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EFFECTS OF STRESS MANAGEMENT TRAINING ON LOCUS OF CONTROL ORIENTATION AND STATE-TRAIT ANXIETY IN ADOLESCENTS

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EFFECTS OF STRESS MANAGEMENT TRAINING ON LOCUS OF CONTROL ORIENTATION AND STATE-TRAIT ANXIETY IN ADOLESCENTS

By

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ABSTRACT

EFFECTS OF STRESS MANAGEMENT TRAINING ON LOCUS OF CONTROL ORIENTATION AND STATE-TRAIT ANXIETY IN ADOLESCENTS

By

Leah B. Hoopfer

The purpose of this study was to examine the effect of a structured stress management program on adolescent-perceived stress and locus of control. Many studies have looked at both stress and locus of control issues among adults, but few have focused specifically on these issues as they relate to adolescents. Even fewer have attempted to relate stress to locus of control in adolescence although these two constructs have been linked in the literature. This study was designed to evaluate the effectiveness of a stress management program with adolescents by monitoring perceived state and trait anxiety and locus of control in treatment and control groups.

The researcher sought to investigate the following questions:

1. Can perceptions of locus of control change as a result of participation in a stress management program?

2. Can a stress management procedure instigate a change in individual trait anxiety?

3. Can a stress management procedure instigate a change in an individual's level of state anxiety with particular situations?

4. Is trait anxiety positively correlated with locus of control?

The subjects in the study were 94 adolescents involved in 4-H--Youth Programs in the summer of 1981. All resided within a 150-mile radius of Lansing, Michigan. Counties within this radius were asked to volunteer

for the study. From this pool of volunteer counties, a group from each county was randomly assigned to the treatment group, control group, or nonparticipation group. Three groups were assigned to the treatment group, three to the control group, and two were nonparticipants. All subjects in the study were pretested with the three covariates: the Nowicki-Strickland Locus of Control Scale, the Spielberger, Gorsuch and Lushene State Anxiety subscale and the Spielberger, Gorsuch and Lushene Trait Anxiety Subscale. Each subject identified a personal stressor and described it in writing prior to taking the state anxiety subscale. Personal stressors included problems in communicating with parents, peer pressure, perceived pressure to have sexual contact with the same or opposite sex, problems related to plans for the future, and school related pressures, to name but a few of the personal stressors which were defined by the treatment and control subjects.

The treatment group members received four training sessions in stress management over a four-week period and took the state anxiety subscale in relation to their identified stressor at each session. At the completion of the four-week period, all subjects were posttested on each of the measures.

The pre- and post-measures of the three dependent variables were analyzed using the Finn model multivariate analysis of covariance. The MANCOVA assessed differences between the treatment, sex, and interaction of treatment and sex for the treatment and control groups. The results indicated that subjects were no different in relation to the independent variable, sex. No significant differences for sex or treatment by sex interaction were revealed. The MANCOVA revealed no significant difference in change in locus of control or trait anxiety, but a significant difference

was revealed for state anxiety between the treatment and control groups. A moderate, positive and statistically significant correlation was found between locus of control and trait anxiety.

This research presents preliminary evidence of positive effects of stress management training in reducing adolescent state anxiety. Future research might explore modes to further reduce adolescent state anxiety and continue to address the question of reducing adolescent trait anxiety and moving the adolescent toward the internality end of the continuum of locus of control through stress management training.

Dedicated to

Jack and Kevin Hoopfer
Edward and Ilah Cox

Their patience, understanding, continuing sacrifices and support have spurred me on to completion of this stage of my education.

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My appreciation is extended to all the people who directed and supported me in my doctoral studies. I thank the members of my committee, Dr. Gaston Blom, Dr. Walter Hapkiewicz and Dr. Sam Moore, for their assistance in planning and implementing this dissertation. As committee chairperson, Dr. Don Hamachek gave willingly of his time and expertise directing the dissertation and aiding me throughout my doctoral program. A special expression of appreciation is also extended to Dr. Christopher M. Clark and Dr. Richard Hill for their interest and support.

I am also greatly indebted to the six county programs that participated in the study. The participating youths taught me a great deal about the concerns of an adolescent audience, much of which will never be captured in an empirical study.

I also wish to thank my friends Dr. Norman Eburne, John Abell and Alice Kersey for their many indications of support.

Finally, I would like to express my appreciation to four important people in my life. Both my husband Jack and our son Kevin (who became a part of our family midway into my doctoral studies) have been supportive and inspirational in their own ways. My parents, Edward and Ilah, have given me untold support since my birth. Their modeling conveyed to me that female children were as capable as male children.

Janet Olsen is an excellent editor--I continually appreciate her talents. Linda Salemka did her usual good work in typing the manuscript.

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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction

Recently the researcher conducted a stress management workshop with a small group of adolescents in temporary foster care along with their group-home parents. One sixteen-year-old male, referred to here as Curt, especially stimulated the researcher's interest. Curt learned the relaxation exercises quickly, but, more interestingly, he appeared to realize that perhaps he could change his parental home situation (he wanted to return home). Curt began to voice ideas for dealing with the conflict between his mother and himself. In the goal-setting section of the workshop, he devised a strategy to deal with this interpersonal conflict with his mother.

The group-home mother informed the researcher that this was the first action of this type that Curt had engaged in. Up to this point he had continually blamed others for the problems he had been having at home and which had taken him out of his parental home. Curt seemed to operate on the premise that others were responsible for doing something about his situation.

Two months after the workshop session, Curt went home, and he went home with a plan for doing something about his life situation. Curt is still there.

With this experience and numerous others, the researcher began to wonder if learning effective stress management could transfer to other areas of one's life situation and improve an adolescent's perceived control. Adolescents seemed to be learning to more effectively manage

their stressors, but, even more interestingly, they seemed to approach situations with an increased internal locus of control. This study is designed to assess that perception and evaluate the particular stress management program.

Purpose

The researcher's purpose in this study was to examine the effect of a stress management program on adolescent-perceived stress and locus of control. Adolescents were taught to identify their life stressors and were taught various stress reduction techniques, including progressive relaxation (Jacobson, 1976), autogenic relaxation (Luthe, 1963), and a simplified form of meditation (Benson, 1975). Adolescents also learned various cognitive strategies, including a form of systematic desensitization (Wolpe, 1958), cognitive restructuring (Goldfried, Decenteneo and Weinbert, 1974), and certain goal-attainment procedures (Anderson, 1978). All these strategies were directed at aiding the adolescent in dealing more effectively with his/her life stress. The study addressed two fundamental questions: (1) Does the treatment have a positive effect on reducing adolescent stress?, and (2) Does the treatment in any way affect the level of locus of control of the adolescent?

The work done in this study had the opportunity of benefiting not only the sample of adolescents worked with but also a potentially much larger population of adolescents who would learn relatively simple but systematic stress management processes. Adolescence has been characterized as a time of rapid physical, cognitive and emotional growth; it has been called a time in which the individual must learn to deal with new and

ever-increasing life changes (Adams, 1976). These life changes and the rapid growth can be easily translated into potential life stressors for the adolescent. Numerous studies have found that those adolescents who cope best with stress and anxiety and who have a higher level of internal locus of control deal more effectively with their life situations (Sarason, 1980).

Helping adolescents deal more productively with their life situations and helping them take increased control of their lives have been goals of educators, youth-serving agencies, social service agencies and juvenile authorities. A reduction in adolescent stress and/or the ability to deal more effectively with it, and an increase in perceived and actual control over one's life situation are socially and educationally desirable end products which can beneift a large number of adolescents.

Statement of the Problem

A myriad of researchers have investigated the physiological and psychological elements of the phenomenon labeled stress (Spielberger, 1972; Sarason and Spielberger, 1979). Almost equal interest has been exhibited in the construct of locus of control since its description by Rotter (1956, 1966). Though a majority of works on stress and stress management refer to the importance of personal abilities and personal control in dealing with life stressors, few have attempted to increase locus of control or to measure any increase in locus of control. Even fewer studies have investigated stress management and locus of control in the adolescent population.

In this study the following questions were asked:

1. Can perceptions of locus of control change as a result of participation in a stress management treatment?

2. Can a stress management procedure instigate a change in individual trait anxiety?

3. Can a stress management procedure instigate a change in an individual's level of state anxiety with particular situations?

4. Is trait anxiety correlated with locus of control?

Instrumentation in answering these questions will include the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory (STAI) and the Nowicki-Strickland Locus of Control Scale.

Working hypotheses include:

1. Adolescents involved in this stress management program when compared to the control group will show an increase in locus of control along the continuum from external to internal levels measured by the Nowicki-Strickland I-E scale for adolescents on pre-post measures.

2. Adolescents involved in this stress management program when compared to the control group will show a decline in A-Trait Anxiety measured by the trait subscale of the STAI on pre-post measures.

3. Adolescents involved in this stress management program when compared to the control group will show a decline in A-State Anxiety measured by the state subscale of the STAI on pre-post measures.

4. There will be a positive correlation between position on the trait subscale of the STAI and the Locus of Control Scale--those scoring high on the trait subscale of the STAI will score high on the Locus of Control Scale on both the pre- and posttests.

Definition of Terms and Constructs

Descriptions of terms and constructs utilized in this study are included here with further elaboration in the review of literature in Chapter 2.

The major terms and constructs defined in this introduction are stress, stressor, threat and anxiety, State-Trait Anxiety, internal and external locus of control, contingency awareness, locus of control as a learned phenomenon, and locus of control manipulated through stress management.

Stress and Anxiety

The concept of stress in the literature is used to describe a variety of physiolocial, cognitive, and behavioral phenomena. However, there is no general definition that satisfactorily encompasses the range of events subsumed under the term "stress."

According to the traditional Cannon (1939) approach to describing stress reactions, when an organism is threatened with or confronted by a threatening stimulus, an emergency "fight or flight" reaction is immediately elicited. This reaction is typically manifested in general sympathetic nervous system excitation which results in muscular activation, increase in blood pressure, adrenalin secretion and other physiological changes. This physiological excitation requires some form of discharge. In animals other than humans, the discharge is normally achieved by automatic, species-specific patterns of motor behavior that involve either fighting or fleeing. This activity aids the animal in discharging the body excitation.

While humans exhibit the same sympathetic excitation when facing danger, threat or stressors, our complex cultural and institutional norms and rules often preclude direct actions of fight and flight. Therefore, a ready means for releasing the tension of mobilization is often unavailable. Hence, learning to recognize the stressor response and then participating in some acceptable mode of discharge should aid the individual in actively and effectively coping with his/her stressors.

Anxiety, like stress, has been investigated as a phenomenon with physiological, cognitive, and behavioral components. Spielberger (1972) has found over 5,000 articles and books on anxiety published in the psychological and medical literature in the '50s and '60s. The construct has remained of equal interest in the '70s. Despite this volume of interest and study on stress and anxiety, there is little agreement on the precise meaning of the term or terms.

In this study, we shall utilize Spielberger's (1979, p. 17) definition of stress and the ultimate anxiety state.

> . . . stress is a complex psychobiological process that consists of three major elements with the temporal sequence of events--
>
> STRESSOR ——————> PERCEPTION OF THREAT ——————> ANXIETY STATE

The stress process is initiated by a situation or stimulus that is potentially harmful or dangerous (the stressor). If a stressor is interpreted by the individual as threatening or dangerous, an anxiety reaction will be initiated.

The term <u>stressor</u> is used to describe situations or stimuli that are objectively characterized by some degree of physical or psychological danger. <u>Threat</u> refers to the individual's perception or appraisal of that situation or stimulus as potentially dangerous or harmful.

Persons who see a stressful situation as threatening are said to experience an anxiety reaction. The term <u>state anxiety</u> is used by Spielberger to describe an emotional reaction that consists of subjective feelings of tension, apprehension, nervousness and worry, and

heightened activity of the autonomic nervous system. This entire process is referred to as stress.

The specification of the components of anxiety has been enumerated by the research of Spielberger, Gorsuch, and Lushene (1970). These studies led to a two-factor state-trait 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 the individual perceives as threatening. Trait anxiety (A-Trait), on the other hand, designates 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. Note how this corresponds with the tenets laid out under the introduction to locus of control.

To measure trait and state anxiety, Spielberger and cohorts developed the State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Lushene, 1970). The inventory is used in this study to measure levels of trait and state anxiety of the adolescent before and after the adolescent participates in the stress management program.

The state subscale is used in conjunction with a specific stressor identified by the adolescent and is given at each of the four stress management workshop sessions. (See Chapter Three, page 72 , for an explanation of its use.)

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 locus of control, is described as a generalized expectancy related to an individual's belief concerning the locus of causality for events. At the 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 including such examples as fate, chance, luck and powerful other persons (Rotter, 1954, and Rotter, 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:

> 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 believe 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 person's belief that he/she is controlled by forces outside of him/herself. Lefcourt contrasted externals with the 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. (Lefcourt, 1976, p. 2)

In this study the researcher was interested in the construct of "contingency awareness" (Watson, 1966) as it relates to locus of control. Contingency awareness links self-generated activity and resulting environmental change to explain the origins of internal locus of control. Research by Crandall (1973), Stephens (1973), Watson (1966), and Watson and Ramey (1972) has described the steps in the process of developing a sense of instrumentality. To appropriately repeat a given activity requires an awareness of previous action and outcome sequences. That is, an individual must be able to recall his/her prior actions that caused a given outcome, and that person must know that those actions were related to those outcomes if he/she is to repeat the sequence. Thus, the cognitive, behavioral and affective components of the learning sequence become of utmost importance. This study contends that learning a sequence for dealing with one's stressors and applying the sequence appropriately in subsequent situations (contingency awareness) will lead to a more internal locus of control and a lower perceived stress level.

Social learning theory proposes that a person is a planning, thinking organism and that his/her 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. Examples of such techniques are seen in Ellis' Rational Emotive Therapy (1962) and cognitive restructuring methods used by Meichenbaum (1974) and others.

Anxiety reduction interventions based on behavioral and social learning theory are designed basically to recondition new behavior

responses which are incompatible with an anxiety response to the stimuli which presently evoke an anxiety response. Examples of such treatments include Wolpe's (1958) systematic desensitization techniques and their many derivatives. The social learning theoretical approach, including the cognitive restructuring approach, provides the basis for the stress management program under study.

It is important to note that while many researchers view locus of control as a trait, theoretically it is not. In the origin of locus of control, Rotter (1966, 1975) and Rotter, Chance and Phares (1972) viewed it as a learned phenomenon which can be affected by certain learning experiences. Lefcourt dealt with this issue and stated:

> For if locus of control were thought to be a trait, consistent and inherent in the person being observed, then evidence regarding change would logically lead one to question the very legitimacy of the locus of control construct. . . . However if the position is adopted that people do not have traits such as a locus of control, as if it were a possession, but rather are said to construct interpretations of events, some of which pertain to causality, then it will be less disconcerting to encounter both stability and change in these constructions. . . . It is easier, though, to comprehend both the stability and changes of our constructions if they are regarded as constructions rather than as traits, or other less variable internal attributes. (Lefcourt, 1976, p. 112)

Thus, this study views locus of control as a construct which can be successfully manipulated, given the appropriate contingencies. Studies of such successful manipulation are reviewed in Chapter Two. Special confounding variables such as age, sex and socio-economic status are also reviewed. All have been related to specific change or status in locus of control measures.

Locus of Control Manipulated through Stress Management

Individual differences in how much control an individual perceives that he/she has over his/her reinforcements have been related to various correlates via the internal-external locus of control dimension (Rotter, 1966; Rotter, Chance and Phares, 1972). Numerous studies involving locus of control in children and adolescents have found this dimension to have wide predictive utility. Internality has been found to be positively related to such variables as popularity (Nowicki and Roundtree, 1971), achievement (Nowicki and Strickland, 1971), delay of gratification (Strickland, 1970), academic achievement (Reimanis, 1973), academic motivation (Crandall, et al., 1965), ability to resist coercion, (Lefcourt, 1976) and approaches to deal with stress (Lefcourt, 1976).

Because of this high predictive utility, it is supposed that fostering a change toward the internality end of the continuum would be a socially and academically desirable motive. Because this move appears desirable, and because locus of control is viewed as a construct which can be manipulated, this study attempts to effect that manipulation through a series of stress management experiences. These experiences will make clear, through a contingency awareness approach, the connection between an adolescent's behavior and the resultant reinforcement. It is suggested that a new-found ability to positively manage one's stressors could have the effect of making adolescents perceive themselves to be more in control of events and thus more internal.

Lefcourt argued that:

> . . . man must come to be more effective and able to perceive himself as the determiner of his fate if he is to live comfortably with himself. (Lefcourt, 1976, p. 3)

It appears then that the construct of locus of control and the phenomenon of stress management under consideration in this study may have a cyclical effect upon each other. Developing a more internal locus of control could affect how positively one deals with his/her stressors, and how one learns to deal with his/her stressors could affect where he/she falls on the locus of control continuum.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter is divided into four sections entitled: Overview of Social Learning Theory; Stress and Anxiety Research; Locus of Control Research; and Locus of Control and Stress.

The section on social learning theory provides a general overview of social learning theory as it relates to the locus of control construct and as it relates to stress management. The next section reviews the history and some of the contemporary research on stress and anxiety, especially as it relates to management of life stress. The third section reviews research which has laid the base during the past 25 years for the now well-researched construct of locus of control. The final section reviews research that has linked the constructs of stress and locus of control.

Overview of Social Learning Theory

Social learning theory enumerates and integrates three major sets of variables which influence behavior change. These variables are related to the environment, to the behavior of the individual, and to cognitive or internal events of the person. Social learning theory analyzes behavior as a functional interaction of all three variables. In this view, individual performance is a compositie of environmental influences that shape behavior; human actions (behavior) that, in turn, create environmental conditions; and finally cognitive processes that mediate all perceptions and ultimate actions (Bandura, 1977).

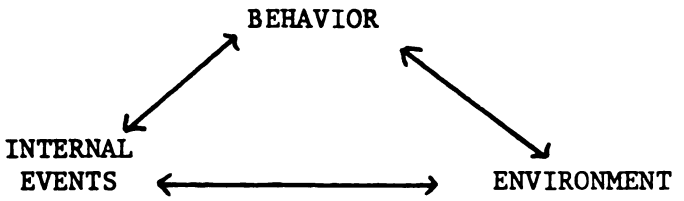

Figure 2.1: Representation of the interaction between behavior, internal events of the person (including cognition), and the environment.

A major premise of social learning theory is that the unit of investigation for the study of personality is the interaction of the individual and his/her meaningful environment. Personality is not viewed as a set of internal characteristics which the individual carries around from place to place; rather, it is viewed as a set of potentials for responding to particular kinds of social situations. Such behavior is learned and thus is modifiable with changes in experience and life situation. Social learning theorists assume that personality has unity--that a person's experiences and his/her interactions with the environment influence one another.

Another major premise of social learning theory deals with the nature of motivation. Behavior is seen as goal-directed. Reinforcements that facilitate movement toward a goal are considered positive reinforcements (Rotter and Hochreich, 1975). Through a process of differential reinforcement, successful forms of behavior are eventually selected and ineffective ones are discarded.

A third premise of importance to this study is that individuals do not learn much, if anything, from repeated paired experiences unless they recognize that events are correlated (Bandura, 1977). Thus,

developing an awareness of what one is experiencing and what responses affect that experience in what way is of primary importance. That awareness is a determinant of conditioning rather than vice versa is shown in a study done by Chatterjee and Eriksen (1962). Participants who were informed that shock would follow a certain word in a chain of associations quickly developed anticipatory heart-rate responses. In contrast, those who were led to believe that the occurence of shock was not related in any consistent way to their verbalizations showed no autonomic conditioning even though they experienced the same paired stimulation as their aware counterparts.

Another example, one which has real significance for this study, is provided by studies of the extinction of emotional reactions as a function of induced awareness. Affective reactions of people who are informed that predictive stimuli will no longer be followed by painful events are compared with those of people who are told that the threat no longer exists. Induced awareness promptly eliminates fear arousal and avoidance behavior in the informed participants, while the uninformed lose their fear only gradually (Bandura, 1969; Grings, 1973).

Also highly related to this study is Bandura's (1977) contention that the strength of a person's convictions in his/her own effectiveness determines whether that person will even try to cope with difficult situations. (Note that personal effectiveness or self-efficacy is equated with Rotter's locus of control construct.) Bandura defines an efficacy expectation as the conviction that one can successfully execute the behavior required to produce a certain outcome.

People fear and avoid threatening situations they believe themselves unable to handle, whereas they behave affirmatively when they judge themselves capable of handling successfully situations that would otherwise intimidate them. Perceived self-efficacy not only reduces anticipatory fears and inhibitions, but, through expectations of an ultimate success, perceived self-efficacy affects coping efforts once they are initiated. The stronger the efficacy or mastery expectations, the more active the individual's efforts will be. Those individuals who persist in performing activities that are subjectively threatening but relatively safe objectively will gain corrective experiences that further reinforce a sense of self-efficacy and thereby eventually eliminate most fears and defensive behaviors.

Expectations of personal efficacy are based on several sources of information. These include performance accomplishments, vicarious experience, verbal persuasion and emotional arousal. Bandura described these as follows:

> Performance accomplishments provide the most dependable source of efficacy expectations because they are based on one's own personal experiences. Successes raise mastery expectations; repeated failures lower them, . . . After strong efficacy expectations are developed through repeated success, the negative impact of occasional failures is likely to be reduced . . . Once established, efficacy expectations tend to generalize to related situations.
> Many expectations are derived from vicarious experience. Seeing others perform threatening activities without adverse consequences can create expectations in observers that they too will eventually succeed if they intensify and persist in their efforts. . . . Phobics benefit more from seeing fearful models gradually overcome their difficulties by determined effort than from observing facile performances by adept models (Kazdin, 1974; Meichenbaum, 1971). In attempts to influence human behavior, verbal persuasion is widely used because of its ease and ready availability. People are led, through persuasive suggestion, into believing they can cope successfully with what has overwhelmed them in the past. Efficacy

> expectations induced in this manner are likely to be weak and short-lived. . . . Results of several lines of research attest to the weakness of verbal persuasion that creates expectations without providing an authentic experiential base for them. Emotional arousal can influence efficacy expectancies in threatening situations. People rely partly upon their state of physiological arousal in judging their anxiety and vulnerability to stress. Because high arousal usually debilitates performance, individuals are more likely to expect success when they are not beset by aversive arousal than when they are tense, shaking, and viscerally agitated. Fear reactions generate further fear.
>
> And, . . . treatments based on performance accomplishments produce higher and stronger efficacy expectations than do vicarious experiences alone. Behavioral changes correspond closely to the magnitude of expectancy change. The stronger the efficacy expectations, the higher the likelihood that threatening tasks will be dealt with successfully (Bandura, 1977, pp. 80-82).

Thus, from social learning theory we have a theoretical basis for a stress management program designed to increase feelings of self effectance as well as the mastery of stress reduction skills.

The following outline designed by Bandura to graphically explain efficacy expectations and their sources also aids this study in graphically representing the major segments of the stress management program.

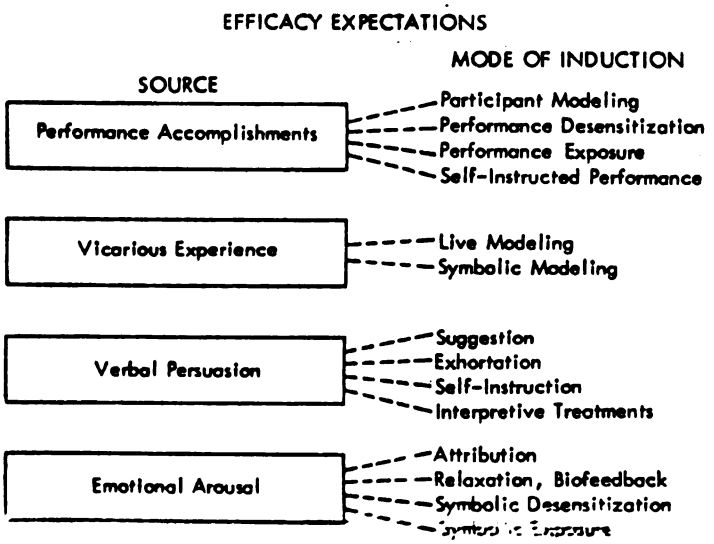

Figure 2.2: Major sources of efficacy expectations and the sources through which different modes of influence operate.

Stress and Anxiety Research

Introduction

In this section, psychological stress and anxiety are defined, and the three major factors (external conditions which produce stress, the influence stressors have on internal processes, and the emotional and behavior patterns which indicate the presence of stress) defining or classifying the constructs are reviewed. The history of stress management or coping with stress and research on stress and stress management are reviewed from early work by Jacobson (1939) to the more recent work by Meichenbaum (1976, a; 1976, b). Stress management began from a primarily physiological perspective and ultimately incorporated more cognitive aspects. Research in the broad areas of progressive relaxation, cognitive restructuring and goal-setting is reviewed and ultimately incorporated into a single approach to stress management. Meichenbaum was one of the major synthesizers of the three areas; he developed a program for stress management incorporating the behavioral, cognitive and affective components around which the program under study has been designed.

Psychological Stress Defined

The recent impetus and popularity of the concept of stress came from physiology and, in particular, from Selye's (1956) analysis of the General Adaptation Syndrome (GAS). Selye defined this concept (GAS) as a universal and nonspecific response to stress which could be provided by a variety of stimuli.

Mason (1975) stated that relatively few researchers at present use the term stress exactly according to Selye's particular definitions

and formulations. He stated that the overwhelming bulk of interest and effort in the field is concerned with psychological stress (i.e., with the impact of psychosocial influences upon the organism).

Because responses to any given psychosocial stimulus may vary widely from one individual to another or from one time to another in the same individual, there has been a natural tendency to view psychological stress phenomena in a broad, many-sided perspective and to avoid simplistic, unilateral definitions based either on input or output parameters alone.

Psychological stress is currently defined (Spielberger, 1979) in at least two different ways. It refers first to the dangerous, potentially harmful or unpleasant external situations or conditions (stressors) that produce stress reactions in the individual and, secondly, to the internal thoughts, judgments, emotional states and physiological processes that are evoked by individual stressful stimuli.

To understand the phenomenon of reaction to stressors, one must explore three major factors or descriptive classifications:

1. The external conditions which produce stress
2. The influence stressors have on internal processes
3. The emotional and behavioral patterns which indicate the presence of stress

External Conditions Which Produce Stress

Stressful circumstances are met at every stage of human growth and development, but they affect different people in different ways. External conditions which produce stress for the adolescent include

the gamut of environmental situations and life events such as choosing a career, dealing with parents and peers, academic tests, participation in sports, too much to do, and too little to do. Even pleasant experiences can be a source of stress to the individual. From before birth until the last day of life, stress is the inevitable accompaniment and influence of human existence. Because causal links between stress and illness have been established (Selye, 1956), it may seem that stress is a totally negative life influence. Such a view, however, does not withstand close examination--some stress and some anxiety is essential to success. Like all organisms, humans must adapt and adjust if they are to survive. It is adaptation and adjustment to stress, as challenge and as threat, that produces vitality and ability to cope with other life events (Spielberger, 1979).

Internal Processes Affected by Stressors

The mechanisms through which stressors assert their influence on the body's processes are not well understood, but there is general agreement that homeostasis and threat are among those mechanisms that are most important (Spielberger, 1979). Homeostasis refers to the ability of an organism to maintain a relatively constant internal environment. It does this by regulating body functions such as breathing, respiration, circulation of the blood, and body temperature.

The physiological changes associated with stress reactions (reactions to threat) are mediated by the nerve center in the brain--the hypothalamus. When a stressor triggers the hypothalamus, a complex chain of neural and biochemical processes begins. This affects the functioning of

almost every part of the body. The autonomic nervous system which mobilizes the body for coping or dealing with stressors is activated by the hypothalamus which also activates the pituitary gland. This gland releases the biochemical agent adrenocorticotrophic hormone (ACTH) into the blood stream. Stimulated by ACTH, the adrenal gland secretes adrenalin and other biochemical agents that further arouse and mobilize the body's mechanisms.

This is the source for Cannon's (1939) fight or flight response. The heart rate increases. Blood vessels close to the skin constrict, and clotting time shortens, thus making severe bleeding from potential severe wounds less likely. Breathing is faster and deeper. Saliva and mucus dry up. Increased perspiration cools the body. During this reaction, muscles tense and tighten to prepare the body for rapid and intense action.

As stated above, Selye (1959) refers to the total of the described body reactions as the General Adaptation Syndrome or GAS. GAS consists of three major stages. The first is an "alarm reaction" caused by the sudden exposure to a perceived stressful situation.

Following this is a "stage of resistance" when exposure to a stressor is prolonged. The resistance uses energy which may be needed for other vital body functions, and so there are definite limits to the adaptive capacity of the organism.

This stage is ultimately followed by the "stage of exhaustion" which can lead to death if the wear and tear of adapting to a stressor have used up the coping resources of the organism.

Emotional and Behavioral Reactions to Stress

Reactions to stress depend on whether or not a particular situation is perceived as threatening. Regardless of whether the danger is real or imagined, the sense of threat will lead to an unpleasant emotional reaction--the arousal of the anxiety state.

Anxiety states vary in intensity among individuals. Calmness and serenity indicate an absence of anxiety (Jacobson, 1938, 1976). Behaviors resulting from the anxiety state can include restlessness, trembling, shortness of breath, fearful facial expression, muscular tension, lack of energy and fatigue. The physiological changes that accompany these behaviors are essentially the same as those that occur in stress reactions. The similarity of the physiological changes in anxiety states and in stress reactions supports Mason's observation that emotional arousal transmits the message of stress (Spielberger, 1979, p. 46). Therefore, stress can be defined by transactions between the person and the environment in which stressors are linked to anxiety reactions by the perception of threat (see Spielberger's description on page 6, Chapter 1).

State-Trait Anxiety

Spielberger (1966) postulated two constructs for anxiety--state and trait. State anxiety is defined as a person's subjectively perceived feelings of tension which, in turn, activate the autonomic nervous system. Trait anxiety refers to a personality condition that more or less predisposes a person toward being susceptible to stressful conditions.

