron (1982) stated that the goal of treatment was to bring about change in three areas. First, there is a focus on altering the behavior of clients. Maladaptive behaviors are identified and altered and adaptive ones are fostered. The second area is self-regulated activity. The aim is to reduce maladaptive cognitions and disruptive feelings that might interfere with effective coping. Finally, there is a focus on cognitive structures. These are tacit assumptions and beliefs that give rise to habitual ways of construing the self and the world. Changing an individual's cognitive structures is most likely to occur by discovering through actual experience that old cognitive structures are unwarranted and that the adoption of new, more adaptive structures is rewarding.

There are three major phases in SIT. Phase 1 involves education or conceptualization and has two major objectives. The first is to collect and integrate data that allow client and therapist to develop a mutual understanding of the problem in terms that open the way for skills acquisition. The second objective is to enhance the problem-solving skills of the client by training in gathering and interpreting data with greater sophistication.

Phase 2 involves skills acquisition and rehearsal. If the assessment reveals a basic skills deficit, then skill
training is undertaken first. The second step is skill rehearsal to insure that the client is able to integrate and smoothly execute basic coping sequences. Rehearsal is intended to nurture the client's confidence in reproducing responses flexibly and appropriately in "real-world" situations.

Phase 3 involves application and follow-through. There are two objectives here. First, the client is induced to make changes in day-to-day situations. The second is to maximize the probability of generalized, enduring change.

While SIT can be tailored to specific populations, certain common elements emerge. These include

1. teaching clients the role that cognitions and emotions play in engendering and potentiating stress;

2. training in the self-monitoring of stress-engendering thoughts, images, feelings, and behaviors;

3. training in the fundamentals of problem solving (e.g., problem definition, anticipation of consequences, evaluating feedback);

4. modeling and rehearsal of instrumental and palliative modes of coping (e.g., relaxation, communication skills, use of social supports, attention-focusing skills, and positive self-evaluation);

5. graded in vivo behavioral assignments that become increasingly demanding. (Meichenbaum & Cameron, 1982, p. 151)

This combination of cognitive education and restructuring, self-monitoring of stress, problem solving, assertiveness, and somatic training in one comprehensive package coincides with Lehrer and Wolfolk's (1984) recommendation that
training which incorporates cognitive, behavioral, and somatic strategies is likely to have the most beneficial effect.

A unique feature of SIT is the large amount of client time spent in the education or conceptualization stage prior to the actual learning of coping strategies. The need to prepare clients for intervention is a primary objective of this cognitive-behavioral approach. However, little research has explored the degree of change attributable to this first phase alone. Dismantling studies by Meichenbaum (1977) indicated that the total SIT package was more effective than any one component alone.

Research on the effectiveness of SIT has assessed many types of problems and populations. In the original study, the relative therapeutic efficacy of SIT in reducing multiple phobias was compared to (a) a systematic desensitization group, (b) a self-instructional rehearsal group which received the coping skills (Phases I and II) but not the application training (Phase III), and (c) a waiting-list assessment control group (Meichenbaum & Cameron, 1972).

Half the multiphobic clients were inoculated or desensitized only to rats and the other half were inoculated or desensitized only to snakes. In this way, a means was provided to assess the degree of treatment generalization that resulted from desensitization as compared to stress inoculation. The results indicated that SIT was the most effective treatment in reducing avoidance behavior and in
fostering treatment generalization. The desensitization treatment proved effective in reducing fear only to the desensitized object.

Novaco (1975) applied SIT to teach the regulation of anger arousal to persons having chronic anger problems. He provided treatment to 34 volunteer subjects (18 male, 16 female) ranging in age from 17-42. Using a group format that initially allowed exploration of the provocative elements in their encounters, Novaco then gave a rationale that explained that the anger reactions consisted of two components: emotional arousal and cognitive activity. Clients were then taught relaxation skills for reducing arousal and strategies for developing cognitive controls in order to manage better attentional processes and thoughts. An application phase followed in which clients were asked to imagine various anger-engendering situations and to rehearse coping with such provocations by means of relaxation, deep-breathing, and personally generated self-statements. The stages were conducted within five 45-minute sessions. While Session 1 was conducted as a group, Sessions 2-5 were conducted individually.

Novaco found SIT effective in reducing anger as assessed by self-report and physiological indices obtained during laboratory provocations which included imaginal, role playing, and direct confrontations. A daily diary of "anger experiences" confirmed the laboratory results. The SIT treatment package that included both relaxation and self-
instructions was superior to the component treatments of self-instructions alone or relaxation training alone.

Lustman and Sowa (1983) compared the efficacy of frontalis electromyographic biofeedback (EMG) vs. stress inoculation for stress reduction. Subjects consisted of 24 senior undergraduates in education who were beginning student-teaching internships and who ranged in age from 20 to 24. The treatment subjects received two individual 50-minute sessions per week for five consecutive weeks. Both treatment groups were compared to a waiting-list control group on systolic and diastolic blood pressure, the Taylor Manifest Anxiety Scale, and the Teaching Anxiety Scale. Multivariate assessment on all four dependent measures indicated that the biofeedback and SIT groups significantly improved in relation to the controls but overall were not significantly different in results when compared to each other. The SIT group did somewhat better in regard to self-reported anxiety while the EMG group did better on the blood pressure measures. The untreated controls experienced slight regression on all measures. It was concluded that the two treatment conditions have specific effects that may prove more beneficial to particular groups of clients.

Hussian and Lawrence (1978) studied the comparative effectiveness of generalized SIT, test-specific SIT, discussion control, and waiting-list control treatments as applied to a sample of test-anxious students. They found both treatment groups improved significantly over controls.
across several dependent measures. The test-specific condition resulted in the greatest therapeutic gain. Although the study was methodologically sound, the authors appeared to have conceptualized SIT as nothing more than training in coping self-statements. In addition they failed to operationalize the third phase (application training) adequately.

McAlister, Perry, and Maccoby (1979) utilized SIT in school to prevent teenagers from becoming cigarette smokers. A controlled field experiment with seventh-graders showed that significantly fewer became smokers by the end of the school year if they were exposed to SIT designed to counteract the overt and subtle social pressures that often induce smoking. The SIT consisted of role-playing skits that represented the various social inducements to smoke, specific suggestions about how to handle difficult situations when confronted with peer-group pressures, and rehearsals of appropriate cognitive responses of commitment to resist the pressures.

Schlichter and Horan (1979) applied SIT to the treatment of anger problems among institutionalized juvenile delinquents. Thirty-eight male adolescents were placed in one of three groups: (a) SIT, (b) a treatment elements condition with practice in relaxation and role play but without the educational and self-instructional training common in SIT, and (c) a no-treatment control condition. While both treatments lowered anger responses on an imagined
provocations test, only SIT produced significant reductions in verbal aggression during role-played provocations. Neither treatment affected self-report or pre- and post-staff ratings of verbal or physical aggression. Further replication is needed to establish that SIT affects in vivo behaviors and not just role-played analog assessments.

Jaremko, Myers, and Jaremko (1979) compared SIT to a behavioral skills-training program with self-referred university subjects debilitated by social anxiety. A total of 48 subjects were treated in outreach workshops during four different school terms. The design was a groups (SIT and skills training) by subjects (high and low frequency of dating groups) by trials (pre-treatment, post-treatment, and two-month follow-up) factorial design. Assessment included self-report inventories and a social interaction diary. Self-report inventories included the Social Avoidance and Distress Scale, Fear of Negative Evaluation Scale, a measure of self-efficacy in dating situations, a modified S-R inventory using 10 common social situations, and a dating and assertion questionnaire. The behavioral diary was for recording every social interaction of over five minutes, indicating the nature and length of the relationship, intimacy rating, the pleasantness, and the quality of the interaction. Treatment took place in four 2-hour sessions in groups of 4 to 10. The behavioral skills-training involved a rationale for behavioral rehearsal and practiced role-playing using nonheterosexual situations. Within this
context, various skills were presented, discussed, role-played, critiqued, and role-played again.

The SIT model provided a conceptual model of dating behavior with four stages of relationship development: initiation, development, maintenance, and termination. The focus was mainly on the initiation phases in order to reduce the anxiety associated with interacting with strangers.

The results indicated that both the behavioral skills group and the SIT group improved on all self-report measures except the assertion questionnaire. The SIT group showed greater improvement on the fear of negative evaluation scale, S-R inventory, and state-anxiety inventory. The behavioral skills group showed more improvement on the self-efficacy measure. In sum, skills training improved the behavioral component of heterosocial anxiety, and SIT improved the cognitive and emotional components.

Jaremko (1984) suggested that, although most applications of SIT have been with clinical populations, it can easily be applied in primary prevention attempts. As a generic approach he stated that SIT can be applied to nearly any stressor. Suggested areas for exploration included work and occupational stressors, academic stressors, behavioral medicine applications, and social/environmental stressors.

**Assessment of Stress**

There is evidence that stress-management training can improve self-concept, reduce state-trait anxiety, and enhance locus of control as well as improve interpersonal
functioning. Those areas are explored in the following sections.

**Self-Concept**

Self-concept refers to a relatively stable set of self-attitudes reflecting both a description and an evaluation of an individual's behavior and attitudes. It is often interchangeable with self-esteem and self-regard and focuses on a person's conscious self-perceptions rather than attempting to infer how they feel about themselves from their behaviors or the attributions of others.

From a global perspective, self-concept refers to a person's self-perceptions in relation to important aspects of life. These are formed during childhood primarily through the interaction of the individual with the environment and by the attitudes and behavior of others.

Several theoretical assumptions underlie this definition of self-concept. First, self-concept is essentially phenomenological in nature. While not directly observable, it can be inferred from behavior or self-report. Second, self-concept has both global and specific components. Global self-concept reflects how an individual feels about himself or herself as a total person while specific components may be broad such as perceptions of physical self or narrow such as perceptions of ability in mathematics. The importance of each of these areas to the individual determines the degree to which success and failure affect overall self-evaluation (Harter, 1978).
Third, self-concept is relatively stable. While it may be possible to enhance children's self-concept through a series of corrective experiences, changes are not likely to occur as the result of a brief, single, or superficial intervention. In addition, certain areas of self-concept may be more difficult to change than others and may be amenable to change only during "critical periods" (Schonfeld, 1969). Fourth, self-concept has a self-evaluative as well as a self-descriptive component. It represents an individual's accumulated judgments concerning himself or herself. Fifth, self-concept is experienced and expressed differently by children at various stages of development. In adolescence, certain aspects of self-concept may undergo rapid change or differentiation while others develop in a continuous, stable way (Dusek & Flaherty, 1981). Sixth, self-concept serves an important organizing function and plays a key role in motivation. By maintaining a consistent image of self and how to react in different situations, an individual develops a relatively stable self-concept which helps to reduce ambiguity in new situations and to strengthen pre-existing goals.

One of the areas of greatest interest in the study of self-concept is that of change following treatment or intervention. However, many studies have been unsuccessful in showing improvement in a child's self-esteem. There are three possible explanations. First, the interventions may not have been sufficiently powerful to bring about the
anticipated changes. Second, the interventions may have been specific in nature (e.g., affecting only academic self-concept). Third, the interventions may have been too brief.

Self-concept is built upon perceptions of self in a variety of roles and activities. A positive self-concept may occur as a result of relatively frequent success in dealing with various problem situations. The ability to manage stress successfully is a crucial skill likely to have far reaching impact on a person's self-concept. Improvement in self-concept may thus be studied as one indication of enhanced stress management ability.

The efficacy of a coping-skills training program for teaching students to deal more adaptively with school-related stress was investigated by Stevens and Pihl (1982). Seventh-grade students identified as likely to fail were randomly assigned to the coping-skills training, a standard school counseling program, or a control group. Pre- and post-intervention measures included the Children's Manifest Anxiety Scale, the Means-End Problem Solving Procedure, the Alternatives Test, and the Piers-Harris Children's Self-Concept Scale. The intervention lasted for nine weeks with students meeting twice a week. Students in the coping-skills group significantly improved their social problem-solving ability. Their scores on the Piers-Harris also increased, although not significantly.

In this study adolescents learned skills to improve their interpersonal functioning and problem solving. As
their behavioral effectiveness toward others improved, both the attitude of others toward them and subsequently their attitude toward themselves should improve and be reflected in more positive levels of self-concept.

Anxiety

Anxiety, like stress, has been investigated as a phenomenon having physiological, cognitive, and behavioral components. Spielberger (1972) found over five thousand articles and books on anxiety published in the 1950s and 1960s. Despite this volume, there remains little agreement as to the definition of this construct.

Spielberger (1979) believed that stress was a complex psychobiological process that consisted of three major elements: (a) a stressor, (b) a perception of threat, and (c) an anxiety state. If the stressor is interpreted by the individual as threatening or dangerous, an anxiety reaction will be initiated.

Spielberger (1979) identified two main types of anxiety which he named A-Trait and A-State:

Persons high in trait anxiety (A-Trait) tend to view the world as more dangerous than people with low trait anxiety; and they respond to their perceptions of threat with more frequent increases in state anxiety (A-State). Since high A-Trait people tend to see many different situations as threatening, they are especially vulnerable to stress. High A-Trait individuals are also more likely to experience neurotic anxiety in which derivations of repressed thoughts or memories of dangerous situations precipitate additional A-State reaction. (p. 61)

Spielberger, Gorsuch, and Lushene (1970) further described trait anxiety
as a psychological concept, trait anxiety has the characteristics of a class of constructs that Atkinson (1964) calls "motives" and which Campbell refers to as "acquired behavioral dispositions." Motives are defined by Atkinson as dispositions that remain latent until the cues of a situation activate them. Acquired behavioral disposition, according to Campbell, involve residues of past experience that predispose an individual both to view the world in a particular way and to manifest "object consistent" response tendencies. (p. 3)

To measure state and trait anxiety Spielberger and cohorts developed the State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970). The STAI has been widely used with over 2,000 citations and translations into 30 foreign languages. It was used in this study to measure tension, apprehension, and perceptions of situations as threatening. The effects of the cognitive, behavioral, and somatic approaches can all be expected to influence this measure. In addition, the STAI allowed a comparison between the effects of the training on state anxiety (i.e., transitory emotional reactions to immediate conditions) versus the generalized anxiety-proneness or predisposition as measured by the trait-anxiety scale.

Locus of Control

During the past 25 years, a great deal of attention has been focused on the locus of control construct emanating from Rotter's social learning theory. The locus of control construct, ranging from internal to external, is described as a generalized expectancy related to an individual's belief concerning the center of causality for events. At
one extreme are "internals" who perceive the reinforcements they receive as a function of their own actions or characteristics. At the other extreme are "externals" who believe the reinforcements they receive are the result of external agents, such as fate, chance, luck and powerful other persons (Rotter, 1954, 1966).

The definition of locus of control, which first guided much of the work on the construct and the subsequent Rotter Internal-External Locus of Control Scale, is as follows:

When a reinforcement is perceived by the subject as following some action of his own but not entirely contingent upon his action, then in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. . . . we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this belief in internal control. (Rotter, 1966, p. 1)

In his voluminous review of the locus of control literature, Lefcourt (1976) described external locus of control as the belief that people are controlled by forces outside themselves. Lefcourt contrasted "externals" with "internals" who "believe that they are actors and can determine their own fate within limits (and this) will be seen to be of critical importance to the way in which they cope with stress and engage in challenges" (p. 2).

Theorists in cognitive psychology propose that a person is a planning, thinking organism and that behavior, including anxious behavior, is determined largely by
cognitive processes. The intervention focus within this cognitive framework is on restructuring the individual's cognitions and perceptions from an inappropriate or maladaptive nature to an appropriate or adaptive nature. An example of such a technique is seen in the cognitive restructuring methods used by Meichenbaum (1977).

Differences in how much control an individual perceives he or she has over reinforcements have been related to various correlates of the internal-external locus of control dimension (Rotter, 1966; Rotter, Chance, & Phares, 1972). Numerous locus of control studies of children and adolescents have found this dimension to have predictive utility in several areas. Internality has been found to be positively related to such variables as popularity (Nowicki & Roundtree, 1971), overall achievement (Nowicki & Strickland, 1971), academic achievement (Reimanis, 1974), ability to resist coercion (Lefcourt, 1976), and approaches dealing with stress (Lefcourt, 1976).

Change toward the internality end of the continuum appears to be socially and academically desirable. The ability to manage stressors positively, one of the components of the training model used in this study, should have the effect of making adolescents perceive themselves to be more in control of their lives and thus lead to greater internality.

Social Behavior

Lehrer and Woolfolk (1984) suggested that behavioral
interventions would be more effective than either somatic or cognitive approaches in reducing stress levels for those individuals suffering from behavioral deficits. They found that in addition to reducing anxiety levels, social skill training also improved overall behavioral functioning.

The Jesness Behavior Checklist (Jesness, 1971) was designed to provide a systematic way of recording data regarding social behavior in 14 major categories. While originally developed for use with delinquents in institutions, Jesness believed the instrument to be useful with persons of different ages in a variety of settings. The instrument is "composed of items describing behavioral units that are sufficiently large to encompass a broad spectrum of non-intellectual, non-cognitive social behaviors" (p. 5).

The Jesness Behavior Checklist was used to assess the self-perceived social functioning of the participants in this study. The behavioral training in social problem solving and assertiveness in the SIT model was implemented to improve perceived social behavior.

Summary

Lazarus and Cohen (1977) advocated a transactional model of stress which views the stress response as part of an ongoing person-environment transaction involving three interacting factors: (a) environmental stressors, (b) cognitive mediation, and (c) stress response. Their emphasis was on the fit between a person's adaptive
capacities and the environmental demands. The discrepancy between goals and the perception of the ability to meet those goals creates stress. In their model, stress can be reduced either by changing the situation or by changing one's skill in managing stress through cognitive or palliative coping procedures (Lazarus, 1981).

Lehrer and Woolfolk (1984) in a review of literature describing various stress management techniques concluded that somatic, cognitive, and behavioral approaches have both specific and general effects. In order to maximize potential benefit, however, they recommended a combination of techniques as superior to any one isolated technique.

Meichenbaum and Jaremko (1983) proposed stress inoculation training (SIT) as one model that meshes well with the transactional model of stress. SIT is designed to produce more effective cognitive appraisals of stressful situations, enhance coping-skills repertoire, and increase confidence in a person's coping abilities. This approach uses a gradual exposure to more threatening stressful events which gives feedback to clients, not only bolstering self-defense, but also boosting defenses against high pressure, threatening situations. This helps reduce the chances of discouragement and relapse into old, maladaptive responses to stress. Meichenbaum divided SIT into three major stages (educational, skills training, and application) and focused on (a) identifying maladaptive cognitions regarding stress, (b) replacing these with more adaptive cognitions, (c)
teaching somatic and behavioral stress management techniques, and (d) applying these skills in a variety of increasingly stressful, real life situations. Jaremko (1984) suggested that although SIT had been used primarily with clinical populations, it could easily be used as a generic approach in various primary prevention efforts.

In the SIT approach used in this study, training along the cognitive, behavioral, and somatic dimensions was incorporated. This included cognitive restructuring (cognitive), social problem solving and assertiveness (behavioral), and progressive muscle relaxation, deep breathing, and autogenics (somatic).

Cognitive restructuring involves identifying irrational, stress-inducing thinking and replacing it with more rational, stress-reducing thoughts. Research with adult outpatients indicates the utility of this as a stress-reducing technique. A study by Feindler, Marriott, and Iwata (1980) indicated that cognitive restructuring can reduce the frequency and intensity of aggressive, explosive behavior as well as overall anxiety in adolescents.