State anxiety as defined by Spielberger (1979) refers to the unpleasant emotional reactions to specific stress experienced by the individual. Though everyone experiences state anxiety from time to time, there are substantial differences among people in the frequency and the intensity with which the states are experienced. Trait anxiety describes individual differences in anxiety proneness--in the tendency to see the world as dangerous and in the frequency that state anxiety is experienced over a long period of time.

Spielberger described the 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 percipitate additional A-State reactions (Spielberger, 1979, p. 61).

Spielberger, Gorsuch and Lushene 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 dispositions, 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 (Spielberger, Gersuch and Lushene, 1970, p. 3).

Stress and Anxiety Management

There is an increasing interest in teaching children, adolescents, and adults more effective coping strategies with which to deal with stressors in their lives. Much ineffective functioning and illness can be traced to stress-related disorders (Benson, 1975). The stress

reaction may exhibit itself in a variety of ways ranging from psychosomatic illnesses such as ulcers and migraine and tension headaches, to less obvious symptoms such as the inability to concentrate and general anxiety states. These reactions may have the compounding effect of lowering self-esteem and self-confidence or interrupting interpersonal relations and decision-making (Spielberger, 1979).

Thus, the most desirable approach to stress reduction would be one which teaches active coping skills designed to deal with anxiety reactions, as well as behaviors designed to alleviate the increase in anxiety.

Coping is a catch-word for a diverse number of activities and processes directed at dealing with a situation. It is used many times interchangeably with stress management in the literature.

Pearlin and Schooler (1978) stated that coping responses have three functions: to change the stressful situation, to control the meaning of the stressful situation, and to control emotional distress after it has emerged. They conceptualized coping as any response to situational life stressors that serves to prevent, avoid or control emotional distress.

Ilfeld (1980) defined coping as attempts by an individual to resolve life stressors and emotional pain. This definition focuses upon individual effort, including both actions and cognitive processes. With this definition, coping may either anticipate or follow a stressful experience.

Lazarus (1966) defined coping in terms of two major categories: (1) Direct actions--behaviors with the goal to alter a person's

troubled relationship with the social or physical environment, and (2) Palliative modes--cognitions that alter and relieve the impact of stress on the person.

Incorporating the Ilfeld and Lazarus definitions, the salient features of coping include personal cognition and personal action. Through a cognitive reappraisal of personal stressors, development of action responses including a cadre of relaxation skills, and a system for dealing with particular stress situations (goal setting), coping through positive stress management becomes a reality.

One of the most effective means of reducing anxiety is to eliminate or avoid the stressor altogether. There are, of course, many circumstances in which a danger cannot be eliminted or avoided. An anxiety state can nevertheless be reduced if a stressful situation is reappraised as less threatening as previously perceived. Certain cognitive, affective and behavioral manipulations can affect this perception. Such manipulations are based on self-help techniques designed to increase reality perceptions and produce a more relaxed state of mind and body. Individual psychological processes which modify the way a threatening situation is perceived without in fact dealing with the actual source of danger are labeled defense mechanisms (Freud, 1946). Psychological defense mechanisms can reduce state anxiety in two ways:

1. Banishment of threatening stimuli from the conscious mind
2. Distortion of a person's perception of potentially harmful situations in his/her physical or emotional environment so that they are considered less threatening. (Spielberger, 1979, p. 2)

Spielberger also stated:

> . . . defense mechanisms invest energy in internal psychological processes in order to reduce anxiety, while the underlying problems that caused the anxiety remain unchanged. To the extent that psychological defenses protect a person from being overwhelmed by anxiety, they are helpful. But defense mechanisms are generally inefficient, and they become maladaptive if habitually used to reduce anxiety as an alternative to dealing effectively with the real source of stress. (Spielberger, 1979, p. 3).

Learning alternatives to defense mechanisms and practicing skills for effective coping are the foci of this study. Self-help techniques promoted by this study and designed to increase reality perceptions and produce a more relaxed state of mind and body include reappraisal of the threat or stressor through cognitive means, learning various relaxation techniques (including progressive relaxation and meditation), and learning goal achievement techniques to more effectively handle a stressor and its contingencies.

Cognitive Restructuring

Reappraising the threat or stressor is of foremost importance in the hierarchy for effectively dealing or coping with stress. Ellis' (1962) premise in Rational Emotive Therapy (RET) is that the appraisal of threat is the critical link in the stress-threat-anxiety chain. Anxiety is reduced by teaching individuals to modify their appraisals of threat that are based on irrational beliefs. The individual learns to monitor his/her own thoughts so that he/she can identify, analyze and challenge those beliefs. Many of the stress management exercises in this study (see The Stress Connection) are based on this sequence of identifying, analyzing and challenging.

Once anxiety states can be reliably identified, the next step for the individual is to become aware of when they happen and to analyze the situations which produce them. The third step is to monitor the appropriateness of the anxiety reactions to the physical or psychological dangers which precipitated them and examine the individual resources for coping with stress and anxiety. Some of these are already possessed by the individuals, many are skills which can be learned. All have cognitive, affective and behavioral components. Learned stress coping skills include modes for identifying stressors, abilities to share the causes of one's stressors with others, stress reduction exercises including autogenic relaxation (meditation) and progressive relaxation exercises, and techniques for laying out the causes of a stress or stressor and outlining a plan for dealing with it.

Goldfried, Decenteceo, and Weinberg (1974) developed a coping skills approach, labeled "systematic rational restructuring," which incorporates rational emotive therapy within a behavioral framework. They argued that the way an individual labels or evaluates a situation determines his/her subsequent emotional reactions. Thus an individual can acquire a more effective coping repertoire by learning to modify his/her cognitive "set" in dealing with anxiety-provoking situations. A five-step treatment procedure is employed to teach the coping skills: (1) Expose the client to anxiety-provoking situations by means of imagery and/or role-playing, (2) require the client to evaluate his/her anxiety level, (3) notice the anxiety-provoking cognitions he/she is experiencing in the situation, (4) rationally re-evaluate these cognitions or self-statements, and finally, (5) note the level of anxiety following the rational re-evaluation.

A skills-training approach similar to the one above was designed by Langer, Janis, and Wolper (1975), who successfully trained surgery patients to use coping devices such as cognitive reappraisal of anxiety-provoking events, calming self-talk, and cognitive control through selective attention. Such training of reappraisal skills, combined with preparatory information concerning postsurgery discomforts and operative care, resulted in significant reduction of postsurgical distress, as indicated by nurses' observations, requests for sedatives and length of the hospital stay.

Such coping-skills training approaches, other than those described above, have been successfully applied in a number of different problem areas. These include speech anxiety (Meichenbaum, Gilmore, and Fedoravicius, 1971), test anxiety (Sarason, 1973), phobias (Meichenbaum and Cameron, 1972b), social incompetence (Christensen, 1974), alcoholism (Sanchez-Craig, 1975, 1976), social withdrawal in children (Gottman et al., 1974) and laboratory and clinical pain (Turk, 1975, 1976).

Systematic desensitization refers to a set of procedures for treating problems associated with inappropriate conditioned anxiety. It is a combination of relaxation techniques and cognitive restructuring. Wolpe (1958) recommended the use of systematic desensitization as a counter-conditioning procedure for individuals with debilitating anxiety. Desensitization induces a deep muscle relaxation procedure, originally attributed to Jacobson (1938), and then instructs the affected individual to visualize the anxiety-arousing situation in a relaxed state in an ordered series of increasingly stressful scenes, called an anxiety

hierarchy. Wolpe assumed that relaxation and high anxiety constituted antagonistic responses so that strengthening the relaxation response to a stimulus that previously prompted anxiety and other aversive responses would result in the gradual weakening and ultimate cessation of the anxiety response. Wolpe's progressive systematic desensitization is generally considered the most widely used procedure for the treatment of test anxiety. Attendant with systematic desensitization are similar methods useful in leading to adaptive behavior, which include self-verbalization (Rimm and Litvak, 1969), reappraisal of the stressful situation (Sanchez-Craig, 1976), and self-observation of behavior (Johnson and White, 1971). Situations that have been made less anxiety-producing by successful desensitization and related methods include disapproval, rejection, social embarrassment, being observed, quarrels, guilt, and speaking before a group.

There have been a large number of developments in anxiety-reduction programs since Wolpe's systematic desensitization. Denny (1980) describes these developments in three categories: applied relaxation techniques, self-control training techniques, and cognitive coping techniques. These labels refer to a continuum of self-control procedures and approximate the sequence of learning experiences presented in the program under study. (See The Stress Connection.)

In Denny's applied relaxation techniques, the individual learns and practices relaxation exercises so that he/she can bring the relaxation response under voluntary control in the future. The individual is encouraged in self-control training techniques to confront a

stressful stimulus that produces tension and to use the coping skills previously learned to reduce tension and anxiety. The individual is assisted in developing more positive self-statements to help reduce anxiety in stressful situations under Denny's third section, cognitive coping techniques.

Rosenthal (1980) described a series of techniques based on modeling approaches first utilized by Bandura. This category includes procedures such as vicarious desensitization in which students either individually or in a group watch the desensitization of a peer model. It is suggested that vicarious desensitization also occurs when individuals in a group have the opportunity to share their stressors with other group members. This sharing takes place throughout the stress management program under study.

Relaxation Training and Meditation

Progressive relaxation utilized in systematic desensitization is one of the major relaxation techniques. A review of the pioneering work of Jacobson (1938) in teaching people to help themselves deal with stress and anxiety through relaxation training is important as we look at the genesis of progressive relaxation. Jacobson's early investigations in clinical physiology led him to the now well-known fact that people are able to regulate certain effects of the autonomic nervous system through their own self-management efforts. Jacobson discovered that anxiety can be caused by the sensation of tension experienced when muscle fibers are shortened or contracted as they are during a stressful situation. Conversely, tension cannot be present when muscle fibers

lengthen or relax. Out of this research came an elaborate system for teaching people to progressively tighten and then relax major muscles of the body--hence, progressive relaxation. The technique is applicable to a wide variety of biopsychosocial problems, and it can be readily taught to a broad range of individuals.

Jacobson's system was utilized by naval training officers in World War II as a mode for aviation cadets to learn to relax and deal with fatigue, restlessness, sleeplessness, and apprehension (Neufeld, 1951). Over the years, Jacobson's audience has ranged from senior citizens, pregnant mothers, and business exeucitves to children in the classroom.

In more recent years, other researchers have developed shorter programs of muscle relaxation for both research and clinical purposes. Bernstein and Borkovec (1973) and Suinn (1976) used relaxation in conjunction with imagery rehearsal to help athletes and others reduce stress before participating in events. Relaxation has also been used to bring relief to sufferers of both tension and migraine headaches (Holeman, 1976). A modification of this approach of muscle relaxation has been incorporated into the program under study and has been coupled with a modification of systematic desensitization.

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 describes this general

"relaxation response" as consisting of the following basic elements and procedures:

Basic Elements

1. A quiet environment
2. A mental device
3. A passive attitude
4. A comfortable position

Procedures for Eliciting the Response

1. In a quiet environment, sit in a comfortable position.
2. Close your eyes.
3. Deeply relax all muscles.
4. Breath through your nose. While breathing out, say the word "one" silently to yourself.
5. Continue this practice for 10 to 20 minutes.
6. When you finish, sit quietly for several minutes before opening your eyes.

This and a number of the exercises in the program under study are based on Benson's work and the original processes used in Transcendental Meditation and other forms of meditation. Note the exercises in The Stress Connection.

Autogenic relaxation training would fit under the rubric of meditation. It is a system of auto-suggestive training developed in Germany by Vogt and Schultz. The method employs a series of phrases (such as "my right arm is heavy") that the individual repeats to him/herself. The method is suggestive of a number of meditative techniques that employ the repetition of words to reduce stimulation or redirect the attention of the individual (Luthe, 1963).

It is important to note that relaxation can usually be induced using any of the currently popular methods including transcendental meditation, progressive relaxation, autogenic training, meditation and self-hypnosis. Only a very small minority of individuals need to resort to biofeedback training to induce relaxation (White and Fadiman, 1976).

Goal Setting and Transference

According to Meichenbaum (1974), it appears that the crucial variable for the successful use of relaxation as an active coping skill is whether or not the subject is able to incorporate this skill into daily living rather than the manner in which it is acquired. Meichenbaum developed an approach known as stress innoculation which incorporates the transference to everyday life situations. This procedure consists of developing the person's cognitive, affective and behavioral coping skills as described in the preceeding two sections--cognitive restructuring and relaxation training and meditation--and then provides for the practice of these skills with exposure to regular stressors.

A variety of teaching techniques are woven into the stress inoculation training. These include didactic teaching, modeling, discussion, reinforcement, and self-instructional and behavioral rehearsal techniques. Meichenbaum stated that:

> For the present we deemed it best to bring the full clinical armamentarium to bear in the cause of translating the phobic client's sense of "learned helplessness" into "learned resourcefulness." (Meichenbaum, 1975, p. 253)

The stress inoculation approach involves three basic steps or phases: cognitive preparation, skill acquisition, and application practice.

The stress management procedures intervene at the cognitive, somatic and behavioral levels to promote adaptive coping with stressors. The first phase, educational in content, is designed to provide the person with a framework for understanding the nature of his/her stressful reactions. The exact content of the conceptualization offered varies with the individual's stressors. The second phase, skill acquisition, is designed to provide the person with a variety of coping techniques to employ at each of the various stages in the coping process. The coping techniques involve both direct actions and cognitive coping modes. Relaxation exercises are taught that involve systematically tensing and relaxing various muscle groups as outlined by Paul (1966). Emphasis is also placed on the importance of the control of breathing. This emphasis was suggested by Deane (1964, 1965) and Westcott and Huttenlocher (1961) who demonstrated that the amplitude and frequency of respiration has an effect on heart rate and the accompanying experience of anxiety.

Once the person has become proficient in employing such behavioral and cognitive coping skills, the facilitator suggests that they should be tested out and practiced by actually employing them under stressful conditions. This, then, is the third phase, application training.

In summary, stress inoculation training involves discussing the nature of emotion and stress reactions, rehearsing coping skills, and testing these skills under actual stressful conditions.

Meichenbaum (1975) found that the mere rehearsal of cognitive self-control skills without the opportunity for application in real-life situations had a diminished effect in obtaining behavioral and affective

change. Hence, the importance of the third and final phase, application practice, is apparent.

All three self-management procedures--the various forms of systematic desensitization, progressive relaxation and meditation--and goal setting and transference have been utilized with a large number of approaches. Their effectiveness has been substantiated by the pioneering studies of Jacobson, Wolpe, Wallace, Benson and others, as reviewed above, and the continuing research of many other investigators. However, not all techniques are equally appropriate for all people or all situations. Thus, learning and being able to employ all modes is important for the individual to determine what is most effective for him/her in a particular situation. Acquiring a complete repetoire of stress coping skills is the approach that Meichenbaum supports (Meichenbaum, 1975).

Research on Stress and Anxiety Reduction Programs

In a review of 49 studies describing anxiety reduction programs, Allen, Elias and Zlotlow (1980) found that in more than half of the investigations the treated groups showed greater improvement than untreated groups on self-report measures of anxiety. Denny (1980) reviewed the results of 20 anxiety reduction studies, and, in all but two, there was evidence of a significiant reduction in anxiety as determined by self-report measures. Also, eight of the 15 studies that used performance outcome measures reported significant improvement for treated controls compared to untreated controls.

Novaco (1975) developed and experimentally evaluated a cognitive behavior therapy approach to chronic anger problems. He found that

cognitive self-control procedures could be effectively used in the regulation of anger, particularly when combined with training in relaxation.

Schlichter and Horan (1979) reported that they were able to show a significant reduction in anger responses in a group of juvenile delinquents who experienced a stress inoculation training program when compared to a non-treatment control group and a group which experienced only relaxation exercises.

Another study using the State-Trait Anxiety Inventory (Spielberger, Gorsuch and Lushene, 1970) as a dependent variable and a short-term stress management program as the independent variable (Grunert et al., 1978) showed a significant change in a pre-post application. Also showing significant change were the biofeedback readings. The authors stated that improvement on both of these measures indicated that relaxation training (progressive relaxation and cognitive restructuring) can result in a significant decline in the level of perceived anxiety and the level of muscular tension.

Additional studies on stress and anxiety reduction programs are reviwed under the section in this chapter titled "Theories and Research Linking Perceived Control and Response to Stressors."

Locus of Control Research

Introduction

In this section of Chapter Two, Rotter's working definition of locus of control is reviewed. Its essence as a generalized expectancy is described. The Nowicki-Strickland Locus of Control Scale for children and adolescents, of the dependent variables in the study, is

described. Research on locus of control is reviewed with special emphasis given to locus of control studies related to locus of control in adolescence. Constructs which are highly related to Rotter's locus of control construct are enumerated, and relevant research related to these constructs is reviewed. Related constructs include White's competence, Watson's contingency awareness, Harter's effectance motivation, Seligman's learned helplessness, deCharm's origin-pawn labels for personal causation and Deci's self-determination model. Research on initiating change in locus of control beliefs is reviewed with research by Reimanis, Eitzen, Matheny and Edwards, Nowicki and Barnes, Phares, Glass, Corah and Boffa and others. The majority of the research on change in locus of control that was reviewed dealt with locus of control in general. The Corah and Boffa work, however, related control to management of stress. Additional research linking these two constructs is reviewed at the end of the following subsection.

Locus of Control Research

The largest body of empirical data dealing with perceived control comes from Julian Rotter's work in social learning (Rotter, 1954; Rotter, Chance, and Phares, 1972). Perceived control is defined by Rotter as a generalized expectancy for internal, as opposed to external control, of reinforcements. This is further explained by Rotter's formula:

$$NP = f(FM \ \& \ NV)$$

This formula states that the potentiality of occurrence of a behavior or a set of behaviors that lead to the satisfaction of some need (need potential--NP) is a function of both the expectancies that

these behaviors will lead to the reinforcements (freedom of movement--FM) and the strength or value of these reinforcements (need value--NV) (Lefcourt, 1976). The term "freedom of movement" points the way to the construct of locus of control in Rotter's social learning theory.

Rotter defines freedom of movement as:

> . . . the mean expectancy of obtaining positive satisfactions as a result of a set of related behaviors directed toward the accomplishment of a group of functionally related reinforcements. A person's freedom of movement is low if he has a high expectancy of failure or punishment as a result of the behaviors with which he tries to obtain the reinforcements that constitute a particular need. (Rotter, 1954, p. 12)

While high freedom of movement leads smoothly toward goal-directed activity, low freedom of movement eventuates, according to Rotter, in defensive and anti-goal directed behaviors (Rotter, Chance, and Phares, 1972). In essence, freedom of movement is a generalized expectancy of success resulting from a person's ability to remember and reflect upon a lifetime of specific expectancy behavior--outcome sequences.

Rotter, Lefcourt, Phares and others stress the point that it is not the simple registering of success and failure experiences that is pertinent to the generalized expectancy of internal versus external control, but rather it is the <u>interpretation</u> of the <u>cause</u> of those experiences. Through a process of becoming aware--contingency awareness (Crandall, 1973; Stephens, 1973; Watson, 1966 and Watson and Ramey, 1972), the individual links self-generated activity and the resulting environmental change. The person is then able to repeat upon need the appropriate behaviors for positive action. Thus, internal locus of control develops.

The ultimate question remains--does the individual believe that the outcomes of his/her attempts are a function largely of personal behaviors, or does he/she believe they are the outcomes dependent on external circumstances? In social learning terms, therefore, the construct of perceived control is referred to as a generalized expectancy of internal or external control of reinforcement with the concept of freedom of movement further explaining the individual's ability to see him/herself as an actor in a life scenario.

Measuring Locus of Control

The first scale to measure locus of control was developed by Phares (1955) as part of a doctoral dissertation. Rotter later developed his much-used scale and published it in 1966. From the inception of Rotter's Internal-External Locus of Control Scale, the literature has rapidly expanded around its use. Research relating locus of control to a myriad of personality characteristics, has "rapidly mushroomed beyond its originator's most vivid expectations" (Lefcourt, 1976, p. 35). A proliferation of locus of control scales followed Rotter's development of the construct with scales developed for particular populations, including young children and adolescents.

Nowicki and Strickland (1973) designed a scale for adolescents in the early 1970s, and this scale will be employed in this study. Strickland (1972) reviewed the relevant literature in locus of control as measured by the Nowicki-Strickland scale and competence in children:

> . . . it appears that we have an instrument which is generally not related to traditional intelligence measures nor social desirability but does appear to predict academic achievement particularly for males. Additionally a belief in internal control for both males and females in most cases, appears to be related to a number of cognitive and competence

> behaviors which can be described as attempts to master the surrounding environment including utilization of information about immediate past performance, concept solution, delay of gratification, persistence at time-consuming and difficult tasks and even compliance to treatment demands that mean the difference between life and death. (Strickland, 1972, pp. 6-7)

Other often-used locus of control scales are the Intellectual Achievement Responsibility Questionnaire (IAR) developed by Crandall (Crandall, Kalkovsky, and Crandall, 1965) and Bailer's Locus of Control Questionnaire (Bailer, 1961). Concerns for generalizability, reliability and validity of the scales will be reviewed in Chapter Three.

Research on Locus of Control

Although much of the locus of control research has focused on adults rather than children and adolescents, there is an increasing interest in the antecedent factors affecting the development and socialization of locus of control and the possibilities for effecting change in locus of control in children and adolescents.

A wide range of relationships associating locus of control with adaptive behavior in children and adolescents has been reported in the literature. The construct of locus of control has been linked with such factors as ability to resist coercion, cognitive approaches to problem-solving and decision-making, creativity, approaches to dealing with stress, achievement-related behavior, deferred gratification, age and sex differences, and familial antecedents, among many others (Lefcourt, 1976).

Recent extensive reviews of the locus of control research (Lefcourt, 1976; Phares, 1976; Gilmore, 1978) indicate that, overall, internals,

including children, adolescents and adults, have demonstrated more positive or adaptive characteristics and performance than have externals. In this study we are primarily interested in the possibility of enhancing locus of control toward the internal end of the continuum in the adolescent population. However, research in locus of control spanning the age range will be reviewed but with special notation of that research which relates specifically to the adolescent.

Age is a consistent correlate of generalized locus of control expectancies. Distefano, Prier and Smith (1971) found internality increased with age in adolescents 13 to 16 years of age. Baldo, Harris, and Crandall (1975) found the same relationship with a sample of adolescents and young adults 15 to 25 years old. Both studies employed the Rotter scale. The Nowicki-Strickland scale has achieved similar results (Eggland, 1973 and Tyler and Halsinger, 1975). Gilmore speculated that this developmental change in locus of control reflects the child's increasing independence from parental dominance and his/her increased exploration of the environment (Gilmor, 1978). Similar studies have found that socioeconomic and racial differences indicate that most blacks and individuals from lower socioeconomic groups tend to be more external rather than internal in their locus of control orientation (Battle and Rotter, 1963; Strickland, 1977).

Locus of control has been related to particular self-report or behavioral indices of adaptive and maladaptive functioning such as self-esteem, anxiety, delay of gratification, persistence, information processing and interpersonal relations (Gilmor, 1978). Juvenile delinquents were found to be more external than nondelinquent comparison groups

in responses to the Nowicki-Strikland and Rotter Scales (Beck and Ollendick, 1976; Duke and Fenhagen, 1975; Obitz, Oziel and Unmacht, 1973). Dendal (Gilmor, 1978) found emotionally disturbed children more external on the Nowicki-Strickland scale than juvenile delinquents who, in turn, were more external than normals matched for mental age.

Segal and Ducette (1973) have reported externality on the Rotter scale correlated with the incidence of premarital pregnancy among middle-class whites, and Carman (1974) found that externally-oriented high school students reported having committed more antisocial behavior than internals. Carman also found that, compared to internals, externals engaged in drinking for reasons that related to personal problems rather than for enjoyment. In a study consistent with the above, Hall (1971) found that greater productive involvement in the culture as defined by either school or work history correlated with internal control for both black and white youths aged 16 to 26. Hall used the Rotter scale, and socioeconomic status was stringently controlled.

In comparison to externals, internals tend to be more effective in interpersonal relations (Nowicki, 1971; Rotter, 1966; Strickland, 1971), to experience less painful relationships with teachers (Bryant, 1972), and to be rated as more positive and less deviant in classroom behavior (Buck and Austrin, 1971). In a review of internal-external locus of control research, Joe (1971) stated that externals, in contrast to internals, were:

> . . . relatively anxious, aggressive, dogmatic, and less trustful and more suspicious of others, lacking in self-confidence and insight, having low needs for social approval and having a greater tendency to use sensitizing modes of defenses. (Joe, 1971, p. 623)

Using Rotter's scale, Baldo, Harris and Crandall (1975) reported that internal control among high school and college students was associated with more successful, positive development using Erikson's psychosocial stages (one through six) as the criterion. External control was associated with less successful development through such stages as trust versus mistrust, initiative versus guilt, industry versus inferiority, and identity versus identity diffusion.

This is also supported by Marcia (1967) who theorized that self-esteem and attendant belief in locus of one's abilities were related to the achievement of that sense of identity which Erikson regarded as central to the developing adolescent's self system. Marcia conducted tests with adolescents in which the results were deliberately misrepresented in order to shake belief in themselves (the adolescents). Marcia found that the higher the adolescent's identity status (ranging from identity achievement to diffusion categories), the more resistant that person was to manipulation in his/her belief in him/herself.

Other studies with children and adolescents have found that internals were more socially popular with peers (Nowicki and Roundtree, 1971), internals persist longer on difficult and time-consuming tasks (Waters, 1972), and internal beliefs are related to school grades and predictive of school achievement (Nowicki and Strickland, 1973).

Seligman (1976) and others have argued that depression, feelings of powerlessness, and helplessness are major problems facing the mental health of individuals in the American society. It has also been concluded that locus of control expectancies are some of the most important of all determinants of underachievement in school among disadvantaged

minority children (Coleman, 1966). Therefore, individuals in mental health, social service agencies, education and related fields, as well as parents, need to be concerned with and aware of the development of locus of control and related behaviors in children and adolescents.

Constructs Related to Locus of Control

A number of different yet highly related constructs to locus of control have been used by different individuals to describe quite similar phenomena or behavior in infancy, childhood and adolescence. White (1959) described competence in infants as the organism's capacity to interact effectively with its environment. Harter (1978) expanded that construct into a recent model of effectance motivation as a basis for future learning. Watson's (1966) contingency awareness, which was introduced in Chapter One and which plays a significant role in the construction of this stress management program, refers to an organism's functional knowledge that the nature of the stimuli received is sometimes affected by the nature of the behavior of the individual. Bandura's effectancy expectation reviewed on page 16 under the social learning theory basis is also related to the locus of control construct.

Another related construct is learned helplessness which was coined by Seligman (1975). Learned helplessness communicates the belief that there is no perceived association between responding and environmental outcomes. When a person loses control over his/her destiny or perceives that he/she has no control (a common malady of some adolescents), the correlates of powerlessness set in--hopelessness, fatalism, apathy, and a why-should-I-care-anyway attitude. This powerlessness manifests

itself as control from the environment and results in restraint or inhibition toward some type of constructive action.

Abramson, Seligman and Teasdale expanded on the learned helplessness model to further explain the dynamics of depression:

> Depression occurs when an individual expects that the probability of a highly preferred outcome is low and he expects that he is helpless to increase it. If the attributions for the present state of affairs are to stable and global factors, the future will look dark to the individual. He expects that he will find himself helpless again and again. This is what is usually meant by "hopelessness." Another implication of the formulation is that individuals will show the greatest loss of self esteem when they make internal, global, and stable attributions for their failures. (Abramson, Seligman and Teasdale, 1978, p. 53)

Locus of control relates closely to deCharm's constructs of origins-pawns and personal causation. deCharms defined personal causation as:

> . . . the initiation by an individual of behavior intended to produce a change in his environment. When a person initiates intentional behavior, he experiences himself as having originated the intention and the behavior. He is the locus of causality of the behavior and he is said to be intrinsically motivated. Since he himself is the originator, we refer to the person as an origin.
>
> When something external to the person impels him to behavior, he experiences himself as the instrument of the outside source, and the outside source is the locus of causality. He is said to be extrinsically motivated. Since the person is impelled from without we refer to him as a pawn. We sometimes talk of people as primarily pawns implying that they more characteristically see themselves as pushed around by outside forces. Conversely, we refer to people as primarily origins implying that they characteristically see themselves as originating their own behavior. (deCharms, 1972, pp. 96-97)

The parallels between the origin-pawn and internal-external locus of control constructs are obvious. The major differences lie in the assumption that pawns and origins are determined by the degree to which

they see themselves manipulated as an object, whereas the internals and externals react more to perceived contingencies (Lefcourt, 1976).

deCharms (1972) applied his constructs of origins and pawns in an ambitious longitudinal 3-year study of training students to behave as origins. Teachers were trained to reward origin as opposed to pawn behaviors in a sample of sixth and seventh grade lower-class black students. deCharms' premise was that to enable a person to behave like an origin (or with an internal locus of control) the person must be helped:

1. to determine realistic goals for himself;
2. to know his own strengths and weaknesses;
3. to determine concrete action that he can take now that will help him to reach his goals;
4. to consider how he can tell whether he is approaching his goal, that is, whether his action is having the desired effect. (deCharms 1972, p. 97)

Note the similarity of deCharms' structure to that of the stress management program which is the focus of this study.

The results of the deCharms longitudinal study were:

1. Students in the experimental group perceived their classrooms as more conducive to origin behavior.
2. Strikingly different profiles of personal causation were evidenced for students involved in the training.

An equally interesting outcome was that students in the experimental groups also failed to show the year-to-year increasing discrepancy with national norms on standardized achievement tests. (deCharms, 1972, p. 96)

The work by Weiner and others (1979, 1978) on attribution is highly related to the construct of locus of control though Weiner differentiates locus from control. For the purpose of this study, however, Weiner's differentiation is noted but not elaborated upon, as the construct of locus of control as defined by Rotter is the construct of

interest. It is important though to relate the recent attributional literature to the locus of control construct.

In an attributional study, Ames and Felker (1979) found that high self-concept children attributed their successes to skill and engaged in more self-reward for success. Both self-concept groups (high and low) used lack of skill to account for their failure, but the low group responded with more self-punishment. Low self-concept children seemed to be characterized by a predisposition to self-criticism when they failed.