Problem-solving training as espoused by D'Zurilla and Goldfried (1971) is a skill building approach that not only reduces a person's experience of stress in regard to the immediate situation but also promotes the ability to analyze situations and plan more effective strategies for the future. Research by Freedman (1974) and Platt, Spivack, Altman, Altman, and Peizer (1974) indicated that delinquent
or disturbed adolescents have poor problem-solving abilities. Research is needed to show whether problem-solving training can serve a preventive purpose for "vulnerable" populations of youth.

Assertiveness is a behavioral technique designed to reduce social anxiety and improve communication. While found successful with many populations, its use with adolescents has been limited. Since a significant portion of adolescent stress is derived from strained interpersonal relations, assertiveness can be taught as a skill to reduce social stress and enhance positive feelings of control and competence.

Lehrer and Woolfolk (1984) suggested that somatic or relaxation training may be more easily learned by adolescents than by adults. In their literature review, they indicated that relaxation therapies have been used to treat several adolescent stress-related problems including hyperactivity, test anxiety, aggressiveness, and poor attentiveness. Somatic training in this study was designed to reduce levels of stress in a variety of situations.

Several variables were used to determine the effectiveness of SIT with adolescents. These included self-concept (measured by the Piers-Harris Children's Self-Concept Scale), locus of control (measured by the Nowicki-Strickland Locus of Control Scale), state and trait anxiety (measured by the State-Trait Anxiety Inventory), and social behavior (measured by the Jesness Behavior Checklist).
Self-concept is a relatively stable set of self-attitudes that are formed primarily through the interaction of the individual with the environment during childhood and by the attitudes and behavior of others. In adolescence self-concept may undergo rapid change, serving an important organizing function and playing a key role in motivation. An improved ability to manage stress enhances a person's sense of mastery and accomplishment and thus improves self-concept. Stevens and Pihl (1982) found that coping skills training for dealing with school-related stress increased student self-concept.

Locus of control, ranging from internal to external, describes the extent to which an individual feels that life events are determined and whether they are under his/her control. Numerous studies with youth indicated that internality or the belief that an individual has a great deal of control over life is positively related to academic achievement, popularity, and the ability to manage stress. The cognitive restructuring and overall SIT approach of Meichenbaum was designed to improve internality and thus lessen stress levels and enhance the adolescent's perception of having control over life.

Anxiety is a term that refers to the individual's interpretation of a stressor as threatening, either as a transitory emotional condition (state anxiety) or as a relatively stable personality characteristic (trait anxiety). SIT was expected to help participants alter their
perceptions of situations as threatening through cognitive restructuring, through developing behavioral skills that reduce social anxiety, and through learning relaxation skills to lower overall levels of anxiety.

Social behavior refers to a person's level of interpersonal functioning. As Petersen and Spiga (1982) pointed out, a deficit in interpersonal functioning represents a significant stressor during adolescence. Training designed to improve social functioning is likely to reduce social stress. This was included in the treatment model used in this study by incorporating social problem solving and assertiveness training.

Lazarus's transactional approach to stress, which viewed the stress response as part of an ongoing and interactive person-environment transaction, was offered as particularly relevant for adolescents. A research review by Lehrer and Woolfolk (1984) recommended SMT training that combines somatic, cognitive, and behavioral interventions as the most effective for the widest range of problems. Petersen and Spiga (1982), in their conception of adolescence, recommended a comprehensive approach toward stress management as more likely to address properly the multiple and complex stressors for youth. To be managed effectively, a comprehensive, conceptual approach was needed. This was provided through Meichenbaum's stress inoculation training (SIT) approach. Broad skills training is promoted, and among those most cited by Meichenbaum and incorporated into
this study, are cognitive restructuring, assertiveness, problem solving, and various relaxation techniques. An effective, prevention-oriented SIT program should not only reduce immediate and persistent levels of anxiety but also enhance perceptions of self along with a sense of control over life in order to promote more effective future coping. This was the approach taken in the treatment in this study.
CHAPTER III
METHODS AND PROCEDURES

Introduction

This study was designed to determine whether a school-based stress management training program derived from Meichenbaum's stress inoculation approach was effective in reducing anxiety, increasing perceived locus of control, enhancing self-concept, and improving the social behavior of adolescents. This chapter is composed of nine major sections: (a) Research Design, (b) Description of the Sample, (c) Sampling Procedure, (d) the Treatment Conditions, (e) Instrumentation, (f) Procedures, (g) Research Hypotheses, (h) Data Analysis, and (i) Limitations.

Research Design

The research design used was a randomized experimental posttest only, control group design. According to Campbell and Stanley (1963), this is one of the most strongly recommended designs as it controls for internal sources of invalidity as well as for pretest sensitization.

The independent variable in this study was stress management training which utilized the stress inoculation concept of Meichenbaum (1985). The dependent variables were locus of control, state and trait anxiety, self-concept, and social behavior. The dependent variables were measured by the Nowicki-Strickland Locus of Control Scale (Nowicki &
Strickland, 1973), the State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970), the Piers-Harris Children's Self-Concept Scale (Piers, 1984), and the Jesness Behavior Checklist (Jesness, 1971).

Description of the Population and Sample

The population for this study consisted of ninth-grade students at Suwannee High School in Live Oak, Florida. Live Oak is the county seat of Suwannee County, a rural, agricultural, north Florida county with a population of approximately 25,000. In 1987 there were only two secondary-level public schools in the county, with the school in Live Oak serving the vast majority of the students.

In the 1986-87 school year, Suwannee High School had 758 males and 612 females, for a total of 1370 students. In the ninth-grade, there were 283 males and 211 females, for a total of 494 students. Of the males, 219 were white and 64 were black with no other groups represented. Ninth-grade females consisted of 161 whites, 47 blacks, 1 Hispanic, and 2 Asians. Whites in the ninth-grade, therefore, represented 76% of the student body while blacks represented 22%. In the total school population whites comprised 77% of the student body while blacks constituted 21%. Fifty-seven per cent of the ninth-grade students were male (compared with 55% of the entire school) according to school statistics.
Suwannee High School Annual Reports for 1984 and 1985 indicated that Suwannee High School offered five types of diplomas. The numbers receiving each in 1985 were as follows: High Academic (36), Academic (33), General (160), Special (3), and Certificate of Completion (0). In the spring of 1986 the SSAT-1 and SSAT-2 were given to sophomores. The percentages of students passing the SSAT-1 were as follows: Reading (92%), Writing (91%), and Mathematics (90%). The percentages of students passing the SSAT-2 were as follows: Communications (83%) and Mathematics (74%). The California Test of Basic Skills (CTBS) was given during the sixth month of the school year. Total battery results by grade level were ninth-grade (10.0), tenth-grade (10.8), and eleventh-grade (13.6).

A measure of family socioeconomic status was gleaned from eligibility for the free lunch program which is based upon federal poverty standards. Ninety-five ninth-graders qualified for free lunches, which represented approximately 22% of the total ninth-grade class. Two hundred fifty-four (21%) of the students in the school were eligible to receive free lunches according to school statistics.

All ninth-grade students were required to take one semester of health education. Approximately one-half of the ninth-graders took it each semester according to school records. The curriculum covered a wide range of topics including nutrition, infectious diseases, cardiopulmonary resuscitation (CPR), drug abuse, exercise, sex education,
and stress management. This class, therefore, served as an ideal mechanism for stress management training. The six classes taught during the fall semester were used in the study with a total population of 198.

**Sampling Procedures**

The researcher attended each class and described the research study to all students during the first week of the fall semester. Participation was encouraged through the promise of a party at the end of the study for each class in which 80% of the students completed the training. One week was allowed for the return of consent forms (see Appendix B) signed by both the student and their parents. When all forms were returned, an alphabetized list of names of students who agreed to participate was prepared for each class period. The names were numbered consecutively and divided into two groups, depending upon whether they were assigned an even or odd number. A coin flip determined which of the two groups was the experimental and which the control group. An attendance sheet for each of the 10 sessions was kept in order to track the number of absences as well as those who chose to return to their regular classroom. Students who elected not to participate in the study were allowed to remain in the classroom with their regular teacher.

**Treatment and Control Conditions**

Treatment consisted of SIT-based training while the control condition consisted of the stress management
training (SMT) normally taught in the health education classes. In order to avoid disrupting school routine, a section of each condition was offered concurrently for each of the six periods in the school day that students normally attended health education. Because the class sizes varied considerably and SIT and SMT curriculum were so structured and detailed, all six sections of SIT were considered one treatment group while the six SMT classes were considered one control group for purposes of analysis.

Comprehensive training in stress management, which was the major independent variable in this study, was based on Meichenbaum's Stress Inoculation Training (SIT) Model. In SIT, clients are educated about stress and especially the role their cognitions and self-statements play. They are taught a variety of specific skills for dealing with stress and are gradually introduced to increasingly stressful situations in order to "inoculate" them. Meichenbaum (1985) refers to these three stages as education, skills training, and application and follow-through. They served as the overall basis for the SIT training model.

The curriculum (presented in Appendix A) was divided into 10 sessions: 1--introduction and data collection, 2--assessment skills training, 3--cognitive restructuring I, 4--cognitive restructuring II, 5--problem solving I, 6--problem solving II, 7--assertiveness I, 8--assertiveness II, 9--application and follow through, and 10--maintenance and generalization. The sessions consisted of approximately
one-third didactive instruction and two-thirds experiential tasks conducted in either small or large groups.

Each session had four components: (a) a review of homework assignments, (b) didactic and experiential training in a specific stress management component, (c) training in a stress management technique with physiological monitoring, and (d) homework assignment. The overall purpose of the training model was to help students identify the major stressors in their lives, recognize the role irrational beliefs play in producing stress, and learn to replace these with more rational beliefs. This would expose students to a variety of stress reduction techniques so they might choose those most useful to them and ultimately to be able to manage stress effectively. An outline of the program is provided in Appendix D.

The control groups were taught the usual stress management curriculum of the school. Among the intended outcomes for this course were the following derived from the state curriculum guidelines: (a) practice skills for self-awareness, self-acceptance, and self-improvement that build positive emotional development; (b) practice skills to facilitate interpersonal communication; (c) practice skills to enhance interpersonal relationships; (d) practice coping skills in time and stress management; and (e) demonstrate the steps involved in responsible decision-making and planning processes. The specific student performance standards for stress management were to identify the short- and long-term
physiological and psychological effects of stress, identify common stressors for adolescents and adults, appraise reactions to stress as positive or negative, and identify techniques for managing stress.

The school personnel used these general state guidelines to develop individual lesson plans. Instruction included lectures, filmstrips such as "Understanding Stress and Conflict" by Sunburst Publications, group discussions, and role play. Discussions included such topics as stress, techniques for coping with stress, stress as a positive force, stress and anxiety, Selye's concept of stress, Holmes and Rahe's Life Change Unit Scale, and Type A personality. Lesson plans were developed by the teacher using the Teenage Health Teaching Modules: Handling Stress by Jacqueline Sowers (1983). The same curriculum was used by the trainer with the control groups. An outline of the instruction for the control group is provided in Appendix E.

Both the control and treatment groups were taught by trained personnel from outside the school. This controlled for the effect of removing students from their normal class and teacher.

While the SMT and SIT curricula had similar objectives which were to enhance stress management, there were substantial differences. The SMT group was based on the traditional stimulus-based and response-based definitions of stress represented by Holmes and Rahe (1967) and Hans Selye (1976). In these theories, stress is viewed as situational or
as an organismic response. SIT, on the other hand, is based on the transactional view of stress espoused by Cox (1978) in which stress is viewed as a result of the interaction between person and environment. While the SMT approach emphasizes intellectual understanding of stress, SIT promotes specific skill-building. Great use is made in SIT of identifying individual stressors and role playing. In the SMT approach students discussed various somatic orientations to stress management while students in the SIT group were led through various techniques and provided with an audio tape for regular practice at home. Within the SMT format, the instructor emphasized solely a somatic approach to stress management while the SIT instructors used the comprehensive somatic-behavioral-cognitive paradigm with special emphasis on cognitive restructuring.

Instrumentation

The dependent variables used as measures of stress reduction and/or coping ability were self-concept, anxiety, locus of control, and social behavior.

Self-Concept

The Piers-Harris Children's Self-Concept Scale (Piers, 1984), subtitled "The Way I Feel About Myself," was used to assess self-concept. It is a brief, self-report measure designed to aid in the assessment of self-concept in children and adolescents. It is an 80-item questionnaire that can be administered either individually or in groups.
A high score reflects a positive self-evaluation, whereas a low score suggests a negative self-evaluation.

An overall assessment of self-concept is reflected in three summary scores: a total raw score, a percentile score, and an overall stanine score. Conversions to normalized T-scores are also provided. In addition, six "cluster scales" can be computed: Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Popularity, and Happiness and Satisfaction. Only the overall score was used in the study.

Two additional measures, the Response Bias Index and the Inconsistency Index, are useful in determining the validity of a particular child's profile. The Response Bias Index measures the degree to which a child responded independently to individual items or was swayed by a need either to agree or disagree with the items as written. The Inconsistency Index measures the extent to which child's responses are internally consistent across individual items.

The authors stated that the scale has a variety of applications. It has been used as a screening instrument in high-risk settings such as psychiatric outpatient clinics, inpatient units, and residential treatment centers. The scale has also been used as an aid to individual assessment in a variety of clinical and counseling settings. The primary purpose of the instrument, however, has been as a
research instrument to provide a quantitative self-report measure of children's self-concepts.

The Piers-Harris is intended for use with children between the ages of 8 and 18. The reading difficulty is approximately at a third-grade level. Children respond to a series of questions about themselves by either circling "yes" or "no." There are no time limits, and children generally complete the instrument in 15-20 minutes.

Self-concept may be less stable among younger children whose sense of self is still under development (Harter, 1983). A number of studies have investigated the test-retest stability of the Piers-Harris with both normal and special samples. The reliability coefficients ranged from .42 (with an interval of eight months) to .96 (an interval of 3-4 weeks). The median reliability was .73. Piers and Harris (1964) tested the reliability with 60 tenth-grade public school students within a four-month interval and obtained a coefficient of .72.

Piers (1973) calculated internal consistency on a normative sample of 297 sixth- and tenth-graders. Using the KR-20 formula, the reliability estimates for the total score ranged from .88 to .93 with scores of .88 for tenth-grade females and .93 for tenth-grade males.

Yonker, Blixt, and Dinero (1974) tested the correlation of the Tennessee Self-Concept Scale and Bills Index of Adjustment and Values with the Piers-Harris for normal
groups of tenth-graders. They found an average correlation of .56 with the Tennessee and one of .41 with the Bills.

Anxiety is a construct one can reasonably expect to be negatively correlated with positive self-attitudes. Millen (1966) investigated the correlation of the Piers-Harris with the Children's Manifest Anxiety Scale in normal tenth-graders. He found a negative correlation ($r=-.54, p<.01$).

Tavormina (1975) investigated the relation of the Nowicki-Strickland Locus of Control Scale for Children with the Piers-Harris for chronically ill children of both sexes between the ages of 6 and 18. He found a modest correlation of .35 at the .01 level of significance.

An important study of the construct validity of self-concept was conducted by Shavelson, Hubner, and Stanton (1976) who examined three aspects of self-concept (definition, instrumentation, and empirical data) for five self-concept instruments, among them the Piers-Harris. They concluded that self-concept interpretations of the total score on the Piers-Harris are warranted based on convergent validity coefficients.

**Anxiety**

The State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970) was used to measure anxiety. The STAI is a research and clinical assessment instrument composed of two subscales: trait anxiety and state anxiety. Trait anxiety is defined as a stable individual difference among people on their predisposition to stress. State
anxiety is described as a transient emotional condition characterized by tension, apprehension, and heightened autonomic nervous system activity. Both scales consist of 20 separate items. Examples of questions on the state subscales include such items as "I am calm," "I am tense," and "I feel upset," which are related to the individual's emotional state at the moment. On the trait scale subjects are asked to rate 20 similar items on how they feel in general.

To reduce the potential influence of an acquiescence set on STAI responses, Spielberger, Gorsuch and Lushene (1970) balanced the A-State and A-Trait scales as closely as possible with equal numbers of items for which high ratings indicate high and low anxiety. The STAI A-State scale is balanced for acquiescence set, with 10 directly scored and 10 reversed items. The STAI A-Trait scale has 7 reversed items and 13 directly scored items.

The STAI was designed for high school and college students as well as adults. Spielberger (1979) reported that most people with a fourth- or fifth-grade reading level responded to all STAI items without special instructions.

Test-retest reliability for a three-week interim was reported by Spielberger, Gorsuch, and Lushene (1970) for the trait scale as .86 for males and .76 for females. Test-retest reliability for a three-week period was reported for the state scale as .54 for males and .27 for females (Spielberger, Gorsuch, & Lushene, 1970). They suggested
that this low range is expected because state anxiety is sensitive by nature to situational factors. They stated that a more meaningful reliability measure is that of internal consistency. Using a formula suggested by Cronbach (1951), KR-20 reliability coefficients were found to range from .83 to .92.

To measure changes in A-State intensity over time, Spielberger, Gorsuch and Lushene (1970) recommended that the STAI A-State scale be given on each occasion for which a measure of A-State is needed. Repeated administrations of personality tests either lead to greater reliability in differentiating among subjects (Howard & Diesenhaus, 1965), or they have no significant influence on test scores (Bendig & Bruder, 1962).

Spielberger, Gorsuch, and Lushene (1970) also stated that the instructions for the A-State scale may be modified to evaluate the level of A-State intensity for any situation or time interval that is of interest to an experimenter:

When administered for research purposes, the experimenter may wish to alter the instructions in order to focus upon a particular time period. A subject may be instructed to respond, for example, according to how he felt while performing on an experimental task that he has just completed. (p. 4)

Thus, the participant is asked to reflect on the described stressor and then to take the state subscale.

Spielberger et al. demonstrated that scores on the A-State subscale increase in response to various kinds of stress and decrease as a result of relaxation training
(Spielberger, Gorsuch, & Lushene, 1970). The trait scale of the STAI has been correlated with other measures of anxiety. The IPAT anxiety scale (Cattell & Scheier, 1963) correlation was .75, and the Taylor (1953) Manifest Anxiety Scale correlation was .80. The state-anxiety scale has been validated by subjecting individuals to normal and stressful situations and measuring subsequent changes. Significant differences existed for both males and females under the different conditions (Spielberger, Gorsuch, & Lushene, 1970).

**Locus of Control**

Locus of control was measured by the Nowicki-Strickland Locus of Control Scale (Nowicki & Strickland, 1973) for children and adolescents (ages 9 to 18) which was based on Rotter's (1966) construct of locus of control of reinforcement. The construct ranges from internal to external locus of control and was described by Rotter as a generalized expectancy related to an individual's belief concerning the locus of causality for events. Internal locus of control stems from a belief that the reinforcement received was a function of a person's own actions or characteristics. External locus of control at the other extreme was generated by a belief that reinforcements received are the result of external agents including such examples as fate, chance, luck and powerful other persons (Rotter, 1954, 1966).
The Nowicki-Strickland Locus of Control Scale for Children was designed in 1969 and is a paper and pencil measure consisting of 40 questions which are answered "yes" or "no." The items sample a variety of situations (e.g., "If you find a four-leaf clover, do you believe it will bring you good luck?"), and persons (e.g., "Most of the time do you think your parents listen to what you have to say?"). This wide sampling yields a measure of a generalized expectancy or reinforcement which parallels in children and adolescents an adult measure of locus of control developed by Rotter (Nowicki & Barnes, 1973). If the subject responds, for example, with a "no" to the question, "Do you feel that when good things happen, they happen because of hard work?" one point would be added to the external score. The total number of external responses is that individual's score.

Nowicki and Barnes (1973) reported that reliability estimates are satisfactory at all grade levels tested (N=1732, grades 3-12) with test-retest reliabilities from .67 to .79. All socioeconomic areas were included in the original sample and all subjects had intelligence test scores that fell within the average classification range.

Internal consistency (Spearman-Brown split half) was reported by Nowicki and Barnes (1973) through groupings of grade levels and were

\[ r = 0.63 \text{ for grades 3, 4, and 5; } \]
\[ r = 0.68 \text{ for grades 6, 7, and 8; } \]
Test-retest reliabilities ranged from .67 to .79 after a six-week period. Locus of control did not correlate with social desirability (Nowicki & Strickland, 1973), sex (Nowicki & Strickland, 1973), and intelligence scores (Nowicki & Roundtree, 1971; Nowicki & Strickland, 1973).

If a measure of a construct such as locus of control has been found to be related to other variables in a theoretically consistent fashion, then the measure gains some degree of construct validation. Construct validity was evidenced by scores from the scale correlating with grade-point averages, popularity, absence of prejudice, and ability to delay gratification (Nowicki & Barnes, 1973).

Several instruments have been designed to measure locus of control at all ages. MacDonald (1973) described the Nowicki-Strickland Scale as the best measure of locus of control available for children.

Social Behavior

The Jesness Behavior Checklist (Jesness, 1971) was used as the measure of social behavior. According to its author, the Jesness Behavior Checklist was "designed to provide a systematic way of recording data about social behavior" (p. 5). While it was originally developed for use with delinquents in institutions, it has now been modified for use by any age in various settings.
The instrument consists of 80 items measuring 14 bipolar behavioral factors that encompass a broad range of nonintellectual, noncognitive social behaviors. The items are written in nontechnical language and refer to directly observable behavior episodes which are rated on a five-point scale from "almost never" to "very often." The test is usually completed in from 10-20 minutes. Two forms are available, a self-appraisal and an equivalent one for an observer. The self-appraisal form was the one used in this study.

The 14 Behavior Checklist scales and their descriptions are as follows:

1. **Unobtrusiveness vs. Obtrusiveness.** Unobtrusiveness is characterized by agreeable, inconspicuous, nonmeddlesome behavior. A low score is characteristic of loud, aggressive individuals, who agitate, quarrel, and thrust their opinions upon others.

2. **Friendliness vs. Hostility.** Friendliness is defined as a disposition toward amiable cooperativeness and noncritical acceptance of others. A low score is indicative of faultfinding and disdainful, antagonistic behavior toward others, especially persons in authority.

3. **Responsibility vs. Irresponsibility.** Responsibility is indicated by adequate work habits, including promptness, initiative, and good care of equipment. Low scores suggest poor quality and low quantity of work performance.
4. **Considerateness vs. Inconsiderateness.** Considerateness refers to a tendency to behave with politeness and tact, and to show kindness toward others. A low score is indicative of callousness, tactlessness, and/or a lack of social skills.

5. **Independence vs. Dependence.** Independence characterizes persons who attempt to cope with tasks and make decisions without undue reliance on others. Low scores characterize those who are not decisive or assertive, and who are easily influenced by others.

6. **Rapport vs. Alienation.** Rapport is shown by those who interact easily with and have harmonious relations with persons in authority, such as teachers, counselors, and therapists. A low score is characteristic of those who avoid authority figures and do not appear to trust them.

7. **Enthusiasm vs. Depression.** Enthusiasm is characteristic of those who are cheerful, active, and involved with others. A low score indicates lack of interest, withdrawal from participation, and unhappiness.

8. **Sociability vs. Poor Peer Relations.** Sociability refers to the capacity for getting along well with others in groups. Low scores characterize those who do not cooperate well in group activities, and are not well liked.

9. **Conformity vs. Non-Conformity.** Conformity refers to the tendency to comply with accepted social conventions, laws, or established rules. Those who obtain low scores are
prone to lie, steal, or otherwise disregard social or legal standards.

10. **Calmness vs. Anxiousness.** Calmness is defined by the presence of self-confidence, composure, personal security, and high self-esteem. Low scores characterize persons who lack confidence and appear anxious and nervous, especially under stress.

11. **Effective Communication vs. Inarticulateness.** Effective communication refers to the capacity for clear expression, and the tendency to listen attentively to others. The person scoring low tends to avoid direct communication, does not express himself/herself clearly, and/or does not attend to what others say.

12. **Insight vs. Unawareness and Indecisiveness.** Insight refers to accurate self-understanding and active engagement in efforts to cope with and solve personal problems. A low score is indicative of indecisiveness, little effort toward resolving personal problems, and inaccurate self-knowledge.

13. **Social Control vs. Attention-Seeking.** Social control is demonstrated by the absence of loud, attention-demanding behavior. Those who are rated low tend to "horseplay," and display other loud, attention-seeking behaviors.

14. **Anger Control vs. Hypersensitivity.** Anger control is defined as the tendency to remain calm when frustrated. Low scores indicate a tendency to react to frustration or criticism with anger and aggression.
Raw scores for each scale are obtained by hand and can then be transferred to a profile sheet where T and percentile scores are noted. Higher scores reflect more positive traits and social functioning.

The test was normed on 2114 youths from 13 to 21 years of age with an average age of 16.7. Most of the youth were male delinquents in two California Youth Authority institutions. The 235 females in the norm group were on probation (Jesness, 1971).

The Jesness was criticized by Butt and Megargee (1978) in Buros' Eighth Mental Measurements Yearbook due to the high number of behavioral constructs, the high intercorrelations between the constructs (.14 to .70 with a median of .39), the low stability of self ratings (-.05 to .58 with a median of .38), little attention to validity, and an inadequate norming sample. Jesness (1971) admitted that this is a developing instrument and in need of further research. The concept of social behavior is a changeable one which makes the task of assessing it difficult. There are few self-appraisal behavioral checklists available for adolescents, and despite the limitations, the Jesness was used to provide an assessment of perceived changes in social behavior.

Seven of the 14 scales of the Jesness were utilized as being most relevant to the dimensions examined in this research. These consisted of considerateness (scale four), independence (scale five), sociability (scale eight),
calmness (scale ten), effective communication (scale eleven), insight (scale twelve), and anger control (scale fourteen).

**Procedures**

The treatment sessions were administered by the researcher, a doctoral candidate in the counseling psychology program at the University of Florida, and a research associate. The researcher's eclectic training included course work, studies, and an internship in behavioral and/or cognitive-behavioral strategies so that he viewed them as a preferred modality.

The associate was a female with a master's degree in health education from the University of Florida. This individual had previously been involved in an experimental, 4-H sponsored, school-based wellness program that included training in stress management. In addition, she had previously taught health education to educably mentally retarded students in the target school.

The researcher utilized the six 1986-87 Fall semester classes for study. At the end of the first week of classes the researcher attended each class, gave a brief overview of the study, and asked those willing to participate to complete along with their parents the informed consent sheet (see Appendix B). No more than one week was allowed for its return. Students in each class who had parental permission were randomly assigned to either a treatment or control group. Those choosing not to participate remained in their
usual classroom. The treatment schedule for each class can be schematized as shown in Figure 1.

Once groups were assigned, students in the six treatment and control sections met in separate classrooms with their respective trainers during their normal health education class time. Participants were told that if at any point they wished to withdraw from the group, they were free to return to the normal classroom.

For the next five weeks the treatment and control sections met with the trainers on Wednesdays and Fridays during health education class time. The treatment group followed the format detailed in the SIT training model (see Appendix A) while the controls received the same stress management instruction they would have received in their normal class but which instead was provided by a trainer (see Appendix E). The day following the end of the 10 sessions a posttesting session was conducted with both treatment and control groups. The scores on the dependent measures for the six SIT and SMT sections were combined to represent one treatment and one control group for analysis purposes. This was done because some sections were too small for statistical analysis alone and all sections of both SIT and SMT were taught using very detailed, structured procedures regardless of trainer or class time.

Class 1:

(R) X 01—led by associate
(R) 02—led by researcher
Class 2:
(R) X 01--led by researcher
(R) 02--led by associate

Class 3:
(R) X 01--led by associate
(R) 02--led by researcher

Class 4:
(R) X 01--led by researcher
(R) 02--led by associate

Class 5:
(R) X 01--led by associate
(R) 02--led by researcher

Class 6:
(R) X 01--led by researcher
(R) 02--led by associate

Figure 1. Treatment schedule and leader assignments

Note: R = random assignment
X = exposure to SIT
0 = post test observation

Research Hypotheses

This study had four major purposes. The first purpose was to determine whether an SIT program could significantly alter an adolescent's perceived locus of control as measured by the Nowicki-Strickland Locus of Control Scale for Children and Adolescents. The second purpose was to determine whether SIT could significantly alter trait and state anxiety as measured by the subscales of the Spielberger, Gorsuch, and Lushene State-Trait Anxiety...
Inventory. The third purpose was to determine whether SIT could significantly alter self-concept as measured by the Piers-Harris Children's Self-Concept Scale. The fourth purpose was to determine whether SIT could significantly affect social behavior as measured by the Jesness Behavior Checklist.

The research hypotheses were

Hypothesis 1: There will be no significant difference in the locus of control scores after treatment between adolescents in the SIT stress management group and those in the control group.

Hypothesis 2: There will be no significant difference in the A-Trait anxiety scores after treatment between adolescents in the SIT stress management group and those in the control group.

Hypothesis 3: There will be no significant difference in the A-State anxiety scores after treatment between adolescents in the SIT stress management group and those in the control group.

Hypothesis 4: There will be no significant difference in the self-concept scores after treatment between adolescents in the SIT stress management group and those in the control group.

Hypothesis 5: There will be no significant difference in the social behavior scores after treatment between adolescents in the SIT stress management group and those in the control group.
Data Analysis

An analysis of variance (ANOVA) procedure was used to compare posttest means on hypotheses one through four which involved the variables of locus of control, state and trait anxiety, and overall self-concept. Because of high intercorrelations among the seven subscales utilized from the Jesness Behavior Checklist as a measure of perceived social behavior, a procedure recommended by Rosenthal and Rubin (1986) for obtaining a single summary effect size estimate from multiple effect sizes was planned to be used to assess differences in social behavior. The Jesness Behavior Checklist measures 14 behavioral dimensions but offers no single score for social behavior. The procedure by Rosenthal was meant to provide an overall score for perceived social behavior; however, the one-way ANOVAs for seven selected subtests were so clearly nonsignificant that it was obvious that the use of the Rosenthal procedure would also yield nonsignificant results and was therefore not used. The study involved a one factor treatment with two levels. An alpha level for significant differences among means of dependent variables was established at .05 as a conventional level of significance.

Limitations

As stated earlier, the randomized posttest only, control group design controlled well for internal sources of invalidity. The use of students in the same school, class, grade, and approximate age helped control for the
possibility of an interaction between selection and maturation contamination to internal validity. The only significant threat to internal validity involved mortality. Students had been advised that at any time they could choose to end their involvement in the study and thereby return to their usual teacher.

Some threats to external validity were possible with this design. These are discussed in two broad categories: population validity and ecological validity. Huck, Cormier, and Bounds (1974) stated that population validity "concerns the generalization of the results to other subjects" while ecological validity "concerns the generalization of the results to other settings or environmental conditions similar to the experimental setting or condition" (p. 258). Within these two categories, Huck et al. (1974) discussed 11 possible sources of external invalidity.

The first source concerned the experimentally accessible population versus the target population. The target population in this study was adolescents while the experimentally accessible population was ninth-grade students taking health education classes at Suwannee High School in Live Oak, Florida. Obviously, this was not a random selection of subjects representative of all adolescents across the country. This limited the results to similarly aged and academically ranked adolescents in a mandatory class.
The second source was the interaction between the treatment and subject characteristics. Treatment subjects do not always respond equally well. There may be differential effects due to age, sex, race, SES, academic ability, class time, etc. Such information was obtained prior to the beginning of the study. Although it was not used in the formal data analysis since the sample size could not be reliably predicted beforehand, it was available to aid in the discussion of the findings and implications.

The third source involved describing the independent variable. The training model is described in great detail (Appendix A) and the study can be replicated. There are, however, other potential threats to validity. The skills of the leaders may vary widely, especially in regard to promoting and leading meaningful discussion. The group interaction effects may differ due to the leader, interest, and understanding of the concepts. Finally, the treatment was complicated, and there were opportunities for differential treatment due to changes in the class routine, time pressures, and environment.

The fourth source involved describing and measuring the dependent variables. The dependent variables must be operationally defined, and the instruments used must be appropriate for the task. The assessment concepts in this study were clearly defined, and the instruments chosen were considered among the best available for measuring those dimensions.
The fifth source was multiple treatment interference. This group of students had not been subjected to previous research that would "cloud" the results. Since the stress inoculation package was presented as a whole, it was possible that some aspects produced a greater effect than others. The experimenter was not able to distinguish accurately the differential effects of the various components as a result of this study.

The sixth source was the interaction of history and treatment effect. Historical events occurring during the time of the experiment sometimes interact with the treatment effect. None were anticipated; however, treatment occurred during the football season so that class periods were often shortened due to pep rallies or were disrupted in other ways.

The seventh source was the interaction of time of measurement and treatment effects. The posttest was conducted immediately following the end of the treatment. It was possible that treatment gains or losses were experienced at a later time which would not be recognized with the present posttest schedule. This does weaken the ecological validity of the results.

The eighth source was pretest and posttest sensitization. It was possible that administering a pretest would have sensitized subjects to the personality and behavioral variables being assessed. This was controlled by using a posttest-only design.
The ninth source was the "Hawthorne effect." This involved the subject's knowledge that he/she was participating in an experiment. This was partially controlled for by having the control group administered posttesting and being instructed in the regular "stress management" by either the researcher or an associate.

The tenth source was novelty and disruption effects. The novelty and disruption of this type of approach were controlled somewhat by having the control group taught by someone outside the school. The treatment instruction, however, may still have been significantly different from the traditional approach in that novelty could have affected the results.

The final source was the experimenter or "Rosenthal effect." This was controlled by having two trainers alternate in leading three treatment and three control groups.
CHAPTER IV
DATA ANALYSES

Introduction

The results are presented in this chapter. Descriptive statistics were used to characterize the sample group while the research hypotheses were analyzed with one-way analysis of variance.

Descriptive Data

The sample consisted of ninth-grade students in six mandatory health education classes at Suwannee High School during the first semester of the 1986-87 school year. In the six classes there were 198 students available for the study. One hundred and sixteen initially agreed to participate. One hundred and twelve students actually met the inclusion criteria of attending 70% of the sessions and completing the posttesting. The final sample represented 56% of the subjects available.

A breakdown of the study participants by class according to race and sex is found in Table 1. The total number of class sessions missed by those completing the study as well as the number of dropouts (those missing over 30% of the sessions, failing to appear for the posttesting, or dropping out of class) is also included.
Table 1

Characteristics of Study Participants

<table>
<thead>
<tr>
<th>Class period</th>
<th>White M</th>
<th>White F</th>
<th>Black M</th>
<th>Black F</th>
<th>Total</th>
<th>Sessions Missed</th>
<th>Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>12</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>11</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26</td>
<td>28</td>
<td>2</td>
<td>6</td>
<td>62</td>
<td>40</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class period</th>
<th>White M</th>
<th>White F</th>
<th>Black M</th>
<th>Black F</th>
<th>Total</th>
<th>Sessions Missed</th>
<th>Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>19</td>
<td>3</td>
<td>7</td>
<td>50</td>
<td>18</td>
<td>3</td>
</tr>
</tbody>
</table>

The treatment group participants were predominantly white (87%) with a slightly greater number of white females than males completing the study. A total of 40 sessions were missed by those completing the study which indicates that 94% of the sessions were attended by the treatment group. Eight students who originally signed up for the study failed to complete it due to excessive absences,
moving away, transferring out of the class, or simply deciding not to participate. The average age for the treatment group was 14.5.

The control group participants were predominantly white (80%) with a slightly greater number of white males than females completing the study. A total of 18 sessions were missed by those completing the study which indicates that more than 96% of the sessions were attended by the control group. Only three students dropped out of the study. The average age for the control group was 14.3.

This study used four instruments to measure the dependent variables: the Nowicki-Strickland Locus of Control Scale, the State-Trait Anxiety Inventory, the Piers-Harris Children's Self-Concept Scale, and the Jesness Behavior Checklist. Means and standard deviations for the 11 dependent measures on the five instruments are presented in Table 2.

**Hypothesis Testing**

To test each of the five research hypotheses one-way ANOVA tests were performed comparing the treatment and control groups. The first hypothesis was that there would be no difference in the locus of control scores between adolescents in the SIT and control groups following treatment. The one-way ANOVA was not significant at the .05 level ($F = .127$, $p = .720$), therefore, the null hypothesis was not rejected.
Table 2

Posttest Means and Standard Deviations on the 11 Dependent Measures for the Treatment and Control Groups

<table>
<thead>
<tr>
<th>Dependent measure</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nowicki Strickland Locus of Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>13.83</td>
<td>4.90</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>14.18</td>
<td>5.19</td>
<td>50</td>
</tr>
<tr>
<td>State-Trait Anxiety Inventory--State-Anxiety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>38.03</td>
<td>9.20</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>40.68</td>
<td>13.14</td>
<td>50</td>
</tr>
<tr>
<td>State-Trait Anxiety Inventory--Trait-Anxiety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>41.70</td>
<td>8.92</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>41.68</td>
<td>8.87</td>
<td>50</td>
</tr>
<tr>
<td>Piers-Harris Children's Self-Concept Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>57.82</td>
<td>14.02</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>56.58</td>
<td>12.98</td>
<td>50</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Considerateness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>28.54</td>
<td>4.14</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>27.06</td>
<td>4.27</td>
<td>50</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Independence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>16.14</td>
<td>2.41</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>16.34</td>
<td>2.81</td>
<td>50</td>
</tr>
</tbody>
</table>
Table 2--continued

<table>
<thead>
<tr>
<th>Dependent measure</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jesness Behavior Checklist--Sociability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>15.70</td>
<td>3.26</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>15.44</td>
<td>2.95</td>
<td>50</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Calmness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>20.38</td>
<td>4.29</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>20.12</td>
<td>3.47</td>
<td>50</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Effective Communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>18.90</td>
<td>3.28</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>18.30</td>
<td>2.76</td>
<td>50</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Insight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>23.79</td>
<td>4.61</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>22.92</td>
<td>3.89</td>
<td>50</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Anger Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>14.51</td>
<td>2.76</td>
<td>62</td>
</tr>
<tr>
<td>Control</td>
<td>14.06</td>
<td>2.98</td>
<td>50</td>
</tr>
</tbody>
</table>

The second hypothesis was that there would be no difference in the trait anxiety scores between adolescents in the SIT and control groups following treatment. The one-way ANOVA was not significant at the .05 level (F=3.942, p=.932), therefore, the null hypothesis was not rejected.

The third hypothesis was that there would be no difference in the state anxiety scores between adolescents
in the SIT and control groups following treatment. The one-way ANOVA was not significant at the .05 level ($F=1.566$, $p=.210$), therefore, the null hypothesis was not rejected.

The fourth hypothesis was that there would be no difference in the self-concept scores between adolescents in the SIT and control groups following treatment. The one-way ANOVA was not significant at the .05 level ($F=.231$, $p=.636$), therefore, the null hypothesis was not rejected.