Arkin and Maruyama (1979) found that unsuccessful students in a college testing situation experienced more anxiety when their attributions were more external. The authors stated:

> Perhaps the more unsuccessful students saw the task as insurmountable (externally controlled), the more they felt anxious, independently of whether their perception of lack of control was due to stable factors such as test difficulty or exam format, or to unstable factors such as the unpredictability of the topics covered by exam questions or the inclusion of "tricky" questions. (Arkin and Maruyame, 1979, p. 91)

In studies on control and self-determination (a construct similar but not exactly equitable with locus of control), Deci (1980) found control was shown to have beneficial effects. Deci suggested that this is because the control either left the people feeling more self-determining or helped to relieve some stress.

Deci (1980) reviewed the progression to self-determination and indicated that, according to organismic theory, promoting self-determination means encouraging awareness of internal cues, increasing one's capacity to choose among motives and goals, and reclaiming

automatic behaviors through the exploration of their nonconcious bases. This requires facilitating the operation of the intrinsic motivational subsystem by strengthening the person's sense of competence and self-determination. There are five interrelated aspects to the processes of strengthening one's sense of competence and self-determination: awareness, acceptance, choice, expectations, and accommodation. Notice how closely these relate to Meichenbaum's (1977) stress inoculation training reviewed on page 33.

Deci (1980) defined the interrelated aspects as: (1) awareness--allowing nonconscious motives and emotions into consciousness; (2) acceptance--in the process of facilitating awareness, one must realize that motives and emotions are kept out of awareness because the awareness of them causes discomfort; (3) choice--the essence of self-determination is making choices that are based on people's expectations about the relationship between behaviors and satisfaction of motives; (5) accommodation--the final aspects of the therapeutic process that facilitation self-determination and internal causality involve learning to discriminate which aspects of the environment are changeable and which are not.

Deci (1980) described how external or impersonal orientations are developed in the individual:

> People develop external or impersonal orientations because they live in controlling or nonresponsive environments. These environments exist because the significant others, such as parents, teachers, or therapists, themselves are behaving automatically. For example, out of their own distress, their own external and impersonal orientations, parents and teachers behave automatically and either control or act inconsistently toward the children and pupils. To provide a responsive, informational environment, the significant others must remain self-determining. Thus therapists must be continually checking their own behavior to ensure that they are being self-determining, responsive, and informational. (Deci, 1980, p. 189)

Initiating Changes in Locus of Control Beliefs

Numerous studies have sought to increase the individual's locus of control beliefs. These studies have met with varying degrees of success.

In a study with second and third grade students, Reimanis (1974) used counseling sessions to increase the children's awareness of behavior-reinforcement contingencies and thus increase internatlity. Compared to a control group matched on pre-treatment locus of control (Battle scale), the experimental group was significantly more internal after three months of treatment.

In the same study, but with college students, Reimanis reported similar results. However, this study indicated that there was a sex difference in outcome. The females increased in internal control immediately following the training, but this was absent on a follow-up measure. The males, however, maintained their increase. Reimanis stated that one explanation for the sex differences may be related to early social learning--that perhaps female students were not as career or competition oriented, and as a result, the achievement motivation training procedures were less relevant to them than to the males.

Another study by Reimanis (1973) suggested that external control interferes with teachers' efforts to increase achievement striving in the classroom.

Eitzen (1974) conducted a behavior modification treatment program with delinquent boys and found a signficant increase in internality from pre-treatment to post-treatment test administration using the Nowicki-Strickland scale.

Matheny and Edwards (1974) obtained a significant increase in internal control using the Nowicki-Strickland scale as a pre-post measure with a contingency-management program. Nowicki and Barnes (1973) recorded a similar change in locus of control beliefs among black seventh-, eighth-, and ninth-grade youths who participated in a one-week, highly structured camp program based on behavior-reinforcement contingencies.

Chandler (1975) reported a study which also showed enhanced internal locus of control among underachieving junior-high school students. The students who tutored underachieving second- and third-grade students increased in internal levels of control on the Bailer scale after their tutorial experience.

Gilmor (1978) stated that it appears that the primary sources of change come from promoting awareness which is induced by techniques which allow children to experience the contingency between their own behavior and subsequent reinforcements.

In a study reported in the previous subsection in this review, deCharms (1972) conducted a training program for elementary school teachers in personal causation. These teachers then designed and implemented classroom exercises for their sixth- and seventh-grade classes. Results of this field experiemnt showed increased motivation of teachers and students and enhanced academic achievement of students. The origin-pawn variable was found to mediate between personal causation and academic achievement.

Foulds (1971) examined the effects of personal growth experiences on locus of control beliefs. Thirty undergraduates participated in four half-hour therapy-like sessions once a week for eight weeks. A

control group of similar students did not participate. In a design involving before-and-after administrations of Rotter's I-E Scale, an increase in internal scores occurred for the experimental group, offering support for the thesis that experiences in an atmosphere of acceptance and unstructured group exploration and expression facilitate a sense of internal control.

Phares enumerated the forces involved in changing or manipulating locus of control:

> It seems apparent that I-E scores (reflecting the subject's locus of control) can be altered by a range of conditions. These conditions include . . . very specific influences whose effects may be transitory and narrow . . . and changes that have more pervasive, permanent effects on behavior.
> . . . to enhance an individual's capacity to cope with the world successfully, one must influence their generalized expectancy for internal control . . .
> Locus of control as a generalized expectancy can be altered by a variety of environmental forces. Some of these forces include factors that accompany age changes, conditions that affect a subject's certainty that control can be exerted, world or national events, special training programs, and a variety of therapeutic techniques. (Phares, 1976, p. 170)

Experiments conducted by Glass, Reim and Singer (1971), Staub, Tursky and Schwartz (1971), Pervin (1963), and Corah and Boffa (1970) all indicated that the aversive quality of a stimulus decreased when subjects exercised some control over that stimulus. The Corah and Boffa study found that stress, as measured by physiological changes, was reduced when subjects were able to control the onset and termination of aversive stimulation. Such findings have been obtained for different types of response measures including performance, self-report and physiological indices (Lefcourt, 1976).

Thus, to have some instrumental reponse at one's disposal and to be able to perceive contingency between one's actions and the termination

of an aversive stimulus seems to make a great difference in the level of locus of control (Lefcourt, 1976).

This study is primarily concerned with influencing that generalized expectancy through a specific training program. The assumption is made that training an individual to cope satisfactorily with his/her stressors can affect positively that generalized expectancy which will lead to an increase in internal locus of control.

Locus of Control and Stress

Introduction

This subsection of Chapter Two explores the research relevant to the relationship between perceived personal control and response to stressors. Various approaches to personal control, including Rotter's locus of control, Seligman's learned helplessness, Pervin's mastery and Averill's review of the need to take action, are included.

Theories and Research Linking Perceived Control and Response to Stressors

In relationship to locus of control, stressors have been defined methodologically by Wolk and Bloom under two broad rubrics:

1. Stress and the resultant threat can reside in a personal inadequacy and potentially disrupt self concept and emotional security.

2. Stress may also be conveyed through environmental hazards that function to threaten ongoing behavior and goal attainment. (Wolk and Bloom, 1978, p. 293)

The influence of personal control is somewhat different in each case. Wolk and Bloom (1978) contended that the manner and degree to which stress is disruptive for an individual in a given situation depends

upon the conjoint effects of the type of stress encountered and the degree of expected personal control.

Rotter (1972) reviewed a series of studies which provide strong support for the hypothesis that the individual who has a strong belief that he/she can control his/her own destiny is likely to: (1) be more alert to those aspects of the environment which give information for his/her future behavior; (2) take steps to improve his/her situation; (3) place greater value on skill or achievement reinforcements and be generally more concerned with ability and failures; and (4) resist attempts by others at subtle attempts to influence him/her.

Averill (1973) distinguished three different types of control related to perceived and actual control related to stress management. Behavioral, cognitive and decisional control are the control factors identified.

> Each type of control is related to stress in a complex fashion, sometimes increasing it, sometimes reducing it, and sometimes having no influence at all. As a broad generalization, it may be said that the relationship of personal control to stress is primarily a function of the meaning of the control response for the individual. Stated differently, the stress inducing or stress reducing properties of personal control depend upon such factors as the nature of the response and the context in which it is embedded and not just upon its effectiveness in preventing or mitigating the impact of a potentially harmful stimulus. (Averill, 1973, p. 286)

Lazarus (1975) has argued that a person may alter his/her psychological and physiological stress reactions in a given situation simply by taking action. In turn, this will affect his/her appraisal of the situation, thereby ultimately altering the stress reaction.

Gal and Lazarus (1975) suggested that taking action under stressful conditions, as opposed to remaining passive, is a powerful coping

tool. They have acknowledged some of the research that indicates that perhaps passivity (not taking control) can be an effective coping mechanism (Avrill, 1973), but they support their contention that activity in the face of stress is preferable for most individuals. They support this contention with numerous empirical studies and conclude with the statement that:

> . . . subjects generally prefer having control over aversive stimuli to not having control or depending on someone else's control although it is as yet unclear as to when and why control is desirable and anxiety reducing under conditions of threat. (Gal & Lazarus, 1975, p. 21)

In a similar interpretation, Pervin (1963), uses the concept of feelings of mastery:

> Activity involving the feeling of participation in the turn of events with the hope of mastery, is preferable to and less anxiety arousing than no activity at all which leaves the person feeling a helpless victim of inevitable events. (Pervin, 1963, p. 26)

Pervin also stated that even in instances where activity does not provide actual control over the situation, it is the feeling of mastery that the person gains from the action he/she is performing that reduces his/her anxiety and feeling of helplessness.

Several other theories have been proposed to account for the relationship between perceived control and response to stressors. Cohen's (1978) theory of attentional overload assumed that an individual's capacity for attention is limited and that uncontrollable or unpredictable stimuli require more extensive monitoring, because of their novelty or complexity, than do controllable events. The former stimuli are, therefore, more likely to deplete attentional resources and to result in impaired task performance and interpersonal relations.

Seligman's (1975) theory of learned helplessness provides an alternative explanation for the beneficial effects of perceived control and is in line with the approach this study takes. According to Seligman, helplessness involves a syndrome of cognitive, emotional and motivational disturbances stemming from repeated exposure to uncontrollable events. Through exposure to such events, the individual comes to believe that personal outcomes are independent of his/her behavior, and, consequently, the person reduces his/her attempts to influence the environment. The personality dimension of internal versus external locus of control (Rotter, 1966) has been found to mediate subjects' reactions to stressful situations, with externals exhibiting greater susceptibility to learned helplessness following exposure to uncontrollable aversive events (Cohen, Rotherbart and Phillips, 1976). Moreover, the extent to which one attributes lack of control to either task difficulty or insufficient effort, the amount of exposure to uncontrollable events, the aversiveness of these events and the psychological importance of the situation have all been identified as important mediators of helplessness effects (Wortman and Brehm, 1975; Roth and Kubal, 1975).

A reformulation of Seligman's model in terms of attribution theory has been proposed by Abramson, Seligman, and Teasdale (1978). The kinds of causal attributions made by target individuals about the source or sources of uncontrollable events play a vital part in mediating response to such events. They note, for example, that the adverse effects of uncontrollable events are less pronounced when subjects attribute the source of their poor performance or lack of control to personally modifiable factors (such as insufficient effort) rather than to

insurmountable or unchageable conditions. Hence, Abramson, Seligman and Teasdale propose a classification of attributions relevant to learned helplessness, incorporating the dimensions of internal (personal) versus external (environmental), stable versus unstable, and global versus specific attributions about the source or sources of uncontrollability. These dimensions are assumed to mediate the chronicity, generality and intensity of the individual's experience of helplessness.

Phares (1976) has argued that internals and externals may be equally aroused and made anxious by some aversive stimulus, and that, during the course of an experiment or task, the internal's belief in his/her own capacity to control events begins to assert itself. Therefore, anxiety dissipates at differential rates in internals and externals due to the cognitive reappraisal made by the internal that the situation is within personal control. The internal, therefore, may be as equally affected initially by stress as the external. But, due to the greater control over reinforcement contingencies (e.g., "I can handle it") expected by the internal, disruptive stressors and related attentional and emotional responses are less capable of influencing the task performance-goal relationship. The more stable reward expectancy of the internal results in more stable behavior. Thus, the internal control may act as a buffer system between anxiety and the disruptive effects upon goal-directed behavior.

Deci has reviewed numerous studies which indicate that:

> . . . increased self-determination enhances motivation and performance and that when subjects have the perception of control over aversive stimulation, the stimulation seems less stressful, interferes less with task performance, and causes less physical symptomatology. . . . the loss of self-determination has serious and far-reaching consequencies. (Deci, 1980, p. 107)

> An understanding of situations can provide cognitive control (see for example, Averill 1973; Langer and Saegert 1977) and may ameliorate the stress associated with the situation. Langer, Janis and Wolfer (1975), for example, have shown that stress is substantially reduced for surgical patients when they are provided with information that helps them cope with the difficult situation. (Deci, 1980, p. 114, 115)

In a review of a number of studies on the relationship of locus of control to stress, Lefcourt (1976) stated that the impact of stress seems to be diminished in situations in which participants can exercise some degree of control. Also, persons assessed as holding internal control expectancies seem to be better able to withstand the assualt of stressors than externals. Fatalistic (external) persons seem to have fewer sources of cognitions that can lessen or mediate the impact of stressful events. Some of the studies reviewed by Lefcourt on the relationship of locus of control to stress include studies by Glass and Singer, Sweck and Repucci, and Dweck.

Abject surrender to failure has been found (Sweck and Repucci, 1973; Dweck, 1975) to occur most frequently when subjects conclude that they are unable to alter their fate--when they believe that they lack the ability to reverse achievement outcomes, situational variables, and certain relationships.

Glass and Singer (1972) found that subjects were able to endure stressful stimuli with less deterioration of various cognitive functions and greater tolerance for frustration when they believed that the aversive stimulus was controllable.

In one of a series of studies on stress, Glass and Singer (1972) asked subjects to work on various tasks in a room where loud, cacophonous sounds filled the air. One group of subjects had no control over the sounds that surrounded them and had to tolerate the noise; a second

group could control the sounds with a button; and members of a third group were told they had access to a person who could control the sound, though they were asked not to use this means unless necessary. The subjects with no control over their surroundings did markedly worse on the complex tasks they were assigned and liked the situation less than either the subjects with the control switch or those who believed that they could take control if necessary.

The research of Glass and Singer (1972) has been particularly important in identifying the role of predictability and perceived control as determinants of response to stressors. Their research on noise levels indicates that although people are able to adapt physiologically and behaviorally to high-intensity noise, in the short run, they frequently exhibit post-noise aftereffects such as decreased tolerance for frustration and impaired task performance. Also, when noise is predictable, periodic or perceived as controllable, its negative aftereffects are reduced.

In similar studies, Sherrod et al. (1977) reported that subjects in an aversive noise situation showed increasingly poorer performance as their degree of control over noise decreased. Likewise, Pennebaker et al. (1977) found that subjects exposed to bursts of unpleasant noise reported more physical symptoms, such as headaches, when they believed they had less control over the noise.

Langer and Saegert (1977) reported that subjects who had increased cognitive control over a crowded situation were more effective and less stressed than those who had less cognitive control. Cognitive control was derived from greater information about the effects of crowding.

Tanck and Robbins (1979) related assertiveness, locus of control and coping behaviors with modes of diminishing tension or stress. The implications for internality-externality in the study seemed particularly strong for the female subjects. The women who saw control of reinforcement as coming from within reported that they tended to meditate or take direct action to deal with stressors, while a perception of external control was related to turning to alcohol or sex or becoming dysfunctional. Other sex differences in coping suggested that male externals respond more frequently to their tensions with use of marijuana or sex, while, as stated above, females were more likely to become dysfunctional.

Johnson and Sarason (1978) looked at internal-external control as a moderator variable with life stress, depression and anxiety, and found that there was a significant correlation between negative life changes, depression and anxiety only with subjects with an external locus of control orientation. Those individuals who viewed events as primarily outside of their control (as measured by the Rotter Internal-External Locus of Control Scale) experienced the greatest stress (as measured by the State-Trait Anxiety Inventory) and depression (as measured by the Beck Depression Scale).

Rodin, Solomon, and Metcalf (1978) have shown that people who feel that they have some personal control find crowded spaces less stressful. They report that subjects who were standing in front of the control panel of an elevator reported feeling less crowded than those standing in a different corner, even when the elevator was equally crowded and other people in the elevator were equally close to the subjects.

Seligman (1975) has reasoned from a behavioristic perspective that when people are in situations where outcomes are independent of the person's responses, they will lose motivation, display impaired learning, and, in some cases, show a fear response. Helplessness is the experience of being in a situation with response-outcome independence, and according to an experiment conducted by Hiroto (1974), one of Seligman's collaborators, that lack of control will affect the person's level of learning. Students were subjected either to uncontrollable loud noise, controllable loud noise, or no noise. They were then asked to use a finger shuttle box while there was noise in the background. Moving across the shuttle would turn off the noise, yet those subjects who had previously had no control over the noise were significantly poorer at learning than people in the other two groups.

In an interesting study, Schulz (1970) found that the residents in a home for senior citizens who could predict and/or control the schedule of visits to them by visitors were better off physically, psychologically, and behaviorally than other residents who were visited with the same frequency but who had no predictability or control over the visits. Persons who were visited but who had no predictability or control were no better off physically, psychologically and behaviorally than others in the same home who were not visited. Predicting or controlling the time of visits was correlated with the subject's taking less medication than the other groups, being rated healthier and more zestful by observers, perceiving themselves to be happier and to have more hope, being more active and making more future commitments, and reporting less time

of being lonely and bored. These findings were demonstrated even more dramatically in an unexpected result which appeared in a follow-up study conducted by Schulz and Hanusa (1978). In these data collected two to four years after the termination of the original study (and the termination of the controllable visits), subjects who had control or predictability over the visits seemed to be worse off than the subjects who had not been able to control or predict the time of the visits. They had moved from being better off than the no-control and no-visit groups during the period of control or prediction to being worse off than the other two grups following the termination of the visits. Schulz and Hanusa concluded that apparently having been given a little control (or predictability) in a situation where they had presumably accommodated to the no-control nature of the institution was very important to subjects, and the loss of this control had quite a significant impact.

Langer and Rodin (1976) found similar results to the Schulz study. They also worked in a home for senior citizens. Subjects for whom self-responsibility had been emphasized and who had been given opportunities for choice and control displayed a greater sense of activity and well-being. In an 18-month follow-up, they found that the beneficial effects of the self-responsibility treatment continued. Those who had been given greater control were still healthier and happier. Though these final outcomes may seem inconsistent with the Schulz and Hanusa follow-up results, further consideration suggests that the results are in fact quite consistent. In the Schulz study, subjects were given control over the time of visits and the control was then removed. The additional

control improved well-being, and the subsequent loss of control reduced well-being to below baseline. In the Rodin and Langer study, however, the manipulation was a lecture stressing how many opportunities subjects had for control of their own lives. This learning was not terminated in the way that control was in the Schulz and Hanusa study. Also, the additional means for responsibility, including care of plants and care of one's personal belongings, continued. Hence, the beneficial effects continued because the enhanced opportunities for self-determination continued.

Engel (1971) reported cases in which people who seemed to be in good health died unexpectedly and unexplainably (in the medical sense) when they were in situations that were stressful because of their lack of control. In a description of his lengthy experience in a German concentration camp, Frankl (1959) asserted that the survivors were the people who managed to maintain a sense of willfulness. He reported observing many people who died almost immediately after giving up hope.

Although much of the evidence is anecdotal or from clinical studies and surveys, it does appear to be supported that when people experience loss of self-determination, when they believe they can no longer control aspects of their lives and achieve desired goals, when they feel helpless and hopeless, they display various manifestations of maladaptation and illness, and they may die in extreme cases. Schmale and Iker (1966) reported an investigation which went beyond the anecdotal. These researchers worked with women who had shown slight irregularity in cervical cells. These women were then separated into those who had experienced significant personal losses in the preceding six months and those who had not. Of

those who had experienced loss, 61 percent developed cervical cancer; of those who had not experienced loss, only 24 percent developed cervical cancer. This study and numerous other subsequent studies suggest that the lack of control over significant outcomes, as evidenced by personal loss, may predispose individuals to organismic malfunctioning (Deci, 1980).

An interesting implication from this research is that stress, once experienced, might be reduced by providing individuals with greater control over their environment, changing their expectations for personal control, or altering their attributions about the causes of prior failure and adversity. Taken together, the findings from this area suggest the existence of a pervasive human need for environmental controllability that plays a crucial role in determining the quality and intensity of a person's reaction to his/her milieu. These examples suggest then that how one responds to stress in large part is influenced by how one appraises the stressor, to what he/she attributes the arousal he/she feels, and how the ability to cope is assessed (Lazarus, Averill, and Opton, 1970; Meichenbaum, 1976a).

CHAPTER III

METHODS AND PROCEDURES

Introduction

This chapter on methods and procedures is composed of five sections: Population and Sample, Description of the Program, Administration of the Treatment, Instrumentation of the Study, and Research Questions and Analysis Procedures. The first section describes the sample and population and outlines how the sample was selected for the study. The second and third sections describe the treatment and its administration. The fourth section includes a review of the instruments used to measure the dependent variables and a discussion of reliability and validity of the two dependent variables--the Nowicki-Strickland Locus of Control Scale for children and adolescents and the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory. The final section identifies the research questions and the analysis procedures used to test each question.

Population and Sample

The population for this study consisted of secondary school adolescents who were in grades 9 to 12, residing in an area of Michigan within a 150-mile radius of Lansing. All were members of Michigan 4-H--Youth Programs, and all came from various economic and racial backgrounds and a mix of rural, urban and suburban settings (see Appendix C).

The sample groups were randomly drawn from groups of youths who volunteered for the study after they received explanatory letters, which asked for their assistance. These letters were sent to all Michigan Cooperative Extension Service agents responsible for 4-H within the 150-mile radius of Lansing (see Appendix B).

A total of 94 adolescents participated in the complete study--29 males and 65 females. Of these, 78 were caucasian, 12 were black, 3 were Hispanic and 1 was Native American. Figure 3.1 represents the groups and number of participants in the study.

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
N=11	N=22	N=18	N=17	N=13	N=13
Male 5	Male 1	Male 4	Male 8	Male 3	Male 8
Female 6	Female 21	Female 14	Female 9	Female 10	Female 5
Treatment	Treatment	Treatment	Control	Control	Control

Figure 3.1: Groups involved in the study.

An attempt was made with the communication to Cooperative Extension personnel to identify groups which were nearly equitable in sex, socio-economic status and rural-urban mix. A description of the adolescents drawn from a descriptive survey at the beginning of the study appears in Appendix C. Only three of the groups were close to being equitable in the distribution of male and female participants.

Since the sample was not randomly selected, a Cornfield-Tukey Bridge Argument was employed to generalize to a larger population of adolescents having similar characteristics as the sample used in this study. In a non-random sample, the Cornfield-Tukey Bridge suggests that careful description of subject characteristics and identification of variables related to the dependent measures permits the researcher to generalize to subjects with similar characteristics.

Description of the Program

The stress management program, which is one of the independent variables in this study, was composed of approximately one-third

cognitive tasks and two-thirds performance training tasks. All of these tasks were accomplished through structured exercises.

Presentations by a facilitator, various pen-and-pencil tasks, and stress reduction (relaxation) exercises constituted the core of the curriculum. (See Appendix A and The Stress Connection, after page 148.)

Major topics in the curriculum included:

- a brief history of the stress-anxiety constructs
- a description of the related exercises to the general individual need to study stress and practice relaxation
- a description of and exercises designed to identify potential stress-related illnesses
- an analysis of the psycho-physiological involvement of stress in people
- a description of how conflict, anxiety, frustration and aggression affect stress levels
- a presentation and experiencing of relaxation exercises as modes for dealing with stress
- a presentation and experiencing of goal-setting exercises and follow-up procedures for dealing with specific stressors

The curriculum for learning stress management techniques covers three major areas: (1) developing an awareness of events, actions, and interactions which can prompt individual stress; (2) learning specific relaxation exercises to temporarily alleviate the adverse responses to stress; and (3) developing a specific plan of action to cope with and perhaps alleviate the stress or stressor.

The curriculum is based on the Selye (1956), Cannon (1939), Spielberger (1966), and Benson (1975) premise that stress reactions to events, actions and interactions which cause stress for the individual are individual specific. What causes stress for one person may or may not cause stress

for another, and how a person responds to a specific stressor may or may not be the same response another person would exhibit responding to the same general stressor. A justification for the curriculum content and process is detailed in Chapter II.

Participants in the curriculum were involved in dyadic and group interaction awareness exercises to identify events, actions and interactions that they found stressful and would term stressors in their own lives. Awareness exercises included the following pen-and-pencil inventories from The Stress Connection: "Are Things Sometimes Just 'Too Much?'" (page 6), "Habits and Routines" (page 7), and "My Personal Stress Symptoms" (page 14). Each personal inventory was then followed by either a dyadic or group interaction and processing period.

Participants learned stress-reducing and relaxation exercises described in Chapter II from the major categories of cognitive restructuring, progressive relaxation, autogenic relaxation and diaphragmatic breathing, and imagery and sensory awareness.

Through pen-and-pencil exercises, facilitator processing and group interaction, subjects participated in cognitive restructuring exercises such as "The Daily Stress Log" (page 15), "Assertiveness" (page 29), "Stress Safety Valves" (page 27), and "What Are Worries?" (page 9). In cognitive restructuring (Ellis, 1962) the threat or stressor is reappraised. Anxiety is reduced by teaching the individual to modify his/her appraisal of threat that is based on an irrational belief. The individual learns to monitor his/her thoughts so that he/she can identify, analyze and challenge those beliefs. This process is further discussed in Chapter II under the subheading "Cognitive Restructuring."

Participants learned a range of relaxation exercises including progressive relaxation (titled "Deep Muscle Relaxation" on page 39) and autogenic relaxation (titled "Autogenic Relaxation" on page 40 and "Diaphramatic Breathing" on page 38).

Imagery and sensory awareness activities included "The Fantasy Vacation," "Sensory Awareness" and "Getting in Touch" (on pages 41 to 43).

The majority of the relaxation exercises are best done in a darkened room and in a prone position. However, all can be done in a seated position. Subjects practiced both approaches so that they could use the exercises to monitor stress reactions in any environment.

The underlying goal of the curriculum was for subjects to learn their personal relaxation response through relaxation exercises. This goal was emphasized by the facilitator throughout the four sessions. After an individual learns a relaxation response, Benson (1975) and others emphasize that the individual has the ability to call upon that relaxation response in most stressful situations without having to go through a stress reduction exercise or series of exercises.

Thus, at least one-third of each session was devoted to learning stress management exercises. Various types of exercises were taught because different people find different exercises more productive in learning to relax and moving to that relaxation response (Benson, 1975; Selye, 1954).

Finally, under the last section (developing a plan of action), goal setting and self-contracting were covered in two exercises: "Who's Problem Is It?" (page 28) and "A Way to Make Change" (page 35).

A step-by-step curriculum guide appears in the beginning of Appendix A. All of the facilitator-led discussions, lecturettes, awareness-generating exercises, relaxation exercises, and goal-setting and self-contracting exercises are included in the participant copy of The Stress Connection (included after page 148).

Prior to the formal investigation, the treatment and instruments were pilot tested with a comparable adolescent group at a Michigan State University event involving participants from throughout Michigan. This testing was conducted to determine necessary revisions in content or presentation format. Fifteen adolescents were involved in the pilot study. No substantive changes were made in either the content or process of the curriculum or in the mode of administering the dependent variables.

Each of the treatment groups was facilitated by the investigator, who began the treatment and control groups by introducing herself to the group and first administering the two pretests: the Nowicki-Strickland Locus of Control Scale and the trait subscale of the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory. The survey of individual characteristics, on which the Cornfield-Tukey Bridge was made, was then administered. Each treatment and control subject was asked to identify for himself/herself a recurrent stressor and one which he/she would like to do something about.

In keeping with Spielberger's description, a stressor was defined as a recurring event which caused the participant to feel anxious or become tense. Examples of stressors, such as parent-adolescent conflict, pressure from friends, anxiety related to test-taking, and life changes including both positive and negative events (death of a parent, graduation

from high school), were given by the facilitator as a preamble to a discussion by participants of specific life stressors. Stressors described by the participants included the inability to communicate with one or both parents, pressure to have sexual contact with a member of the same sex or opposite sex, pressure to drink or take other harmful substances, pressure to excel in school, anxiety felt when preparing for and participating in dirt bike competition, inability to get along with a sibling(s), death of a friend, swimming in deep water, money problems, transportation problems, and career expectations.

Both control and treatment participants were asked to describe their stressor so that they could refer to it prior to taking the state subscale of the STAI. Treatment participants took the subscale during all four of the treatment sessions. The control group took it only during the pre- and posttest. Control group members were not available for repeated administration of the state subscale because many would have had to travel 20 to 30 miles for only that purpose. This problem is discussed in Chapter V as one of the possible limitations of the study.

Treatment participants were asked to focus on their described stressor when they worked on the various stress inventories and relaxation exercises throughout the four sessions. They were asked to attempt to apply what they were learning in stress management to the management of their identified stressor.

At the end of the final session, each treatment and control participant was given the posttests of the locus of control scale and the trait subscale of the STAI. Each participant also responded to the state subscale in relation to his/her described stressor.

At the end of the treatment, participants were also asked to respond to an open-ended evaluation of their experience in the stress management workshop. These responses were for use by future facilitators to make subjective decisions on content and process. Samples of responses from these open-ended evaluations are included in Appendix D. The open-ended statements to which participants responded were:

- I most appreciated hearing, doing, seeing, experiencing, etc. . . .
- I would have preferred hearing, doing, seeing, experiencing, etc. . . .

Instrumentation of the Study

The Nowicki-Strickland Locus of Control Scale for children and adolescents and the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory were used as dependent variables in the study. They were chosen as appropriate measures for locus of control and stress constructs based upon available data on reliability, validity of the instrument and appropriate age range.