The fifth hypothesis was that there would be no difference in the social behavior scores between adolescents in the SIT and control groups following treatment. To answer this question seven subscales from the Jesness Behavior Checklist were analyzed independently with one-way ANOVAs. All seven one-way ANOVAs were not significant at the .05 level: considerateness ($F=3.469$, $p=.061$), independence ($F=.155$, $p=.695$), sociability ($F=.205$, $p=.655$), calmness ($F=.126$, $p=.721$), effective communication ($F=1.073$, $p=.302$), insight ($F=1.129$, $p=.290$), and anger control ($F=.701$, $p=.408$). Therefore, the null hypothesis was not rejected.

Summary of Results

No significant differences between the treatment and control groups were found for any of the variables. The last seven comparisons which represent subtests from the Jesness Behavior Checklist were to be combined to yield an overall measure of social behavior; however, as only one achieved a significance level of less than 0.2, it was clear
that a composite score would not be statistically significant.
CHAPTER V
SUMMARY, DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS

Summary

The purpose of this study was to determine whether a school-based, SIT program for adolescents would be effective in reducing state and trait anxiety and increasing self-concept, locus of control, and perceived social behavior. Adolescents are a group at risk for substance abuse, suicide, premature pregnancy, and other psychosocial problems in part because of the stress inherent with this stage of development. These problems are often exacerbated by their ignorance of effective strategies for managing stress. A comprehensive approach to stress management (SIT) that incorporated behavioral, somatic, and cognitive skills training was designed to prepare adolescents to better manage both present and future stressors and thus reduce their potential for developing a variety of problem dependencies.

Using a randomized, posttest only, control group design, the treatment and control groups were administered the Nowicki-Strickland Locus of Control Scale, the State-Trait Anxiety Inventory, the Piers-Harris Children's Self-Concept Scale, and the Jesness Behavior Checklist following the last session. The five dependent variables were analyzed using a one-way ANOVA. The results indicated no significant dif-

110
significant differences between the treatment and control groups at the .05 level of significance although the treatment group had slightly more positive scores on all but two of the measures.

**Discussion of Limiting Factors**

The lack of significant results may be explained by several unanticipated factors that limited the implementation of the treatment. One factor was the time allowed for each session. The tight 50-minute schedule per class in the school prohibited a thorough approach to the instruction. The actual time available was less as all students initially met in their regular class, answered roll, and then the treatment and control groups had to adjourn to a different room. This cut valuable time from the sessions. Time was also shortened during several Friday sessions to accommodate a football pep rally at the end of the day. As a result the in-session training in somatic stress management procedures was omitted and students were left to learn these on their own through the audio tape provided each student. This prohibited gaining valuable feedback from the researcher regarding the proper development of these skills. All other components in the curriculum were covered although there was less time available for discussion of the more technical concepts.

A second factor involved dropouts, sessions missed, and student transfers. A total of eight students dropped out of the study because they later chose not to participate in SIT,
were suspended, dropped the health education class, or moved away. A total of 40 class sessions were missed by students in the SIT group. This represented 6% of the total number of sessions. During the first few weeks of the study many students transferred from one section of health education to another. This disrupted the balance of students in the treatment and control groups for several periods. All of these factors combined to effect the continuity and stability of the treatment sessions.

Only 56% of the students available agreed to participate in the study despite encouragement by the examiner, the enticement of a party, and several invitations by the classroom teacher. This low percentage may reflect several biases. Those with very high stress levels and motivation to change may have been well represented. Another possible group highly represented may have been those who simply saw the SIT training as an opportunity for a "vacation" from regular classroom routine and homework and thus had little commitment to actively participate. A survey was conducted of participants to determine their reasons for agreeing to be involved in the study. While the majority said they wished to learn to control stress and handle their problems, three participated to "get out of health class", four did so to "see what it would be like", two "thought it would be interesting", and one "thought it would be fun". It would have been preferable to work with entire classes in a quasi-
experimental design but the necessity to receive permission from students and their parents prohibited this.

Another possible contaminating factor was the noise level in the room used by the treatment groups. Because of an unusually large number of entering freshman, the school was overcrowded and the only room available for the first four sessions was a back section of the auditorium. The fixed seating inhibited group interaction. In addition, another class shared the auditorium which made it difficult for students to hear.

The motivation of several students to truly benefit from the training was questionable as some were verbally disruptive in class and had to be disciplined. This took valuable time away from the session and prevented the more interested students from gaining the maximum benefit from the sessions. In addition, some students failed to turn in their homework although they were warned that this would be graded. By not regularly completing and turning in the home practice sheet and daily stress log it was impossible to determine whether the students were correctly identifying their current stressors and regularly practicing somatic stress management skills. These elements were a crucial part of the SIT intervention.

It was expected that all students who agreed to volunteer for the study would be cooperative especially in light of the excellent cooperation achieved in the pilot study which is described later. This may have been a
function of the fact that the pilot group was generally older and were students in an elective peer helper course where there is an expectation of participation in various psychological procedures.

Another limiting factor had to do with the student's involvement in the experiential portion of the training. Although many students later said they enjoyed the role playing or at least observing others in this, it was often difficult to enlist volunteers for this activity. This is in marked contrast to the active involvement of the older students in the pilot study. Participation in role play was seen as an important component in assisting students to not only learn social skills but also to apply them in a variety of problem situations.

A final limiting factor had to do with a "nesting" problem in the research design. Because of the school requirement that students remain in their originally scheduled health education class period, subjects were randomized within class period rather than across periods. Even though the SIT and SMT curriculum were very detailed and specific, it can not be assumed that the training experience was identical for all periods. This is a weakness in the design that limits the results.

**Discussion of Results**

No statistically significant differences were found between the treatment and control groups on any of the five hypotheses. In analyzing the results of the study, the
question must be asked as to why the SIT program was insufficient to effect a meaningful difference between the groups on the five dependent variables. One possible answer is the previously described unanticipated events that occurred during the program implementation; however, there are other possibilities.

The SIT training as designed in this study may be more appropriate for an older population such as that utilized in the pilot study rather than ninth-graders. A pilot study was conducted by the researcher in the same target school approximately four months prior to the present study. Two intact classes of students in a peer helper course were utilized in a nonequivalent control group design. Twenty-one students were in the treatment group while there were 27 control students. Participants were several years older than the research study group as most were juniors and seniors rather than freshmen. While ANOVA tests showed no significant pretest differences between the treatment and control groups, there were significant differences (p<.05) found in the posttesting on locus of control and effective communication. (Detailed tables of posttest mean scores and ANOVA results are found in Appendix C.)

Since the study involved a preventive approach with normal subjects, participants were assumed to be functioning in a relatively healthy way. Additional improvement was likely to be more difficult to achieve than if subjects began at dysfunctional levels. Both the pilot and
experimental SIT groups had mean posttest scores that were average or better compared to other youth their ages.

The SIT program may not have lasted long enough to have the maximum impact on adolescent stress management. Jaremko (1984) stated that while SIT has been conducted in anywhere between 1 and 20 sessions, in most instances SIT is conducted in 12 to 14 sessions. Feindler, Marriott, and Iwata (1980) reported that 12 sessions of cognitive restructuring with multiply suspended junior high school students produced significant reductions in aggressive behavior and school suspensions. It seemed reasonable to expect a 10-session preventive SIT program with normal adolescents to be sufficient in producing significant change. On the other hand, Reimanis (1974) found a change toward greater internality through group counseling and behavioral skill training sessions although they extended over a two- to four-month span. Nowicki and Barnes (1973) reported a change in internality during a one-week intervention although the contact time was approximately 40 hours.

Related to the issue of number of sessions is the intensity or extent to which the content of the sessions coincides with the personal needs of the student. Spielberger, Gorsuch, and Lushene (1970) found that trait anxiety does not reduce over time without experiences significant to the individual. The poor response in completing and returning the homework made it difficult to
assess the extent to which students were finding meaningful applications of SIT in their daily lives. The developmental level of the students which determine their personal needs may also be a consideration.

Decker, Williams, and Hall (1982) indicated that stress management training which included progressive relaxation and cognitive restructuring was effective in reducing stress and irrational beliefs for students in a graduate course. It may be that older students have a greater awareness of the need for effective stress management in their lives and are more motivated to cooperate with educational programs.

Drum (1984) detailed several principles crucial in designing effective prevention activities. These include (a) going beyond providing information to transforming behavior; (b) designing interventions based on a group's readiness for and investment in change; (c) being appropriately timed so that the program occurs before a problem is manifested but not so long as to diffuse the effort; (d) materials and procedures paced according to the participant's motivation, coping skills, and tolerance for disclosure; and (e) effectively addressing major obstacles to change such as low client motivation, low urgency, and resistance to change. In the research study the translation of skills learned in class to problems outside required thorough completion of the homework which many students failed to do. There was a wide disparity in the awareness of personal stress and interest of students in changing it.
While some students were genuinely interested in learning to control stress, others felt no need for such training. It was clear in comparing the older pilot students with those in the health education classes that the former were better able to grasp the materials and more willing to participate in the experiential components of the program. Despite disciplinary actions and grading for homework completion, some students continued to show little interest in the sessions.

In addition, the instruments used may not have been sensitive enough to detect changes that could have taken place. Richardson, Beall, and Jessup (1982) provided a three-week stress management training program for adolescents in health education classes. They used heart rate and EMG measurements to indicate changes in stress level and found improvements in both for the treatment group. Such physiological measures as well as skill observation ratings by independent judges may offer more sensitive indicators of the benefits of SIT.

There may not have been sufficient differences between the SIT and SMT curriculum to produce statistically significant change particularly if SIT students failed to regularly monitor their stress levels or practice the taped somatic exercises. A no treatment control group would have helped determine whether any type of treatment sessions would be beneficial. This notion is supported when the results are closely examined.
Although not statistically significant the experimental group scored in a more healthy direction than the control group on all scales except trait anxiety (scores were essentially the same) and independence (controls were slightly higher). This could mean that SIT has potential as a stress management model.

Multiple components in the SIT treatment may not have been effective for this population. In the tenth session students were polled as to the elements of SIT that they liked best and those they liked least. While a majority of students said they enjoyed the role playing and relaxation exercises, it was often difficult to find volunteers for the role plays. The low return rate of the home practice sheets calls into question the extent to which students practiced and applied the somatic skills.

A majority of students disliked the homework and daily stress logs as reported in a survey conducted after the training was completed. This is critical as the completion of these items was essential in order for the stress management skills to have relevance in the lives of students rather than merely serving as an academic exercise.

Recommendations for Future Research

As a result of the findings in this study, the following recommendations are made in order to guide future investigations in this area.

1. Research with various ages of adolescents should be attempted in order to determine the group most receptive to
stress management training. Although no significant difference was found between the ninth-grade treatments and controls at posttesting, a pilot study with older students did result in significance in several areas. This may mean an SIT approach is more effective with older students who are approaching major stress-inducing decisions such as graduation, college, military service, and marriage. Research with various groups could help pinpoint the population most amenable to SIT training.

2. Future researchers should attempt to elicit a higher participation rate from the population to be studied. While 56% of those eligible agreed to participate and the dropout rate was low (6%), obviously some self-selection factors were involved. If the results are to be generalized to the broadest population, then a higher percentage of marginally interested students should be obtained.

3. Due to the small number of black participants, race could not be singled out as a significant variable. Future studies could seek to determine how effective SIT may be with non-white populations.

4. The population studied was from a rural, agricultural, low SES setting containing few resources for mental health treatment much less prevention activities. SIT intervention should be attempted in an urban setting with a potentially more sophisticated population that is more aware and accepting of mental health education. In
addition, revised strategies should be attempted in order to make SIT more beneficial to rural populations.

5. Manipulations of treatment length and frequency should be attempted. The format in this study called for twice-weekly sessions for five weeks as one that allowed for covering the necessary material in a time frame acceptable to the restrictions in the school calendar. More sessions or extension over a longer period of time may allow students a greater opportunity to fully practice and integrate the material. Another possibility would be to condense the material further to allow better assimilation by students.

6. Meichenbaum (1985) found through dismantling studies that the entire SIT approach has a significantly greater impact than any specific component alone although this may not hold true for an adolescent population. Observation and self-report information indicate that youth most enjoy the social skill building and role playing while cognitive restructuring and daily stress monitoring is less enjoyable. Perhaps greater emphasis should be placed on the former in order to provide a more beneficial stress management training experience.

7. Additional follow-up at a later period is recommended. It may be that the ultimate benefit of the training will accrue at some point much later than the intervention when adolescents have more opportunity to apply the skills learned and experience success. Testing at an
interval six-months or a year later would help explore this issue.

8. Future researchers should compare SIT, alternate stress management training, and a no-treatment control group. This would help in determining whether training per se has a meaningful impact on adolescents. In addition, the power of an SIT approach when compared to both alternate and no training could be assessed.

9. There is a need for more refined outcome measures. Assessment of the study could be undertaken with instruments more sensitive to the specific skill training involved in the SIT program such as the Means-Ends Problem Solving Test or Hepner's Personal Problem Solving Test. A videotape of student role-play solutions to various social problems inducing stress could be rated by independent judges as a measure of skill acquisition.

Conclusions and Implications of SIT with Adolescents

This study failed to show statistically significant proof that SIT with adolescents can increase locus of control, self-concept, and effective social behavior and reduce state and trait anxiety although changes in a positive direction were found. An obvious conclusion is that SIT was not effective for these students under these conditions and, therefore, should not be used as a stress management technique for this population. Because SIT has rarely been used with adolescents, it would be premature to reject its possible utility without further modification and
investigation. The researcher is not prepared to reject SIT and the previously enumerated recommendations for future research suggest research design and measurement refinements that will help determine the ultimate benefit of SIT with adolescents.

The period of adolescence in our society is one at risk for a variety of problem dependencies that may be averted or lessened by imparting to youth skills in better managing stress. The need is certainly there. A poll of SIT participants as to their reasons for volunteering for the study indicated that 26 did so in order to learn to control stress and handle problems better. The interest in learning to handle stress better is present at least for some youth. SIT is a comprehensive, integrative approach that has demonstrated utility with a variety of clinical and prevention populations. The challenge is to find the mechanism by which stress management training can be most effectively delivered to the greatest number of youth. The consequences of failure in this task are too severe to consider not making the attempt.
APPENDIX A
TRAINING MODEL

Session 1 Data Collection

I. Introduction and overview of the study.

A. Discuss sequence of SIT sessions and homework procedures.

B. Lecture

Health is presently the 3rd largest industry in the U.S. with expenditures of $229 billion in 1980. When broken down this involves spending of 93% for treatment, 4% for research, 2 1/2% for prevention, and 1/2% for health education.

In 1900 the life expectancy was only 45 due primarily to deaths due to infectious diseases such as malaria and whooping cough. Although the life expectancy today has increased into the 70's, between 50 and 70 percent of deaths are controllable through lifestyle or other behavioral changes especially in regard to our reaction to stress.

The following are in part symptoms of the ravages of stress in our society:

--30 million heart or blood vessel diseases
--1 million heart attacks yearly
--25 million with high blood pressure
--8 million ulcers
--12 million alcoholics

124
--5 billion doses of tranquilizers prescribed yearly
--$19.4 billion lost by industry due to premature employee death
--$15 billion lost due to instances of employee stress-related absenteeism.

The mentally healthy individual in our society has generally found two means of dealing with stress. One, they are able to utilize a lifestyle that reduces their initial levels of stress (e.g., not living beyond their means). Two, they are able to implement stress management procedures to keep stress levels from becoming disabling (e.g., cardiovascular exercise and meditation).

Stress has been defined in several ways. One popular definition was devised by Hans Selye who saw stress as any change in conditions that required the body to adjust. Whether the stressor is internal or external, pleasant or unpleasant, the body's response to the change is the same. The factors that create problems are when the stress is sufficiently intense to require a great deal of adjustment in the organism such as when a loved one dies. However, it should be borne in mind that stress is essential for life as without it there is only death. The challenge for us all is to learn to manage our stress in better ways so that it helps rather than hurts us.

Selye described the body's response to stress in three stages known as the General Adaptation Syndrome (GAS). The first stage is alarm and here the body recognizes a stressor
and prepares for fight or flight. Hormones are released from the endocrine gland, heart rate, respiration, blood flow, blood sugar level, and perspiration increase, muscles become tense, and digestion slows down. The second stage is resistance. Here the body repairs the damage caused by the stress. The alarm symptoms disappear and resistance rises above normal. If stress does not go away, the body is unable to repair itself. The final stage is exhaustion. More repair and rebuilding take place. Adaptation energy becomes exhausted. Signs of alarm reappear but are irreversible and may cause death.

Although much of the body's reaction to stress is patterned, in this training we will emphasize that disabling levels of stress are not inevitable and we all have a great deal of control over our levels of stress. You will learn skills that will help you control stressful situations. However, like any skill this must be practiced well not only in class but outside as well. We will have 10 classroom sessions. In addition you will each be provided with daily stress logs, relaxation tapes, and home practice sheets to chart your progress in identifying stressors and monitoring your skills in somatic relaxation. It is hoped that by the end of the sessions that you will have a variety of skills that you will feel comfortable in applying in a variety of stressful situations.
II. Data Collection

**Individual and Small Group Activities**

A. Subjects will be asked to make a list of ten of their current stressors (see "Current Stressors and Coping Strategies" worksheet). They are to be arranged in a hierarchy from the least to the most anxiety producing. Then subjects are to assign a point value to each stressor based on Wolpe's **Subjective Units of Distress** (SUDS). Total relaxation is zero SUDS while the most stressful situation in the hierarchy is rated at 100 SUDS. After a few minutes in composing their lists the subjects are to pair up with a neighbor and share their lists. After two minutes the trainer asks each pair to choose one stressor they have in common and one that is unique to each partner.

B. Each pair is then invited to share their chosen common and unique stressors with the group at large. The trainer writes down all of the stressors on the blackboard.

C. Students are then asked to change their focus of attention from the problem to the solution. They are asked to make a second list—this time writing down their favorite coping techniques. Participants are to note the typical ways they deal with these or other stressors in their lives.

D. Students pair up with a different neighbor and compare notes on coping. After two minutes they are asked to choose one skill they have in common and one coping strategy unique to each partner.

E. The trainer reconvenes the group and comments on the gold
mine of coping resources represented by all the individuals in the room. Volunteers are asked to share the skills they had in common with their partners and they are written on the blackboard.

After several examples have been given, the trainer asks all participants to share in turn one of their unique coping skills. The only rule is that each person must name a skill that has not been previously mentioned. As the coping strategies are identified, the trainer writes them on the board and comments on the richness and diversity of skills suggested by the "coping experts" in the room.

--the skills may be grouped according to some overall strategy (i.e., positive or negative) and elaborated on.
--if "negative" copers are mentioned this may stimulate a discussion on the costs and benefits of different coping strategies.

F. Following this exercise the trainer can summarize several points identified about stress:

Lecture
So far we have learned that:

--Stress is universal.

--One's perception of a situation is a common source of stress.

--Stress may come from your own negative feelings or bad habits.

--Stress is not all bad.
Too much stress can be distressing and eventually disastrous.

Healthful stress levels vary greatly from individual to individual (Tubesing & Tubesing, 1983).

III Stress management technique.

During most of the sessions students will be trained in various somatic stress management techniques. For both pre and post training they will be instructed to record their pulse and digital temperature on their home practice sheet. This is to give them some physiological feedback on the effects of the various techniques and thus assist them in using the ones most beneficial to them. They will be instructed in the proper means of taking temple, wrist, and carotid artery pulse readings.

Temperature is the simplest, easiest, and most reliable form of biofeedback to use. Digital thermometers will be provided to each student. The thermometers will be lightly taped with the red bulb over the fingerprint on the middle finger of the dominant hand with an inch to an inch and a half of transparent tape as recommended by Lowenstein (1980) of the Conscious Living Foundation.