Nowicki-Strickland Locus of Control Scale (Appendix E)

The Nowicki-Strickland (1973) Locus of Control Scale for children and adolescents (ages 9 to 18) is based on Rotter's construct of locus of control of reinforcement which is defined as the perception of a connection between one's action and its consequences. The construct ranges from internal to external locus of control and is 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 is a function of one's

own action or characteristics. External locus of control at the other extreme is 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 and Rotter, 1966).

The Nowicki-Strikland 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 and Barnes, 1973). In answering the questions on the test, if the subject responds, for example with a no to the statement, "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.

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

Internal consistency (Spearman-Brown split half) was reported by groupings of grade levels and were:

r = .63 grades 3, 4, 5

r = .68 grades 6, 7, 8

r = .74 grades 9, 10, 11

r = .81 grade 12

Test-retest reliabilities ranged from .67 to .79 after a six-week period. Locus of control did not correlate with social desirability (Nowicki and Strickland, 1973), sex (Nowicki and Strickland, 1973), and intelligence (IQ) scores (Nowicki and Strickland, 1973; Nowicki and Roundtree, 1971).

Construct Validity. 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.

MacDonald (1973) has described the scale as the best measure of locus of control presently available for children. MacDonald reported a correlation of .41 with the Bialer-Cromwell scale with an alpha level of .05.

Spielberger et al. State-Trait Anxiety Inventory (See Appendix F)

Cattell and Scheier (1958, 1961) identified two distinct anxiety factors through factor analysis: trait or chronic anxiety, which they defined as a relatively permanent and stable characteristic of people, and state or acute anxiety, which they defined as a transitory condition which varies from moment to moment and from day to day.

Spielberger (1966, 1972) has suggested that much of the conceptual and empirical confusion with respect to anxiety results from the failure to distinguish between trait and state anxiety. Speilberger thus defined state anxiety (A-State) as an emotional reaction:

> . . . consisting of unpleasant, consciously-perceived feelings of tension and apprehension with associated activation or arousal of the autonomic nervous system. (Spielberger, 1972, p. 29)

According to Spielberger, trait anxiety (A-Trait) refers to individual differences in anxiety proneness, i.e., the tendency to respond with A-State under stress. Spielberger (1972) stated that people high in A-Trait are self-deprecatory and concerned with "fear of failure," and that they should, therefore, be more likely to perceive situations that are ego-involving as more threatening than would low A-Trait individuals. In other words, high A-Trait persons will manifest more intense levels of A-State arousal in ego-threatening situations than low A-Trait individuals. Under neutral or nonthreatening conditions, the level of A-State arousal should be equivalent for both high and low A-Trait people.

The State-Trait Anxiety Inventory (Spielberger, Gorsuch and Lushene, 1970) is a research and clinical assessment instrument designed by Spielberger, Gorsuch and Lushene. The test is composed of two subscales: trait anxiety and state anxiety. As described above and in Chapter II, trait anxiety is defined as a stable individual difference between people in their predisposition to stress. State anxiety is described as a transient emotional condition that is 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," and these are related to the individual's feeling (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 seven reversed items and 13 items that are scored directly.

Reliability. Test-retest reliability for a lag of three weeks was reported for the trait scale as .86 for males and .76 for females. Test-retest reliability for a lag of three weeks was reported for the state scale as .54 for males and .27 for females. Spielberger, Gorsuch and Lushene have 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 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 and Diesenhaus, 1965), or they have no significant influences on test scores (Bendig and Brudger, 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. (Spielberger, Gorsuch and Lushene, p. 4, 1970)

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

It has been demonstrated by Spielberger and others 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 and Lushene, 1970).

Validity. The trait scale of the STAI has been correlated with other measures for anxiety; the IPAT anxiety scale (Cattell and Scheirer, 1963) as .75, and the Taylor (1953) Manifest Anxiety Scale as .80. The state scale has been validated by subjecting individuals to normal and stressful situations and measuring subsequent changes on the state anxiety scale. Significant differences existed for both males and females under the different conditions (Spielberger, Gorsuch and Lushene, 1970).

Research Questions and Analysis Procedures

This study had two major purposes, which were to see if a curriculum composed of stress management procedures could: (1) significantly alter an adolescent's perceived locus of control as measured by the Nowicki-Strickland Locus of Control Scale for children and adolescents, and (2) if it could significantly alter trait and state anxiety as measured by the subscales of the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory.

The study employed a pretest, treatment-and-interspersed-test, and posttest design to ascertain changes in the dependent variables.

Specifically, the intent of the study was to answer the following questions:

1. Can perceptions of locus of control change as a result of participation in a stress-management treatment?

2. Can stress management training instigate a change in individual trait anxiety?

3. Can stress management training instigate a change in an individual's level of state anxiety with particular situations?

Hypotheses Stated in the null Form

Hypothesis 1

> Adolescents involved in this stress management program when compared to the control group will not show an increase in locus of control along the continuum from external to internal levels measured by the Nowicki-Strickland I-E scale for adolescents on pre-post measures.

Hypothesis 2

> Adolescents involved in this stress management program when compared to the control group will not show a decline in A-Trait Anxiety measured by the trait subscale of the STAI on pre-post measures.

Hypothesis 3

> Adolescents involved in this stress management program when compared to the control group will not show a decline in A-State Anxiety measured by the state subscale of the STAI on pre-post measures.

Hypothesis 4

> There will not be a positive correlation between position on the trait subscale of the STAI and the Locus of Control Scale--those scoring high on the trait subscale of the STAI will not score above a low correlation (40) with the Locus of Control Scale on both the pre- and posttests.

Analysis Procedure

Analysis procedures for the study include a multivariate analysis of covariance (MANCOVA) and a subprogram of the Statistical Package for the Social Sciences (SPSS) to compute Spearman Brown correlation coefficients. MANCOVA was used to test hypotheses 1, 2 and 3, and the subprogram of the SPSS tested hypothesis 4. MANCOVA was used because the study was composed of potentially nonequivalent groups and more than one dependent variable was employed; another factor was that the dependent variables were not necessarily independent. Since there was an unequal number of subjects in the treatment and control groups, the Finn Program, Version 6 for multivariance was used in the MANCOVA.

The alpha level for significant differences among means of dependent variables was established at .01 prior to gathering the data. The .01 alpha level was chosen because an alpha of .01 or .05 are levels of convention.

The Nowicki-Strickland Locus of Control Scale and the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory were handscored and independently checked for accuracy. Scores for each subject in treatment

and control groups were entered on coding sheets along with indicators of the subject's group and locality, and the subject's grade, sex, and racial or ethnic background. A keypunched card was prepared for each treatment and control subject with the above data, including the scores for the covariables (pretests) and the measures (posttests) of the MANCOVA. The keypunched cards were analyzed via the Control Data Corporation Cyber 7500 Computer system in the Computer Center at Michigan State University.

CHAPTER IV

ANALYSIS OF THE RESULTS

Introduction

This chapter presents the results of the study. Through the design of the study and the analysis of the results, the researcher sought to determine if the stress management curriculum under evaluation prompted an increase in locus of control and a reduction in trait and state anxiety in treatment subjects. The researcher also sought to determine if locus of control and trait anxiety were correlated. The four hypotheses used to test these questions are listed in Chapter III.

In this comparative study the data were analyzed for statistical significance using a Finn program (Scheifley and Schmidt, 1973) to perform a multivariate analysis of covariance. A subprogram of the Statistical Package for the Social Sciences (Nie et al., 1970) was also employed to compute the Pearson Product Moment Correlation coefficients. MANCOVA was used to test hypotheses 1, 2 and 3. The SPSS was employed to compute the Pearson Product Moment Correlation Coefficients to test hypothesis 4.

The multivariance model for analysis was used because both multiple sources of influence and multiple outcomes of educational process were expected.

> Multivariate models are appropriate when a study contains multiple outcomes, or dependent, or criterion measures. They frequently constitute the most realistic statistical models for behavioral data, especially when the research evolves from a multiple-input, multiple-output paradigm. (Finn, 1974, p. 7)

The multivariate approach attends to the data as a whole rather than to a few isolated or transient aspects as would be the case if simple change scores had been computed and tested for significance with t-tests.

> The analysis of a single summary measure (such as a total or average score) will result in the loss of information conveyed by the individual scales. The results will have dubitable meaning. Analysis of each of the measures separately results in redundancy to the extent that the measures are non independent. Statistical error rates may be multiplied many fold, and the replicability of the study is reduced. The appropriate multivariate model retains the multiple scores as a set of interrelated traits. (Finn, 1974, p. 7)

The multivariate analysis of covariance was used because the study was composed of potentially nonequivalent groups and the dependent variables were not necessarily independent. The covariates were the three pretests given to treatment and control groups. The Nowicki-Strickland Locus of Control Scale, and the Spielberger, Gorsuch and Lushene State Anxiety subscale and Trait Anxiety subscale act as covariates. Measures of the MANCOVA are the posttests performed using these scales.

A multivariate extension of the usual F test, the step down F, was employed. The univariate F and the step down F were computed in the MANCOVA, but the step down F is reported because the researcher wished to test the main effects independently.

Descriptive Data

The subjects from both treatment and control groups are described in Appendix C. Because there was attrition between the pre- and post testing of both treatment and control groups, that attrition is reported here and its possible effects are discussed in Chapter V.

Table 4.1 contains the attrition rate for subjects in the experimental and control groups.

TABLE 4.1

ATTRITION RATE OF EXPERIMENTAL AND CONTROL GROUP SUBJECTS

Group number by location	pretest	posttest	attrition rate
	NUMBER	NUMBER	PERCENT
Treatment			
1 - Bay County	15	11	27
2 - Lenawee County	25	22	12
3 - Oakland County	20	18	10
	60	51	15
Control			
4 - Midland County	20	17	15
5 - Calhoun County	13	13	0
6 - Hillsdale County	19	13	32
	52	43	17
Grand Total	112	94	16

Note that the total number of treatment subjects lost between pre- and posttests is the same as the number lost in the control groups during the same span. A slightly higher (2%) attrition rate occurred in the control group when compared to the treatment group.

Descriptive statistics including the means and standard deviations for the three dependent variables (the Nowicki-Strickland Locus of Control Scale, and the Spielberger, Gorsuch and Lushene State Anxiety subscale

and Trait Anxiety subscale) on both pre- and posttests for the treatment and control groups are reported in Table 4.2.

TABLE 4.2

COMPUTED MEANS AND STANDARD DEVIATIONS OF THREE DEPENDENT MEASURES ON TREATMENT AND CONTROL GROUP'S PRE- AND POSTTESTS

	Mean	Std. dev.	n
Nowicki Strickland Locus of Control Scale pretest			
treatment	13.80	6.08	51
control	13.16	5.46	43
NSLCS posttest			
treatment	13.04	6.53	51
control	13.33	5.69	43
Spielberger, Gorsuch and Lushene State Anxiety pretest			
treatment	57.75	10.69	51
control	52.74	12.38	43
State Anxiety subscale second session			
treatment	54.59	12.83	51
State Anxiety subscale third session			
treatment	49.35	13.91	51
State Anxiety posttest			
treatment	45.12	14.98	51
control	50.72	12.01	43
Spielberger, Gorsuch and Lushene Trait Anxiety pretest			
treatment	43.02	11.12	51
control	42.07	8.09	43
Trait Anxiety posttest			
treatment	41.29	9.90	51
control	41.07	7.15	43

Hypothesis Testing

From the data in Table 4.1, the MANCOVA was performed to determine any statistically significant effects on the three dependent variables. Also, the Spielberger, Gorsuch and Lushene State Anxiety subscale means are used in Figure 4.1 to plot the changes in state anxiety for the treatment group over time.

As stated earlier in the chapter, hypotheses 1, 2 and 3 were tested by conducting a multivariate analysis of covariance (MANCOVA) on all of the dependent measures. Table 4.3 presents the results of this multivariate analysis. As indicated in Table 4.3, the treatment F test was significant at alpha .01. A further analysis of the components of this overall treatment F test and a discussion of the interaction and main effects F tests follow.

TABLE 4.3

SUMMARY OF MULTIVARIATE ANALYSIS OF COVARIANCE

Source of Variation	Degrees of freedom	F-Value	P<
Treatment	3, 85	5.335	.0021
Sex effects	3, 85	.8572	.4667
Interaction	3, 85	.4894	.6906

To determine if sex was interacting with the treatment, the F statistic for multivariate test of equality of mean vectors was run with scores from each of the three dependent variables (the Nowicki Strickland Locus of Control Scale, and the Spielberger, Gorsuch and Lushene State subscale and Trait Anxiety subscale. The following table shows that

no statistical significance was found with an F ratio of .489 and the P level set at .01; thus there was no statistically significant interaction between treatment/no treatment groups and sex.

TABLE 4.4

RESULTS OF MANCOVA FOR SEX/TREATMENT INTERACTION

Degrees of Freedom 3 and 85	Overall F = .489 p = .691	
Variable	Step down F	P <
Nowicki Strickland Locus of Control	.007	.936
Spielberger, Gorsuch and Lushene Trait Anxiety	.772	.382
Spielberger, Gorsuch and Lushene State Anxiety	.691	.408

In order to determine if there was an effect due to the sex of the subject on any of the three dependent variables, an F statistic for multivariate test of equality of mean vectors was computed. Table 4.5 shows that, with an F ratio of .857 obtained at a P level of less than .467, no statistically significant effects were found.

TABLE 4.5

RESULTS OF MANCOVA FOR SEX EFFECTS

Degrees of Freedom 3 and 85	Overall F = .857 p = .467	
Variable	Step down F	P <
Nowicki Strickland Locus of Control	.032	.859
Spielberger, Gorsuch and Lushene Trait Anxiety	.275	.601
Spielberger, Gorsuch and Lushene State Anxiety	2.260	.137

Finally, to test the actual hypotheses 1, 2 and 3 for the effects of the treatment, the F statistic for multivariate test of equality of mean vectors was computed. Table 4.6 reviews the results. To determine which variable(s) contributed to the significant difference of the overall F at 5.335 and p of .002 for treatment, the step down F tests were examined.

The step down F test indicates whether or not a particular variable has contributed to significant results on the multivariate test after its mean has been adjusted to account for the linear relationship between that variable and the other variables. The step down F tests reported in Table 4.6 indicate if a variable has contributed to significant findings of the univariate F test testing for significance of treatment. An examination of the step down F tests for treatment indicated that the significance came from the Spielberger, Gorsuch and Lushene State Anxiety subscale measure.

TABLE 4.6

RESULTS OF MANCOVA FOR TREATMENT EFFECTS

Degrees of Freedom 3 and 85	Overall F = 5.335 p = .002	
Variable	Step down F	P <
Nowicki Strickland Locus of Control	.846	.360
Spielberger, Gorsuch and Lushene Trait Anxiety	.004	.9499
Spielberger, Gorsuch and Lushene State Anxiety	15.204	.0002

As indicated in Table 4.6, there were no significant differences between the treatment and control groups on scores on the Nowicki-Strickland Locus of Control Scale or scores on the Spielberger, Gorsuch and Lushene Trait Anxiety subscale. Therefore, null hypotheses 1 and 2 were not rejected.

There was a significant difference between the treatment and control groups on scores on the Spielberger, Gorsuch and Lushene State Anxiety subscale reported in Table 4.6. Thus, with an F ratio of 15.204 at an alpha level of less than .0002 null hypothesis 3 was rejected. A significant difference existed between the means of the treatment and control groups on the state subscale. To test for possible changes in state anxiety, the Spielberger, Gorsuch and Lushene State Anxiety subscale was administered to treatment groups at each of the four sessions. Since the null hypothesis was rejected and the difference was significant, the means of each successive State Anxiety subscale for the treatment groups were plotted. Figure 4.1 illustrates the trend of this plotting.

A steady decrease in the reported perceived level of state anxiety occurred over the four sessions of the treatment. There was a statistically significant reduction of 12.6 points on the state anxiety by the treatment group. The control group dropped only 2.02 points.

Hypothesis 4 was tested using a subprogram of the SPSS to compute Pearson Correlation coefficients. The correlation coefficients are reported in Table 4.7, along with the correlation coefficients between the Nowicki Strickland Locus of Control scores on pre- and posttests and the Spielberger, Gorsuch and Lushene Trait Anxiety subscale scores on the pre- and posttests. A discussion of the relationships follow the table.

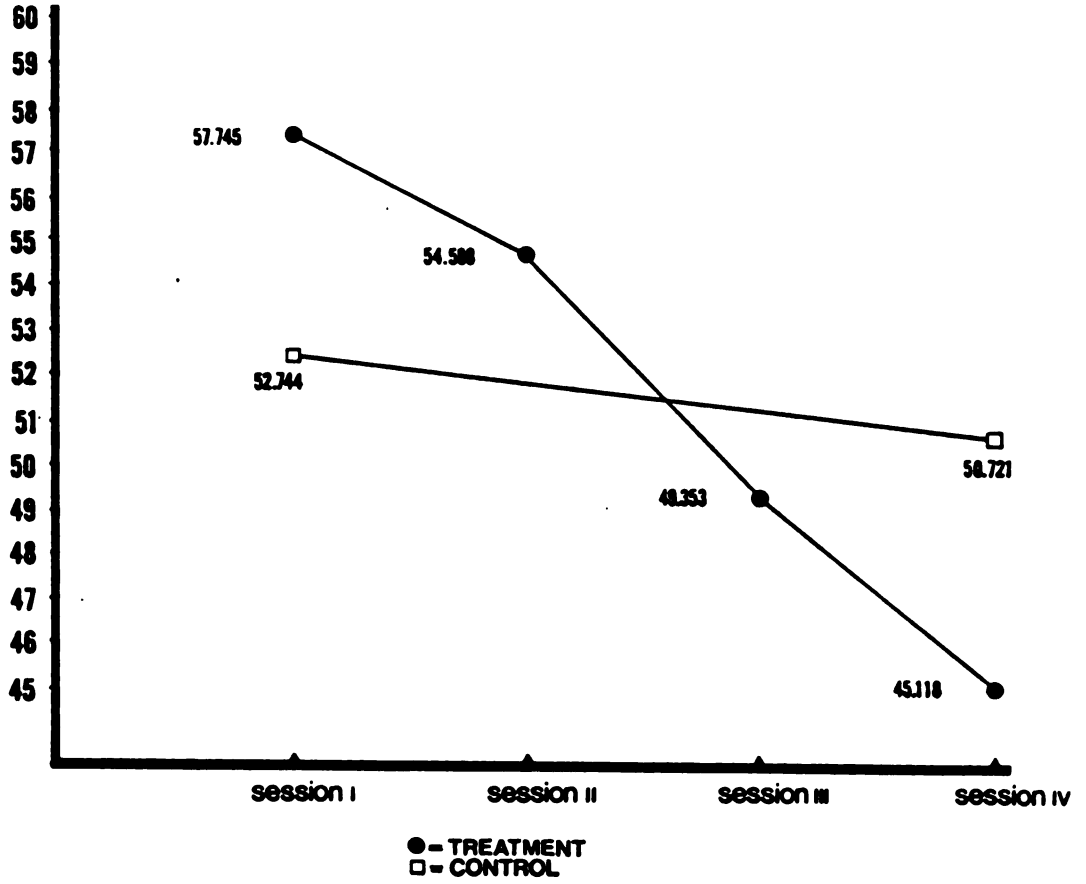

Figure 4.1: Treatment Group Change in State Anxiety Over Time.

TABLE 4.7

SUMMARY OF PEARSON PRODUCT MOMENT CORRELATIONS
BETWEEN THE DEPENDENT VARIABLES ON PRE- AND POST MEASURES

	PRETEST		POSTTEST	
pretest	NSLC	TRAIT	NSLC	TRAIT
NSLC	1.000	.556 (p=.001)	.775 (p=.001)	.460 (p=.001)
TRAIT		1.000	.536 (p=.001)	.790 (p=.001)
posttest				
NSLC			1.000	.488 (p=.001)
TRAIT				1.000

As can be seen in Table 4.7, correlations were significant at the .001 alpha level. A significant, moderate correlation coefficient (.556, p=.001) between locus of control (as measured by the Nowicki Strickland Locus of Control Scale) and trait anxiety (as measured by the Spielberger, Gorsuch and Lushene Trait Anxiety subscale) was obtained on the pretest. A somewhat lower, but still significant correlation coefficient (.488, p=.001) was obtained on the posttest between locus of control and trait anxiety. Thus, hypothesis four, which states that there is not a positive correlation between locus of control and trait anxiety, is rejected.

Responses from the open-ended evaluations are reported in Appendix D. Data on the open-ended evaluations were gathered as subjective input from participants for future replications of the curriculum.

The open-ended evaluations asked treatment participants to respond to the two statements:

- I most appreciated hearing, doing, seeing, experiencing, etc. . . .
- I would have preferred hearing, doing, seeing, experiencing, etc. . . .

A majority of the participants responded that they learned from the group processing "because it brought things to mind that I didn't think of." The participants also indicated that they were surprised to learn that their peers had problems and worries similar to their own: "Sometimes you sort of wonder if you are a bit strange because of the things that bother you . . . I found I'm not alone in my thinking!" Getting feelings out and being able to deal with them openly within the group seemed to be a major plus for participants in the program. Also, learning the relaxation exercises, especially the fantasy exercises, was reported to

be of great importance to most participants: "I appreciated most the exercises with breathing and fantasy trips. They really helped me to relax . . . Also the ways to handle stress made me stop and think about what I do and maybe how I could handle it better."

Approximately 25 percent of the treatment participants would have preferred less of or none of the locus of control and STAI subscale inventories. Many indicated that the testing segments seemed like "school" while the curriculum itself was meeting their learning needs. A small number (approximately 10 percent) indicated that the group interaction and group sharing made them feel uncomfortable, while a majority listed this interaction as a highlight of the curriculum.

A number of participants also suggested that the curriculum should be conducted for adults as well. Many indicated that they wished there had been additional sessions.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study was to examine the effect of a training technique on the reduction of adolescent-perceived stress and locus of control. Little research has been done to evaluate the effectiveness of stress management models with an adolescent population. This study was designed to evaluate the effectiveness of such a stress management regimen with adolescents by monitoring perceived state and trait anxiety and locus of control in treatment and control groups.

The research sought to investigate the following questions:

1. Can perceptions of locus of control change as a result of participation in a stress management treatment?

2. Can a stress management procedure instigate a change in individual trait anxiety?

3. Can a stress management procedure instigate a change in an individual's level of state anxiety with particular situations?

4. Is trait anxiety correlated with locus of control?

The subjects in the study were 94 adolescents involved in 4-H--Youth Programs in the summer of 1981. All resided within a 150-mile radius of Lansing, Michigan. Counties within this radius were asked to volunteer for the study. From this pool of volunteer counties, a group from each county was randomly assigned to the treatment group, control group, or nonparticipation group. Three groups were assigned to the treatment group, three to the control group, and two were

nonparticipants. All subjects in the study were pretested with the three covariates: the Nowicki-Strickland Locus of Control Scale, the Spielberger, Gorsuch and Lushene State Anxiety Subscale and the Spielberger, Gorsuch and Lushene Trait Anxiety Subscale. Each subject identified a personal stressor and described it in writing prior to taking the state anxiety subscale. The treatment group members received four training sessions in stress management over a four-week period and took the state anxiety subscale in relation to their identified stressor at each session. At the completion of the four-week period, all subjects were posttested on each of the measures.

The independent variable sex was selected as a possible factor which could bias the data. It was thought that this variable might influence research results in relationship to both locus of control and state and trait anxiety--that the treatment might not be the only variable influencing the outcome. To overcome this potential problem, the variable sex was included in the design so that the effects of the treatment could be analyzed.

The pre- and post measures of the three dependent variables were analyzed using the Finn model multivariate analysis of covariance. The MANCOVA assessed differences between the treatment, sex, and interaction of treatment and sex for the treatment and control groups. The results indicated that subjects were no different in relation to the independent variable sex. No significant differences for sex or treatment by sex interaction were revealed. The MANCOVA revealed no significant difference in change in locus of control or trait anxiety, but a significant

difference was revealed for state anxiety between the treatment and control groups. A moderate and statistically significant correlation was found between locus of control and trait anxiety.

Discussion of Limitations

This section consists of an appraisal of the limitations of the study. In almost any study there are some factors which operate outside of the researcher's control. Such factors potentially influence the results and cause the researcher and consumers of the research to question the results of the study. In this section, the sample, instrumentation, design, treatment, and methodology are critiqued.

The initial nonrandom nature of the sample may have influenced the results of the study. All groups had first been volunteered by their counties prior to being randomly assigned to treatment or control group status. All subjects were those who were then willing to participate and commit their time. Nine subjects from the treatment groups dropped out during the four-week treatment session. Fifty-one completed the treatment. Nine from a total of 51 dropped out of the control groups. This attrition is documented in Table 4.1. It is important to recognize that the attrition rate was higher in some subgroups of both the treatment and control groups than in others, and it is possible that though the data were analyzed using the subgroups as a common treatment or control group, it should be recognized that this uneven attrition rate could be a confounding variable. In generalizing the results of the study to a larger population of adolescents, caution should be exercised because of the possible confounding of results by attrition, the characteristics of volunteering and the motivation for involvement.

One would assume that the treatment subjects who completed treatment were motivated for one reason or another, perhaps for personal reasons, to travel to each session. Participants were volunteers and were not a captured audience, as one might find with a secondary school class.

It could be argued that certain characteristics of the sample are unique and not representative of a much larger population of adolescents. Though this is possible, the 94 adolescents in this study were representative of the population of adolescents within Michigan 4-H--Youth Programs for this age range. (Characteristics are documented in Appendix C, which is the description of adolescents that was used in making the Cornfield Tukey Bridge argument.)

The Michigan 4-H--Youth Programs involve a broad gamut of youths including high-, mid- and low-achievers, adjudicated youths, handicapped youngsters, and youths from all SES and racial and ethnic backgrounds. However, race, a potentially important independent variable, was omitted from the study because of the relatively small number of non-Caucasians (3) in the treatment group. Because of this omission, the researcher would question the generalization to a mixed racial-ethnic audience--especially on the locus of control covariate had there been a significant difference indicated. Previous research (Nowicki, 1971) has indicated that locus of control scores differ slightly between black and white youths. There have been no documented differences on state or trait anxiety between black and white youths (Spielberger, Gorsuch and Lushene, 1970).

The State-Trait Anxiety Inventory and the Locus of Control Scale both reflect the self-perception of each subject. There is a possibility of a halo effect in which the youths in the training groups wanted the

results to show a reduction in stress or a change in direction of locus of control. This concern must be considered in the interpretation of any clinical research results. Therefore, the feelings that the subjects had about the study, the regimen and/or the facilitator could have an impact on the results of a paper and pencil instrument rating system.

Because one person, the researcher, conducted all of the sessions, the effects of differing training for the treatment groups was diminished. However, the investigator's own ego investment in the project may have contributed that "something extra" to the sessions that would not have been there with another person. The investigator did, however, make a conscious effort to conduct these sessions in the same manner as she has conducted dozens of others in the past.

Discussion of Results

Four major conclusions can be drawn on the basis of the results of the tests of the hypotheses. First, no statistically significant change in locus of control was noted when the treatment group was compared with the control group. Second, no statistically significant change in trait anxiety was noted upon the comparison of control and treatment groups. Third, a statistically significant change did take place among the treatment group in state anxiety and a steady decrease in state anxiety was noted over the four week treatment session. And fourth, a positive, moderate, and statistically significant correlation was found between locus of control and trait anxiety.

In analyzing the results of the study, the researcher must ask why the stress management training program was not sufficient to prompt a change in locus of control orientation and trait anxiety. A discussion

of the major four findings follows under the sections titled Locus of Orientation, Trait Anxiety, State Anxiety, and Correlation Between Locus of Control and Trait Anxiety.

Locus of Control Orientation

Because locus of control orientation and ability to deal with anxiety have been linked in the literature (Lazarus, 1975; Pervin, 1963; Phares, 1976; Deci, 1980; Glass and Singer, 1972; and Lazer and Saegest, 1977) it was hypothesized that teaching youths to manage life stressors could increase their generalized locus of control orientation along the continuum from externality toward internality.

Numerous studies (Reimanis, 1973, 1974; Eitzen, 1974; Matheny and Edwards, 1974; and Chandles, 1975) have reported changes in locus of control orientation toward greater internality prompted by group counseling and behavior modification treatment programs. The researcher expected to find that such a move toward internality would take place in the treatment group in this study. However, no statistically significant move toward internality was found.

One of the major differences between this study and the referenced programs was that the referenced programs were conducted over a two- to four-month period. This study spanned only a four-week period and entailed approximately eight hours of contact time.

Only a study by Nowicki and Barnes (1973) cited in Chapter II recorded a change toward internality in locus of control in a one-week program. Though the length of the program was relatively short, the contact time on tasks relevant to change in locus of control was approximately 40 hours.

Thus, the researcher suggests that a more lengthy stress management training program may be what is necessary to prompt a change in locus of control toward greater internality.

Trait Anxiety

Trait anxiety is viewed by Spielberger, Gorsuch and Lushene (1966, 1970, 1979) as a trait and a factor which does not change perceptibly over time without experiences significant to the individual. Spielberger et. al and Denny (1980) have cited studies which have manipulated trait anxiety through stress management training programs and have shown that trait anxiety can be significantly reduced.

Thus, the researcher hypothesized a reduction in trait anxiety by treatment subjects in this study. The results of the research project did not support this hypothesis however. Again it is suggested that a change in the length of the time on task might affect the outcome of the study. The researcher suggests later in this chapter that this study be replicated with an increased number of learning experiences in stress management training.

State Anxiety

A statistically significant change in state anxiety was observed in the treatment group. This reduction, from a mean of 57.745 to 45.118, corresponds with data reported by Spielberger, Gorsuch and Lushene (1970) for subjects in an anxious state (norm 57) and was approaching the reported norm of 36.99 for high school males and 37.57 for high school females in a nonanxious state. The researcher suggests that further

reductions in state anxiety may have taken place had additional sessions in stress management been made available to the treatment subjects.

One outcome of the descriptive statistics in Table 4.2 should be noted. The standard deviation for the treatment group on A-State changed from 10.675 on the pretest to 14.978 on the posttest. This could be interpreted to mean that some subjects improved more than did others. Thus, the researcher is led to question if state anxiety related to certain stressors was more easily affected by the curriculum than were other stressors. To determine if this supposition has support, a recommendation to block subjects on types of stressors is made in the next section on suggestions for future research. By working with a research design which blocked subjects by types of stressors (e.g., peer-related, parent-related, future-related, and sex-related), the researcher could determine if the stress management program was more successful with one type of stressor or another.

Data from the open-ended responses suggest that perhaps one of the major causes of change in state anxiety may be prompted by the group and dyadic sharing. An interesting variation of the study would contrast the group interaction model used in the present study with an individual use of the information and exercises in The Stress Connection. Participants in this alternate approach would work on their own to complete the pen and pencil exercises and learn the stress reduction exercises. This modification would test the supposition that group interaction and sharing prompted much of the change in state anxiety. In both the open-ended evaluations and the interaction with the researcher, participants stressed the importance to themselves of

realizing that some of their peers had problems similar to their own. This would support Marcia's (1967) thesis that growth in identity takes place when adolescents are able to break out of the belief that they alone have certain experiences or certain problems--the realization that they are not alone seems to have therapeutic value for adolescents.

Correlation Between Locus of Control and Trait Anxiety

A moderate, positive and statistically significant correlation was found between locus of control and trait anxiety on the pretest of treatment and control groups. It was both statistically ($r=.56$; $p=.001$) and meaningfully ($r^2=.31$) significant. Since about 31 percent of the variance from one can be used to predict values on the other, it supports the contention by Lefcourt (1976) and the studies that Lefcourt reviewed that locus of control and the ability to deal positively with stress are related. Thus, the data from this study support in part the contention that persons assessed as holding internal control expectations seemed to be better able to withstand the assault of stressors than do persons assessed as holding external control expectations. The question remains: would a decrease in trait anxiety prompt a move toward the internality end of the continuum in locus of control? Because of the correlation found in this study between trait anxiety and locus of control, it seems realistic to hypothesize that it would if the right mix of stress management training techniques and time on task were discovered to prompt a decrease in trait anxiety.

In reviewing the discussion of results under the four hypotheses, the researcher is left with two major questions. First, would a more lengthy stress management program prompt change sufficient to reject the

first two hypotheses and would this more lengthy stress management program lead to further reduction in state anxiety? Second, would a different combination of stress management learning experiences prompt statistically significant change in state and trait anxiety and would a change in locus of control follow a change in trait anxiety?

To test variations of these questions, recommendations for future research are listed in the following section.

Recommendations for Future Research

As a result of the findings of this study, the following recommendations are made for future investigations into the effects of a stress management program for adolescents.

1. In as much as the subjects in this study were youth volunteers from Michigan 4-H--Youth Programs, it is recommended that a larger number of subjects be included who are selected on a random basis in order to eliminate the possibility of self-selection bias.

2. Future studies should include a higher proportion of male subjects to female subjects.

3. An effort should be made to develop a research design so that adolescents can be blocked on types of stressors to determine if stress management techniques used in this study may be more effective with certain stressors than others and if such blocking could show a difference in outcomes with locus of control and trait anxiety.

4. An effort should be made to include enough non-Caucasions in future studies to include race as a covariate.

5. Future studies could contrast regimens which concentrated on primarily cognitive or primarily behavioral modes as contrasted with the eclectic mode of stress management evaluated in this study.

6. A future study could also contrast the present mode of delivery, which uses group interaction, with a mode which is composed of primarily individual work with the stress management booklet and self-guided exercises.

7. The STAI state subscale could be administered to the control group at the same second and third stage intervals the treatment group received them.

8. Similar exercises in both the cognitive and behavioral domain should be added to the curriculum and the treatment lengthened in order to determine: (1) how far the drop in state anxiety would go before diminishing returns make further instruction impractical, and (2) if increased time on task would improve the drop in trait anxiety and improve the move toward internality in locus of control.

9. Future studies could analyze the data to determine if initial levels of locus of control or trait anxiety had a significant relationship with the decrease in state anxiety.

10. A future study should administer the three dependent measures one to two months after the posttest is administered to determine if scores are maintained.

Conclusions and Implications for Stress Management Training with Adolescents

The findings of this study indicated that the stress management techniques may be effective in helping adolescents deal with specific life stressors (such as school, parent, peer, sex and future-related stressors), though it appears that trait anxiety and locus of control are not significantly affected. It is clear that many adolescents

perceive stressors in their daily lives and wish to learn positive coping techniques. The large proportion of the participants completing the sessions (85 percent) attests to this interest.

In summary, a number of implications for stress management programming with adolescents emerged from this study. The first, which is supported by the state anxiety data, was that meaningful change can occur when adolescents identify a specific stressor and take the time to analyze the stressor through structured group experiences, learn stress reduction techniques, and develop a specific mode for dealing with the identified stressor.

The second, supported by the trait anxiety data, was that a meaningful change cannot be expected in trait anxiety (i.e., the way one generally perceives stressful situations) after exposure to a four-week, eight-hour stress management curriculum. The locus of control data supported a similar implication--no meaningful change should be expected because of the curriculum.

Finally, one can expect to find a moderate predictive relationship between the level of locus of control and trait anxiety. That is, if one has an internal locus of control, this relationship would predict a moderate correlation with the ability to positively manage one's stressors.

Because of what was learned in this research project, the researcher believes that a program which teaches adolescents to deal positively with their individually identified stressors has merit and should have a place in school and youth-serving agency curriculums. At this point the research supports only a reduction in state anxiety but it points

to directions for future research in determining the efficacy of reduction of trait anxiety and a move toward internal locus of control through stress management training.

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APPENDIX A

CURRICULUM

SESSION I

Administer Pretests

- Participant determines his/her 4 digit code
- Administer Locus of Control measure
- Administer STATI # 2 (trait subscale)
- Request demographic data
- Participant identifies his/her stressor. Participant writes a scenario on the stressor, describing the stressor and describing how he/she feels about the situation, event, etc.

1. Introductory lecturette on stressors, stress and anxiety reaction, and stress management (page 3 & 4 Stress Connection).

2. Exercise - What Are Fears (page 4 & 5, Stress Connection). Process exercise in total group.

3. Lecturette - Stress Overload (Page 5, Stress Connection).

4. Exercise - Are Things Sometimes Just "Too Much"? (page 6, Stress Connection).

BREAK - 10 minutes

5. Lecturette - Stress Underload (Page 7, Stress Connection).

6. Exercise - Habits and Routines (page 7, Stress Connection). Process exercise in total group.

7. Lecturette on body tension as stress. Group practices tensing muscles to experience muscle tension. Introduce concept of relaxation exercises. (page 36 & 37, Stress Connection)

8. Exercises - Diaphragmatic Breathing and Deep Muscle Relaxation (pages 38 & 39 Stress Connection) Process exercises in total group.

SESSION II

Give STAI # 1 (State subscale)

1. Each group member introduces him/herself by talking about how they used one of the relaxation exercises during the past week. Use this to review concepts from Session I.

2. Exercise - Introduce and practice breathing exercises (page 38, Stress Connection). Process exercise in total group

3. Lecturette - Change as a Cause of Stress (pages 7 & 8, Stress Connection)

4. Exercise - Life Changes (page 8, Stress Connection). Ask participants to identify one of the life changes they checked and would feel comfortable in sharing with another person. Instruct participants to form dyads by choosing someone they have not worked with before and a person who is not on either side of them. Process exercise in total group

BREAK - 10 minutes

5. Lecturette - Ways People Respond to Stress (page 10, Stress Connection). Relate to the stressors participants identified during the first session, e.g. STAI - State Subscale Stressor

6. Exercise - Ways People Respond to Stress (page 10, Stress Connection). Have group divide into subgroups of four or five and do exercise as a group project. Again relate to STAI State Subscale Stressor. Process exercise in total group.
Relate this back to Session I's discussion and exercise on Stress Overload and Underload.

7. Introduce the concept of a daily stress log. Ask participants to keep a stress log for a total of twelve waking hours during the following week.

8. Exercise - Deep Muscle Relaxation (page 39, Stress Connection). Guided Imagery and Sensory Awareness (page 41 & 42, Stress Connection). Process exercises in total group. Concentrate on the concept that the relaxation response is a learned skill and when once learned can be achieved without having to utilize exercises such as the above.

9. Remind group of their stress log assignment.

SESSION III

Give STAI # 1 (State Subscale)

1. Introduction Exercise - have participants identify a stressor they experienced during the past week and one they feel comfortable in sharing. Participants should form dyads and share their stress with their partner. Instruct participants to describe stressor and how they coped with the stressor. Process exercise in total group by asking for sharing of stressors by group members.

2. Lecturette - Review ways people respond to stress (page 10, Stress Connection). Discuss stress symptoms (page 12, Stress Connection).

3. Exercise - Generate a List of Stress Symptoms (page 12, Stress Connection). How Do You React? (page 12 & 13, Stress Connection). Process in dyads and then in total group.

4. Exercise - Quick Relaxation Techniques (pages 40 & 41 Stress Connection). Choose three of the six exercises. Process in total group.

5. Lecturette - Psychosomatic Illnesses (page 13, Stress Connection) Process in dyads.

6. Exercise - My Personal Stress Symptoms (page 14, Stress Connection)

BREAK - 10 minutes

7. Lecturette - Ways People Sometimes Cope (page 24, Stress Connection)

8. Lecturette - Coping With Stress (page 27, Stress Connection).

9. Exercise - Stress Safety Valves (page 27 & 28, Stress Connection) Relate to identified stressor in STAI State Subscale.

10. Exercise - Autogenic Relaxation (page 40, Stress Connection)

11. Assignment - Keep a stress log for the same period of time as kept last week--this time monitor how able to deal with it.

SESSION IV

Give STAI # 1 (State Subscale)

1. Exercise - In dyads discuss how participants used stress management this past week. Refer back to stress log. Also, ask participants to reflect on how they used stress management with their identified stressor. This they do not share with their partner or in the group unless they wish to.

2. Lecturette - Where in the body do we feel tension? (Draw lecturette from previous sessions)

3. Exercise - Ask participants to get in touch with where they may be experiencing tension at the moment. Then instruct them to relax generally and relax those tension spots by focusing on their breathing. Ask participants to imagine their breath breathing then through their toes. Participants should practice breathing as if their breath was entering and exiting through their toes.

4. Lecturette - Territorial Privacy (page 21, Stress Connection)

5. Exercise - Territorial Privacy (page 21, Stress Connection). Process in total group.

6. Lecturette - Assertiveness (pages 28 & 29, Stress Connection)

7. Exercise - How Do You Respond (page 30, Stress Connection).

BREAK - 30 minutes

8. Give Nowicki-Strickland Locus of Control post-test and STAI # 2 Trait Subscale post-test. Open-ended evaluation. (Have participants respond to the following open-ended sentences: 1. I most appreciated hearing, seeing, doing, experiencing, feeling, ... 2. I would have preferred.....)

9. Review relaxation exercises.

APPENDIX B

CES
COOPERATIVE
EXTENSION
SERVICE

MICHIGAN STATE UNIVERSITY • U.S. DEPARTMENT OF AGRICULTURE & COUNTIES COOPERATI
4-H — YOUTH PROGRAMS 175 SOUTH ANTHONY NISBET BUILDING OFFI
EAST LANSING, MICHIGAN 48824 (517) 353-6391
(517) 355-0180

June 1, 1981

To: 4-H - Youth staff within a 150-mile radius of East Lansing

Re: Research on Stress Connection

From: Leah B. Hoopfer, Program Leader, 4-H - Youth Programs

I am looking for counties to volunteer to participate in an evaluation of the recently developed stress management program (Stress Connection) for adolescents. The following paragraphs outline the needs of the study and the type of responsibilities you would be buying into if you decide to volunteer to participate in the study.

All volunteer counties will be placed in a pool and randomly assigned to treatment, control, or no-contact groups.

- If your county is randomly assigned to the treatment group, a facilitator will work in stress management with a group of twenty adolescents whom you have identified and will give the participants two simple pre- and post-tests.*

- If your county is randomly assigned to the control group, a facilitator will give a pre- and post-test to twenty adolescents whom you have identified. The post-test would be given four weeks after the pre-test. A facilitator will be available to work with these adolescents this fall after the post-test is given. This stress management instruction is not part of the study but is in trade-off for their participation in the study.

- If your county is randomly assigned to the no-contact group, we will try our best to provide stress management instruction for you late this fall or early winter.

Those counties assigned to the treatment group should expect to include approximately twenty participants in grades 9-12 as of fall, 1981. These participants should be representative of the type of adolescents your county generally works with. The participants should be committed to four sessions, one per week, for approximately two hours. The entire Stress Connection for kids will be covered during that time. Copies of the Stress Connection will be available free of charge to all participants. The cost will not be debited to your publications account.

I prefer to work with groups during the weeks of July 13th through September 4th.

Prospective volunteer counties should call me at 517/353-6391, or write to me at Suite #10, Nisbet Building, by June 25th. Random assignment will be made on the 26th. I will be available at Exploration Days to go into more detail on the needs of the study.

*All pre- and post-tests will have passed the Human Subjects Committee at Michigan State University.

mm

APPENDIX C

DESCRIPTION OF ADOLESCENTS

Treatment Groups		Control Groups	
Grade in School		**Grade in School**	
9th Grade	23	9th Grade	9
10th Grade	6	10th Grade	9
11th Grade	9	11th Grade	10
12th Grade	13	12th Grade	15
	51		43
Sex		**Sex**	
Male	10	Male	19
Female	41	Female	24
	51		43
Racial & Ethnic Background		**Racial & Ethnic Background**	
White	48	White	30
Black	2	Black	10
Spanish descent		Spanish descent	3
Native American	1	Native American	
Other		Other	
	51		43
Place of Residence		**Place of Residence**	
Medium sized city	7	Medium sized city	6
Small city	16	Small city	11
Small town	10	Small town	11
Rural area	18	Rural area	15
	51		43
Participating in Stress Management		**Participating in Stress Management**	
Yes	4	Yes	3
No	47	No	40
	51		43

Group 1--Treatment		Number of Participants
Grade in School--	9th	11
	10th	0
	11th	0
	12th	0
		11
Sex	male	5
	female	6
		11
Racial or Ethnic Background		
	White	11
	Black	0
	Spanish descent	0
	Native American	0
	Other	0
		11
Place of Residence		
	Medium sized city	0
	Small city	8
	Small town	0
	Rural area	3
		11
Participated in Stress Management Exercises Before?		
	Yes	2
	No	9
		11

Group 2--Treatment		Number of Participants
Grade in School--	9th	7
	10th	2
	11th	5
	12th	8
		22
Sex	male	1
	female	21
		22
Racial or Ethnic Background		
	White	19
	Black	2
	Spanish descent	0
	Native American	1
	Other	0
		22
Place of Residence		
	Medium sized city	3
	Small city	4
	Small town	6
	Rural area	9
		22
Participated in Stress Management Exercises Before?		
	Yes	1
	No	21
		22

Group 3--Treatment		Number of Participants
Grade in School--	9th	5
	10th	4
	11th	4
	12th	5
		18
Sex	male	4
	female	14
		18
Racial or Ethnic Background		
	White	18
	Black	0
	Spanish descent	0
	Native American	0
	Other	0
		18
Place of Residence		
	Medium sized city	4
	Small city	4
	Small town	4
	Rural area	6
		18
Participated in Stress Management Exercises Before?		
	Yes	1
	No	17
		18

Group 4--Control		Number of Participants
Grade in School--	9th	4
	10th	5
	11th	4
	12th	4
		17
Sex	male	8
	female	9
		17
Racial or Ethnic Background		
	White	17
	Black	0
	Spanish descent	0
	Native American	0
	Other	0
		17
Place of Residence		
	Medium sized city	3
	Small city	4
	Small town	3
	Rural area	7
		17
Participated in Stress Management Exercises Before?		
	Yes	0
	No	17
		17

Group 5--Control		Number of Participants
Grade in School--	9th	1
	10th	2
	11th	4
	12th	6
		13
Sex	male	3
	female	10
		13
Racial or Ethnic Background		
	White	0
	Black	10
	Spanish descent	3
	Native American	0
	Other	0
		13
Place of Residence		
	Medium sized city	3
	Small city	7
	Small town	2
	Rural area	1
		13
Participated in Stress Management Exercises Before?		
	Yes	0
	No	13
		13

Group 6--Control		Number of Participants
Grade in School--	9th	4
	10th	2
	11th	2
	12th	5
		13
Sex	male	8
	female	5
		13
Racial or Ethnic Background		
	White	13
	Black	0
	Spanish descent	0
	Native American	0
	Other	0
		13
Place of Residence		
	Medium sized city	0
	Small city	6
	Small town	0
	Rural area	7
		13
Participated in Stress Management Exercises Before?		
	Yes	3
	No	10
		13

APPENDIX D

Openended Responses

The following is a sample of the responses obtained from the openended evaluation of the program done at the end of the final treatment session. Note that the answers are in response to the openended questions:

1. I most appreciated seeing, hearing, experiencing, doing being.....etc.

2. I would have preferred seeing, hearing, experiencing, doing, being.....etc.

These responses are included unedited for spelling, grammar and punctuation.

1. I most appreciated...

I most appreciated hearing that others had some of the same problems, stresses, fears, etc. that I did. Sometimes you sort of wonder if your a bit strange because of some of the things that bother you. Here everyone's problems were brought out in the open, where as, normaly you might not have discussed these things as freely with other people. I found I'm not alone in my thinking!!

I most appreciated the relation of stress management to almost anything we do and the fact that it gives us confidence and helps us believe in ourselves.

I most appreciated doing the fantasy trips.

I most appreciated visualizing. This is really working out well for me. I can now see myself doing well, and usually I do well. I also appreciated talking with other people about problems etc. Alot of people have the same problems as I do, which I didn't realize before.

I most appreciated talking out loud all together as a group. It made you feel better hearing other peoples problems and thinking about how you would have dealt with them. It made your own problems seem a little bit less of a trouble. The talking about yourself helped alot, too. Self-esteem is really important.

I most appreciated the friendly setting, comfortable, on the ground, relaxed. The atmosphere was soft and friendly. I also enjoyed learning the exercises, and relaxing. It made me realize how good my body could always feel, and now I am working on keeping things that way.

I most appreciated the group talks because it brought things to mind that you yourself didn't think of. The relaxation "trips" so called. They make you feel at ease and more comfortable about the group and yourself. I like it, it made me see alot of things and understand things better. Things about yourself and the other teens and helps you experience things through others that maybe you've never run across and when you do now I'll know how to deal with it as a stress.

I most appreciated being able to share my stresses with others my age and realize that they had all of the same problems and worries that I have experienced. I also enjoyed the exercises. Now, I know how to apply them and I also know I am in control of my life, which was something I wasn't altogether sure about in the beginning.

I most appreciated talking with the group. It helped me learn to speak in front of others without being stressed and also showed me that others have the same kinds of stresses. I also liked learning the exercises. They really come in handy when I get stressed.

Question 1. cont.

I most appreciated hearing different ways to help me with all my different problems and to relax, keep cool and I think it helped me and always will help me to control my stress. It really works!

I most appreciated learning how to deal with others, through exercises and through expressing myself calmly in angered situations. Although I didn'tuse my abilities to respond calmly all the time, outbursts do and did occur once and awhile. I was glad I could refer to them when I wanted or needed to.

I appreciated most the exercises with breathing and fantasy trips. They really taught me how to relax. I really liked those! They helped me to relax. Also the ways to handle stress made me stop and think about what I do and maybe how I could handle it better.

I appreciated doing the different exercises. They were very soothing and relaxing and I just loved to do them. It was good being talked through them but my mind was getting upset with hearing the same voice all the way through. I hope this class will continue to exist and give others the same great experience I had.

I appreciated learning how to deal with stress, learning the different ways of exercise to relax. Sharing stresses of the week with others. I also liked having different partners (meet more new people).

I most appreciated finding my stress points because it helped relax myself. Also, I appreciated finding everyone else has lots of stresses too.

I most appreciated getting my feelings out and learning the exercizes.

2. I would have preferred...

I would have preferred more talking out in the group. I liked it when everyone had to tell something about themselves. You learn more about everyone that way and get to share some of your personal experiences. Yet, I realize that that would have taken up to much time to go through every person, so, I really don't have any complaints!!

I would have preferred working in a more relaxed atmosphere where we could talk about more personal stresses with the whole group.

I would have preferred less surveys.

I would have preferred starting at a later time. Even though I would have gotten home later, it would have been easier for me to get here on time.

I would have prefered working more as a total group after the first week when we got to know each ther. Working with everyone was more fun.

I would have preferred that I hadn't already known so many of the people here. It didn't make me feel self-concious, but if everyone had been strangers, they would (everyone) have been more uninhibited.

Question 2 cont.

I would have preferred knowing a little more about what you are learning from us. What you are observing and how you think we are coming along. You did a really good job, and you did some of this but you weren't really complete. I have really enjoyed your class, I think it would be a good program to continue. I'm sure alot of other people could benefit from it.

I would have preferred not to answer this question. There wasn't anything I thought should be changed. The whole thing was really good.

I would have preferred to do the breathing exercise with pillows, just kidding!! There was nothing I can think of!!

I would have preferred an earlier time period for this class during school hours or run the program during the summer. The seven to nine, sometimes conflicted with my homework and test assignments. I think it would have been better to start each class by telling your first name and (also last if you wanted) what club you were from. Also, I think they should run this type of class for 4-H parents and adults.

I would have preferred not to have another person introduce me and tell how you feel after talking in a dyad with them. I don't know why but this seemed to bother me.

There was nothing I would have preferred to do other than what we did do. Itwas a great class and I'd love to do another one, (like a more advanced stress class, but this may not be possible) just as an extension to this one.

I would have preferred more examples in the book telling how to do the stress relief.

I would have preferred longer breaks, not to talk so much about me with other people, more relaxation time.

I would have preferred it to last longer.

APPENDIX E

THE NOWICKI-STRICKLAND PERSONAL REACTION SURVEY

We are trying to find out what boys and girls your age think about certain things. We want you to answer the following questions the way you feel. There are no right or wrong answers. Don't take too much time answering any one question, but do try to answer them all.

1. Do you believe that most problems will solve themselves if you just let them? . . . . . yes no
2. Do you believe that you can stop yourself from catching a cold? . . . . . yes no
3. Are some kids just born lucky? . . . . . yes no
4. Most of the time do you feel that getting good grades means a great deal to you? . . . . . yes no
5. Are you often blamed for things that just aren't your fault? . yes no
6. Do you believe that if somebody studies hard enough he or she can pass any subject? . . . . . yes no
7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway? . . . . . yes no
8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do? . . . yes no
9. Do you feel that most of the time parents listen to what their children have to say? . . . . . yes no
10. Do you believe that wishing can make good things happen? . . . yes no
11. When you get punished does it usually seem it's for no good reason at all? . . . . . yes no
12. Most of the time do you find it hard to change a friend's mind or opinion? . . . . . yes no
13. Do you think that cheering more than luck helps a team to win? . . . . . yes no
14. Do you feel that it's nearly impossible to change your parent's mind about anything? . . . . . yes no
15. Do you believe that your parents should allow you to make most of your own decisions? . . . . . yes no
16. Do you feel that when you do something wrong there's very little you can do to make it right? . . . . . yes no

17. Do you believe that most kids are just born good at sports? . yes no

18. Are most of the other kids your age stronger than you are? . . yes no

19. Do you feel that one of the best ways to handle most problems is just not to think about them? . . . . . yes no

20. Do you feel that you have a lot of choice in deciding who your friends are? . . . . . yes no

21. If you find a four leaf clover do you believe that it might bring you good luck? . . . . . yes no

22. Do you often feel that whether you do your homework has much to do with what kind of grades you get? . . . . . yes no

23. Do you feel that when a kid your age decides to hit you, there's little you can do to stop him or her? . . . . . yes no

24. Have you ever had a good luck charm? . . . . . yes no

25. Do you believe that whether or not people like you depends on how you act? . . . . . yes no

26. Will your parents usually help you if you ask them to? . . . . yes no

27. Have you felt that when people were mean to you it was usually for no reason at all? . . . . . yes no

28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today? . . . . . yes no

29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them? . . . . . yes no

30. Do you think that kids can get their own way if they just keep trying? . . . . . yes no

31. Most of the time do you find it useless to try to get your own way at home? . . . . . yes no

32. Do you feel that when good things happen they happen because of hard work? . . . . . yes no

33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters? . . . . . yes no

34. Do you feel that it's easy to get friends to do what you want them to? . . . . . yes no

35. Do you usually feel that you have little to say about what you get to eat at home? . . . . . yes no

36. Do you feel that when someone doesn't like you there's little you can do about it? . . . . . yes no

37. Do you usually feel that it's almost useless to try in school because most other children are just plain smarter than you? . . . . . yes no

38. Are you the kind of person who believes that planning ahead makes things turn out better? . . . . . yes no

39. Most of the time, do you feel that you have little to say about what your family decides to do? . . . . . yes no

40. Do you think it's better to be smart than to be lucky? . . . . yes no

APPENDIX F

SELF-EVALUATION QUESTIONNAIRE

Developed by C.C. Spielberger, R.L. Gorsuch and R. Lushene

STAI - X-1

NAME_____ DATE_____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Almost Never	Sometimes	Often	Almost Always
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I am regretful	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel rested	1	2	3	4
9. I feel anxious	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel "high strung"	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel over-excited and "rattled"	1	2	3	4
19. I feel joyful	1	2	3	4
20. I feel pleasant	1	2	3	4

SELF-EVALUATION QUESTIONNAIRE

STAI - X-2

NAME_____ DATE_____

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

	Almost Never	Sometimes	Often	Almost Always
21. I feel pleasant	1	2	3	4
22. I tire quickly	1	2	3	4
23. I feel like crying	1	2	3	4
24. I wish I could be as happy as others seem to be	1	2	3	4
25. I am losing out on things because I can't make up my mind soon enough	1	2	3	4
26. I feel rested	1	2	3	4
27. I am "calm, cool, and collected"	1	2	3	4
28. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
29. I worry too much over something that really doesn't matter	1	2	3	4
30. I am happy	1	2	3	4
31. I am inclined to take things hard	1	2	3	4
32. I lack self-confidence	1	2	3	4
33. I feel secure	1	2	3	4
34. I try to avoid facing a crisis or difficulty	1	2	3	4
35. I feel blue	1	2	3	4
36. I am content	1	2	3	4
37. Some unimportant thought runs through my mind and bothers me	1	2	3	4
38. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
39. I am a steady person	1	2	3	4
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

THE STRESS CONNECTION

4-H 1138B

THE STRESS CONNECTION

kid's guide

4-H—YOUTH PROGRAMS
COOPERATIVE EXTENSION SERVICE • MICHIGAN STATE UNIVERSITY

The Stress Connection

—*Kid's Guide*—

by

Judy Ann Goth-Owens

This project was funded by a grant to the National 4-H Council from the Robert Wood Johnson Foundation.

Michigan 4-H staff, volunteers and teens participated in the grant pilot program.

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MICHIGAN STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE

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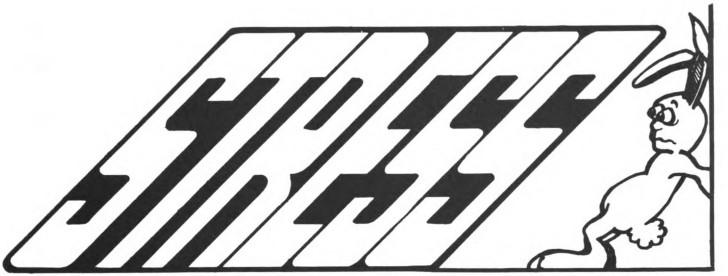


Introduction

The Stress Connection can help you become aware of the impact of stress on your life and help you increase your skills in coping with stress. Stress is a term that is often associated with the harried businessperson or the risk-taking race car driver. You may think that stress has little to do with your life. But, have you ever tried out for a team, taken a test, competed for an award, or changed schools? All of these events may produce stress for you.

You have probably been in many stress-producing situations, but perhaps you didn't think of them in terms of "stress." Stresses are demands on your mind and body. Learning to deal with these demands is what The Stress Connection is all about.

The Stress Connection is a series of activities designed to help you:

. . . develop an understanding of stress as a factor influencing the quality of your life.

. . . learn to appreciate your mind and body as parts of a system that work together.

. . . develop an awareness of your personal stress symptoms.

. . . identify situations that are stress-producing for you.

. . . increase your skills in changing stress-producing situations.

. . . learn some specific techniques for coping with stress.

The Stress Connection is written so that you can do many of the activities, checklists and inventories on your own. You will find, however, that you may learn more about yourself and how you can best deal with your life stress if you work on The Stress Connection in a group. Many of the activities are designed for group discussion. Most participants find that they learn more about themselves when they can share with others.

You decide what you share with others. The Stress Connection is yours. You may wish to keep your responses private. *You do not have to turn anything in or show anything you do in this booklet to anyone else.* It's more important that you share with the group how you feel while you are doing an activity and what you learn as a result of the activity.

The Stress Connection Kid's Guide is one part of the Stress Connection series. Also included are a slide-tape production for kids and adults and a Leader's Guide. The Leader's Guide is a booklet for adults that will help them deal with the stress in their lives and help them build skills to aid kids in coping with stress.

There are many ways you and your group can choose to use The Stress Connection. Here are some examples:

- The group may decide to cover The Stress Connection material in four or five group sessions.
- You and/or the group may choose certain experiences from the Stress Connection that you would want to do together.
- You may want to do an exercise or two each week in your group.
- You may want to spend a long period of time with the group and do most of the exercises as a day-long workshop.
- You may want to go through The Stress Connection individually.

There may be other ways you can think of to adapt this booklet to meet the needs of you and your group, but however you connect with The Stress Connection, you're bound for learning and fun.

What is Stress?

Stress is the body's physical and emotional reaction to circumstances that frighten, irritate, confuse, endanger, or excite us.