Students will be instructed in proper diaphragmatic breathing and then led through breathing exercises as cited in Stress Management: A Comprehensive Guide to Wellness by Charlesworth and Nathan (1984, pp. 90-92). They will be asked to assume a comfortable sitting position and to close their eyes before being led through the breathing exercise.
IV. Homework

Students will be instructed to complete two forms as homework for the next session: a daily stress log and a home practice chart of their practice in stress management skills. These forms will be completed each week during the course of the sessions and be included in the student's course folder (see "Instructions for Keeping Daily Stress Log", "Home Practice Chart", and "Daily Stress Log").

Session II Assessment Skills Training

I. Review and discuss homework assignments.

II. Introduce the AAbc's of stress management model (Tubesing & Tubesing, 1983).

   A. The trainer introduces the AAbc decision-making model for stress management. Examples should be used as the following points are expounded upon.

Lecture

1. Stress management is a decision-making process. When we are feeling the effects of a stressful life position or a stressful lifestyle, we have three major ways we could deal with that stress:

   Alter it
   Avoid it or
   Accept it by

       building our resistance or
       changing our perception

2. All three of these approaches can be effective coping techniques. The trick is choosing the proper
approach for the situation at hand and the person involved.

3. The first A of the AAAAbc stands for Alter which implies removing the source of stress by changing something. Problem-solving, direct communication, and time management are common techniques for altering stress. For instance, if your parents complain about your messy room, you could alter the stress by keeping your room neat and clean.

4. The second A of the AAAAbc model stands for Avoid which implies removing oneself from the stressful situation or figuring out how not to get there in the first place! To conserve stress energy, people sometimes need to walk away, let go, say "no", delegate, withdraw, and know their limits so they can "live to fight another day." For instance, if you are presently very busy, you could avoid further stress by saying "no" to additional demands of your time and effort.

5. The third A in the AAAAbc model stands for Accept which involves equipping oneself physically and mentally for stress. The b and c of the AAAAbc model represent this physical and mental preparation.

6. The b stands for building resistance. People can increase their capacity to tolerate stress physically through proper diet, regular exercise, and systematic relaxation techniques. Relaxation and exercise provide the double bonus of releasing stored up tension as well! Mental resistance is bolstered through positive affirmation, getting clear about goals and priorities, and cognitive
restructuring. For example, if you feel stressed due to being overweight, you could utilize a diet combining proper nutrition with exercise.

7. The c stands for change. One way to Accept stress is to change the way you perceive the situation or yourself. Changing unrealistic expectations and irrational beliefs such as "I should succeed at everything I try" or "It would be awful if my girlfriend was angry with me," is a good start. Redefining the situation in a less stress-provoking way is always an option—when people play "ain't it funny" or "ain't it grand" instead of "ain't it awful", their stress resistance increases. For example, if a boyfriend or girlfriend breaks up with you, rather than telling yourself it must be because "I'm no good and therefore will never get a date", you could say "It's unfortunate but I'm still a worthwhile person and there are many others I can date."

Large Group Discussion

B. The trainer models the stress management decision-making process using the AAAbc paradigm. The group is solicited as to relevant stress scenarios in their lives. As a group the situations are classified according to the AAAbc model. Examples of situations include displeasure with one's appearance, studying for an exam, public speaking, and dealing with peer pressure.

Small Group Exercise and Large Group Discussion

C. The group is then asked to break into three small groups and work together in applying the AAAbc model to
several stressful situations. Each group works on one of the following: (a) breaking up with a boyfriend or girlfriend, (b) preparing for a big exam, and (c) telling your parents you do not want to finish high school. The group is given the AAAbc Application Form to record their decisions (see "AAAbc Application Form").

The trainer instructs the groups to read their scenarios out loud and then to brainstorm together a list of management strategies which might work in this situation. One person acts as recorder, summarizing the scene briefly at the top of the form and noting all suggestions under their proper categories.

D. The trainer calls time and asks the group to choose one of the suggested strategies as the "BEST OPTION" and record it on the bottom of the application form.

E. The trainer reviews each scenario and reads the "BEST OPTION" solution suggested by each of the groups and again solicits comments from participants.

F. The trainer asks participants to apply the model to their own life situation. He distributes a copy of the "AAAbc Application Form" to everyone and asks them to write a brief scenario of two of their current life stressors for homework. Then they are to answer the questions, brainstorming mentally their own list of coping options. Finally, they are to choose one "BEST OPTION" to use in dealing with this stress.
III. Stress Management Technique--Progressive Relaxation.

Before and after this exercise students are directed to record their digital temperatures and pulse rate on their home practice sheets. They are then to get relaxed in their seats as a script on progressive relaxation is read (Charlesworth & Nathan, 1984, pp. 51-58).

IV. Homework

A. Complete Daily Stress Log

B. Complete Home Practice sheet

C. Complete AAAbc application form on two personal stressors.

**Session III Cognitive Restructuring**

I. Review homework. Discuss any difficulty in completing them.

II. Old Lady--Young Girl Exercise (Johnson, 1972, p. 212).

**Small Group Exercise**

A. The objective of this exercise is to demonstrate how two individuals with different frames of reference can perceive the same event in two different ways.

B. Divide class into two groups with an equal number of members.

C. Each group receives a picture. One group receives "Picture A" and the other group receives "Picture B". Each person is asked to complete a worksheet (see "Perceptions Worksheet") with a description of the person in the picture,
including such things as sex, clothing, hair style, and age of the person in the picture.

D. Each member of the first group is paired with a member of the second group. Each pair is given a copy of "Picture C". The two individuals are then asked to negotiate a common description of the person in the picture, including such things as sex, clothing, hairstyle, and age.

Large Group Discussion

E. Conduct a discussion in the group as a whole concerning the results of the negotiations. Did you see "Picture C" the same way? Once you perceived the picture in one way, was it difficult to see it another way? In conflict situations, what role does your background, previous experience, expectations, and frame of reference have upon how you see your behavior and the behavior of the other person?


Lecture & Exercise

A. People are different in the way they see things and there is nothing wrong with this fact. If there were, the world would become a very boring place in which to live. Do you think this is true of what we believe people are doing and thinking as well? That is, do we each interpret what other people are doing and saying differently? Let's look at this picture (TAT card 3BM) and write down the answers to the questions we have on our worksheets.
Questions:

1) Is that a man or woman?
2) What is on the floor?
3) What is the person doing?
4) How does the person feel?
5) Why does the person feel that way?

Large Group Discussion

The leader then discusses the group's responses to each question. He ends the discussion by making the point that there are often many different explanations for what we see. The question is then asked: "What can be done to change the way the person feels?"

IV. Didactic session on irrational beliefs (Ellis & Harper, 1977).

Lecture

Your desires and emotions do not consist of mysterious, uncontrollable forces that drive you to do their bidding. Although they are learned and therefore remain partly beyond your immediate control, your desires and emotions directly relate to your thinking and imagining and stay within your eventual control. While animals and young children depend largely upon their inborn urges, you can uniquely alter your own emotional responses and considerably control your destiny. Although you cannot maintain perfect control over your thoughts, you can--by observing, questioning, and changing the internalized sentences of which it largely consists--significantly modify your thought processes. At
the same time, by controlling a considerable amount of your thinking, you can also learn to change your emotions.

Although we are capable of thinking straighter and of more effectively controlling our behavior, we get habituated to thinking irrationally which often leads to self-defeating behavior. By closely observing your beliefs you can learn to dispute and counter-attack the irrational ideas you now hold.

Albert Ellis outlined 10 irrational beliefs (i.e., beliefs that have no basis in reality) that are common in many people. They can be categorized into 5 self-directed and 5 other-directed beliefs (Charlesworth & Nathan, 1984, pp. 170-171). The teacher should distribute and discuss the "Ten Irrational Beliefs and Exercise" worksheet.

To help you begin to identify irrational beliefs and categorize them as coming from thoughts about ourselves or about other people, read the following statements (see "Ten Irrational Beliefs and Exercise" worksheet) and underline only those that are about yourself. The thoughts you do not underline are about other people or events outside yourself.

At the root of all irrational thinking is the assumption that things are done to you: "That really got me down...She makes me nervous...Places like that scare me...Being lied to makes me see red." Nothing is done to you. Events happen in the world. You experience those (A), engage in self-talk (B), and then experience an emotion (C) resulting from the self-talk. A Does not cause C--B causes
C. If your self-talk is irrational and unrealistic, you create unpleasant emotions. You choose your emotions or how you react. For instance, no one can make you mad; you may choose to be mad based upon the things you say to yourself about a situation.

VI. Ellis' ABC chart (Davis, Eshelman, & McKay, 1980, pp. 110-112).

Lecture & Exercise

There are five steps (A through E) to disputing and eliminating irrational ideas. Start by selecting a situation that consistently generates stressful emotions in you. The teacher then distributes "Guidelines for Using Ellis' ABC Chart" for students to follow along and use in completing their homework.

A. Write down the objective facts of the event as they occurred at the time you were upset. For example, "My girlfriend went out with another guy."

B. Write down your self-talk about the event. Look for irrational ideas. For instance, "Since she went out, I must be no good... I'm not good enough for her... I'll never find anyone else to date... It's the end of the world if I lose her."

C. Focus on your emotional response. Make a clear one or two word label such as angry, depressed, or felt worthless. You may be depressed and angry at all women in this example.

D. Dispute and change the irrational self-talk identified at step B.
1. Select the irrational idea to dispute. For instance, "I'll never find anyone else to date."

2. Is there any rational support for this idea? No, not unless all women suddenly leave the earth or I make no attempt to ever try to date anyone.

3. What evidence exists for the falseness of this idea?
   a. There are no laws of the universe that say I shouldn't have pain or problems.
   b. Life is not fair. It is a sequence of events, some of which are pleasureable and some of which bring pain.
   c. If problems occur, it is up to me to solve them.
   d. Trying to keep a problem from developing is adaptive, but resenting and not facing it once it exists is a dangerous strategy.
   e. No one is special. Some have less pain than I either due to luck or decisions I have made that contributed to the necessary conditions for my problems.
   f. Just because I have a problem doesn't mean I have to suffer. I can take pride in the challenge of a creative solution.

4. Does any evidence exist for the truth of this idea?

5. What is the worst thing that could happen to me if what I want to happen doesn't, or what I don't want to happen does? For instance, "I'll be lonely my entire life."

6. What good things might occur if what you want to
happen doesn't, or what you don't want to happen does? For instance, "I'll have more money for myself... I can work to develop open friendships with girls rather than strained dating relationships."

E. Substitute alternative self-talk. For instance, "Everyone breaks up at some time... This is not the end of the world... I can find others to date if I try."

Large Group Discussion

Have the class cite examples from their own life of stressors and go through the ABC model together as a group.

VII. Lead stress management training in deep muscle relaxation (Charlesworth & Nathan, 1984, pp. 76-82).

VII. Homework.

A. Complete Daily Stress Log and Home Practice Sheet.

B. Complete ABC chart (see "ABC Chart") on 2 stressors in your life and rate them on a scale from 0-100 as to how stressful they are (Davis, Eshelman, & McKay, 1980, p. 114).

Session IV Cognitive Restructuring

I. Review homework.

Role Play

II. Conduct a role play of an activating event (i.e., something that starts self-talk that is sometime irrational) and subsequent self-dialogue (Bedell, Vagg, & Marlowe, 1978, p. 15).

A. Select two male volunteers to role play an activating event and irrational dialogue.

B. Event—I was turned down for a date by someone I have
known for several months. I had gone out with this person several times before and we had both seemed to enjoy ourselves.

1. B1 and B2 dialogue

B1--She really didn't like you, nobody really likes you.

B2--All it really means is that she wouldn't go out with you, and that's not all that bad.

B1--She probably only pretended to enjoy herself the other times because she felt sorry for you. That means you must be a real jerk.

B2--You really should stick to what you know rather than what may be true. She probably enjoyed herself some of the other times. If she didn't, it doesn't make you a jerk. Your self-worth is not dependent on what others think of you.

B1--But if other people don't like you it probably means that you are doing something wrong and should change your behavior and act more appropriately.

B2--Rubbish! Who says you have to change your thinking or behavior just because someone else disagrees with you. That is an assumption you are making.

B1--But you can't choose your own behavior and feelings. Other peoples' behavior and other events make you feel things. This person made you upset by not going out with you.
B2--Who says you can't choose your own behavior? You do, and you can also choose to view any situation the way you want to. You can choose to be upset about it or not. If you want to you can choose to be upset about not getting the date, but why pick bad feelings?

III. Lecture to be followed by small group discussion on automatic thoughts (Meichenbaum, 1985, pp. 59-60).

Lecture

A. One of the initial tasks in changing your thinking is thought catching which is designed to help stressed individuals to become aware of the automatic thoughts, images, and accompanying feelings they have when they are stressed. Beck used the term automatic thoughts to describe discrete specific thoughts that occur very rapidly, seemingly unprompted by events (out of the blue), and are not the result of "directed" or planned thinking. They are specific in content, provide interpretation of events, and often include predictions about situations. They can occur outside a person's awareness. When individuals do notice them, they are usually viewed as indisputable and undeniable facts or truths. Examples of automatic thoughts include the following:

It is such an effort to do anything.
I'm not as good as others.
Everything is futile.
The future is just one string of problems.
I have only made mistakes in the past.
Everything I do turns out badly.
There is no one I can turn to.
Life has no meaning.
The future is hopeless.
These thoughts (or feelings) just overwhelm me.
There is nothing I can do to control them.
I let them down. It's all my fault.
Students are then encouraged to detail their own automatic thoughts.

One should realize that it is not the presence of such thoughts per se that represents the problem, but rather that such negative thinking triggers further negative feelings and stress-producing behavior along with their accompanying consequences. This pattern leads subsequently to further negative thinking and a vicious cycle develops. On the other hand, people who cope well may have negative stress-producing thoughts but in their case such thoughts are open to interruption and they spontaneously employ coping responses such as social comparison, denial, and problem solving.

**Large Group Discussion**

The trainer then elicits several of the group's automatic thoughts and examines them by asking several questions. Examples include, "I'm no good with my hands" and "I always get scared when I have to talk in front of a group."
1) Do you have similar thoughts and feelings in other stressful situations?
2) What do you think will happen in such situations?
3) What do you picture happening?
4) What are you saying to yourself in that situation?
5) Then what?
6) How do you know that that will indeed happen?
7) What is the evidence of a threat?
8) How serious is it?
9) What coping resources are available?

Discussion is aimed at challenging one's automatic thoughts. This procedure is continued in the next discussion.

**Large Group Discussion**

The leader leads the class through a series of questions designed to decatastrophize predictions and attribute blame regarding several automatic thoughts.

1) Let's suppose for the moment that the following did indeed occur (one's worst fear). What would happen then?
2) Just how much responsibility do you really have for this occurring?
3) Could there be other reasons for X?
4) How would you know that was the way others viewed it?
5) Is it possible that there are other reasons for what happened?
6) Is it as bad as it seems?
7) How does that happening cause you to be stressed?
8) What would be the worst possible thing that could occur
to you? Let's assume for the moment that the worst possible thing actually happened. What would happen then? Could you make some predictions? What thoughts and feelings would you have?

Students are encouraged to challenge, reality test, look for evidence that supports or refutes predictions, and arrange for personal experiments to test the validity of their expectations. The trainer distributes and discusses questions students should be able to ask themselves during stressful situations (see "Cognitive Restructuring Guide and Homework") (Meichenbaum, 1985, pp. 64-65). The example of having to give a talk in front of the entire school will be used.

1) What exactly is at stake?
2) Does this situation reflect a threat signaling potential harm, or a challenge, signaling an opportunity?
3) Do I have the resources to handle this situation?
4) How do I know that this will indeed happen?
5) What evidence do I have that this will happen?
6) Are there other ways of looking at the situation?
7) There are times when I don't do as well as I would like, but other times I do, so what are the differences?
8) Have I only had failures in situations in the past, or were there times I did okay?
9) What am I saying to myself right now?
10) What is the evidence for this conclusion?
11) Is there evidence that contradicts this conclusion?

Lecture

A. Self-instructional training is designed to teach a problem-solving attitude and to produce specific thoughtful techniques that students can use at various phases of their stress response. There are four stages in the re-thinking process for which self-statements are useful: (a) preparing for a stressor, (b) confronting and handling a stressful event, (c) feeling overwhelmed by a stressor, and (d) reflecting on one's coping efforts. In each of these four phases, what you think and feel plays a key role in influencing your stress reaction. The way we think can affect how we feel in a fairly direct, intentional fashion. We each influence our thoughts by a sort of internal monologue—an ongoing series of statements to ourselves—in which we tell ourselves what to think and believe and even how to behave.

You might find that speaking about your thoughts as "self-statements" is somewhat unexpected. But there is good reason for using this phrase. Calling a thought a "statement to yourself" emphasizes the deliberateness of that particular thought and that it is under your control.

The trainer then goes through the four stages in the model using the example of giving a talk before the entire school.
Preparing for Stressor

Purpose--Focus on specific preparation for task.

Combat negative thinking.

Emphasize planning and preparation.

Examples--What do I have to do?

I can develop a plan to deal with it.
This could be a rough situation.
Remember, stick to the issues and don't take it personally.
Stop worrying. Worrying won't help anything.
What are some of the helpful things I can do instead?
I'm feeling uptight--that's natural.

Confronting and Handling Stressor

Purpose--Control stress reaction.

Reassure that one can handle situation.
Reinterpret stress as something that can be used constructively.
Reminder to use coping responses such as relaxation.
Remain focused on task or situation.

Examples--Just "psych" yourself up--I can meet this challenge.
I can convince myself to do it.
One step at a time.
Don't think about my stress, just about what I have to do.
It is a reminder to use my coping exercises. Relax, I'm in control. Take a slow deep breath. Ah, good.

As long as I keep my cool, I'm in control of the situation.

Don't make more out of this than I have to.

Look for positives, don't jump to conclusions.

Things are not as serious as I make them out to be.

Coping with Feelings of Being Overwhelmed

Purpose--This stage does not always occur.

Set up contingency plans, prepare for the possibility of becoming extremely stressed.

Prepare to deal with the worst situation when feeling out of control and overwhelmed.

Stay focused on the present.

Accept feelings and wait for them to decrease.

Learn to have some control even if the worst happens.

Examples--When stress comes, just pause.

Keep my focus on the present; what is it I have to do?

I should expect my stress to rise sometimes.

Don't try to eliminate stress totally; just keep it manageable.

My muscles are getting tight.

Relax and slow things down.
Time to take a slow deep breath.
Let's take the issue point by point.
Time for problem solving.

**Evaluation of Coping Efforts and Self-Rewards**

**Purpose**—Evaluate attempt, what helped and what didn't.
Look back over experience to see what has been learned.
Recognize small gains, don't belittle gradual progress.
Praise self for trying.
Keep trying, don't expect perfection.

**Examples**—It wasn't as bad as I expected.
I made more out of stress than it was worth.
It's getting better each time I use this procedure.
It didn't work. That's okay.
What can I learn from my try.
I can be pleased with the progress I'm making.
Wait until I tell the others how it went.
I handled it pretty well.
Good, I did it. Next time I'll do even better.

V. Lead students through autogenic training (Charlesworth & Nathan, 1984, pp. 102-108).

VI. Homework.

A. Daily Stress Log and Home Practice Sheet.

B. Develop self statements for each of Meichenbaum's
four stages in confronting stress and apply through imagery (see "Cognitive Restructuring Guide and Homework").

Session V  Problem Solving

I. Review homework.

II. Problem solving


Lecture & Small Group Exercise

   Frequently, we find ourselves acting one way in a situation and later regretting it or wishing we had behaved differently. The clearer people are about their values, the more likely their actions will agree with their feelings and beliefs and, therefore, the less often they later regret their actions.