Stress isn't all bad; it's really very necessary in life. The body mobilizes its defenses and protects itself against danger. Each time the body senses danger or the unknown, the nervous system reacts by getting ready for "fight or flight." This "fight or flight" response is inborn and present in all organisms. Perhaps you have noticed the following stress responses in yourself:

- The **muscles** are ready to physically respond for fight, flight (getting away in a hurry), or other action.
- The **heart** beats faster, pumping more blood each minute to the brain, lungs, and muscles. This means more food and oxygen are needed for energy to reach these organs in a crisis.
- **Breathing** becomes quicker as more oxygen is obtained for energy, and as carbon dioxide, the waste product of energy production, is disposed of.
- **Digestion** slows, since body energy becomes available for moving rather than being used for digestion.
- The **pupils** dilate. The dark centers of the eyes widen, sharpening the ability to see.
- Great **emotion** is experienced—anger, fear, excitement, happiness. Nerve impulses from the brain and other parts of the nervous system signal the glands. The pituitary and other glands pour out chemical messengers called hormones which influence emotions.
- Greater strength or endurance seems to be experienced.

The effects of a normal amount of stress can give us that extra burst of energy we need to finish the last mile of our jog or they can make us mentally more alert to pass an important exam.

Thousands of years ago, this stress response was absolutely vital for survival. Our early ancestors lived in a brutal world where instantaneous, unthinking responses helped them "fight or flee" concrete dangers like saber-toothed tigers or forest fires. Today, this same body response works well when we are faced with similar stressful situations such as running from a vicious dog or avoiding being hit by a car.

Most of our changes and threats today, however, are much less clear-cut than saber-toothed tigers were. Our threats include things such as tests, conflicts with parents, and relationships with friends. Our bodies respond in the same chemical way they reacted to the saber-toothed tiger long ago—our muscles tense, our hearts pound, we breathe faster—but the fight never comes. Although our bodies are supercharged, there is usually no direct way to "fight or flee" the situation. These prolonged effects of stress can become cumulative and do real damage to our bodies.

WHAT ARE FEARS?

Description

This exercise will help you take a look at what makes you feel fearful and will help you take a look at how you react to fear.

Procedure

1. *Are you afraid of some things or are you afraid to do certain things? Make a list of these things.*

2. *As you look over your list of fears you may notice that some of your fears concern physical events or situations—these physical fears are ones like fear of rattlesnakes, fear of thunderstorms, etc. On the other hand, some of your fears may be associated with social or emotional situations. For example, you may be afraid to go to a party where you don't know everyone, or you may be afraid to give a speech in front of your class.*

   Which of the fears you listed above are physical and which are social-emotional? Some of your fears may fit into both categories. There are no right or wrong answers.

Physical Fears	*Social-Emotional Fears*

3. *Ask yourself, "How do I usually respond to fear—through fight or flight? Why?"*

4. *Answer for yourself, "Can I overcome my physical fears? My social-emotional fears?"*

STRESS OVERLOAD

It is important for all of us to find our own best level of stress—a level of stress that keeps us active and interested in life. This level shouldn't overwhelm us so much that we can't think straight or "underwhelm" us so much that we get bored and fall asleep in the middle of a conversation.

A stress overload or "distress" is too much stress for us to deal with without making us feel tense, insecure, or frustrated. Signs that tell us we might be moving into stress overload are nervousness, a pounding heart, rapid breathing, and an inability to slow down.

We might also be heading into stress overload when we find we want to yell at those around us or when we feel like completely closing ourselves off to others. These behaviors and physical symptoms can give us a clue that we are experiencing too much stress.

ARE THINGS SOMETIMES JUST "TOO MUCH"?

Description

The exercise will help you explore your own reactions to stress overload.

Procedure

Read through the following statements and check those that apply to you. Remember that this is a checklist for you to use in determining your level of stress. There are no right answers, and you do not have to share your responses with anyone else.

_____ 1. I often feel tense, anxious, upset.

_____ 2. I have a "nervous stomach."

_____ 3. People in my family often make me feel upset.

_____ 4. People at school often make me feel nervous.

_____ 5. I get headaches a lot.

_____ 6. I often have trouble sleeping.

_____ 7. I worry about school, even at night and on weekends.

_____ 8. I find myself eating a lot when I get nervous.

_____ 9. I find myself smoking a lot when I get nervous.

_____ 10. I have trouble concentrating on things because I'm worrying about something else.

_____ 11. I take medicine to relax.

_____ 12. I have a lot of things that have to be done by certain times at school or at home.

_____ 13. I have trouble finding time to relax.

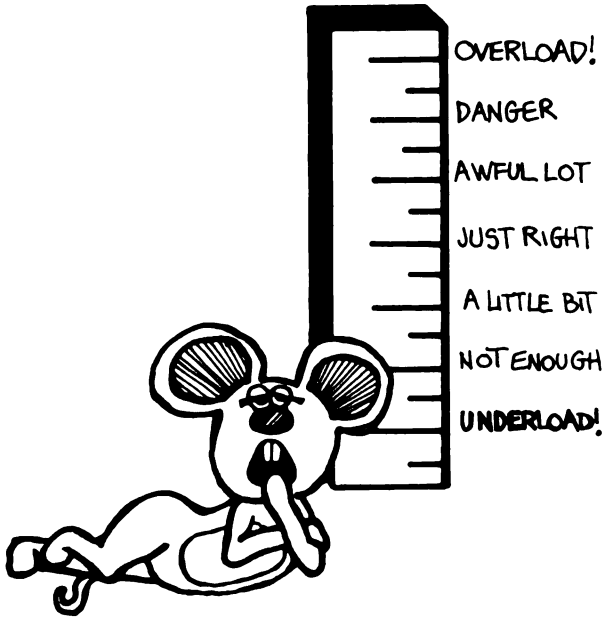
_____ 14. When I do have time to relax, I can't relax because I feel guilty that I'm not doing my homework or other chores.

If you checked six or more items, your tension level is probably quite high. If you checked two to five items, your tension level is probably average. If you checked one item or less, your tension level is below average—lucky you!

STRESS UNDERLOAD

Stress underload or "boredom" or "indifference" is a lack of interest in things generally found to be interesting or exciting. The absence of stress is a form of stress itself. Common signs of stress underload are fatigue, sleeplessness, inability to concentrate, and feelings of hopelessness.

Most people think stressful situations have a lot of pressures or worries associated with them. But *boredom* can be very stressful, too. People need a certain amount of stress to keep them active and interested in life. This activity will help you find out if you are in a rut—maybe even without knowing it!



Read through the following sentences and decide if they are true or false for you. Add up the number of trues and falses you circled, and look at the scoring paragraph at the end of this activity.

HABITS AND ROUTINES

Description

This activity will help you find out if you are in a rut—maybe even without knowing it!

Procedure

Read through the following sentences and decide if they are true or false for **you.** Add up the number of trues and falses you circled, and look at the scoring paragraph at the end of this activity.

---

1. When I hang out with my friends, we usually end up doing the same thing (such as going to a movie, going roller-skating, going to a school dance, etc.). T F
2. I usually do the same things every day when I come home from school. T F
3. I am a clock watcher. T F
4. If I have free time, I usually end up watching TV, because I can't think of anything else to do. T F
5. If I really want to do something but I can't get any of my friends to do it with me, I usually don't do it. T F T F
6. I am proud that I am very organized. T F
7. I spend my allowance/savings on clothes that will last—I don't buy really trendy or flashy clothes. T F
8. I feel really crabby or tired a lot. T F
9. I try to be really efficient and get my work done at school and in study hall. T F
10. My old friends are my best friends. T F
11. I like some of my habits and won't give them up. T F
12. I finish what I start, even if I get bored. T F
13. I plan my weekends ahead of time. T F
14. I am pretty much interested in the same things I was interested in a couple of years ago. T F

Habits and routines give us security, so they are an important part of our lives.

But if you found *most* of your answers were true, you might be in a rut. It could help to change your life a little. You might want to try new things and new ways of doing things to develop a better balance between things you do as habits or routines and those things that are a little new and different.

If most of your answers were *false*, you may also be in a rut—from not having *enough* habits! You might try planning ahead for things you want to do, or you might try developing some new habits. This can help you feel you have more control over your life.

The right balance of habits and "letting it happen" is different for each person, so only you can decide what is the best mix for you!

CHANGE AS A CAUSE OF STRESS

Stress is a challenge that makes special demands on both your body and your mind. It is the body's physical and emotional response to any demand placed on it. One of the big demands on our bodies is CHANGE—family changes, school changes, changes that come from growing up, and changes that come about as a result of personal loss, illness, or injury.

The demands that produce stress are known as stressors. Stressors may be in the form of life changes, emotional conflicts, physical injury, fear, or any other demand on the mind-body system. For example, changing schools, trying out for a team, parents getting a divorce, and holidays all can be stressors. Any out of the ordinary experience, *pleasant or unpleasant*, that changes our lives and requires more than routine adjustment can cause stress. The greater the cause of stress, the greater the demand for readjustment.

LIFE CHANGES

Description

This exercise is designed to help you become aware of some of the events in your life that can contribute to your level of stress.

Procedure

Read through the following list of possible life changes. Check the ones that have applied to you within the last year. You may want to add something that was a change for you but isn't listed.

_____ Death of parent

_____ Divorce of parent

_____ Parents separated

_____ Death of a close family member

_____ Death of a boy/girl friend

_____ Personal injury or illness

_____ Failed a class at school

_____ Gained a new family member (new brother or sister; grandparent moved in)

_____ Changed to a different school

_____ Change of health in family

_____ Arguments with parents

_____ Outstanding personal achievement

_____ Brother or sister left home

_____ Began menstruation

_____ Argument with best friend

_____ Moved to a new house

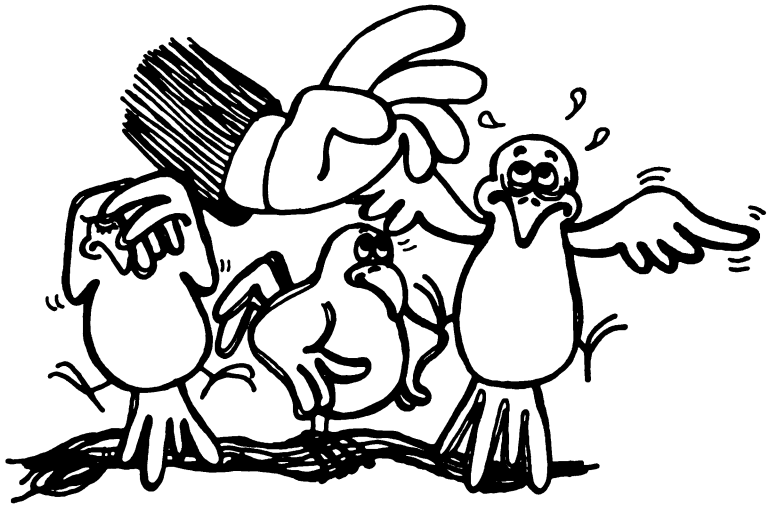
_____ Moved to a new city

_____ Had trouble with a teacher

_____ Vacation

_____ Started a new job

Any one of the above changes is probably stressful. If you checked several, you may be experiencing a stress overload. How have you handled these events so far?



DIFFERENT PEOPLE VIEW SITUATIONS DIFFERENTLY

An event or situation that is stressful for you may not be stressful for someone else. On the other hand, your parent or friend may consider an event to be highly stressful, while that same event may only be a minor inconvenience for you.

Whether or not a person views an event as stressful usually depends on the following things:

1. **The Meaning of the Situation for Us OR "A Problem or Not?"**

   The things that are most important to people are things that people value. For example, a per-

son may value independence, having lots of friends, and being good at basketball (among other values). Trying out for the basketball team is likely to be more stressful for the person who has spent years practicing and preparing for basketball than for the person who decides to try out on the spur of the moment. The things that are the most important to a person are likely to be a source of stress, since there is more at stake.

Our *values, interests, and goals* all play a part in determining how stressful a situation is.

2. **The Resources We Have to Cope with a Crisis OR "What Do I Have to Help Me Get Through This?"**

Money can be a resource, but so can things, time, friends, family members, and a state of health. These can all be useful to a person who is faced with a stressful event. Other important resources for coping with stress may include communication, and decision-making and problem-solving skills. These are resources that we can develop and learn to use more effectively.

Our *resources* and *skills* help us cope with stressful situations.

3. **Our Past Experiences with Stress OR "How Full is My Success Bank?"**

The more success one has had in dealing with stressful situations in the past, the more confident one is likely to feel about handling new stressful situations. A person who had a successful experience making new friends after moving to a new town is likely to find changing schools less stressful than a person who hasn't successfully experienced that kind of change. People who feel good about themselves are more likely to think that there is something they can do to handle new situations.

Our *self-esteem* level can influence our ability to handle stress.

4. **How Much in Control of the Situation We Feel OR "Do or Done Unto?"**

We can more easily deal with a situation that is stressful if we feel like we have some control over the outcome. A situation over which we have no control is one that makes us feel like there is no use in trying. For example, a person who wants to go to the movies with friends but doesn't have any money may feel like there's nothing he/she can do about the problem. This situation is likely to be stressful until the person discovers and thinks through the options and actions that are possible. The less helpless you feel in a situation, the less stressful the situation is likely to be.

Our *feeling of control* is important in determining which events will be stressful for us.

WHAT ARE WORRIES?

Description

This exercise is designed to help you become more aware of how stress factors change with age.

Procedure

1. *Make a list of things that create teenage worries and adult worries. You may wish to brainstorm these with your group.*

Teenage Worries

_____

_____

_____

_____

_____

_____

_____

_____

Adult Worries

_____

_____

_____

_____

_____

_____

_____

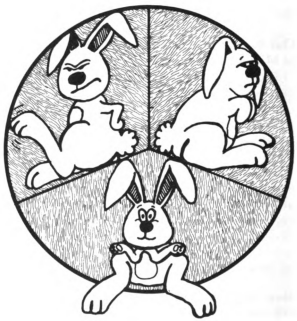
_____

2. *Do the above lists differ? If so, how do they differ? Why?*

3. *Go home and ask an adult to describe two events in his/her life that generally cause stress.*

4. *Next, ask a child between 6 and 10 years of age what really bothers him/her.*

5. *Discuss your findings with the group. Does everyone experience stress? How do stress factors change with age? Do babies undergo stress? Elderly people? Are there stress factors common to all age groups?*



WAYS PEOPLE RESPOND TO STRESS

Making the basketball team, failing a test, and winning the election for student council can all be stressful. Our bodies create excess energy so that we will be able to defend ourselves from the change or meet the challenge the change creates.

The problem is what we can *do* with this excess energy. If we don't find a way to get rid of it, we feel TENSE or ANXIOUS.

When people feel TENSE or ANXIOUS, they try to find some way to get rid of the excess energy. They usually try one of several ways:

1. **They act out how they feel (become aggressive)**—They yell at their younger brother or sister, kick the dog, throw the textbook on the floor, rip up the notebook paper, or (add aggressive acts you or members of your group have seen acted out).

2. **They leave (withdraw from) the situation that is upsetting**—They might daydream about getting even, leave the room, make a sandwich to eat, eat three pieces of cake, think about being rich and famous, or (add ways of withdrawing that you or members of your group have seen acted out).

3. **They make do with (adapt to) the situation**—They grin and bear it, take more babysitting jobs to get more money, talk to friends about what's going on, or (add some ways of adapting to situations that you or members of your group have observed.)

How do you usually handle situations that are upsetting? Does this work for you?

We've been talking about getting rid of excess energy, but people do need *some* excess energy to keep them active, on their toes, and interested in life. Without it, we can become dull, lifeless, bored, or depressed. Excess energy can actually be used creatively—to change a bad situation into a good one, to give us an extra boost so we can reach a goal, or to expand our imaginations.

Can you think of ways you could use your excess energy creatively?

It is important for all of us to find our own *best (optimal) level of* stress—a level of stress that keeps us active and interested in life, but doesn't overwhelm us so much that we can't think straight or underwhelm us so much we get bored and fall asleep in the middle of a conversation! Because each person is different, this *OPTIMAL LEVEL OF STRESS* is different for each person. Only *you* can determine how much stress is comfortable for you.

How Can You Tell If You Are Under Stress?

How can you tell if you or someone you know is experiencing a stress overload? The answer may seem obvious—you know that you're under stress when you worry a lot. So you may answer that question by saying that your mind tells you when you're under stress. But, your body also sends you messages when you are under stress.

Actually the mind and body are not separate; they function as one unit. The mind has an effect on the body and the body has an effect on the mind. For example, do you ever blush when you are embarrassed or get clammy hands when you are nervous? These are normal reactions to certain situations, and for the most part, they are beyond your control. Your mind and body are influencing each other.

GENERATE A LIST OF STRESS SYMPTOMS

Description

This is an exercise to help you become aware of some physical and behavioral symptoms of stress.

Procedure

1. Have the group generate a list of body reactions to stress. This should be a brainstorming session to allow as many ideas as possible to be generated.
2. Talk about your favorite symptoms in the group.
   —Are you always aware when they are happening to you?
   —Can you stop them from happening?
   —Do the symptoms themselves ever contribute to further stress?

HOW DO YOU REACT?

Description

This is a checklist exercise to help you realize how you react to stressful situations.

Procedure

Read each question and answer by choosing a, b, or c. There are no right or wrong answers. Use the checklist to get in touch with how *you* react.

How do you react when:

1. You are called on to lead a group discussion in class. Are you:
   a. calm?
   b. nervous?
   c. glad?
2. Your mom keeps you waiting for an hour—when

she was supposed to pick you up right after practice. Do you:
   a. become really mad?
   b. read a paperback or magazine you carry "just in case?"
   c. calmly tell your mom you don't like to wait?
3. You are taking an exam. Do you feel:
   a. self confident?
   b. worried?
   c. sick to your stomach?
4. You made a comment in a class discussion. The girl sitting next to you tells you your idea is crazy. Are you:
   a. really embarrassed?
   b. amused?
   c. angry?
5. Your dad tells you that you have made a terrible mistake. Would you:
   a. ask how you could change it?
   b. defend what you did?
6. You and your best friend have a fight. She/he says, "That's the last time I'll talk to you!" Do you answer:
   a. "That's just fine with me!"
   b. "Don't say that! You don't really mean it, do you?"
   c. "I'll call you up when you cool down."
7. The person you are really crazy about has just asked you to go to the movies. Are you:
   a. frantic because the large zit on your chin looks bigger?
   b. worried about finding something to talk about?
   c. so happy you float on air?
8. You just made the goal that tied the score. Are you:
   a. upset because you only got one point instead of two?
   b. worried that you might not be able to do it again?
   c. excited because now your team might win?

PSYCHOSOMATIC ILLNESSES: ARE THEY REALLY ALL IN THE MIND?

You have probably heard the word "psychosomatic" before. It means "mind-body." "Psyche" means mind and "soma" means body. It is used to describe the effect your mind can have on your body and vice versa.

Often when people are under stress, their bodies react to the excess energy and tension they have created. People can develop headaches, stomachaches, blushing, a sore neck, etc., when they are under stress. Doctors call these reactions psychosomatic illnesses. The pain people experience from these illnesses is *not* "all in their heads;" the pain or other feeling is very real because the body is undergoing a definite physical reaction to the stress.

Once people experience a psychosomatic illness, it is hard to treat without a doctor's help. A doctor can take a careful history of the symptom and give a complete examination. The doctor may order special tests. If no serious organic disease is found, the doctor may suggest that the person change daily activities, follow a different diet, or take medications. All these will help the body heal the damage caused by the stress experienced. The doctor may also suggest the person talk with a helping professional to find ways to cope with stress.

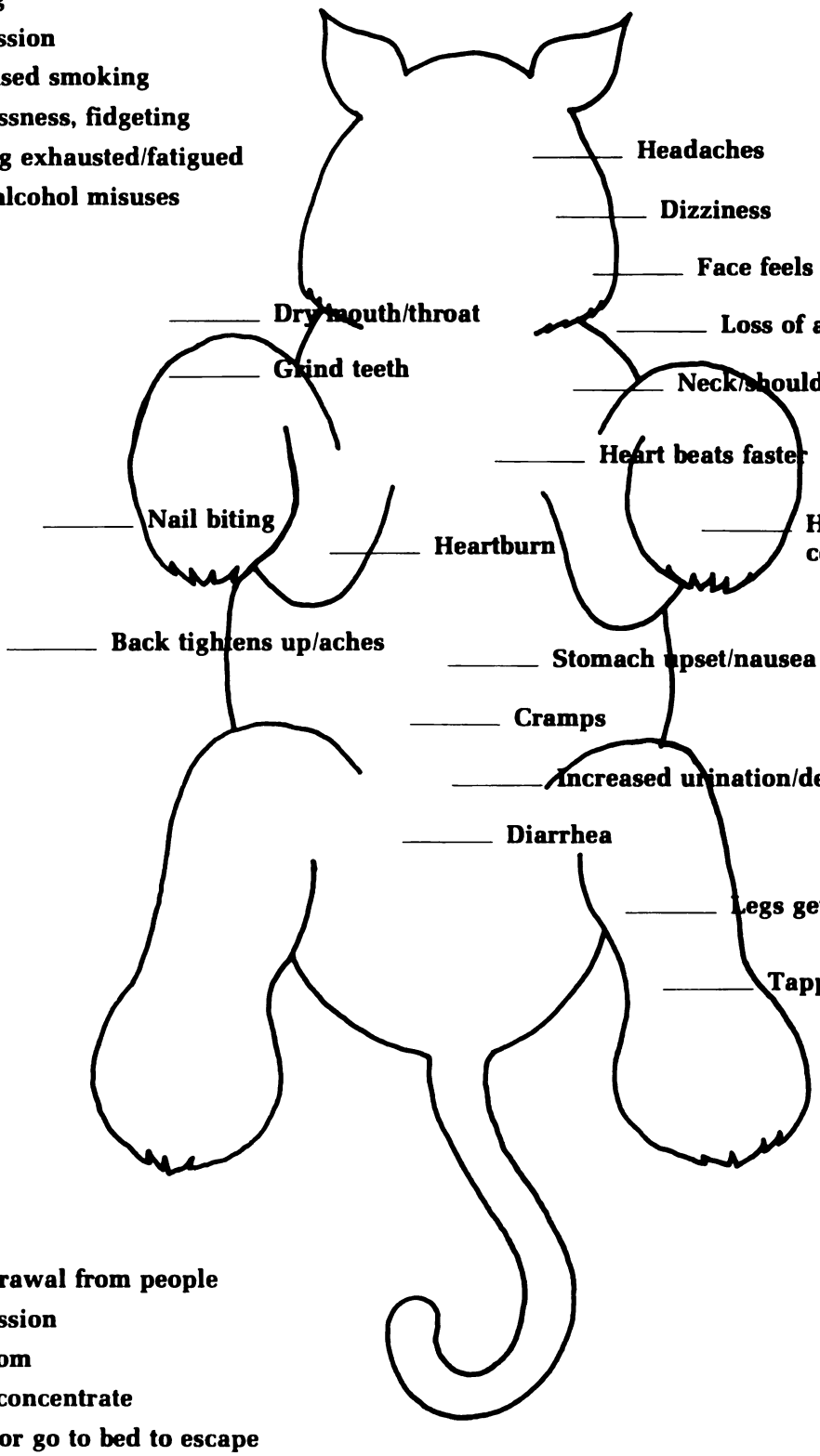
Psychosomatic illness won't go way if "you just don't worry" or if "you just forget about it." They *aren't* "just all in your head"—the body is undergoing some physical changes that could be serious. Having a psychosomatic illness is nothing to be ashamed of—it only means that the person is faced with stress he/she hasn't learned to cope with, and the body is sending messages to take it easy. A doctor can be a best friend at a time like this—follow his/her advice! Parents and friends can also help sort out our feelings and help us learn to cope with the stress.

MY PERSONAL STRESS SYMPTOMS

When I feel under a lot of stress and pressure, which of the following responses do I notice?

Place a check "✓" before those items which apply and occur frequently or regularly.

Place an "X" before those that occur only occasionally.



_____ **Crying**

_____ **Depression**

_____ **Increased smoking**

_____ **Restlessness, fidgeting**

_____ **Feeling exhausted/fatigued**

_____ **Drug/alcohol misuses**

_____ **Headaches**

_____ **Dizziness**

_____ **Face feels hot, flushed**

_____ **Dry mouth/throat**

_____ **Loss of appetite**

_____ **Grind teeth**

_____ **Neck/shoulders tighten up/ache**

_____ **Heart beats faster**

_____ **Nail biting**

_____ **Heartburn**

_____ **Hands and/or feet feel cold or sweaty**

_____ **Back tightens up/aches**

_____ **Stomach upset/nausea**

_____ **Cramps**

_____ **Increased urination/defecation**

_____ **Diarrhea**

_____ **Legs get shaky or tighten up**

_____ **Tapping fingers/feet**

_____ **Withdrawal from people**

_____ **Aggression**

_____ **Boredom**

_____ **Can't concentrate**

_____ **Sleep or go to bed to escape**

_____ **Inability to sleep**

DAILY STRESS LOG

This log will help you look at what stresses are in your daily life. Many times teens aren't aware of exactly what makes them feel "tense." This kind of log can help you see exactly what you were doing in those stressful times.

It helps a lot to keep a log for more than a day—that way you might see patterns of stress that wouldn't show up in just one day. Try to keep track for a week if you can.

This is a sample log filled out by a teenager who goes to junior high in a medium-sized town. Can you see any stress patterns? Does your log look like this?

DAILY STRESS LOG

Activity	Time	What It Felt Like
Getting ready to go to school. Couldn't find algebra book—almost late for the bus.	**7:00**	*Felt hurried, mad at myself, because I couldn't find math book.*
Sitting on bus. Talking with friends.	**7:30**	*Worried about math test.*
Taking test in math class.	**8:30**	*Really scared. I want to get a good grade, but I just don't do good in math.*
Playing volleyball in gym.	**9:45**	*Felt really good to run around and play volleyball. Our team won!*
Taking part in small group discussion in history class.	**11:00**	*I always hate small group. Sally always takes over and I feel really dumb—I never talk much.*
Lunch	**12:15**	*Ate lunch at our table with my friends. Talked about the dance after the basketball game. Tom kept looking at me–I got really nervous.*
English class	**1:00**	*BORING, BORING! Almost fell asleep.*
Band practice	**2:00**	*Tryouts for 1st chair for clarinet. I practiced so hard! My stomach got all queasy and my hands got sweaty when it was my turn. I goofed up the first time, but Mr. Bowen let me play it over. I can't stand the wait till Monday to see if I got 1st chair.*
Home Ec.	**2:30**	*We're doing sewing, but I worried about band while I worked on my skirt. Put the zipper in wrong and had to take it out. Felt really frustrated. Glad when class was over.*
School Variety Show Rehearsal	**3:15**	*Practiced with other band people for our part in the show. I really like to play this kind of music.*
Supper with family	**5:30**	*Tried to talk mom and dad into letting me stay until the dance is over after the basketball game. Dad said no—he would be at the door to pick me up at 10:30 p.m. and I'd better be there or else. I get so mad at him—he treats me like a baby!*
Basketball game	**7:00**	*Sat with my friends and had a good time. Sue and Cindy tried to talk me into staying at the dance till it ends—they say my dad is being too strict. They also say everybody else will stay. I get worried I'll look like a baby if I go home when Dad says. Tom comes over and asks if I am going to the dance. I get really nervous!*

DAILY STRESS LOG

Activity	Time	What It Felt Like
Dance at school	9:00	*Had a really good time. Tom asked me to dance twice! Decided to leave when Dad came at 10:30 —didn't want to be grounded.*
Getting ready for bed	11:00	*Wondered if Tom really liked me. Thought about making 1st clarinet. Had trouble falling asleep.*

DAILY STRESS LOG

Activity	Time	What It Felt Like

Can You Think of Alternatives

When you look back over your "Daily Stress Log," do you see any patterns to the times you felt stress?

_____

_____

_____

_____

Many times, just looking at your stressful situations can give you ideas on how you might cope with them better next time. Can you see any ways you might have handled your stressful situations differently?

Situation: _____

How I would change it: _____

_____

_____

_____

Situation: _____

How I would change it: _____

_____

_____

_____

Situation: _____

How I would change it: _____

_____

_____

_____

What Causes Stress For Kids?

LOOKING AT PRESSURES YOU FEEL

Description

This activity gives kids a chance to examine the sources of pressures and to begin to explore some options for dealing with these pressures.

Procedure

1. Everyone in the group should make a list of the pressures he/she feels.
2. For each pressure write down:
   —What you would like to happen as a result of any possible solution you might try.
   —All the things that will help you reach your goals.
   —All the things that might get in the way of success.
   —How you could eliminate or neutralize the things that might get in the way of success.
3. Using this information, choose the best course of action for handling each pressure.

Conclusion

As a follow-up activity, you may want to write down the actual results and discuss them with the group. Remember that it may take time to get the best results. It may also be necessary to consider other solutions to achieve the desired results.

WHO INFLUENCES YOU?

Following is a list of people. Circle the people you believe have the most influence on you (in one way or another).

— A special friend your age
— A favorite rock and roll singer
— Your next-door neighbor
— A favorite teacher
— The star of a favorite TV show
— The head cheerleader
— The school football star
— Someone you know who is in his/her early twenties
— A political figure you admire
— Your minister, priest, or rabbi
— Who else? Write them down.

Some of these people may have a positive influence on you; others may have a negative influence. People who influence you in a positive way bring out the best in you because they expect you to be your best self.

Yet there are probably others who influence you in a negative way. These people may bring out the worst in you. As a result of their influence, you may look down on yourself or feel taken advantage of.

Look back over your list and decide which people on the list have a positive influence on you most of the time and which ones usually have a negative influence on you. If you think of more people, add them to your list.

One of the strongest influences on people is pressure. Pressure isn't always bad, but sometimes you may feel as if you are in a non-win position. You don't know whether or not to do what the person wants. If you do, you may be going against yourself. On the other hand, if you don't, you may lose that friendship. It seems like either way you lose.

Can you remember a time when someone pressured you to be somebody other than yourself or to do something you knew wasn't right?

If so, how did you feel? _____

_____

_____

What did you do? _____

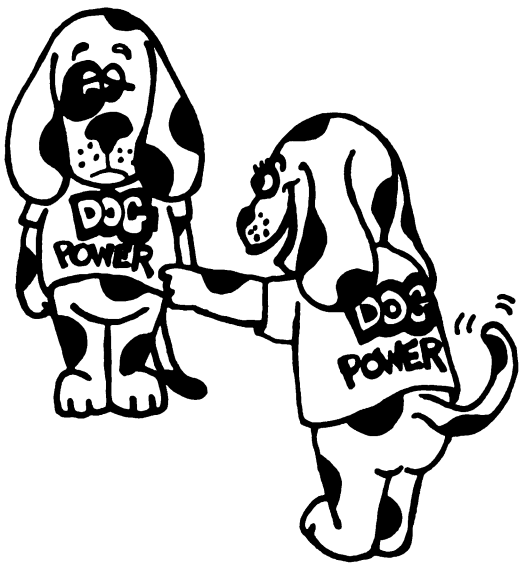
_____

_____

The people you know can influence you in different areas of your life. Read through each question below and consider that part of your life and who counts the most. Rate each person on a scale of 1 to 6. A rank of 1 is for the person who influences you the most; a rank of 6 is for the person who influences you the least in that area.

	Self	Brothers/ Sisters	Parents/ Guardians	Best Friend	Other Friends	Other Adults
How you dress	____	_____	_____	_____	_____	_____
How hard you work at school	____	_____	_____	_____	_____	_____
What kind of career you want	____	_____	_____	_____	_____	_____
How you fix your hair	____	_____	_____	_____	_____	_____
What you do in your free time	____	_____	_____	_____	_____	_____
Whether you play sports	____	_____	_____	_____	_____	_____
Who your friends are	____	_____	_____	_____	_____	_____
How you spend your allowance/earnings	____	_____	_____	_____	_____	_____
What things you do after school	____	_____	_____	_____	_____	_____

Who seems to be the most important to you? _____



STRESS FROM FRIENDS

Here are some things kids worry about concerning their friends. Do any of these sound familiar to you?

- — Trying to make new friends.
- — Being accepted by kids at school.
- — Wondering how to tell your best friend that you don't like the kids he/she has started hanging around with.
- — Friends expecting you to do what they want to do.
- — Fighting with a friend.

How can you cope? Sometimes it's hard to remember who you are, who you want to be, and who your friends want you to be—especially when you are going through a lot of changes. Sometimes you have to rely on what you believe in and act on it—

even though your friends might not understand. In the long run you'll feel more comfortable with yourself if you do.

Sometimes teens wonder if they are being real or phony. It's hard to know who you really are when many changes are happening. Good talks with friends can help you discover what you want for yourself and how you relate to other people.

It can be really upsetting when you don't understand what someone is trying to tell you by their words or behavior. For example, if your friend starts laughing when he/she sees your new T-shirt, is it because the shirt looks ridiculous or because he/she has a new one just like it or because he/she enjoys the picture on the shirt? If you can get clear on what the other person means, then you can decide what to do about it. Even if you can't or choose not to change the situation, it's easier to cope with these sorts of situations if you know what is really going on.

BELONGING

One of the best feelings for most people is the feeling of belonging, yet practically everyone has felt left out or pushed out by other people at least once. Think back to some situations you have experienced in your life. Write down the situation in one column and write your feelings about it in the other.

Situation	How You Felt About It
A time when you included someone:	
A time when you were included:	
A time when you were left out or excluded:	
A time when you excluded someone:	

IS IT WORTH IT TO BE IN?

What would you do to be included in a group? Imagine you want to do something with a group that's very important to you and you've planned on for a long time.

Fill out the checklist by answering the following questions about yourself.

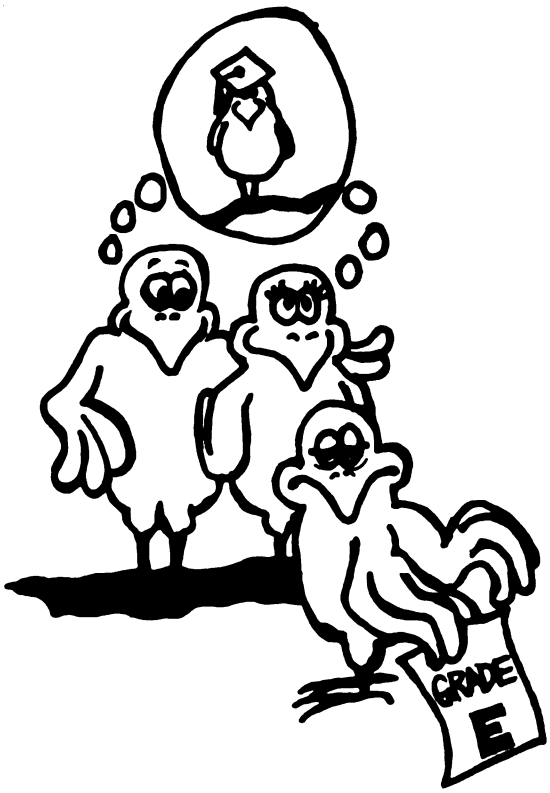
In order to be a part of this group, I would:	Yes	No	Maybe
— Risk giving up friends I have now.	___	___	_____
— Do something I think is wrong.	___	___	_____
— Do something I know is against the law.	___	___	_____
— Drink alcohol.	___	___	_____
— Try drugs.	___	___	_____
— Do something that might harm me physically.	___	___	_____
— Do something that would cost me a lot of money.	___	___	_____
— Do something that might interfere with my schoolwork.	___	___	_____
— Become a snob.	___	___	_____
— Do something my parents would not approve of.	___	___	_____
— Do something against my religion.	___	___	_____

As you look over your list, see where you answered "yes" or "maybe." Ask yourself about where your values were when you made these check marks.

STRESS FROM PARENTS

Following are things teens worry about where their parents are concerned.

- — My dad making me do a lot of work on the weekend.
- — My mom loading lots of responsibility on me.
- — My folks telling me how to live my life.
- — Failing a test and getting yelled at.
- — My mom always complaining about what I do or don't do.
- — When my parents refuse to see things my way and don't remember how they felt when they were my age.



Ways to Cope

Sometimes it may seem that you aren't really sure who you are. You are growing and changing so fast that your parents' understanding of what you are capable of doing on your own may not have caught up with you yet.

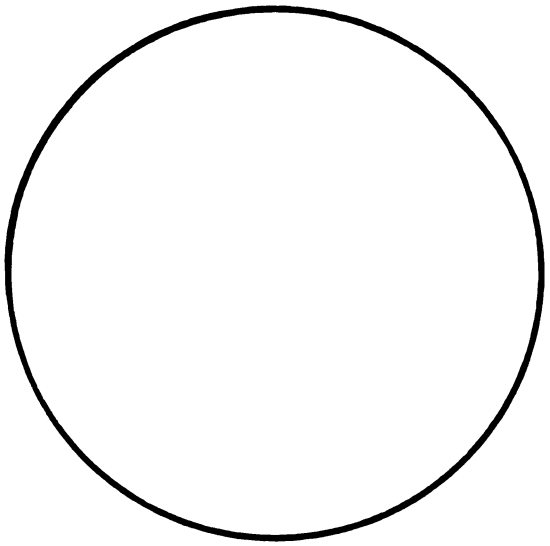
It might help to demonstrate your capabilities at home, while your parents' ideas of you catch up to reality.

It may seem as though your parents are overreacting at times. Although all families are different, you might get a clearer picture if you check out your values and your interactions with your parents with those your friends have. You might find it helpful to talk to a helping professional to get a good picture of the situation.

It may help to remember that as you change, your parents' roles change too. These changes can be stressful for them. Parents have all sorts of problems and stresses that can effect how they relate to you.

When you are worried about something and don't want your parents to know about it or help you, it can add to the tension in your family. You are involved with other people, especially your family, and when something affects you, it has an impact on them. They can't understand if they don't know what's going on. It might help to talk to them. You might be surprised at the results.

MAKE A PIE



1. Divide the circle into pie-shaped slices. Have the size of each slice represent the relative importance of each part of your life that influences you. Include the following sections:
   — Family
   — Friends
   — Television
   — School
   — Teacher
   — Reading
   — Movies
   — Relatives
2. Do some areas influence or pressure you more than you would like? What changes would you like to make? List them.

TERRITORIAL PRIVACY

Description

This activity shows you some ways to consider your own feelings about privacy—particularly regarding environmental design.

Materials

Paper and pencil

Procedure

1. Everyone in the group should walk around the room and find the space they like best. They should take their time and experiment with several spots until they find one they particularly like. They should sit down, relax, and let their minds wander freely.

   After awhile, each person should join with three other people and the four should choose a common meeting space that they all find comfortable. Everyone can talk about their favorite space—what they like or don't like about it; how they feel; what they can do in their space; how they'd feel if someone entered their space uninvited; and what *type* of person (no names!) they might want to invite to share their space.
2. Prepare a diagram or a drawing showing how you would design your own private space—a home, a room, an apartment, etc. What kinds of thoughts would you have in this space? What kinds of feelings? How would you share (or not share) this space with others?
3. For one day, keep a list of people and things that invade your private places by placing a P by the ones that please you and an I by the ones that irritate you. Then write why you were pleased or irritated next to the P or I. Next to the I's situation, write how you might keep from being irritated or how you could try to accept the situation. You might wish to compare this list with that of a friend.

SCHOOL STRESS

Here are some typical things kids worry about regarding school.

— Trying really hard, then failing.
— Sports, because I'm really not very good.

— Speaking up in class—I get really nervous.
— Having enough time to study *and* practice for band.
— Parents expecting too much of me.

How can you cope with some of these stresses at school? One thing that can contribute to this kind of stress is putting things off. If you have something to do that you really don't like to do—like studying for a test—get it over with. Putting it off won't make it go away.

Do you feel like you have too much to do and too little time to do it in? People who are feeling good about themselves and life in general like to have a lot of things to do. But there might be times when you don't feel on top of the world. It's important to know that sometimes you'll be able to do a lot and sometimes not as much. It helps to be flexible, so you can have time to do what's important to you.

Most people do fail some time in some way. That's human. Failing often happens when you want to do something you aren't able to do—like making the team, being in the school play, or passing a test. You have the right and the freedom to try things and to succeed or fail on your own. You also have the right to try again.

If your grades aren't too great but you and your parent(s) think you should be getting good grades, testing or counseling might help by helping you find out what your skills and abilities are. If you and your parents know what you're good at, then you can start planning realistically, rather than wishing you were different.

PERSONAL PRIVACY

Description

This activity can help you begin to look at how much privacy you have—and whether you need more or less privacy. It can also help you explore your own experiences with being alone.

Procedure

1. Many times people under stress feel that they don't have enough privacy at home and school. Answer *yes or no* to the following:
   _____ I have a special time to go for a walk.
   _____ I take time to reflect.
   _____ I like to listen to music very much.
   _____ I often daydream, fantasize, or meditate to help me relax.
   _____ I have a special place where I can be alone.
   _____ Noise around the house doesn't bother me.
   _____ No one bothers me while I am dressing.
   _____ People accept me as I am.
   _____ I like to work on my hobbies by myself.
   _____ When I am alone I like to read.
   _____ I prefer sports that I can do alone, rather than team sports.
   _____ I am just as happy when I am alone as I am when I am with my friends.
   _____ I like to explore my environment by myself and discover new places and things I've never seen.
2. Check the feelings that you most often experience when you are alone:

_____ lonely	_____ sad
_____ happy	_____ relaxed
_____ excited	_____ miserable
_____ envious	_____ calm
_____ left out	_____ jealous
_____ tired	_____ content
_____ depressed	_____ angry

3. Check the things that you agree with:
   _____ I wish I had more time to be alone.
   _____ I don't want to be alone so much.
   _____ I want to spend more time with my friends.
   _____ I need a place where I can be by myself.
   _____ My family doesn't leave me alone enough.
   _____ I am happy with life just the way it is.
   _____ Sometimes I just want to get away from people for awhile.
   _____ I wish I could do things with my friends more than I do.

Conclusion

Share with the group something new that you learned about yourself from this activity.

FEELINGS ABOUT MY BODY

Description

This activity gives you a chance to rate various parts or aspects of your body.

Procedure

1. Rate each part of your body using the following rating scale.
   1—Am really happy with it.
   2—Am satisfied with it.
   3—No feelings either way
   4—Don't like but can tolerate it
   5—Am unhappy with it and would like to change it

   _____ Face _____ Complexion _____ Hair

____ Nose	____ Feet	____ Buttocks
____ Eyes	____ Weight	____ Hips
____ Neck	____ Height	____ Ears
____ Chest	____ Body build	____ Posture
____ Arms	____ Thighs	____ Back
____ Hands	____ Body hair	____ Ankles
____ Knees	____ Stomach	____ Overall body
____ Legs	____ Waist	

2. Look over your list and see if you can find one part of your body you are particularly concerned about. How would you like to view it?

Conclusion

You may want to have this be a private activity, but you may want to share what you learned about yourself with the group.

LOOKING AT BODY IMAGES

Description

These activities give you a chance to explore some of the factors that may influence how you feel about your body.

Materials

1. Magazines—particularly fashion magazines for both men and women
2. Large paper for gluing pictures on
3. Glue or paste
4. Paper and pencil

Procedure

1. Make a collection of advertisements that emphasize the human body or parts of it. Choose ads that "change you for the better," "make you more desirable," etc. Full-page color ads are preferable.
2. Write three possible endings to the following phrases:
   "The most important thing about a woman's appearance is.... "
   "The most important thing about a man's appearance is.... "
   Put these papers aside temporarily and, looking at the ads, think about and discuss what each ad says about the human body and what human emotions or desires the ad appeals to. Then discuss how the advertiser has tried to put across the image of the "correct" physical characteristics of males and females, and whether or not the advertisements are really accurate in their descriptions of what the product can do for the buyer.
3. Get out your original papers and compare them with what you have been discussing about the advertisements. Has your thinking about "body images" changed?
4. Next, close your eyes and think of someone you like. Does he or she match your written statements or the advertisers' images? (Do not answer aloud.)
5. Finally, discuss in small groups the things that influence your concept of what the human body should be like? Talk about how you are or are not influenced by parents, teachers, the community, books, advertisements, the media, peers, and your own experiences.

DESIGN A NEW BODY

Description

This activity gives you a chance to be creative and design a body to your own specifications.

Materials

1. Paper for drawing
2. Pencils, crayons, chalk or markers
3. Modeling clay (optional)

Procedure

1. Close your eyes and concentrate on your ears; feel the lobes, the curves, the insides, and the backs of your ears. Cover one ear, then both. What do you hear? What do you experience? Uncover your ears and listen to the sounds.
2. Imagine what it would be like if your ears were on your elbows, on your knees, on your back, or on the top of your head.
3. What would you change if you could redesign the human body? How would the body look? Draw a picture of your new body, or make a small model to show what it would look like.

What Can You Do About the Stress in Your Life?

WAYS PEOPLE SOMETIMES COPE

It is important to remember that *some* stress is vital to keep us active, alert, and interested in life. It can actually be used creatively—to change a bad situation into a better one, to give us an extra boost to accomplish a desired goal, or to expand our imaginations and abilities to create and grow. Without some change or stress, we are likely to become dull, lifeless, and bored.

It would be unrealistic to rid ourselves of all stress. The optimal level of stress is a balance between stress-overload and stress-underload. This balance gives us the energy to remain interested in life, but at the same time, it doesn't overwhelm us. Stress should be a healthy friend, rather than an overwhelming enemy.

How can you keep stress from being an overwhelming enemy in your life? The first thing you might want to do is pay attention to how you have been coping with stress.

When people are in stress, they cope with their extra energy in three different ways:

1. They may use up the energy through *aggression*.
2. They may block the creation of the energy through *withdrawal*.
3. They may use the energy productively through *adaptation*.

When energy is created, it must be used. Aggression is one way we can quickly use our excess stress energy. We may hit someone, yell threats, throw something, or put someone down. Aggression serves the simple purpose of quickly using up stress energy. It provides relief to the person. If aggression is direct, we express it toward the person or thing causing our fear. If it is indirect, we express it toward anything or anyone who is handy. For example, we may be mad at our parents but act out aggressive behavior toward our brothers and sisters.

Withdrawal is another way we deal with stress. We may leave the place or the people who are threatening us. For example, some people walk out of the house during an argument. Another person may cut classes at school when he/she is failing. Some people mentally escape by daydreaming, sleeping, or watching television. Other people withdraw by using drugs like alcohol or pot. Physical and mental withdrawal may help to temporarily block out the threatening situation.

When people withdraw, they reduce the production of stress energy in their bodies. Sometimes people who withdraw too often end up with more problems and more stress.

When people act aggressively to relieve themselves of stress, they use up their stress energy. Sometimes people who are aggressive cause more trouble for themselves and therefore create more stress.

It is important to remember that the *feelings* that you have when you are under stress are hard to change. What's important is how you *act* on those feelings. If you are angry and frustrated because your parents won't let you go somewhere with your friends, you could pick on your little brother, or you could go out for a run. Both ways of behaving would probably use up your stress energy, but one has the potential of adding to the tension in your family, while the other could end up being good for you.

If you are overwhelmed by a lot of homework, you could act on that feeling by going out and getting drunk, or you could take a walk around the block and return to your work. Both of these ways of behaving may temporarily reduce the production of stress energy, but which one could end up creating more problems and stress?

In adapting to stress, we use our stress energy in productive ways and try to solve the problems causing the stress. In adapting to stress, one does not simply react to the excess energy with only aggression and withdrawal. Instead, one recognizes the sources of stress and chooses productive ways to use up the excess energy. We might change the way we think about a situation, or we may become assertive and work to change the situation itself.

Generate a list of methods you or people you know

use to reduce stress and tension (like using drugs or eating a lot).

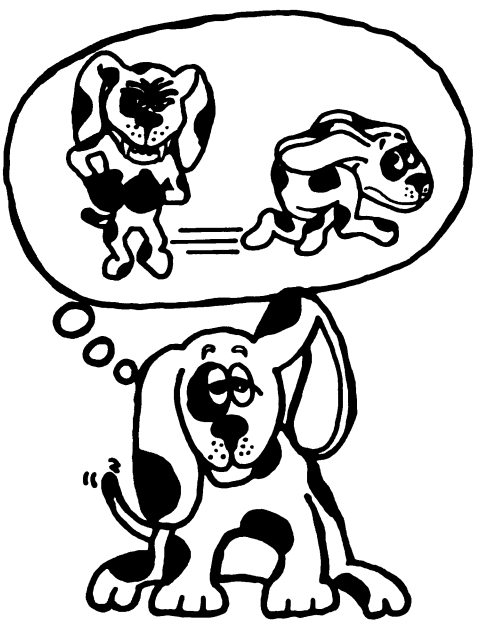
drugs	
eating	

Classify each of these methods by placing *Ag* next to those that are aggressive, *W* next to those that indicate withdrawal, and *Ad* next to those methods that are adaptive.

WITHDRAWAL AND EMOTIONAL OUTBURSTS

Description

You take a look at situations that cause withdrawal and/or emotional outbursts in yourself.



Procedure

1. Describe situations that cause you to withdraw emotionally.

a. _____

_____

b. _____

_____

c. _____

_____

d. _____

_____

e. _____

_____

2. Describe situations that cause you to experience emotional outbursts.

a. _____

_____

b. _____

_____

c. _____

_____

d. _____

_____

e. _____

_____

3. **Is emotional withdrawal ever healthy? Is it ever unhealthy? In what situations is it healthy?**

4. **Is an emotional outburst ever healthy? Is it ever unhealthy? In what situations is it healthy?**

"SOMETHINGS . . . " AND "BUT . . . "

Description

This activity helps you become aware of the "somethings" that may seem to get in the way when you try to solve a problem. Sometimes these "excuses" can be a form of withdrawal. By becoming aware of them, you can find a clue to ways you can change situations to make them less stressful.

Procedure

1. Read through and then complete the following sentences—in the way that most applies to you.

I meant to do my homework but _____

I meant to get along with my sister/brother but _____

I meant to be on time for class but _____

I meant to listen in class but _____

I meant to keep my room clean but _____

I meant to help my mom but _____

2. Can you think of any ways you might change these excuses?

_____

_____

_____

_____

3. Do you think that excuses can cause stress for you? Why?

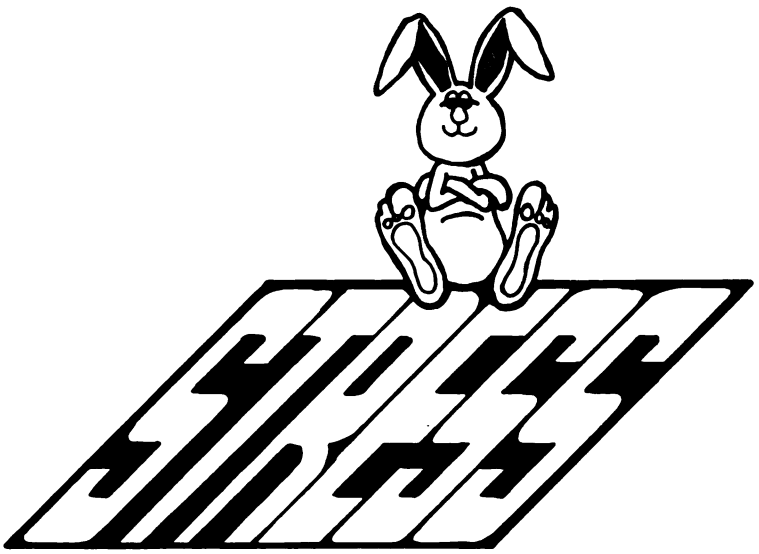
_____

_____

_____

_____

_____



COPING WITH STRESS

Adapting to the stress in your life is something that may take practice. You can learn new skills that will help you choose productive ways to use up your excess stress energy. You can learn how to become assertive and work to change a situation. You can learn to accept your feelings so they will not have as much power to hurt you. You can learn relaxation techniques that will help you teach your muscles to work *for* you.

There are three directions we are going to take to approach coping with stress:

1. Diversion activities can help you cope with stress by providing an appropriate escape when the going gets rough. These techniques do not get at the causes of stress, and they may not cause a physiological relief, but they can act as a safety valve in times of stress.
2. Relaxation techniques do not get at the causes of stress overload either. However, they are designed to provide a physiological release from body tension. The body has a chance to "refuel" itself. This relief of excess muscle tension can act as strong protection against the physical symptoms of stress.
3. Behavior changing exercises can cause meaningful changes in stress reduction by helping you begin to look closely at the reasons underlying your particularly stressful situations.

Let's look at some of the positive ways of coping with stress. Not all techniques work well for everybody. Each person needs to find those techniques best suited to him/her. For everyone, most of these techniques need to be used regularly to be effective.

STRESS SAFETY VALVES

Sometimes you need a break from a stressful situation in order to return refreshed and ready to handle a problem.

Here are some diversions that can act as stress safety valves:

- Spend some time on yourself—take a long bubble bath or shower; pamper yourself.
- Take a walk—especially in the early morning.
- Listen to music.
- Talk or play with little kids.
- Care for your pet.
- Work on your favorite hobby or start one.
- Sing with a group of people.
- Bake or cook something special.
- Play a musical instrument.
- Try jogging, dancing, playing basketball or participating in some other activity that you enjoy.
- Watch the sun rise or set, or watch the night sky.
- Play just for fun—like "kick the can."

- Smile at someone.
- Tackle one task at a time—make a list of what you want to do and then start with the first task.
- Talk to someone—when stress and tension are out of hand, find someone to talk to. Try to find someone to talk to who will listen and not give you his/her solutions; find someone who will provide a communicative environment in which you can explore your own alternatives. Talking with someone who is willing to listen may give you the perspective and confidence you need to cope with stress more effectively.

Generate three new safety valves for yourself. Choose some diversions you could use.

_____

_____

_____

_____

Go through the list of safety valves again. Write down any that you don't usually use but would like to try.

_____

_____

_____

What safety valves do you already use?

_____

_____

_____

As a group activity, brainstorm as many safety valves as you can. The more options you can think of, the more resources you will have for coping effectively with stress. Other people in the group can share activities with you that work for them.

Write your own prescription for stress.

Rx FOR STRESS

NAME: _____

TAKE: _____

TIMES A DAY UNTIL SYMPTOMS DISAPPEAR: _____

WHO'S PROBLEM IS IT?

Description

Before you can act on a stress situation, you have to decide exactly what the problem is and who has the problem.

Procedure

1. Describe a stress situation you have when dealing with your:

Teachers _____

_____

Friends _____

_____

Parents _____

_____

Brothers or Sisters _____

_____

2. Who's problem is it? In other words, who wants the situation to be different?

This problem is:	mine	theirs	ours
Teachers	_____	_____	_____
Friends	_____	_____	_____
Parents	_____	_____	_____
Brother or Sister	_____	_____	_____

3. Talk about your most stressful situation with your group.

4. Think about how you could let the other person (teacher, friend, etc.) know how you feel. For example:
   Situation: Sue agrees to meet her friend, Brad, at the park. Sue shows up 30 minutes late and offers no excuse or apology.
   Brad's response: I feel frustrated when you show up late because I have other things to do.
   Notice that Brad's response describes how he feels about Sue *being late*. It is not a judgment about Sue. Brad talks mainly about his problem. This way does not put the other person on the defensive.

5. Write out a response to each of your stress situations listed in 1 and 2 in the space below.

   1. Teachers: "I feel _____ when you _____ because I _____."

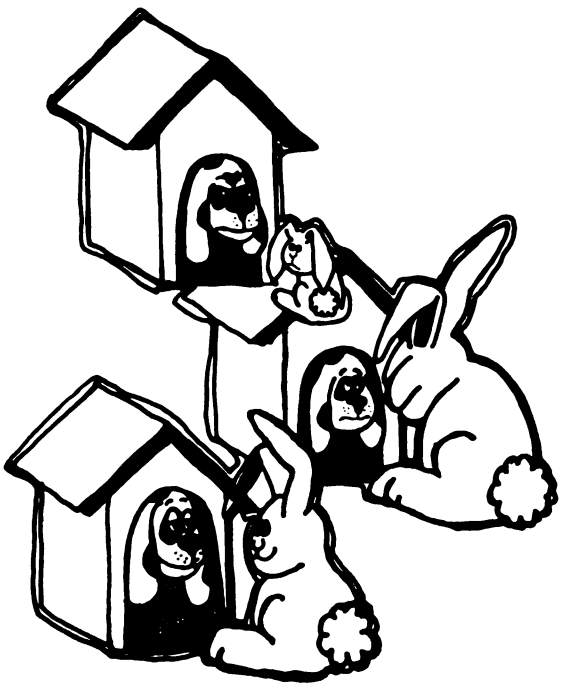
   2. Friends: "I feel _____ when you _____ because I _____."

   3. Parents: "I feel _____ when you _____ because I _____."

   4. Brothers or sisters: "I feel _____ when you _____ because I _____."

ASSERTIVENESS

Today's society of institutions, bureaucracies, and authoritarian relationships may often cause us to feel powerless and overwhelmed. The stress of the daily reminders of the impersonal nature of society—such as waiting in line only to be told you have to wait in another—leaves you feeling confused and frustrated. One way to respond to these demands is by verbal *aggressiveness* or attacking people. Another way is to react *submissively* and give up your own interests and allow other people to run over you without even a protest. The third way is to behave *assertively*, a way where you express and achieve your own wants and needs without violating the wants and needs of others.



What Does It Mean to be Aggressive, Submissive, or Assertive?

People act aggressively when they:
- —intentionally attack, take advantage of, humiliate, hurt, or put down other people.
- — behave as if others are not as important as they are.

People act submissively when they:
- — allow or encourage others to take advantage of them.
- — act as if other people are always more important by putting themselves down.

People act assertively when they:
- — express themselves openly and honestly to communicate their wants and feelings without putting others down or discounting the wants or feelings of others.
- — behave as if they believe that all people, including themselves, are equally important.

Let's take a look at some examples of aggressive, submissive, and assertive behaviors. How would you want someone to respond to you?

A neighbor comes uninvited to your door and wants to have coffee and chat. You are going out later and have a lot to do.

(Aggressive) You scowl and say, "You've got to be kidding. Can't you see I have a million things to do?"

(Submissive) You are afraid to offend him/her, so you say, "Sure, come on in." You end up late for your other appointment.

(Assertive) You say, "Gee I'd really like to visit with you, but I'm busy right now. Can we plan a time to get together later?"

You find that you have been short-changed after you leave the store.

(Aggressive) Loudly demand the correct change.

(Submissive) Forget about it and take the loss.

(Assertive) Catch the attention of the clerk, explain that you think there has been an error, and show your change.

How Do You Respond?

By now you probably get the idea and can think of times when you have acted aggressively, submissively, or assertively.

There may have been times when you:
- — wanted to get rid of a door-to-door salesperson
- — wanted to turn down someone's request to borrow something
- — wanted to ask someone for something
- — wanted to ask someone for a meeting or a date
- — wanted to tell someone that their smoking or loud noise was disturbing you.

These are just a few examples. Think of some situations you have been in. Decide whether your own behavior was aggressive, submissive, or assertive. Looking back, *how could you* have handled the situation more effectively (if you behaved aggressively or submissively)?

The Situation	How Did I React?	How Did I Feel?

You have to practice being assertive in order to see that it really can work. There are many popular books on the market if you want more training in assertiveness.

By behaving assertively, you are more likely to get what you want and feel good about it. That can go a long way toward reducing some of the stress in your life.

Further Activities

Journal—Keep an assertiveness journal for yourself. Record your daily or weekly experiences and accompanying feelings in which you have had the opportunity to be aggressive, submissive, or assertive. You may want to share with others some of the experiences you have recorded.

Role-Play—A group activity involves role-playing situations with aggressive, submissive, and assertive responses. Group members can "act out" different situations as a method for helping individuals become more aware of their own behavior and its effect on others. Use one of the examples from the previous discussion or use an example from the group.

FEELINGS . . . NOTHING MORE THAN

Feelings have an effect on your body. They have the power to hurt you and to make you feel better. If you refuse to accept your feelings, they can fight back by causing physical symptoms. The locked-in feelings can cause real sickness. This is the mind/body connection again.

The first step to accepting feelings is to become aware of them. Some feelings, often those that are painful, may become so "locked in" that we are unaware that they even exist.