   The three stories below are presented to the class (see "Problem Solving Worksheet") and each person is asked to write down what they would do in each situation. After writing this out individually, they are them to break into small groups and try to come to a consensus for presentation to the whole class. In discussion afterwards they will be asked how they went about deciding what they would do.

   1. There is a boy in your class who has a body odor problem. You know the general sentiment is, "He's not such a bad kid, but I just hate to get near him." You hardly know him--you just have sort of a nodding acquaintance at a friendly distance. Ideally what would you do?

   2. You see a kid three or four years younger than you
shoplifting at the local discount store. You're concerned that he'll get into serious trouble if the store detective catches him. What would you do?

3. Your father has been giving you a lot of flack about how much TV you watch. One day you come home from school and the TV set isn't working. You suspect your father has done something to the set. What would you do?

B. Stages in Problem Solving (Meichenbaum, 1985, p. 67).

Lecture

The 7 steps in problem solving can be used by asking yourself several questions. Students should follow along as these are outlined using the example of a sibling who will not stay out of your room (see "Problem Solving Worksheet").

<table>
<thead>
<tr>
<th>Steps</th>
<th>Questions/Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Problem identification</td>
<td>What is the concern?</td>
</tr>
<tr>
<td>2. Goal selection</td>
<td>What do I want?</td>
</tr>
<tr>
<td>3. Generation of alternatives</td>
<td>What can I do?</td>
</tr>
<tr>
<td>4. Consideration of consequences</td>
<td>What might happen?</td>
</tr>
<tr>
<td>5. Decision making</td>
<td>What is my decision?</td>
</tr>
<tr>
<td>6. Implementation</td>
<td>Now do it!</td>
</tr>
<tr>
<td>7. Evaluation</td>
<td>Did it work?</td>
</tr>
</tbody>
</table>

C. Initial steps in problem solving (Platt, Spivack, & Swift, 1982, pp. 41-45).

Lecture

A simple way to solve problems is to think about them in three major steps. First, you have to decide what the
problem is. This is a very important step because once you can clearly understand and say what the problem is it is much easier to see what you can do about it. Secondly, you then have to think of all the possible things to do about the problem. Thirdly, you must decide which is the best solution out of all the possibilities you've considered. However, we will first of all deal with defining the problem. It helps us to think more clearly if we say what we are thinking out loud. What do you do when you think about a problem? First you should ask yourself is it fact or is it opinion? You should say to yourself "Don't jump to conclusions". Let's remember to say things like this to ourselves when a problem arises. Now, let's read the following story:

Mr. A. was listening to the people speak at a meeting about how to make things better in his neighborhood. He wanted to say something important and have a chance to be a leader, too. The story ends with him being elected a leader and presenting a speech.

**Large Group Discussion**

Now, what's the problem in this story? Let's go around the class and each of us say what the problem is in our own words. In addition let's discuss not just what the problem is but also all the possible solutions and the best decisions. Following this a second story is read and discussed:
Sam came home after shopping and found that he'd lost his new watch. He was very upset about it. The story ends with Sam finding his watch and feeling good about it.


IV. Homework

A. Complete Daily Stress Log and Home Practice Sheet.

B. Do Interpersonal Problem Solving exercises (see "Problem Solving Worksheet").

Session VI Problem Solving

I. Review homework.

II. Problem Solving

A. "Decisions-Faces" (Platt, Spivack, & Swift, 1982, pp. 53-54).

Large Group Discussion

This exercise involves three problem situations in which a person is caught between two major choices. The group has to (1) name the two choices, (2) tell the leader the advantages and disadvantages of each, and (3) tell the leader which choice he would make. The exercise is intended to give the group practice in considering the advantages and disadvantages of alternative solutions to problems as an aid in teaching them to be better decision makers. The three problems are: 1) whether or not to return a lost wallet to the owner, 2) whether to let somebody else use a payphone first when their reason for using it seems important, and 3)
whether or not to smoke pot with your friends although you really don't want to.

**Lecture & Large Group Discussion**

B. We've talked about the various parts to solving a problem and now we're going to talk about how to define a goal. You have to know what you want to happen before you decide how you can make it happen.

The leader asks each person to contribute a problem situation and to state the goal. The group will decide if this is or is not the goal. The leader can then guide the group to focus on thinking of alternatives and considering consequences.

C. Problem solving is not something that occurs by itself or in a vacuum. It often involves our relations with other people. For instance, you may have to tell someone you have changed your mind about what you were going to do or you may have to tell someone that you don't think what they wanted to do is best. How do you feel when you have to do things like that?

The group is then led into discussion which may center around two main points. First, that one doesn't always know how to present his or her point of view, and secondly, that one can be very nervous when having to do so.

**Role Play**

Two group members are chosen to act out the following skit (Platt, Spivack, & Swift, 1982, pp. 65-66).

Paul: What do you want to do next Friday night?
Hal: I'm going to a movie. It's supposed to be great. I'm really looking forward to seeing it. You wanna' go, don't you?
Paul: Ah, I don't know--yeah, I'd sure like to see that movie but I wish we could do something else on the weekends besides go to the movies. I wish we knew some girls.
Hal: Yeah, that would be nice but you know how scary it is for both of us to meet girls. We really do get scared to death around them. (Pause. Demandingly) Well, you wanna' go or not?
Paul: Let me think it over, O.K.?
Hal: O.K. but you know how I'd hate to have to go by myself.
Narrator: The next day Paul is talking to Jack, who is trying to invite him to a party on the same night that Hal wants him to see the movie.
Paul: Gee! A party. I don't know. I kind of promised Hal that I'd go to the movies with him that night.
Jack: Well, it's up to you but there'll be lots of girls there. It really looks like a good party.
Paul: Well, you know how scared I am of girls, although I'd sure like to meet some.
Jack: Well, you're not going to meet one at the movies. It's up to you, man. Just let me know.

Large Group Discussion

The leader then begins a discussion focusing around the earlier steps of problem solving in this particular problem. He might ask, "What is Paul's problem? How does Paul feel?"
What can he do? If he does that, what might happen? How might Hal feel if Paul tells him he wants to go to the party instead? What could Paul do then? What might happen if Paul goes to the movies with Hal? and so on. The leader tries to get the group to decide on the best way for Paul to present his point of view. The group is then asked if any of them has had a problem in presenting their point of view. The group discussion would then center around solving each problem.

Lecture & Large Group Discussion

D. In solving our problems, not only must we not rush into trying to solve them, but we must carefully think of the step-by-step things that we have to do. For instance, Fred may say--"I know I have a problem with my girlfriend, but I've got it solved because I am going to try to change." Is this enough to solve the problem? It's an important first step, but Fred would probably try and think of the specific steps that he would have to take to solve the problem and that's what we are going to learn to do in this next exercise.

Here are three problem situations Sam is in. I want you to think about them very carefully and (1) decide what the goal is, (2) look at all the different things Sam could do, and (3) decide which one is best. Then I want you to tell us each step that Sam is going to take. Remember to be as detailed as you can. The leader will write the responses on the blackboard for discussion.
1. Sam is at a party and he doesn't know anyone. How can he make a friend?

2. Sam has just had an argument with his girlfriend and she's left him. Sam wants her to come back. How can he do this?

3. Sam has just found out that a friend of his is spreading a bad rumor about him. He knows the rumor is untrue. What can he do? (Platt, Spivack, & Swift, 1982, pp. 70-71).

The leader should encourage the group to be specific by asking certain questions. For instance, if someone says that Sam can make a friend by being friendly, the group leader should try to elicit specific ideas such as walk over to him, introduce himself, start a conversation, offer him a drink, and so on. The entire group can be involved in offering suggestions. Each step can be listed, in order, on the blackboard until the group is satisfied that nothing has been left out. A criterion of completeness for the list would be when each person feels he could follow the list as a script to act out exactly what Sam has done.

III. Provide a lecture on the stress management technique of stretching (Anderson, 1980)(see "Stretching").

IV. Homework

A. Complete Daily Stress Log.

B. Complete Home Practice Sheet.
Session VII Assertiveness

I Review homework.

II Assertiveness

A. Recognizing how the other person feels (Platt, Spivack, & Swift, 1982, pp. 24-26).

Lecture & Large Group Discussion

Being able to recognize the way other people feel about things or letting them know how you feel is very important to your being a good problem-solver. Why should this be so? Because it will help you to decide what you should do or should not do. Suppose that someone you are with is doing something you don't like. How could you let him know you didn't like it? You might ask him to stop doing it. But sometimes you're embarrassed or feel it's impolite and so you don't say anything. Now how else can you let the person know you want him to stop?

The leader now asks the class for suggestions which are written on the board. After the list is complete, the leader should ask the group to help him decide which suggestions are verbal and which are nonverbal in nature and put a star (*) next to the nonverbal ones. After this, he should say to the group, "It looks to me as if there are other ways to let someone know how you feel besides telling him. I guess that you could have ___" (leader inserts suggestions which have already been indicated by an asterisk (*). These suggestions could include: "Act fidgety", "yawn", "go to sleep", or "look bored."
Sometimes, however, you really like what the other person is doing or saying and will want him to keep on doing or saying it. Now, how can you let him know it? (Leader repeats steps in Part I, writing down a list, dividing it into two groups, verbal and nonverbal, etc.) The leader then says to the group: "Now that we have learned some of the ways to recognize how someone feels, I want you to practice actually doing each of these things. Now let's make believe that I'm doing too much talking, and you want to let me know that I am; how would you let me know?" At this point volunteers are asked to model the nonverbal responses listed on the board which are then imitated by the class.

Role Play & Large Group Discussion

B. The leader will inform the class that a role play will be performed soon which involves a girl turning down a date with someone she does not want to go out with. Participants should observe the role play for both verbal and nonverbal behavior. The trainer will then model turning down the date request in a passive, aggressive, and assertive manner. After the role play has been completed, the facilitator should write "passive behavior" at the head of a blackboard. Sub-headings will include: definition, verbal behavior, nonverbal behaviors, pay-offs, and consequences.

Participants should now be requested to describe the verbal behaviors they observed. Group participation should
be encouraged with the facilitator reinforcing appropriate responses and making suggestions or additions when necessary. When verbal behaviors have been listed, continue by listing nonverbal behaviors and so on.

When the above has been completed, repeat this same task with both aggressive and assertive behaviors. When this exercise has been completed, students will possess a list of workable definitions of passive, aggressive, and assertive behaviors.

C. Speak Up (Tubesing & Tubesing, 1984, pp. 77-80).

**Lecture**

It's amazing how much stress we could eliminate from our lives by practicing two simple techniques—saying "no" (to unrewarding activities, extra obligations, etc.), and asking directly for what we want. Making direct requests of others and turning down requests from others are two components of assertive behavior.

Most of us stress ourselves and the people around us with our style of making requests and of giving responses to other's requests. All too often, people are either so passive that others have to guess at their meaning, or so aggressive that others feel the sting of their anger. Neither the non-assertive nor the aggressive pattern is a very effective style of communicating.

Non-assertive people have difficulty asking for things directly. They tend to either avoid asking, or they ask in such an indirect, self-effacing way that their requests are
often not understood, or are easily turned down. Likewise, when they say "no", they tend to be indirect and give excuses instead of stating the real reasons for their hesitation. Non-assertive people are also easily persuaded to do what they don't want to do. These non-assertive behaviors are a sure-fire source of stress for both the requester and the responder.

Aggressive people tend to be the opposite. They will make requests willingly and say "no" clearly, but do so in a manner that tends to be coercive, hostile, demanding and disrespectful. Such behavior is also often stressful to both giver and receiver.

Small Group Exercise

The trainer asks participants to recall and note a recent stressful incident when someone requested something from them and they had difficulty saying "no." Participants are asked to remember and note another recent experience when they felt under stress about asking for something they wanted.

The trainer asks group members to form pairs. Each pair decides who will be the "asker" and who will be the "refuser."

The "asker" is instructed to think of a series of reasonable requests that she can make of the other person. The "refuser" is directed to respond with one word only: "no". When everyone understands the instructions clearly, the trainer tells the pairs to begin the request and refusal
process, keeping it up for three minutes. At the end of that time, the pairs reverse roles and repeat this activity for another three minutes. Discussion follows.

The trainer tells the pairs to continue with the same routine, except this time the "refusers" are to make up phoney excuses about why they can't do what is being asked. Their task is to avoid revealing their real reason for saying "no." The "asker" is to be very persistent, and to offer alternatives and/or solutions to the "refuser's" excuses. Again each role is portrayed for three minutes with discussion to follow.

In the third and final part of this exercise, the pairs continue to make and refuse requests, but this time the "refuser" uses one of three assertive responses:

* "No I won't" or "No I don't want to" with no explanation
* "No . . . because" with an honest explanation
* "No . . . but" with possible alternatives.

When both people have practiced making and refusing requests assertively, they can give each other feedback as to how assertive they were in each role.

**Large Group Discussion**

The trainer asks the entire group to briefly discuss what it was like both to make assertive requests and to experience the clear refusals. The group generates a list of situations in which these skills would be particularly effective.
Participants are encouraged to keep practicing honestly saying "no" in their lives whenever they have the opportunity. The trainer notes that once they grow comfortable saying "no", it will probably be easier for them to ask for what they want directly and also to say an unqualified "yes" when they do want to accept.

Lecture

D. Passive, aggressive, and assertive behaviors will be defined for students as follows (Ferrandino & Marlowe, 1978, pp. 9-10):

**Passive Behavior**: Not getting one's needs met or getting them met indirectly through manipulation.

When a person acts in a passive manner, that person either ignores or simply does not express his rights, needs and/or desires. The consequence of such behavior is the infringement of one's rights, resulting from the fear of standing up for them. However, the passive individual sometimes does get needs met through manipulation. This is an indirect and dishonest tactic, which seeks to obtain something from the other person engaged in the interaction. In this instance, the passive person has allowed another to choose for them. Passive behavior aims to avoid unpleasant or risky situations; this is accomplished through hedging and/or apologetic and indecisive language. The ultimate consequence of this behavior is feelings of anxiety and frustration, which can culminate in a later aggressive outburst.
**Aggressive Behavior**: Getting one's needs met without taking into consideration the rights and needs of others.

Although an individual behaving in an aggressive manner may indeed be standing up for legitimate rights, he/she does this in a fashion that violates the rights of others. Aggressive behavior is an inappropriate outburst or hostile overreaction to some stimulus situation. While aggressive behavior may be effective in one's efforts to achieve goals, in the long run the outcome may be feelings of resentment and alienation by others. This behavior may be self-enhancing; however, the aggressive person may also experience feelings of guilt, since such behavior is generally emotionally impulsive. In short, friendship and respect may be sacrificed to satisfy immediate needs.

**Assertive Behavior**: Expressing one's rights and needs while taking into consideration the rights and needs of others.

The assertive individual is emotionally honest and direct; he/she stands up for legitimate rights, but concurrently takes into consideration the rights and needs of others. This individual may be persistent in situations where others are not willing to accept their choice of behavior. Additionally, being assertive respects the rights of both oneself and of others to deny requests. Offering and being able to accept compromise is an important assertive skill and is consistent with attempting to satisfy both person's needs. The consequences of assertive behavior are confidence and self-respect. In short, in the process
of meeting one's needs, if one respects the rights of others as well as others respecting their rights, the consequence is generally mutually enhancing and relationships become freer and more honest.

In order to assist students to clearly differentiate the various components in non-assertive, assertive, and aggressive behavior, a handout will be distributed and discussed (see "Summary of Communication Skills for Assertion").

E. Irrational beliefs that support passive and aggressive behaviors (Charlesworth & Nathan, 1984, pp. 222-224).

Lecture

Sometimes despite knowing the skills and benefits of assertiveness, we continue to persist in behaving passively or aggressively. This may be due to irrational beliefs we hold regarding the consequences of assertive behavior. Irrational beliefs regarding assertiveness that promote passivity and their rational counterparts are explored below:

<table>
<thead>
<tr>
<th>Irrational belief</th>
<th>Rational counterpart</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As soon as I am assertive, others will become angry</td>
<td>Others may react positively, neutrally, or negatively.</td>
</tr>
<tr>
<td>at me.</td>
<td>If assertiveness involves legitimate rights, the odds are that you will have a positive response.</td>
</tr>
<tr>
<td>2. As soon as I assert myself, I will be capable of</td>
<td></td>
</tr>
</tbody>
</table>
people will become angry and I will be devastated. handling it, and I am not responsible for another person's anger. It may well be that person's problem.

3. I want others to be honest and straightforward with me but if I tell others what I prefer to be dealt with I feel or want, I will hurt them. People may or may not feel hurt, and most people me but if I tell others what prefer to be dealt with I feel or want, I will hurt directly.

4. If others are hurt by my assertive behavior, I am responsible for their hurt feelings. Even if they are hurt, I can let them know I care for them in other ways, and they will survive.

5. If I turn down legitimate requests, other people will hate me. Even legitimate requests can be refused. I can consider my own needs, and I cannot please everyone all the time.

6. I should always avoid making I am a valuable human statements or asking questions that might make me look stupid. The people I want to associate with will accept me as a valuable human being.

Irrational beliefs that support aggressive behaviors include the following:
Irrational belief

1. It's either them or me, and it's not going to be me if I can help it.

2. If I'm not aggressive, they will be.

3. It's a dog-eat-dog world.

4. If I don't angrily turn this request down now, I'll have a flood of requests to contend with.

5. If I don't let them know loud and clear, they won't do what they said they would.

6. You can't teach an old dog Always? Few "always" or "never" statements are true.

Rational counterpart

We can both win. Let's look for a compromise.

Others may respond in many ways--odds are the ways will be neutral or positive.

What you expect is often what you get.

I can be assertive if people later try to take advantage of me.

First, I'll see what they say to my firm request. I can always use other assertive techniques if they refuse.

You can't teach an old dog Always? Few "always" or new tricks. I always get angry. "never" statements are true.


IV. Homework

A. Daily Stress Log

B. Daily Practice Sheet

Session VIII Assertiveness

I. Review homework.

II. Assertiveness


B. Have two female students role play faulty inner dialogue and irrational thinking in a dating situation (Lange, 1977, pp. 300-301):

Irrational Thinking

"What if he gets angry if I say I don't want to go to bed with him; maybe he'll really be turned off and not want to see me anymore; then I'll wind up alone, maybe forever! I'll probably never get married; that would be awful! What am I gonna do! What can I say! Darn him anyway! All they want is sex!"

Rational Thinking

"If he does get angry that would be unfortunate, but I can handle it; if he never comes back I'll probably miss sharing all the good things we've had, but I'm not willing to do something I don't want to do to avoid his anger and rejection; if I am alone for some time I can handle that too, even if I might not prefer it; I can be happy and I don't need a romantic relationship, although I would like to have one; even if I never have a sexual or romantic relationship the rest of my life, it's not the end of the
world; I may not like it or prefer it, but I can handle it. It's likely I will have another relationship."

C. Meichenbaum's SIT as applied to assertiveness (D'Amico, 1977, pp. 212-213).

Lecture

The general approach to stress in the Meichenbaum-Cameron model may be equated to the demand for assertive behavior in an interpersonal situation. The adaptation of their four basic stages in preparing for assertiveness may be delineated as follows:

a) Preparing for the assertive demand:

1) What is an adaptive response for this assertive situation?
2) If I just follow the assertive model I can deal with the demand!
3) Keep thinking about the model! It is better than getting upset!
4) No negative self-statements about my not being able to deal with it! Just think of the model!
5) Don't worry! It won't help at all!
6) Maybe what I'm feeling is not anxiety, but just my eagerness to respond appropriately!

b) Confronting and handling the assertive demand:

1) Hey! I can do it!
2) One step at a time now, think about what I'm doing!
3) Don't think about getting anxious, just about what is expected!
4) That's it now, slowly, one step at a time!

c) Coping with the presence of interpersonal anxiety:
   1) Ok, now, I'm feeling some anxiety, I'll just pause!
   2) Now, I'll label it from one to ten and watch it change, first it will go up a bit, now, it's going down.
   3) Focus back on the situation and watch it go away soon!
   4) That's it now, I'm coming up with the appropriate response!
   5) Go ahead, now, give it!

d) Reinforcing self-statements:
   1) Hey! I did it! It worked!
   2) Boy, do I feel good about that!
   3) That wasn't so bad!
   4) The more I do this, the easier it will get!
   5) Hey! I did it!

D. Verbal components of assertiveness.

Students are often at a loss as to the proper format for devising an assertive statement. One basic formula is as follows:

\[
\begin{align*}
  \text{I feel} & \quad \text{when you} \\
  \text{I would prefer} & \quad \text{because}
\end{align*}
\]

For example, 'I feel threatened and angry when you pressure me to have sex. I would prefer concentrating on one of the other aspects of our relationship because I am not ready to make a sexual commitment to you at this time.'
E. Strategies to use when people try to block your assertiveness (Davis, Eshelman, & McKay, 1980, pp. 148-149).

**Lecture**

An important step in becoming an assertive person is learning how to avoid doing what you don't want to do. Inevitably, you will encounter blocking statements from those who seek to ignore your assertive requests. The following techniques are proven ways of overcoming the standard blocking gambits:

**Broken Record.** Calmly repeating your point without getting sidetracked by irrelevant issues (Yes, but . . . Yes, I know, but my point is . . . I agree, but . . . Yes, but I was saying . . . Right, but I'm still not interested.)

**Assertive Agreement.** Responding to criticism by admitting an error when you have made a mistake, but separating that mistake from you as a bad person. (Yes, I did forget our lunch date. I'm usually more responsible.)

**Assertive Inquiry.** Prompting criticism in order to gather additional information for your side of the argument. (I understand you don't like the way I acted at the meeting last night. What is it about it that bothered you? What is it about me that you feel is pushy? What is it about my speaking out that bothers you?)

**Content-to-Process Shift.** Shifting the focus of the discussion from the topic to an analysis of what is going on between the two of you. (We're getting off the point now.)
We've been derailed into talking about old issues. You appear angry at me.)

**Clouding.** Appearing to give ground without actually doing so. Agree with the person's argument, but don't agree to change. (You may be right, I probably could be more generous. Perhaps I shouldn't be so confrontive, but . . .)

**Defusing.** Ignoring the content of someone's anger, and putting off further discussion until he has calmed down. (I can see that you're very upset and angry right now, let's discuss it later this afternoon.)

**Circuit Breaker.** Responding to provocative criticism positively. (Answer 'You're a real loudmouth' with 'Thank you'.)

**Assertive Delay.** Putting off a response to a challenging statement until you are calm, and able to deal with it appropriately. (Yes . . . very interesting point . . . I'll have to reserve judgement on that . . . I don't want to talk about that right now.)

F. Role play situations (McPhail, 1977, p. 220).

**Role Play**

The leader will give the following examples as situations for volunteers to role play with analysis by the whole class to follow.

I need to be able to tell a friend "no." For instance, a friend wants to come over to talk and I really have a lot to do and just don't feel like talking.
I want to be able to tell a good friend of mine what things about him or her really bug me.

When I am with a guy at the show or something and the guy is trying to go too far, what should I do? I like him a lot but I don't want to do anything.

I would like to be able to talk to my parents when they're mad at me without being told, "Don't talk back to me, young lady."

How do I tell the lady who asks me to babysit how much an hour I want?

How do I tell a teacher I think he or she is being unfair?

How do I handle a person selling something at the door?

III Homework

A. Daily Stress Log

B. Daily Practice Log

C. Students formulate strategies based on Meichenbaum's four step approach to preparing for stressful situations that are amenable to assertiveness (see "Application of SIT in Stressful Assertive Interpersonal Situations").

Session IX Application and Follow-through

I. Review homework.

II. Application.

Small Group Discussion & Role Play

Insure that all students have completed the Meichenbaum statements for confronting stressors and all other homework. In small groups the students should discuss the effectiveness of these rational strategies in real life
situations. Students will then be asked to role play these before the class and where they are having difficulties should enlist the help of the class in developing more effective problem solving, better self-statements, more rational beliefs, use of more assertive statements, and utilization of other stress management techniques. Possible problem situations to be explored include:

(1) You're always late for school,
(2) Your friend wants you to go to a movie on Saturday but you've already made other plans,
(3) My boy/girl friend wants to have sex,
(4) Your parents continually bug you about the condition of your room,
(5) Your parents are going to separate,
(6) Someone wants you to try drugs.
(7) You think your teacher is being unfair about a grade,
(8) Your younger sister wore your sweater without permission,
(9) You never get to watch the TV shows you want,
(10) You didn't win the science award you hoped and expected to win.

III. Homework
A. Daily Stress Log
B. Daily Practice Log

Session X Maintenance and Generalization

I. Review homework.

Summary Lecture
II. Summarize the main topics covered throughout the course. Clarify any remaining questions or concerns. Role play situations of interest to students that continue to offer them difficulty.

III. Inoculation for failure.

Large Group Discussion & Role Play

Meichenbaum (1985, pp. 41-42) spoke of the need to inoculate clients for failure and to forestall their noncompliance with tasks given by a therapist. Students should be directly asked what problems they foresee in carrying out the strategies they have learned for dealing with stress. If they deny that they'll have difficulty they should be reminded that many people return to old maladaptive patterns (e.g., overeating, drug abuse, smoking, and suicidal ideation) in spite of learning new, more beneficial ones. In this way students can expect such lapses as a normal occurrence and not be overwhelmed by them. In fact, self-statements can be developed to deal with the stress of relapse such as were devised for confronting a stressor. Examples can be role played before the class as an illustration.


Individual Exercise & Large Group Discussion

The leader announces that participants have finally attained the status of stress management experts and will now have a chance to demonstrate their wisdom. He
distributes paper to everyone with the following instructions:

Please write down in 25 words or less, your response to the question, "What is your best advice for managing stress?". In addition, students are asked to answer honestly (1) why they signed up for the stress management training, (2) what they liked best about it, and (3) what they liked least.

The trainer collects all the cards and mixes them up. One-by-one each participant is invited to choose one and read out loud the "words to the wise" written on it.
### Current Stressors and Coping Strategies

<table>
<thead>
<tr>
<th>Least Anxiety Provoking</th>
<th>SUDS Ranking (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
<td>5.</td>
</tr>
<tr>
<td>6.</td>
<td>6.</td>
</tr>
<tr>
<td>Most Anxiety Provoking</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>7.</td>
</tr>
<tr>
<td>8.</td>
<td>8.</td>
</tr>
<tr>
<td>9.</td>
<td>9.</td>
</tr>
<tr>
<td>10.</td>
<td>10.</td>
</tr>
</tbody>
</table>

### Major Coping Strategies Used

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
Instructions for Keeping Daily Stress Log

In order to effectively replace unwanted behaviors with more desirable ones, the process of self-understanding is essential. To aid in self-understanding, keep a daily log of potentially changeable behavior (Kansas Department of Health & Environment, 1980, pp. 22-23).

Keep a log of your stress behaviors over the next few weeks on the "Daily Stress Log" which consists of four parts:

1. The Stressor Category--Most stressors can be classified under the following:
   
   Fear--Whatever you perceive fear to be
   Ambiguity--Unfamiliar situations (meeting new people)
   Overload--Too much stimulus (noise, bills, deadlines, etc.)
   Underload--Not enough stimulus (boredom, depression)
   Life changes--Major happenings of life (death in the family)

2. Time of day the stressor is experienced

3. Reaction to the stressor--ask yourself, "How am I reacting to the situation?" Some possible reactions are:
   
   Aggression--Physical (hitting someone), verbal (ridicule, sarcasm), or displaced (taking it out on someone else or yourself, hitting the wall).
   Withdrawal--Withdrawing by either physically or mentally getting away from the situation.
Acting—Doing something about the situation (quitting your job).

Redefining the situation—Trying to look at the situation from another, more rational viewpoint.

Relaxation—Recognizing tension and deliberately relaxing (practicing a relaxation technique).

4. Comments—write any comments about your feelings.
# Daily Stress Log

Week of ___________

<table>
<thead>
<tr>
<th>Stressor Category</th>
<th>Time of day Experienced</th>
<th>Reaction to the Stressor</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Home Practice Chart**

**Directions:** For each week of your stress management program, record the date in the blank next to the week number. Space is provided to record your practice twice a day. Next to the technique used write in the number of minutes you practiced. In the last two columns write in your relaxation ratings. Remember, 0 means total relaxation and 100 means total tension.

Week 1

<table>
<thead>
<tr>
<th>Day</th>
<th>What you Practiced</th>
<th>Minutes Practiced</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Scenario:

ALTER: How could you remove the source of stress?

AVOID: How could you get away from or prevent the stress?

ACCEPT: How could you live with the stress?

Build Up Resistance

Change Self/Perception

BEST OPTION:
**Perceptions Worksheet**

**DESCRIPTION OF PERSON IN PICTURE A OR B**

1. Sex  
2. Clothing  
3. Hair style  
4. Estimated age  
5. Other characteristics

**DESCRIPTION OF PERSON IN PICTURE C**

1. Sex  
2. Clothing  
3. Hair style  
4. Estimated age  
5. Other characteristics

**RESPONSES TO TAT CARD**

1. Is that a man or woman?  
2. What is on the floor?  
3. What is the person doing?  
4. How does the person feel?  
5. Why does the person feel that way?
Ten Irrational Beliefs and Exercise

Self-Directed Irrational Beliefs
1. I need everyone's love and approval for just about everything I do.
2. I should be able to do everything well.
3. If something bad happens, I should worry about it.
4. It is easier to avoid difficult things than to try them and risk failure.
5. I will enjoy life more if I avoid responsibilities and take what I can get now.

Other-Directed Irrational Beliefs
1. Some people are bad and should be punished.
2. When things aren't going well in my life, it is terrible.
3. If things go wrong, I'm going to feel bad and there's very little I can do about those feelings.
4. What has happened to me and what I have done in the past determine the way I feel and what will happen to me now and in the future.
5. People and things should be different, and perfect solutions should be found for everything.

The world is unjust. My parents should not boss me around. It would be awful if I wasn't popular. I deserve to be punished the rest of my life. People should not get divorced. Because I work hard people should love me. If I ask her and she refuses, it's going to be awful. Because I have suffered, people should be kind to me. If I fail, I am
worthless. My parents should love me and approve of what I do. If he doesn't like me, I am worthless and valueless. If I can't find a solution, I must be dumb or stupid. You just can't trust anyone. I was born a loser.
Guidelines for Using Ellis' ABC Chart

A. Write down the objective facts of the event as they occurred at the time you were upset.

B. Write down your self-talk about the event. Look for irrational ideas.

C. Focus on your emotional response. Make a clear one or two word label such as angry, depressed, felt worthless, etc.

D. Dispute and change the irrational self-talk identified at step B.

1. Select the irrational idea to dispute.
2. Is there any rational support for this idea?
3. What evidence exists for the falseness of this idea?
   a. There are no laws of the universe that say I shouldn't have pain or problems.
   b. Life is not fair. It is a sequence of events, some of which are pleasurable and some of which bring pain.
   c. If problems occur, it is up to me to solve them.
   d. Trying to keep a problem from developing is adaptive, but resenting and not facing it once it exists is a dangerous strategy.
   e. No one is special. Some have less pain than I either due to luck or decisions I have made that contributed to the necessary conditions for my problems.
   f. Just because I have a problem doesn't mean I
have to suffer. I can take pride in the challenge of a creative solution.

4. Does any evidence exist for the truth of this idea?

5. What is the worst thing that could happen to me if what I want to happen doesn't, or what I don't want to happen does?

6. What good things might occur if what you want to happen doesn't, or what you don't want to happen does?

E. Substitute alternative self-talk.
**ABC Chart**

A. Activating Event:

B. Rational Ideas:

  Irrational Ideas:

C. Consequences of the irrational ideas:

D. Disputing and challenging the irrational ideas:
   1. Select the irrational idea:
   2. Is there any rational support for this idea?
   3. What evidence exists for the falseness of the idea?
   4. Does any evidence exist for the truth of the idea?
   5. What is the worst thing that could happen to me?
   6. What good things might occur?

E. Alternative thoughts:
   Alternative emotions:

Complete this sheet for two current stressors in your life and give a SUDS rating (0-100) for each of them.
Cognitive Restructuring Guide and Homework

QUESTIONS TO ASK SELF DURING STRESSFUL SITUATIONS

1. What exactly is at stake?
2. Does this situation reflect a threat signaling potential harm, or a challenge, signaling an opportunity?
3. Do I have the resources to handle this situation?
4. How do I know that this will indeed happen?
5. What evidence do I have that this will happen?
6. Are there other ways of looking at the situation?
7. There are times when I don't do as well as I would like, but other times I do, so what are the differences?
8. Have I only had failures in situations in the past, or were there times I did okay?
9. What am I saying to myself right now?
10. What is the evidence for this conclusion?
11. Is there evidence that contradicts this conclusion?
12. Are there alternative explanations for how I am feeling?

FOUR STAGES IN CONFRONTING A STRESSOR

Preparing for Stressor
Purpose--Focus on specific preparation for task.
Example--What do I have to do?
1.
2.
3.

Confronting and Handling Stressor
Purpose--Control stress reaction.
Example--Just "psych" yourself up--I can meet this challenge.
1.
2.
3.
Coping with Feelings of Being Overwhelmed
Purpose--Prepare to deal with worst situation when feeling out of control and overwhelmed.
Example--Don't try to eliminate stress totally; just keep it manageable.
1.
2.
3.

Evaluation of Coping Efforts and Self-Rewards
Purpose--Evaluate attempt, what helped and what didn't.
Example--I made more out of stress than it was worth.
Problem Solving Worksheet

THREE VIGNETTES

1. There is a boy in your class who has a body odor problem. You know the general sentiment is, "He's not such a bad kid, but I just hate to get near him." You hardly know him—you just have sort of a nodding acquaintance at a friendly distance. Ideally what would you do?

2. You see a kid three or four years younger than you shoplifting at the local discount store. You're concerned that he'll get into serious trouble if the store detective catches him. What would you do?

3. Your father has been giving you a lot of flack about how much TV you watch. One day you come home from school and the TV set isn't working. You suspect your father has done something to the set. What would you do?

WASIK'S 7 STEPS IN PROBLEM SOLVING

<table>
<thead>
<tr>
<th>Steps</th>
<th>Questions/Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Problem Identification</td>
<td>What is the concern?</td>
</tr>
<tr>
<td>2. Goal selection</td>
<td>What do I want?</td>
</tr>
<tr>
<td>3. Generation of alternatives</td>
<td>What can I do?</td>
</tr>
<tr>
<td>4. Consideration of consequences</td>
<td>What might happen?</td>
</tr>
<tr>
<td>5. Decision making</td>
<td>What is my decision?</td>
</tr>
<tr>
<td>6. Implementation</td>
<td>Now do it!</td>
</tr>
<tr>
<td>7. Evaluation</td>
<td>Did it work?</td>
</tr>
</tbody>
</table>

HOMEWORK

State what the problem is, all the possible solutions, the
one you'd choose as the best one and explain why to each of the following situations.

Sam had just moved in that day and didn't know anyone. He wanted to have friends in the neighborhood. The story ends with Sam having many good friends and feeling at home in the neighborhood.

Sam's boss has asked him to work late although he's already made plans to go out on a special date.
Stretching

A frequently overlooked component in overall fitness besides muscle strength and aerobic capacity is flexibility. Stretching can serve as a link between the sedentary and the active life and has additional benefits as a stress management technique. It keeps muscles supple and ready for action as well as preventing injuries if used before and after vigorous exercise.

The proper sequence is to stretch easy for 10-30 seconds then to go to mild tension and relax. The tension should quickly subside or you've gone too far. The next step is the developmental stretch in which you move a fraction of an inch further and hold for 10-30 seconds. Again the tension should diminish. This type of stretch fine tunes muscles and increases flexibility. It is important that one's breathing during stretching be slow, rhythmical, and under control.

Several guidelines are especially important to keep in mind:
1. Don't stretch too far, especially in the beginning. Get a slight stretch and increase it after you feel yourself relax.
2. Hold a stretch in a comfortable position; the stretch tension should subside as you hold it.
3. Breathe slowly, deeply and naturally--exhale as you bend forward. Do not stretch to a point where you cannot breathe normally.
4. Do not bounce. Bouncing tightens the very muscles you are trying to stretch. Stretch and hold it.

5. Think about the area being stretched. Feel the stretch. If the tension becomes greater as you stretch, you are over-stretching. Ease off into a more comfortable position.

6. Do not try to be flexible. Just learn to stretch properly and flexibility will come with time. Flexibility is only one of the many by-products of stretching.

There are stretching routines available for nearly every activity or body area possible. The students will be taught some general ones that are recommended for everyday use and can be performed in either a standing or sitting position.
### Summary of Communication Skills for Assertion

<table>
<thead>
<tr>
<th>NON-ASSERTIVE</th>
<th>ASSERTIVE</th>
<th>AGGRESSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VERBAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apologetic words</td>
<td>Statement of wants</td>
<td>Loaded words</td>
</tr>
<tr>
<td>Veiled meanings</td>
<td>Honest statement of feelings</td>
<td>Accusations</td>
</tr>
<tr>
<td>Hedging</td>
<td>Objective words</td>
<td>Descriptive, subjective</td>
</tr>
<tr>
<td>Rambling</td>
<td>Direct statements</td>
<td>Imperious, superior words</td>
</tr>
<tr>
<td>Failure to say</td>
<td>&quot;I&quot; messages</td>
<td>&quot;You&quot; messages</td>
</tr>
<tr>
<td>what you really mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I mean&quot;, &quot;you know&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NON-VERBAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actions instead of Attentive listening</td>
<td>Exaggerated words</td>
<td></td>
</tr>
<tr>
<td>General assured show manner</td>
<td></td>
<td>Flippant,</td>
</tr>
<tr>
<td>Look as if you mean what you say</td>
<td>Communication, caring sarcastic</td>
<td></td>
</tr>
<tr>
<td><strong>Specific</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak, hesitant, soft, wavering</td>
<td>Firm, warm, relaxed, Tense, shrill, well-modulated</td>
<td>loud, shaky demanding, cold</td>
</tr>
<tr>
<td>eyes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stance</td>
<td>Posture</td>
<td>Hands</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Averted, downcast, Open, frank, direct</td>
<td>Lean for support</td>
<td>Fidgety, fluttery, Relaxed, warm</td>
</tr>
<tr>
<td>Expressionless, teary, pleading</td>
<td>Well-balanced, at twisted</td>
<td>Relaxed, warm</td>
</tr>
<tr>
<td>eye-to-eye contact cold, staring</td>
<td>Hands on hips</td>
<td>clammy smooth motions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>196</td>
</tr>
</tbody>
</table>
1. A description of the situation to the best of my ability (What happened):

2. A description of how I felt in my body (Physical cues and symptoms: tight, anxious, etc.): Things I noticed about other people's bodies:

3. How I acted in the situation:

4. How I felt in the situation (feelings: sad, angry, aggressive, annoyed, etc.):

5. What I would like to have done in the situation:

6. Why I didn't do what I wanted to do:
Cognitive-Behavioral Assertive Bill of Rights

1. I am under no obligation to say "yes" to people simply because they ask a favor of me.
2. There is no law in the sky that says other people's opinions are more valid than mine.
3. If I say "no" to someone and they get angry, that does not mean that I should have said "yes."
4. I have a right to assert myself even though I may inconvenience others.
5. The fact that other people might not be assertive doesn't mean that I shouldn't be.
6. I can still feel good about myself even though someone else is annoyed with me.
7. Standing up for myself over "small" things can be just as important to me as "big" things are to others.
8. The fact that I say "no" to someone does not make me a selfish person.
9. If someone doesn't do something I ask them to do, that doesn't mean I shouldn't have asked them in the first place.
10. I have a right to disagree with other people, even though they feel strongly about their own opinion.
11. Just because I have already agreed to do something doesn't mean I can't change my mind and say "no."
12. I have a right to tell others when the way they are acting is annoying or upsetting to me and to give them suggestions for different ways of behaving.
13. Saying "no" to a friend probably won't make her dislike me forever.

14. People I care about might be disappointed when I don't do things that they want me to do, but that is not a catastrophe.

15. If I have to always do things I don't want to do just to get someone to like me, then I have to wonder if their liking me is critical to my well-being.

16. Other people don't have magical abilities to know what I want if I don't tell them.

17. The fact that some people are inconsiderate and obnoxious is a pain in the rear, but there is no reason why they shouldn't be that way.

18. I have a right to enjoy what I am doing and to ask others to stop doing things that interfere with my enjoyment.

19. I may want to please people I care about, but I don't have to please them all the time.

20. Give, give, giving is not the be-all and end-all of life. I am an important person in this world, too.

21. If I refuse to do a favor for someone, that doesn't mean I don't like them. They will probably understand that, too.

22. I do not have to make myself responsible for solving others' problems and for making them happy.

23. I have a right to intimidate others by my mere presence. I don't have to try to look weak, stupid, or
ineffectual just so people won’t be threatened by me.

24. I can choose not to assert myself, and I can still feel good about myself.
APPLICATION OF SIT IN STRESSFUL ASSERTIVE INTERPERSONAL SITUATIONS

Preparing for the assertive demand
Example—No negative self-statements about my not being able to deal with it! Just think of the model!

1.
2.
3.

Confronting and handling the assertive demand
Example—Don't think about getting anxious, just about what is expected.

1.
2.
3.

Coping with the presence of interpersonal anxiety
Example—Ok, now, I'm feeling some anxiety, I'll just pause!

1.
2.
3.

Reinforcing self-statements
Example—The more I do this, the easier it will get!

1.
2.
3.

FORMULA FOR DEVISING AN ASSERTIVE STATEMENT

I feel ________
when you ________
I would prefer _______
because _________
APPENDIX B

UNIVERSITY OF FLORIDA

DEPARTMENT OF COUNSELOR EDUCATION

Student's Name: ____________________________

Student's Address: ____________________________

City State Zip

Project Title: A School-Based, Stress-Inoculation Approach to Stress Management Training with Adolescents: Effects on Locus of Control, Self-Concept, State-Trait Anxiety, and Social Behavior.

Principal Investigator: Larry Kubiak

Date: __________________

To the parents of students in the prospective stress management training:

I am a doctoral candidate in the Counseling Psychology program at the University of Florida. In order to complete the dissertation requirement for my Ph.D., I am proposing to conduct a stress management training program for students in health education classes at Suwannee High School. I am concerned about the increasing stresses that adolescents face that may lead to suicide, drug abuse, depression, early pregnancy, etc. & have designed a training model that I hope will enable them to deal more effectively with a variety of stressors in their lives. The school shares my concerns as the principal, teachers, and guidance personnel involved have all lent their support to my project. A pilot study completed in the school in May indicated that the model can be effective in helping youth improve their ability to cope with stress.

Donald Meichenbaum's stress inoculation training (SIT) model views stress from a transactional viewpoint, resulting from an interplay between the person and the situation. In SIT subjects are educated about stress and especially the role their cognitions and self-statements play in this, are taught a variety of specific skills for dealing with stress, and are gradually introduced to increasingly stressful situations in order to "inoculate" them to future disabling stress.

Either I or my associate will be leading 10 classroom sessions in SIT during the child's regular class time. Classes to be included have been selected on a random basis.
Topics will include cognitive restructuring, imagery, assertiveness, problem solving, progressive relaxation, deep breathing, etc.

The aim of this study is to explore the effects of stress management training with adolescents. The information will be used to refine training interventions and assist young people to more effectively manage stress in their lives. No risks or discomforts are involved.

To participate students will be asked to complete four questionnaires after the training as well as in-class and homework exercises. Homework will include trying out various skills learned during training as well as keeping track of their effect in a daily log. This should require no more than 2 hours outside class per week during the time of the project. It should be emphasized that students in health education normally cover stress management in class. My intent is to cover this in a more comprehensive manner than is usually possible. As this is part of their usual class time, students will be graded for this section.

Please feel free to ask any questions you may have at this time or hereafter. During office hours I can be reached at 658-3333, ext. 320, or in the evenings at 362-5716.

The above stated nature and purpose of this research have been explained to me. Furthermore, I understand that this investigation will be used for educational purposes and neither subject's names nor other identifying information of any kind will be published. I also understand that either I or my child may withdraw consent at any time without prejudice. No monetary compensation is involved.

I have read and I understand the procedure described above and discussed it with my child. I agree to allow my child to participate in the procedure and I have received a copy of this description.

Subject _____________________________ Date ______

Parent _____________________________ Date ______ Parent _____________________________ Date ______

I have defined and explained fully this research to the participant whose signature appears above.

Principal Investigator _____________________________ Date ______

I strongly support and encourage your participation in this project.

Charles Sweat, Principal
Suwannee High School
## APPENDIX C
### PILOT STUDY DATA

Table 3

Means, standard deviations, and number of subjects for 11 dependent measures on pilot treatment and control group posttest scores

<table>
<thead>
<tr>
<th>Dependent measure</th>
<th>Treatment Mean</th>
<th>Treatment Standard Deviation</th>
<th>Control Mean</th>
<th>Control Standard Deviation</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nowicki Strickland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locus of Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>11.65</td>
<td>4.22</td>
<td>15.00</td>
<td>5.32</td>
<td>20</td>
</tr>
<tr>
<td>Control</td>
<td>15.00</td>
<td>5.32</td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>State-Trait Anxiety Inventory--State-Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>38.00</td>
<td>12.08</td>
<td>39.00</td>
<td>11.67</td>
<td>19</td>
</tr>
<tr>
<td>Control</td>
<td>39.00</td>
<td>11.67</td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>State-Trait Anxiety Inventory--Trait-Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>39.15</td>
<td>7.55</td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Control</td>
<td>43.84</td>
<td>9.30</td>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Piers-Harris Children's Self-Concept Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>61.90</td>
<td>8.34</td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Control</td>
<td>58.48</td>
<td>9.66</td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Considerateness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>28.50</td>
<td>3.12</td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Control</td>
<td>27.07</td>
<td>4.50</td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Dependent measure</td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------</td>
<td>--------------------</td>
<td>----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Independence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>17.20</td>
<td>2.23</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>17.48</td>
<td>2.76</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Sociability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>16.65</td>
<td>2.56</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>15.37</td>
<td>2.71</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Calmness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>20.85</td>
<td>4.34</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>20.18</td>
<td>3.84</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Effective Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>19.70</td>
<td>3.26</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>17.44</td>
<td>4.00</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Insight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>25.25</td>
<td>3.16</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>23.25</td>
<td>4.37</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jesness Behavior Checklist--Anger Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>15.30</td>
<td>2.63</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>14.33</td>
<td>3.58</td>
<td>27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4

Posttest ANOVA results for pilot study on 11 dependent measures

<table>
<thead>
<tr>
<th>Scale</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>128.939</td>
<td>1</td>
<td>128.939</td>
<td>5.389</td>
<td>.023</td>
</tr>
<tr>
<td>Within Ss</td>
<td>1076.550</td>
<td>45</td>
<td>23.923</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State-anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>11.156</td>
<td>1</td>
<td>11.156</td>
<td>7.950</td>
<td>.770</td>
</tr>
<tr>
<td>Within Ss</td>
<td>6174.000</td>
<td>44</td>
<td>140.318</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait-anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>241.296</td>
<td>1</td>
<td>241.296</td>
<td>3.252</td>
<td>.074</td>
</tr>
<tr>
<td>Within Ss</td>
<td>3189.906</td>
<td>43</td>
<td>74.183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Concept</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>134.281</td>
<td>1</td>
<td>134.281</td>
<td>1.612</td>
<td>.208</td>
</tr>
<tr>
<td>Within Ss</td>
<td>3748.531</td>
<td>45</td>
<td>83.300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerateness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>23.359</td>
<td>1</td>
<td>23.359</td>
<td>1.474</td>
<td>.229</td>
</tr>
<tr>
<td>Within Ss</td>
<td>712.851</td>
<td>45</td>
<td>15.851</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>.910</td>
<td>1</td>
<td>.910</td>
<td>.139</td>
<td>.710</td>
</tr>
<tr>
<td>Within Ss</td>
<td>293.941</td>
<td>45</td>
<td>6.532</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>18.814</td>
<td>1</td>
<td>18.814</td>
<td>2.672</td>
<td>.105</td>
</tr>
<tr>
<td>Within Ss</td>
<td>316.845</td>
<td>45</td>
<td>7.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calmness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>5.078</td>
<td>1</td>
<td>5.078</td>
<td>.307</td>
<td>.588</td>
</tr>
<tr>
<td>Within Ss</td>
<td>742.625</td>
<td>45</td>
<td>15.502</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>58.452</td>
<td>1</td>
<td>58.452</td>
<td>4.250</td>
<td>.042</td>
</tr>
<tr>
<td>Within Ss</td>
<td>618.8672</td>
<td>45</td>
<td>13.752</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale</td>
<td>SS</td>
<td>df</td>
<td>MS</td>
<td>F</td>
<td>p</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>----</td>
<td>------</td>
<td>-------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Insight</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>45.533</td>
<td>1</td>
<td>45.533</td>
<td>2.982</td>
<td>.087</td>
</tr>
<tr>
<td>Within Ss</td>
<td>686.935</td>
<td>45</td>
<td>15.265</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Anger Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>10.736</td>
<td>1</td>
<td>10.736</td>
<td>1.036</td>
<td>.315</td>
</tr>
<tr>
<td>Within Ss</td>
<td>466.200</td>
<td>45</td>
<td>10.360</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

OUTLINE FOR SIT STRESS MANAGEMENT CLASSES

Session I--Data Collection

I. Introduction & overview
   A. What is stress?
   B. What is stress management?
   C. Why is it needed?
   D. Sequence of procedures for S.M. sessions
   E. Homework
   F. Potential benefits

II. Data Collection
   A. Elicit 10 personal stressors.
   B. Compile list of group's common and unique stressors.
   C. Elicit preferred coping strategies.
   D. Small group discussion of common and unique coping strategies.
   E. Compile list of group's common and unique coping strategies.
   F. Summary of major points regarding stress.

III. Stress management technique--Diaphramatic breathing

IV. Homework
   A. Daily stress log
   B. Home practice chart

Session II--Assessment Skills Training

I. Review homework
II. The AAAbc's of stress management

A. Trainer introduces AAAbc decision-making model for stress management.

B. Stressful scenerios are classified according to the AAAbc model.

C. Small group application of the AAAbc model to relevant personal stressors.

D. Small group selects the "Best Choice" from several possible strategies.

E. Compile results from each group for large group discussion.

F. Students apply AAAbc model to individual stressors.

III. Stress management technique--Progressive relaxation

IV. Homework

A. Daily Stress Log

B. Home Practice Sheet

Session III--Skills Training in Cognitive Restructuring I

I. Review homework

II. Old Lady-Young Girl Exercise--designed to demonstrate how two individuals with different frames of reference can perceive the same event in two different ways.

III. Thematic Apperception Test (TAT) exercise--designed to show that there are often many different explanations for what we see.

IV. Complete the Beliefs Inventory to uncover one's irrational beliefs.
V. Lecture on irrational beliefs.

VI. Discussion and application of Ellis' ABC chart for eradicating irrational beliefs.

VII. Stress management technique--Deep muscle relaxation

VIII. Homework
   A. Daily Stress Log
   B. ABC chart for two stressors

Session IV--Skills Training in Cognitive Restructuring II

I. Review homework

II. Role play of an activating event and irrational dialogue.

III. Lecture and small group discussion regarding automatic thoughts.

IV. Lecture and examples of Meichenbaum's guided self-dialogue.

V. Stress management technique--Autogenics

VI. Homework
   A. Daily Stress Log
   B. ABC Sheet
   C. Develop self statements for four stages of guided imagery.

Session V--Skills Training in Problem Solving I

I. Review homework

II. Problem solving
   A. Alternative action search exercise.
   B. Present Wasik's seven steps in problem-solving.
C. Explanation and demonstration of first three steps in problem solving.

III. Stress management technique--Benson's relaxation response

IV. Homework
   A. Daily Stress Log
   B. Stress imagery
   C. Interpersonal Problem Solving exercises

Session VI--Skills training in Problem Solving II

I. Review homework

II. Problem solving
   A. Decisions-Faces exercise
   B. Lecture and discussion on defining a goal.
   C. Role play of situation for interpersonal problem solving.
   D. Exercise to elicit student input regarding specific stages in problem solving.

III. Stress management technique--Stretching

IV. Homework
   A. Daily Stress Log
   B. Stress Imagery
   C. Home Practice Sheet

Session VII--Skills Training in Assertiveness I

I. Review homework

II. Assertiveness
   A. Discussion on recognizing how another person feels.
B. Demonstration of passive, aggressive, and assertive strategies for turning down a date.

C. Speak Up exercise.

D. Definitions for passive, aggressive, and assertive behaviors.

E. Summary of communication skills for passive, aggressive, and assertive behavior.

F. Discussion of irrational beliefs that support passive and aggressive behaviors.

III. Stress management technique--Imagery

IV. Homework

A. Daily Stress Log

B. Daily Practice Sheet

C. Stress Imagery

D. Assertion Group Journal

Session VIII--Skills Training in Assertiveness II

I. Review homework

II. Assertiveness

A. Present cognitive-behavioral assertive bill of rights.

B. Present example of faulty inner dialogue and irrational thinking in a dating situation.

C. Application of Meichenbaum's SIT guided imagery to assertiveness.

D. Verbal components of assertiveness.

E. Strategies for use when others block one's attempts at assertiveness.

F. Class role play of situations in an assertive manner.
III. Homework
   A. Daily Stress Log
   B. Stress Imagery
   C. Daily Practice Log
   D. Assertiveness Journal

Session IX--Application and Follow-Through
I. Review homework

II. Application

III. Homework
   A. Daily Stress Log
   B. Stress Imagery
   C. Daily Practice Log
   D. Assertiveness Journal

Session X--Maintenance and Generalization
I. Review homework

II. Summarize and clarify topics covered throughout session.

III. Inoculation for failure.

IV. Final exercise--25 words or less.
APPENDIX E

OUTLINE FOR SMT STRESS MANAGEMENT CLASSES

Session 1

I. Introduction and overview.

II. Effects of stress in America.
   A. Provide statistics on health expenditures.
   B. Describe national symptoms of stress (e.g., numbers of heart attacks and ulcers).

III. Define stress.
   A. Explain Selye definition.
   B. Explain General Adaptation Syndrome.
   C. Discuss stress overloading and health-promoting lifestyle responses to stress.

IV. View filmstrip "Understanding Stress and Conflict" by Sunburst Publications.

Session II

I. Introductory stress statements--have students pretend they are receiving various news statements (e.g., won $1000, failed an exam) and note their reactions.
   A. Discuss how situations are alike.
   B. Discuss types of physical and emotional reactions experienced.
   C. Have students write down which events they viewed as positive and which as negative and give their reasons.

II. Lecture on stress, stressors, and distress.
III. Lecture on anxiety.

IV. Encourage students to maintain a daily stress book for later class discussion. Entries should detail the stressor, response, and behavior.

Session III

I. Discuss Holmes and Rahe chart on stressful life events and have students determine their score.

II. Class discussion on stress at different ages.
   A. Display and discuss differences between stressful life events lists for adults and children.
   B. Have class discuss how their ratings would differ if given when they were in elementary school.

III. Class poll on stress in adolescence.

IV. Have students complete a self-inventory of stress and add to stress book.

Session IV

I. Lecture on physiological changes occurring during the General Adaptation Syndrome.

II. Lecture on physical reactions to prolonged stress.

III. Class discussion of stress symptoms and signs of successfully coping with stress and strains.

Session V

I. Perception exercise--"The Lady"

II. Small group work and discussion of "Stories".

III. Small group exercise.
   A. Students generate stories about adolescents whose
distress is directly related to their perceptions of life events.

B. Collect and discuss these in large group.

Session VI
I. Lecture and discussion on relaxation.
II. Instruct students in Benson's relaxation response.
III. Instruct students in deep muscle relaxation.
IV. Encourage students to teach these techniques to another as homework.

Session VII
I. Class discussion on "Three Diaries" which illustrate passiveness, aggressiveness, and assertiveness.
II. Lecture on aggressive, passive, and assertive communication.
III. Question and answer period.
IV. Practicing saying no.
V. Assertiveness role play.
VI. Have students examine stress books for instances in which they would have benefited from assertiveness.

Session VIII
I. Case study exercise of "Michael" and "Ginny" with class discussion.
   A. Identify stressors and signs of stress.
   B. Discuss use and misuse of diet and exercise in each situation.
II. Have students fill in charts showing the potential links
between diet, exercise, and sleep, on the one hand, and health and stress on the other during lecture.

III. Lecture on links between diet, exercise, and sleep to health and stress.

Session IX

I. Lecture and discussion on alcohol and drug abuse.
   A. Define drug.
   B. Define drug use, misuse, and abuse.
   C. Define various drug terms (e.g., tolerance).
   D. Discuss four major drug categories.
   E. Discuss myths about alcohol.
   F. Outline responsible drug use.

II. Lecture and discussion on suicide.
   A. Discuss characteristics of suicidal individuals.
   B. Point out cues of a high suicidal potential.
   C. Outline strategies for helping the suicidal person.

Session X

I. Review stress books and discuss.

II. Assist students in making a contract for changing their lifestyle in order to better manage stress.

III. Lecture and discussion on environmental stress specifically focusing on the school.
REFERENCES


adolescent boys. Unpublished manuscript, University of Wisconsin.


BIOGRAPHICAL SKETCH

Lawrence Curtis Kubiak was born on January 10, 1952, in Oklahoma City, Oklahoma. He graduated as the valedictorian of Star Spencer High School in Spencer, Oklahoma, in 1970. In 1974 he graduated cum laude with a bachelor's degree in psychology from St. John's University in Collegeville, Minnesota. Mr. Kubiak then entered the University of Florida where he received his Master of Education and Specialist in Education degrees in counselor education in 1976. Upon graduation, he moved to Live Oak, Florida, where he worked as the Alcoholism Program Coordinator for the Suwannee River Counseling Center. In 1978, he married Vicki Costopoulos. Mr. Kubiak began his doctoral studies in 1982 a few days after the birth of his son, Stephen. Two years later, Mr. Kubiak assumed the position of Director of Psychological Services for the Child and Family Enrichment Center in Dowling Park, Florida. His daughter Stephanie was born in February of 1986. The family continues to enjoy the slower pace of rural life in Live Oak.
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

James Archer, Jr., Chairman
Associate Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Margaret L. Fong
Assistant Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

James I. Morgan
Associate Professor of Psychology

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May, 1987

Dean, College of Education

Madelyn J. Stockham
Dean, Graduate School