Feelings have labels like happy, sad, or angry. The labels describe emotions, but sometimes people confuse emotions with sensations. For example, the statement, "I feel too hot in here," is about experiencing the sensation of heat. Sometimes we also confuse feelings with thoughts, for example, "I feel I should go on a diet." Here the word "feel" is used to mean "think."

Try to think of feelings as labels for emotions, for example, "I feel frustrated when my car won't start." Make a list of as many words as you can that describe emotions. This feeling word list should include even those feelings that may not be familiar ones to you.

Feeling Word List

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Group Activity

Generate a group feeling word list after everyone has had a few minutes to work on individual lists. Once the momentum gets going, it's surprising how many words can be generated by a group.

Take a look at your list of feeling words. How many of the feeling words have a "positive" meaning? _____ How many have a "negative" meaning? _____ (If you do this activity in a group, you will probably find that some people disagree on some words.)

Which feelings on your list are difficult for you to express?

Which feelings are easy for you to express?

Why might some feelings be harder for you to express than others?

What happens to those feelings that are hard to express?

Select from your list the five feelings that are the strongest and most powerful for you. Think about where in your body you experience that feeling. For example, you may experience anger in a clenched fist or a rigid neck, or you may feel hurt as a "choked-up" sensation in your throat.

Feeling	Where in Your Body Do You Experience It?

How might locating the physical component of emotions help you become more aware of your own and others' feelings?

Ambivalent Feelings

Sometimes feelings come in pairs or threesomes. You may have experienced mixed feelings and been confused. Mixed feelings are ambivalent feelings. We often experience more than one feeling at a time, and sometimes our feelings do not agree. Frequently we experience positive and negative feelings about the same things. The result is often confusion and conflict—a sort of fight inside between feelings.

The best way to deal with ambivalent feelings is often to talk about each feeling separately. Then you can experience each one clearly. Think about a time when you felt two or more feelings at once about the same things. Perhaps you can remember a time when you came home from a trip, or you let someone borrow something, or you played a joke on someone. Take time to remember what happened and what your feelings were.

Accepting Feelings

You probably discovered when you were listing feeling words that there are many, many feelings. Although everybody feels them all, we each feel our feelings in our own unique ways. You share similar kinds of feelings with others, but what triggers those feelings and what you do about them are uniquely your own.

Complete the following sentences. As you write, remember that everyone experiences these feelings too. Feelings are not good or bad or right or wrong. They may be pleasant and unpleasant, but that's inevitable.

I feel happy when _____

_____

_____

I become angry when _____

_____

_____

I am sad when _____

_____

_____

I feel lonely when _____

_____

_____

I become frustrated when _____

_____

_____

I hate it when _____

_____

_____

I get excited when _____

_____

_____

Group Activity

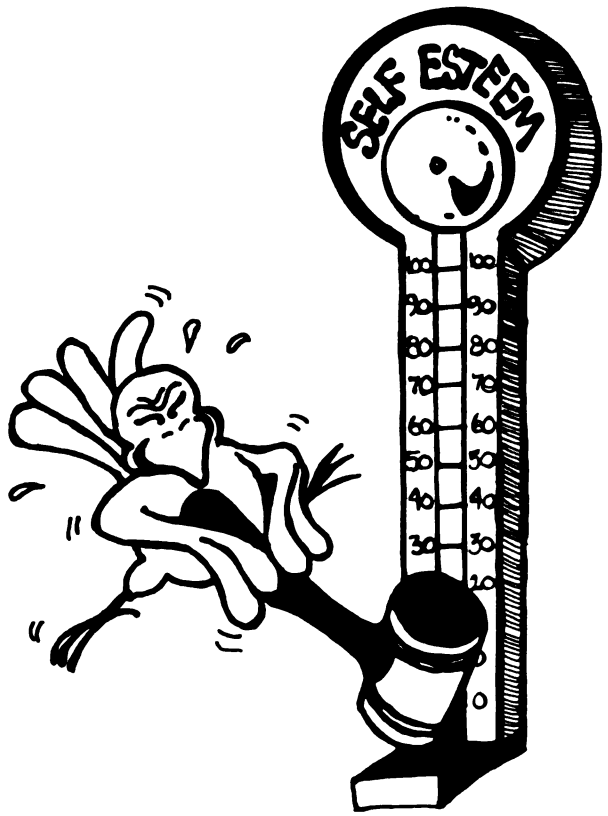
In pairs, group members may find it interesting to compare responses, noticing differences and similarities. Remember, you don't have to share responses if you don't want to.

YOUR SELF-ESTEEM

How much you like or dislike yourself can influence how you view and handle stress. If you see yourself as helpless, inferior, and incapable of changing, then you will probably view more situations as threatening and stressful. You may also have little confidence in your ability to handle stress.

Your self-esteem refers to how much you like and dislike what you think you are. It's not an all-or-nothing idea but rather a continuum—from high to low and all places in between. Imagine self-esteem on a scale from 1 to 100. One is very low and 100 is very high. How would you rate your self-esteem?

Your self-esteem has been learned and developed as a result of your experiences. From the time you



were a baby, you have had relationships with other people and learned about what pleases and what gets attention. As a result, you have feelings of worthiness and/or unworthiness.

Although the early influences on a person have a significant impact, it is possible to change self-esteem. However, the change is slow and takes place over a period of time. The experiences in your past have had a big influence on you, and those experiences cannot be changed. You *can* change your feelings about those experiences, and you can give yourself *new* experiences that build self-esteem.

Experiences that build self-esteem are experiences that are successful. Perhaps you can think of things that you do that make you feel successful. You can add to your list by trying something new. Trying new things, whether they include roller skating or talking before a group, may seem risky. Yet taking appropriate risks is the only way to build success experiences. Although everything you try may not be successful, the experience of trying, of taking the risk, can in itself be esteem building.

Relating successes or strengths to one another is important in building and maintaining self-esteem.

Make a list of three things that you are proud of or that you do well.

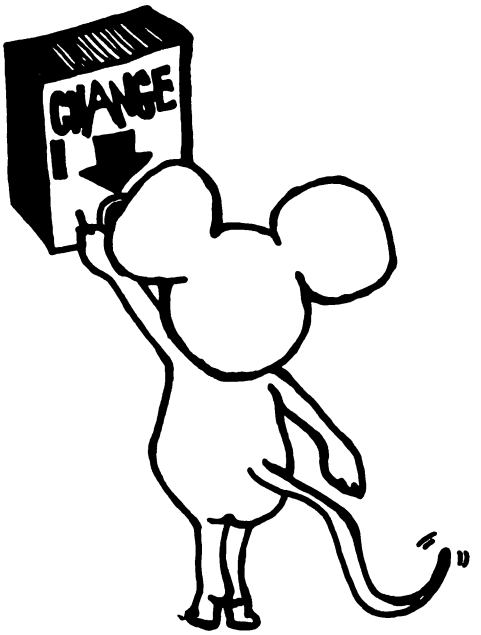
Make a list of three things you would like to try.

Group Activity

1. Share one thing from your list with the group. Each group member should take a turn sharing.
2. After everyone has had a turn, talk about the experience.
   a. What feelings did you have when it was your turn? After you took your turn?
   b. How did you feel when you listened to others share?

If you were to ask yourself, "Who am I?", how many different ways could you answer? For example, you may be a mother or father, a daughter or son, a friend, a swimmer, a messy person, etc. Write down as many ways as you can think of to answer the question "Who am I?"

As you look over your list, is there anything about it that surprises you? Is there anything you have discovered?



A WAY TO MAKE A CHANGE

Look over all your inventories and note one thing you are unhappy with and would like to change.

How would you like to change this situation?

Describe the situation in terms of why you are unhappy with it.

List all of the obstacles that you feel are causing this situation to remain a problem for you.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

TEACHING YOUR MUSCLES TO WORK FOR YOU

Just as the mind can work to *cause* physical symptoms of stress, it can also be put to work to stimulate relaxation.

Our muscles act to express nearly every aspect of our physical and emotional life. Strong protection against physical symptoms of stress can be attained by relieving excess muscle tension.

Even when we are standing still our muscles are working. We may think that we are resting when we are not moving. This deception takes place because of the body's automatic act of balancing muscle tension in opposing muscles. States of anxiety or nervousness, or such slight body responses as bracing for something unexpected, stiffen the muscles causing an outbreak of muscle signals that are sent back to the brain. Those signals cause feelings of tension. The muscle systems respond with their balancing act and then adapt to the new condition of heightened tension. The problem is that our conscious awareness also adapts until we soon forget that we are tense.

We can *learn* not to engage in continuous physiological stress responding. The relaxation response is essentially the opposite of the stress response. The relaxation response counteracts stress and puts our physiology back within a normal range. It causes the heart to slow down, the muscles of the body to relax, the blood pressure to lower, the adrenal glands to stop secreting their powerful adrenalins, and the stomach to stop secreting strong acids.

The relaxation response is *not* what occurs when we try to relax by watching TV. This usually produces the stress reaction even though we call it relaxing. The relaxation response is achieved only under special circumstances, but it can be learned. However, learning to reverse a habitual response takes time and practice.

Periods of relaxation are helpful even if a person goes back into a stressful situation. You can reverse the stress build-up and cause the stress response to cease. The internal organs recover. They reverse their harmful effects. We then have a new reserve built up—one which will again be ready to deal with stress, but one which has not been pushed to the breaking limit of exhaustion.

THE RELAXATION RESPONSE

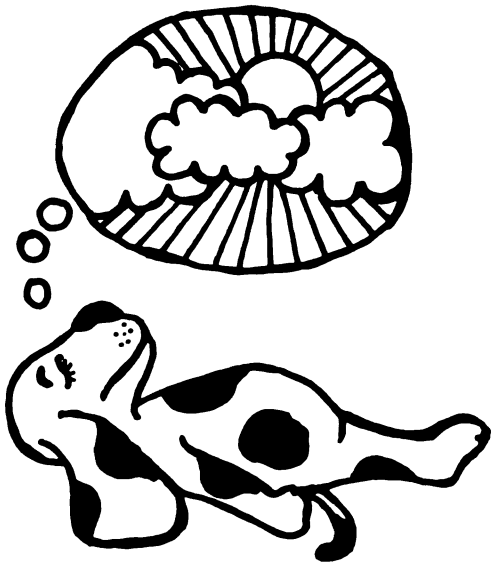
The relaxation response is a term used by Dr. Herbert Benson* to describe a physical state of reduced body tension. Although Dr. Benson has coined the term, the idea has been around for centuries. The essence of the relaxation response has been practiced through various methods including meditation. The attainment of the relaxation response is an important technique for counteracting the harmful effects of stress-overload on the body.

Learning to achieve the relaxation response is a skill. Learning a new skill takes *practice*. With practice, the response should come with little effort. Practice the technique once or twice a day. Since the digestive process seems to interfere with the elicitation of the relaxation response, do not practice within two hours after a meal.

Here are some suggestions for achieving the relaxation response. This procedure may be used as a relaxation technique in and of itself, and it may also be used as a set of guidelines for the relaxation exercises that follow (diaphragmatic breathing, deep muscle relaxation, autogenic relaxation, quick release techniques, and visual imagery).

1. *Find a quiet place.* Take the phone off the hook and let everyone know that you will be unavailable for about 15 minutes. It is probably unrealistic to expect to find a place that is totally free from distractions. Just try to eliminate as many as you can and ignore the rest.
2. *Assume a comfortable position.* The best position is flat on your back on the floor. Your *eyes should*

*For more information, see The Relaxation Response by Herbert Benson, New York, Avon Books, 1976. ($1.95 paperback)



be closed and your arms should be loose at your sides. Uncross your feet and loosen any tight collars, belts, or footwear. Initially, lying flat on your back on the floor may seem uncomfortable, but you are urged to try it. Usually, after you start to relax you don't notice the hard floor and this position is really the best one for your body.

If you choose to sit in a chair, remember to uncross your legs and let your arms rest loosely at your sides.

3. *Maintain a passive attitude.* Do not worry about whether you are successful in achieving a deep level of relaxation. Maintain a passive attitude and permit relaxation to occur at its own pace. Do not try to work at relaxing. Disregard distracting thoughts and sounds for the time you have set aside.
4. *Concentrate on a pleasing phrase or image.* For some people a word formula such as "in" and "out" or "one" works well. Other people find visual images such as cloud formations useful for this purpose. Repeat the word or image effortlessly.
5. *Breathe easily and naturally.* Breathe through your nose, with your mouth open slightly.
6. Keep your muscles loose, limp, and relaxed.

AS YOU GET READY TO R...E...L...A...X

The following relaxation exercises—diaphragmatic breathing, deep muscle, autogenic, quick release, and visual imagery—are best introduced by having another person read through the exercise while you experience them. This can be accomplished in a group by having everyone relax together, while the leader (or someone else) gives the instructions in a slow, relaxed manner. If you are not part of a group, you can have another person give you the instructions while you relax. Eventually as you learn which techniques work best for you, you will probably be able to go through the exercise without instruction. A popular method is to make tape recordings of the instructions to use during a relaxation session. You may want to tape another person, or make a tape yourself. Commercial tapes of relaxation exercises are also available. (See bibliography.)

Some Guidelines for Group Relaxation

1. Realize that the benefits of relaxation are not as dramatic as we would like them to be, but occur gradually over time.
2. Clothing should be comfortable and loose fitting.
3. The sounds are a natural part of the environment,

and as you relax, you will always be completely aware of everything that's going on, although you may not be particularly concerned about it. There is not much you can do to decrease sound, but keeping it at a minimum is helpful.

4. The light should be low. Looking up into bright light with closed eyes becomes annoying when one is relaxed.
5. It is important that the person relaxing does not feel that he/she will be bumped or touched while relaxing. The sense that someone is relaxing "too close" to another person is often disturbing.
6. Sometimes people fall asleep during these exercises. The person may feel embarrassed so it is best to remind the group that this may happen and that is okay. However, the goal of relaxation exercises is usually not to fall asleep. The goal is to relax and return refreshed.
7. Encourage group members to talk about their experiences with the exercises. The subjective feelings that accompany relaxation vary among individuals. Most people feel a sense of calm and feel very relaxed. Other descriptions involve feelings of pleasure, refreshment, and well-being. Some people notice relatively little change on a subjective level. Usually regardless of the subjective feelings, the psychological changes, such as decreased oxygen consumption, do take place. People may describe feelings of floating, tingling, cold, or warmth. These feelings and sensations are different for individuals, and it is important for people to feel reassured that they are normal.

DIAPHRAGMATIC BREATHING

Description

One way to achieve the relaxation response is through diaphragmatic breathing. The instructions for this technique include several variations. Adapt this exercise so it works best for you.

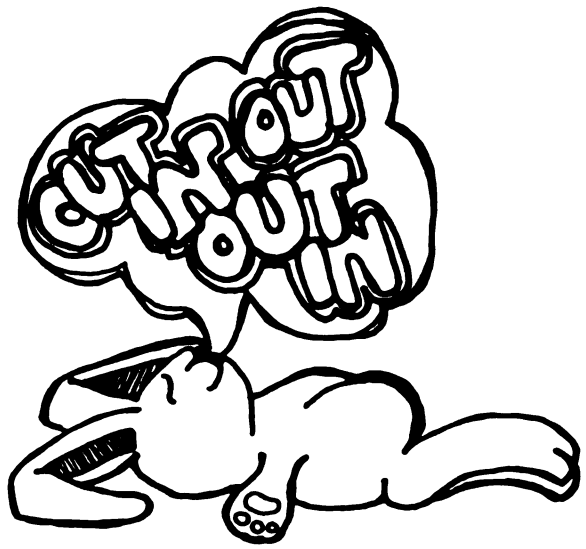
Procedure

1. Assume the relaxed position (eyes closed, passive attitude, comfortable position, quiet room).
2. Begin to focus on your breathing. Allow your breathing to become regular and natural as you inhale and exhale through your nose. Remember that breathing is a peaceful, natural process.

   Each time you exhale, allow some tension to leave your body, and allow the relaxation to come in.
3. As you begin to feel more and more relaxed with each breath, try one (or more) of the following vehicles to deepen your feeling of relaxation:
   - Imagine the air that comes to you as a cloud. The cloud comes to you, fills you, and then leaves you.
   - Imagine your lungs as a balloon (you may want to put your hand on your chest). As you inhale your lungs expand like a balloon, and as you exhale your lungs deflate.
   - As you inhale say the word "in" to yourself. As you exhale say the word "out."

   Try each of the above at different times to see which works best for you. For some people the visual images are more powerful, while for others the word formula (such as "in" and "out") works better.

   Try to focus on one of these images or word formulas for several minutes. Tell yourself to relax more and more with each breath. You may discover that your mind will wander from the image or word from time to time. This is normal. Simply return to your word or image and continue to relax.



4. You may want to deepen your relaxation now by using one of the following methods:
   - Slowly count backward from 10 to 1. With each count allow yourself to feel heavier and more relaxed.
   - Imagine that you are on the top of a long, winding stairway. Picture yourself descending the steps. Feel a new wave of calm with each step that you take.
5. It is now important to return. You will now come back to the real world feeling calm yet alert. You will feel the benefits of this relaxation throughout

the day. Come back to the room slowly by counting from 1 to 5, gradually becoming more alert. At the count of 5 your eyes should open. Get up *slowly*.

Conclusion

Encourage group members to talk about the experience of this exercise. The subjective feelings that accompany relaxation vary among individuals. Most people feel a sense of calm and feel very relaxed. Other descriptions involve feelings of pleasure, refreshment, and well-being. Others notice relatively little change, especially the first few times. These reactions are all normal. The feelings and sensations are different for individuals, and it is important for people to feel reassured that this is normal.

DEEP MUSCLE RELAXATION

Description

This technique involves tensing specific muscle groups and then relaxing them. For each muscle group a method is described for creating tension and achieving relaxation.

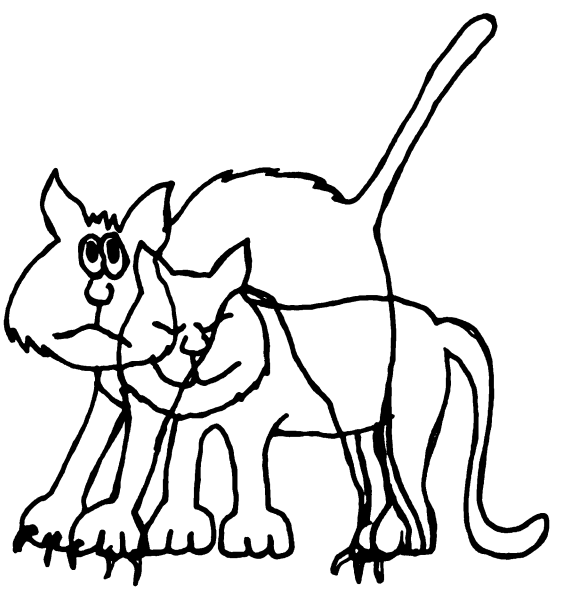
Procedure

1. Assume the position for relaxation (eyes closed, lying on floor, quiet, passive attitude).
2. Go through the following for each muscle group twice.

Muscle	Tensing Method
Forehead	Wrinkle your forehead. Try to make your eyebrows touch your hairline for five seconds. Relax.
Eyes and nose	Close your eyes as tightly as you can for five seconds. Relax.
Lips, cheeks, and jaw	Draw the corners of your mouth back and grimace for five seconds. Relax. Feel the warmth and calmness in your face.
Hands	Extend your arms in front of you. Clench your fists tightly for five seconds. Relax. Feel the warmth and calmness in your hands.
Forearms	Extend your arms out against an invisible wall and push forward with your hands for five seconds. Relax.
Upper arms	Bend your elbows. Tense your biceps for five seconds. Relax. Feel the tension leave your arms.
Shoulders	Shrug your shoulders up to your ears for five seconds. Relax.
Back	Arch your back off the floor for five seconds. Relax. Feel the anxiety and tension disappearing.
Stomach	Tighten your stomach muscles for five seconds. Relax.
Hips and buttocks	Tighten your hip and buttock muscles for five seconds. Relax.
Thighs	Tighten your thigh muscles by pressing your legs together as tightly as you can for five seconds. Relax.
Feet	Bend your ankles toward your body as far as you can for five seconds. Relax.
Toes	Curl your toes under as tightly as you can for five seconds. Relax.

Conclusion

Encourage group members to talk about the experience of this exercise. The subjective feelings that accompany relaxation vary among individuals. Most people feel a sense of calm and feel very relaxed. Other descriptions involve feelings of pleasure, refreshment, and well-being. Some others notice relatively little change, especially the first few times. These reactions are all normal. The feelings and sensations are different for individuals, and it is important for people to feel reassured that this is normal.



AUTOGENIC RELAXATION

Description

This technique involves the use of a word formula that acts as a reminder to each part of the body to relax.

Procedure

1. Assume the position for relaxation (quiet, eyes closed, lying on floor).
2. Although repeating the word formula may seem like a task, remember to maintain *passive* concentration.
3. Repeat the word formula in the sequence given below. This is done silently. Allow all your body parts to feel heavy, warm, and relaxed.

   My right arm is heavy.
   My right arm is heavy.
   My left arm is heavy.
   My left arm is heavy.
   My arms are heavy and warm.
   My arms are heavy and warm.
   My arms are heavy and warm; warmth is flowing into my hands.
   My arms are heavy and warm; warmth is flowing into my hands.
   My legs are heavy.
   My legs are heavy.
   My legs are heavy and warm.
   My legs are heavy and warm.
   My breathing is calm and regular.
   My breathing is calm and regular.
   My body breathes me.
   My body breathes me.
   My breathing is calm and regular; I am at peace.
   My breathing is calm and regular; I am at peace.
   I am at peace.
   I am at peace.

Conclusion

Encourage group members to discuss their experiences with this exercise. Different exercises work better for different people. Group members may want to explore for themselves the different impact each of the exercises experienced has had on them so far.

QUICK RELAXATION TECHNIQUES

Description

As you become more experienced at eliciting the relaxation responses, some quick methods of relaxation may be useful. This exercise describes several "quick release" techniques.

Procedure

These exercises take less time than the preceding methods, BUT they are most effective only after you have practiced the longer techniques and have become acquainted with your own body and how it tenses and relaxes. As you become better at relaxation with practice, it will take less time to achieve the relaxation response. You will still want to continue a regular routine of 15 to 20 minutes of daily relaxation, but the following suggestions can be supplemental.

Here are some pointers for review about all the exercises that follow.

Position	Get as comfortable as possible. Some of these exercises can be done while waiting in the doctor's office or at some other time when there's nothing to do but wait. It is not necessary always to lie down to do them.
Attitude	Remain passive. Just watch your mind work. Whatever thoughts come to mind are okay. Do not work at it, just let it happen.
Sounds	Sounds are a natural part of the environment—just take note of them and let them pass.
Breathing	Focus inward on breathing as a natural, easy process.

1. **Whole Body Tension**
   a. Tense everything in your whole body, stay with that tension, and hold it as long as you can without feeling pain.

b. Slowly release the tension and very gradually feel it leave your body.
c. Repeat three times.
d. Describe how this feels.

2. Imagine Air as a Cloud

a. Open your imagination and focus on your breathing.
b. As your breathing becomes calm and regular, imagine that the air comes to you as a cloud —it fills you and goes out. There may be a color of cloud that you can imagine.
c. Notice that your breathing becomes more regular as you relax.

3. Pick a Spot

a. With your head level and your body relaxed, pick a spot to focus on (eyes are open at this point).
b. When ready, count five breaths backward. With each breath allow your eyes to close gradually.
c. When you get to one, your eyes will be closed. Focus on the feeling of relaxation.

4. Counting 10 Breaths Back

a. Allow yourself to feel passive and indifferent, counting each breath slowly from 10 to 1.
b. With each count, allow yourself to feel heavier and more relaxed.
c. With each exhale, allow the tension to leave your body.

5. Shoulder Shrug

a. Try to raise your shoulders up to your ears.
b. Hold for the count of four, then drop your shoulders back to normal position.
c. Repeat as often as necessary.
d. Vary this by rotating your shoulders back, down, and around—first one way, then the other, then both at the same time.

6. Alternate Nostril Breathing

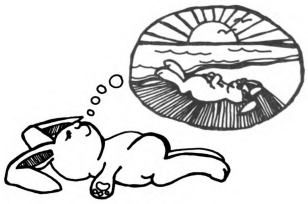
a. Block the left nostril with one hand and inhale deeply through your right nostril for five seconds.
b. Block both nostrils, holding your breath for five seconds.
c. Repeat, beginning this time by breathing through the left nostril.

IMAGERY AND FANTASY

We often think of daydreaming as a frivolous activity, generally a waste of time. Actually, taking a "mind vacation" can help you sharpen your awareness, provide you with a break from stressful routines, and give your body a chance to refuel. You can give yourself permission to engage in fantasy trips. You may want to set aside a certain time each day for relaxing. The fantasy trips can be combined with other types of relaxation such as diaphragmatic breathing or deep muscle relaxation. The fantasy trips can also be used by themselves at other times during the day when you take a break.

A Fantasy Vacation

Here are some suggestions for taking a mind vacation. Lie on the floor or sit relaxed in a chair with both feet on the ground. Close your eyes. Imagine yourself in a place you enjoy—a mountain meadow, a pleasant garden, a cabin by a lake, or a sunny beach. Picture yourself relaxing there. Enjoy the feel of the sun, the fresh breeze, the soft grass, or the sand underneath you. Enjoy the sounds, the wind in the



trees, the surf, and birds. Become aware of the fragrances. Try to experience all of your senses in the fantasy—sight, sound, touch, taste, and smell.

You may want to do something on your "vacation" that you enjoy like picking flowers, fishing, reading poetry, or gathering shells. Maybe someone you love will be with you. Spend about 10 or 15 minutes enjoying yourself, then slowly return from your vacation.

Another kind of mind vacation involves watching your thoughts. Ordinarily you are swept up by the thoughts, impressions, feelings, and experiences that constantly flow through your mind. For example, a memory may arise, and mentally you return to the scene. Try watching this stream of consciousness without being carried away by it or interfering with its flow. Let your thoughts continue, but act as a bystander rather than a participant. To achieve this inward glance, do nothing. Make no effort of your own. Imagine your thoughts as a stream. You watch the stream as an interested observer, but you refuse to become a part of the current.

There are lots of images that suggest relaxation. You may choose one of the ideas above or find a special place or idea that's all your own. Once you have found a special place, you may want to go back again and again when you need to escape.

The next two exercises provide a more structured fantasy. They work best when read aloud by someone to you or to a group. However, you may want to use some of the images for your own private "vacations."

SENSORY AWARENESS

Description

The exercise encourages you to use your imagination to experience your senses.

Procedure

1. The best environment for this activity is a comfortable room with carpeting and soft lighting. (This is preferable but not essential.)
2. Assume the position for relaxation (eyes closed, quiet, passive attitude).
3. Read the following to the group very slowly. Pause at least five seconds at the dots and at the end of each paragraph to allow time to focus on each image.

   Allow yourself to feel as comfortable as you can ... As you relax, begin to focus on your breathing ... Continue to breath in a very natural, very regular way ... As you inhale, picture your lungs expanding like a balloon and contracting as you exhale ... Allow yourself to feel more relaxed with each breath ... Each time you exhale, imagine the tensions flowing from your body ... Continue to focus on your breathing for a moment or two ... (Pause for one or two minutes.)

   As you continue to relax, imagine that it is a cool, crisp autumn day ... You are walking through the woods ... What colors do you see? ... Look closely at the leaves ... Someone has been burning leaves. Imagine the smell as you inhale ... Someone you care about joins you on your walk through the woods ... Silently the two of you continue ...What do you hear? ...

   Now imagine that you are in the city ... It is rainy at night ... What do you see? ... What do you hear? ... What does it smell like? ...

   As you walk along through the city you see a gift you would like to buy for someone in a store window ... Imagine yourself giving this gift to someone special ... How does that person look when you present your gift? ...

   Now you are in a warm bubble bath ... Your body floats in the warm, gentle water ... Soft music is playing ... The bubbles smell sweet like wildflowers ... Your body floats and rocks as you relax ...

   As you leave your imaginary world, bring your thoughts and feelings back with you to this room ... Slowly and gently open your eyes and join the group.

Conclusion

Stimulate discussion by asking the following questions:

1. How do you feel now?
2. What colors did you see and when?
3. What sounds did you hear and when?
4. What scents did you smell? If so, when did you smell them?
5. Did you have any other sensations?
6. Did you experience any emotions? If so, when?

GETTING IN TOUCH

Description

This is an exercise that is designed to bring you in touch with your feelings and your body. It may enrich your overall awareness and provide you with a new way of experiencing yourself.

Procedure

1. Assume the relaxation position (quiet atmosphere, eyes closed, comfortable position, passive attitude).

2. **Read the following to the group very slowly. Pause at least five seconds at the dots and at the end of each paragraph to allow time to focus in on body feelings.**

As you lie on the floor, allow your body to feel as relaxed and comfortable as possible... Spend some time now getting in touch with yourself... Just pay attention to you now, letting the rest of the world drift by for a short while. It will all still be there when you've finished relaxing... Begin by focusing first on your breathing, remember that it is a very natural, very relaxing process... Just breathe naturally, allowing yourself to become more relaxed with each breath that you take... Now as you inhale say the word "in" to yourself, and as you exhale say the word "out" to yourself. Continue breathing, saying the words "in" and "out" for a few moments... (Pause for one to two minutes.)

Now as your body begins to relax, think for a moment about your feelings...What kind of feelings have you experienced today?...

Often we experience our feelings in our bodies. Where in your body are your feelings located?... In your back, your throat, your neck, your stomach?... Pick a feeling you have often and imagine it in your body... where does it settle?... (Pause for one to two minutes.)

Try to imagine what your feeling looks like... Is it big or small?... Does it have a color or shape?... Do you want your feeling to stay with you or are you anxious for it to go away?...

Begin to let go of your feeling... Say good-bye to it... Think now about yourself in this room... Keep your eyes closed and imagine what this room will look like when you open your eyes... Open your eyes now and slowly sit up when you feel ready.

Conclusion

Culminate this activity by asking the group:

1. What are some of the things that came into your awareness during the exercise?
2. Were you able to feel your emotions in your body? If so, where? How was it for you?
3. How do you feel now?

SUGGESTED READINGS

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Notes: