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Rational-Emotive Therapy And Progressive Relaxation In The Reduction Of Trait Anxiety Of College Undergraduate Students Who Enroll In Anxiety Reduction Workshops

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RATIONAL-EMOTIVE THERAPY AND PROGRESSIVE RELAXATION IN THE REDUCTION OF TRAIT ANXIETY OF COLLEGE UNDERGRADUATE STUDENTS WHO ENROLL IN ANXIETY REDUCTION WORKSHOPS

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Abstract of Dissertation

The purpose of this study was to determine the effectiveness of Rational-Emotive Therapy (RET), Progressive Relaxation (PR), Attention Placebo (AP), and a no-treatment group in reducing levels of trait anxiety in undergraduate students who participated in anxiety reduction workshops. The subjects in this study were fifty-one volunteer male and female undergraduate students from the University of the Pacific, Stockton, California, who chose to participate in a seven session anxiety reduction workshop. The subjects were randomly assigned to one of the four treatment groups.

The Attention Placebo procedure consisted of a discussion of learning styles, and the effects that the learning styles have on adjustments in the classroom. The no-control group served as a control with no treatment being administered.

Two self-report measures, the State-Trait Anxiety Inventory (STAI) (A-State), and the Multiple Affect Adjective Checklist (MAACL) ("In General"), as well as a behavioral measure, the Anxiety Rating Scale (ARS), were used to assess the effectiveness of each treatment on anxiety.

It was hypothesized that the self-report scales would reflect a decrease in anxiety which would be greatest for the RET treatment. The second hypothesis was that the students in the RET treatment would report the greatest amount of anxiety reduction according to the behavioral measure. The third hypothesis stated that there would be no sex differentiation in relation to anxiety reduction within any of the treatments.

An analysis of variance (ANOVA) on the difference scores from pre-test to post-test, and an analysis of co-variance (ANCOVA) of the difference scores from pre-test to post-test by group and sex with pre-test scores as the co-variant, were the methods for each measure, with alpha set at .05 for all analyses.

Results showed that there was a significant difference, in the effectiveness of anxiety reduction of the RET group, according to the STAI. The MAACL failed to reveal any significant differences between treatments. The RET group was more effective than the other treatments in anxiety reduction, and the PR group was more effective than the NT group, according to the ARS. All instruments revealed no difference between sexes in anxiety reduction within any of the treatments.

TABLE OF CONTENTS

Chapter

LIST OF TABLES

Chapter 1

THE PROBLEM, AND HYPOTHESES

Introduction

According to medical estimates, more than one-half of Americans suffer from some type of anxiety (Pelletier, 1977). Consequently, a number of articles and dissertations, dealing with anxiety have been written (Alpert, 1960; Gier, 1970; Honneger & Pettigrew, 1977; Kyriacou & Sutcliffe, 1977, 1978; and Pratt, 1978).

Anxiety is generally known to be most prevalent in situations where the real or imagined threat of danger, or fear of failure is the greatest. The difference in response by individuals to situations perceived as threatening refers to their "trait anxiety." A-Trait anxiety indicates differences in the strength of a latent disposition to respond to stressful situations (Spielberger, Gorsuch, & Lushene, 1970).

Although anxiety among undergraduate students is a known phenomenon, the literature surveyed indicates few attempts to develop adequate research studies. Most of the research relates particularly to test anxiety (Chang-Liang & Dewey, 1976; Johnson & Sechrest, 1968; Romano & Cabianca, 1978). Test anxiety is the specific anticipatory anxiety that results from the anticipation of having to take a test.

Test anxiety is extremely common in students (Sarason, 1963).

Test anxiety is usually independent of a realistic appraisal of a person's ability. Research relating anxiety to learning and performance has confirmed that high test anxiety disrupts and disorganizes performance (Paul & Eriksen, 1964; Sarason, 1963; Spielberger, 1966). There is significant evidence that test-anxious individuals actively rehearse negative self-evaluations which compete for attention during the testing situations (Mandler & Watson, 1966; Meichenbaum, 1972, 1974; Sarason, 1973; Wine, 1971). A significant number of people become so anxious in the face of a test that they defeat themselves by poor performance (Atkinson, 1964).

The concept of trait anxiety in undergraduate students has not been as well researched as test anxiety (Gorsuch, 1969; Hodges, 1967; Johnson, 1968). Trait anxiety encompasses the total level of anxiety in the individual, and is not merely limited to test anxiety. As a psychological concept, trait anxiety has the characteristics of a class of constructs known as motives (Atkinson, 1964) and behavioral dispositions (Campbell, 1963).

Although the difficulties of research are often many, there should be a continued commitment to efficiently and effectively study the different methods of psychotherapy

and their treatment effects on the reduction of anxiety in students (Watkins, 1965). Investigators (Ellis, 1973; Lazarus, 1966; Mandler, 1962) have stressed the important role which an individual's appraisal and understanding of the psychotherapeutic effect has in the modification of behavior. The awareness that inappropriate self-verbalizations mediate the production of anxiety is basic to the early treatment approaches of Dollard and Miller (1950), Ellis (1957), and Kelly (1955).

Today, there are a variety of techniques for the treatment of anxiety. Progressive relaxation (Paul, 1966) attempts to decrease the conditioned anxiety which interferes with appropriate responses. This approach assumes that the subject has the skills to perform appropriately once the anxiety has been reduced. Other treatments such as cognitive restructuring (Meichenbaum, Gilmore, & Fedoravicious, 1971) or relaxation training (Goldfried & Trier, 1974) also teach subjects anxiety-reducing skills. It would seem important, therefore, to identify the treatment interactions that maximize success (Bergin & Suinn, 1975; Kiesler, 1966).

Progressive relaxation has been frequently used for the reduction of anxiety. Behavior therapists, however, have begun to consider the effectiveness of cognitive procedures as a means of anxiety reduction (Bandura, 1969;

Beck, 1976; Craighead, Kazdin & Mahoney, 1976; Goldfried & Davison, 1971; Kanfer & Goldstein, 1975; Mahoney, 1976; Meichenbaum, 1977; Rimm & Masters, 1974). There has been recent growing interest in the "cognitive-behavioral" treatments (Mahoney, 1977). One of the most popular cognitive-behavioral psychotherapies, Rational-Emotive Therapy, has been successful in the treatment of a wide variety of emotional disorders (DiGuseppe, Miller, & Trexler, 1977).

Rational-Emotive Therapy. The premise of Rational-Emotive Therapy is that thinking produces emotions (Ellis & Harper, 1971. Albert Ellis elaborated this into his ABCD theory:

A - experience of a fact, event, behavior or attitude of another person or situation

B - self-verbalization of the individual about A, his definition or interpretation of A as awful, terrible, horrible, etc.

C - reaction of person, emotional disturbance or unhappiness, presumed to follow directly from A.

D - self-defeating thoughts are attacked and disputed by reorganizing perceptions and thinking so that thinking becomes logical and rational.

The goal of RET is to help a person identify irrational beliefs and actively to dispute them (Ellis, 1973; Ellis &

Harper, 1971; Goodman & Maultsby, 1973). Rational-Emotive Therapy holds that when persons are irrationally anxious they have an irrational belief (B) which causes them to respond inappropriately at point (C) the emotional consequence. People are not made to feel anxious by an activating event (A), but they make themselves needlessly anxious by choosing certain irrational beliefs. The method to have a person give up these irrational beliefs is to actively dispute (D) the irrationality of the beliefs (Ellis, 1962, 1971, 1973; Ellis & Harper, 1971, 1972). Disputing will usually result in a new rational effect (E).

Because the habit of irrational thinking is learned, the therapeutic process involves encouraging the client to recognize irrational thoughts and to practice formulating rational beliefs. Ellis (1971) identified twelve irrational beliefs that are common causes of anxiety (Appendix A). Basic personality change comes from disputing these twelve irrational beliefs and replacing them with new, more effective thinking habits.

Progressive Relaxation. Another method which has been successful in reducing anxiety is progressive relaxation. Two early studies (Lang, 1969; Paul, 1969) confirm the efficiency of relaxation treatment. Only a few studies, however, have compared progressive relaxation directly with other methods of treatment (Cohen & Dean, 1968; Creighton & Jehu, 1969; Dixon, 1966; Doctor & Altman, 1969;

Kondas, 1967; Paul, 1968; Paul & Shannon, 1966).

The purpose of current progressive relaxation (PR) techniques is to achieve a neuro-physiological state of mind-body integration (Husek & Alexander, 1963; Johnson & Spielberger, 1968; Pelletier, 1977). This is accomplished by the tensing and relaxing of various muscle groups along with learning to attend to and discriminate the resulting sensations of tension and relaxation. The goal is the elimination of unnecessary muscle contractions and the experience of deep relaxation (Bernstein & Borkoven, 1973). The Bernstein and Borkoven procedure consists of a muscle tension-release program starting with sixteen muscle groups which is consecutively reduced to seven, and then to four muscle groups. Once the client has learned to achieve deep relaxation he is introduced to a recall and a counting method in which the actual practice of deliberate tension is eliminated. Bernstein and Borkovec (1973) have completed a manual which sets forth in detail therapist behaviors necessary for effective application of Progressive Relaxation.

Attention Placebo. Frequently in research, the decision is made to study the effects of two or more treatments on different groups. Rarely is a planned placebo group included to separate the effects of treatment from suggestion. An attention placebo (AP) group was

included in this study to assess the extent of improvement from a variety of factors other than the effects of a treatment. These include:

a. nonspecific therapeutic factors in the environment,

b. the effect of group intimacy and leader style (Goldstein, 1960, 1962).

Sex Differences. Most individuals of both sexes have, at some point in time, experienced anxiety that resulted from the anticipation of having to do something that they felt was threatening to them in some way. Sex differences in experiencing anxiety, measured by self-report or questionnaire, have been obtained, with females consistently having higher scores (Forbes, 1969; Phillips, 1966; Ruebush, 1963). Several explanations have been given for this, the most frequent being that males are more defensive (Hill, 1963). Females may be more susceptible to anxiety or on the other hand more willing to admit anxiety (Manosevetz & Lanyon, 1965).

Few studies have focused on sex differences in anxiety reduction as an outcome of short-term therapy programs. Coursey (1977) found no significant difference for sex in his study on differential effectiveness of progressive relaxation and anxiety. No studies on sex differences on effectiveness of Rational-Emotive Therapy and anxiety reduction have been published in the literature.

Statement of the Problem

With continued monetary cutbacks in expenditures to colleges and universities there is often an inadequate number of college mental health professionals to establish appropriate programs for anxiety reduction in undergraduate students. What is needed is an effective, short-term, economical method of delivering mental health services to undergraduate students. Two therapeutic methods currently employed for the treatment of anxiety are Rational-Emotive Therapy and Progressive Relaxation. The purpose of this study was to examine the effectiveness of a short-term (seven sessions) program of Rational-Emotive Therapy and Progressive Relaxation, and their relative effectiveness in the reduction of anxiety in undergraduate students. A second purpose of this study was to examine any differential effects which Rational-Emotive Therapy and Progressive Relaxation might have had on male and female undergraduate students.

Significance of the Study

The significance of the study is three-fold:

1. To investigate the relative effect of two treatment programs on trait anxiety.
2. To contribute to the application of a short-term, economical delivery system as an alternate

treatment program for the reduction of anxiety.

3. To investigate the variable of sex on the effectiveness of anxiety reduction techniques.

Hypotheses

H_1: There will be a significantly greater reduction in self-reported anxiety for undergraduate students who are instructed in the Rational-Emotive Therapy procedures than those in the Progressive Relaxation, Attention Placebo and No-Treatment control groups as measured by the State Trait Anxiety Inventory (STAI) (A-Trait) and the Multiple Affect Adjective Checklist (MAACL) (In General).

H_2: There will be a significantly greater reduction of observed anxiety for undergraduate students who are instructed in the Rational-Emotive Therapy procedure than those in the Progressive Relaxation, Attention Placebo and No-Treatment control groups as perceived by external observers using the Anxiety Rating Scale (ARS).

H_3: Males and females will gain equally in anxiety reduction within any treatment.

Research Methodology

The general design is an experimental study using a pretest-posttest control group design (Campbell & Stanley, 1963). There will not be a follow-up test.

Procedures

All subjects were grouped randomly into four treatment areas:

1. Rational-Emotive Group (RET)
2. Progressive Relaxation Group (PR)
3. Attention Placebo (AP)
4. No-Treatment (NT)

The size of each group was between eleven and fourteen undergraduate students. The size provided diverse interpersonal interactions yet were not so large as to preclude every member's participation or overload the leader with its complexity.

With the inclusion of a placebo and no-treatment group the results of the study were more than merely suggestive, and the exact conditions and the relative effectiveness of each treatment's success in the reduction of anxiety will not have to be demonstrated by additional research, except for replication.

Summary

The difference in people's responses to situations perceived as threatening refers to their "Trait Anxiety." The concept of trait anxiety in undergraduate students has not been well researched. Although there are a variety of techniques for the treatment of test anxiety, there are no studies which compare Rational Emotive Therapy and Progressive Relaxation in the reduction of

trait anxiety of undergraduate students.

The first chapter of this dissertation described the basic tenets of Rational-Emotive Therapy and Progressive Relaxation. The decision to include an Attention Placebo (AP) as a means of separating the effects of treatment from suggestion was discussed. The problem as stated was to test the effectiveness of a short-term, economical method for reducing anxiety in undergraduate students. The second purpose of the study was to examine any differential effects which Rational-Emotive Therapy and Progressive Relaxation might have had on male and female undergraduate students.

The hypotheses stated that the greatest amount of anxiety reduction would be reflected by the RET group, and that sex would not be a differential factor in its effectiveness. The procedure for the study was also briefly outlined.

Chapter 2

REVIEW OF THE LITERATURE

There are a variety of techniques for the treatment of anxiety. Some treatments, such as systematic desensitization (Paul, 1966) or in vivo flooding (Kirsch, Wolpin, & Knutson, 1975), attempt to decrease the conditioned anxiety which interferes with the appropriate responses without directly changing the behaviors. These approaches are based on the assumption that the individual already has the requisite skills to perform competently once anxiety is reduced. Other treatments such as cognitive restructuring (Meichenbaum, Gilmore, & Fedoravicious, 1971) or relaxation training (Goldfried & Trier, 1974) also reduce anxiety while teaching the individual specific anxiety management skills.

Methods of reducing anxiety, especially in college students, appear increasingly important as the harmful effects of tension and stress on academic performance are better understood. Relaxation techniques play a significant role in anxiety reduction interventions which seem especially effective with performance related anxiety (Kirsch, Wolpin, & Knutson, 1975). Although interventions using relaxation techniques have been the most frequently used for the reduction of anxiety (Goldfried, 1974; Kanter, 1975)

behavior therapists have begun to consider the effectiveness of rational-emotive therapy in reducing anxiety (Mahoney, 1974; Meichenbaum, 1977; Rimm & Masters, 1974).

Controlled outcome studies also support the effectiveness of cognitive-restructuring therapies in anxiety reduction. According to Meichenbaum, Gilmore, and Fedoravicious (1971) and Trexler and Karst (1972), Rational-Emotive Therapy is more effective than systematic desensitization in the treatment of performance anxiety.

Despite the popularity of, and interest in, rational-emotive therapy it is not seen as a cure-all for anxiety reduction, as is indicated by Lazarus' account of where behavior therapists take their troubles (Lazarus, 1971). Of twenty behavior therapists surveyed who were in personal therapy for themselves, ten were in psychoanalytic therapy, five in Gestalt therapy, three in biogenetics, four in existential therapy, and one in group dynamics, and not one in rational-emotive therapy.

Since there is a continuing need for more efficient and objectively studied methods for reducing anxiety, the purpose of this study was to provide data on the effectiveness of rational-emotive therapy and progressive relaxation in the reduction of anxiety in undergraduate students. As there is research to support the effectiveness of each of

these methods in reducing anxiety, the need to integrate and review literature to further clarify relationships among the variables that are being investigated is the purpose of this literature review. Specifically, literature addressing the effectiveness of rational-emotive therapy and progressive relaxation in the reduction of trait anxiety in undergraduate students has been reviewed. Consequently, literature addressing differences by sex concerning the effectiveness of treatments in reducing anxiety has also been reviewed.

The procedure established for testing the effectiveness of the treatments was to have the subjects attend seven sessions of treatment. As the researcher was concerned with the effectiveness of short-term economical methods for reducing anxiety in college students, literature utilizing similar procedures has been reviewed to assess the effectiveness of short-term therapeutic interventions. The intent of the review is to identify treatment interactions that will maximize success (Bergin & Suinn, 1975).

Rational-Emotive Therapy

Many investigators (Ellis, 1963; Lazarus, 1966; Meichenbaum, 1977; Reister, Stockton, Maultsby, 1977; Straatymer, 1974) have argued for the important role

which an individual's cognitive appraisal, expectation, self-labels, etc., play in the handling of stress and in the modification of stress-related behavior.

The purpose of this section is to review the literature concerning the effectiveness of rational-emotive therapy in the reduction of state anxiety. In keeping with the active-directive RET treatment that was used in this study, the review focused on studies which made subjects aware of their thoughts, self-verbalizations, and self-instructions and how they contributed to anxiety.

One of the most popular cognitive-behavior psychotherapies is rational-emotive therapy (Ellis, 1962). Ellis (1973) theorizes that maladaptive emotions are mediated by irrational beliefs and related self-verbalizations. Therapy is aimed at modifying these maladaptive beliefs. Rational-emotive therapy has been successful in the treatment of a wide variety of emotive disorders (DiGiuseppe, Miller, & Trexler, 1977).

Outcome Studies Concerning the Effectiveness of Rational-Emotive Therapy in the Reduction of Anxiety

One of the first studies to compare the effectiveness of rational-emotive therapy with other psychotherapies

was conducted by Ellis (1957). At that time, Ellis was favorably disposed toward three different techniques of therapy: first, orthodox psychoanalysis; then, psychoanalytically oriented psychotherapy; and finally, rational psychotherapy. Over a period of seven years Ellis compared the effectiveness of these three psychotherapeutic techniques on the outcome of 172 subjects. It was found that individuals treated with orthodox psychoanalysis showed little or no improvement in 50% of the cases, distinct improvements in 37%, and considerable improvement in 13%. Those treated with psychoanalytically oriented therapy showed little or no improvement in 37% of the cases, distinct improvement in 45%, and considerable improvement in 18%. Those treated with rational psychotherapy showed little or no improvement in 10% of the cased, distinct improvement in 46% and considerable improvement in 44%.

Although the observed differences between the groups treated with orthodox psychoanalysis and psychoanalytically oriented therapy did not prove to be statistically significant, those between the groups treated with rational psychotherapy and the other two techniques did reach statistical significance. While the obtained data of the study did not offer incontrovertilbe proof of the superiority of the technique of rational psychotherapy, they strongly indicated that neither orthodox nor liberal

psychoanalytic procedures were effective therapeutic interventions. This research aroused further interest in rational psychotherapy, and established Ellis as the expert of this technique.

Because the habit of irrational thinking is learned, the therapeutic process involves encouraging the client to recognize irrational thoughts and to practice formulating rational beliefs. Basic personality change occurs when old thinking habits are extinguished by replacing them with new, more effective thinking habits. The premise of rational-emotive therapy is the A-B-C theory of emotions that Ellis first described, namely, that thinking produces emotions (Ellis & Harper, 1971).

Meichenbaum (1972) is more emphatic than Ellis in suggesting that all treatment involving anxiety reduction should be designed to directly control the cognitive concern over performance. This belief is based on an earlier study (Meichenbaum, 1971) in which three forms of group treatment were compared for their relative therapeutic effectiveness in reducing speech anxiety. Treatments included desensitization, "insight" (which emphasized self-verbalizations), and a combined desensitization and insight treatment condition. Meichenbaum based his assumption that the combined treatment would be the most effective in reducing anxiety on research

carried out by Dollard and Miller (1950) and Kelly (1955) as well as that of Ellis (1973), that began to show that cognitive factors such as self-verbalizations may play a large role in mediating emotional responses. The results of the Meichenbaum study showed that a combined desensitization and insight treatment condition was, in fact, the most effective in reducing speech anxiety.

Karst and Trexler (1970) further tested rational-emotive therapy versus placebo and no-treatment effects on public speaking anxiety in thirty-three students in a public speaking class. Like most studies of outcomes with a single technique, there was at least modest support for the effects of the therapy on some criteria compared with the control groups, but there was no comparison with any other form of therapy. The problems were mild and changes were more evident on an irrational beliefs test and self-rating of confidence as a public speaker than on a behavior check list or an anxiety scale.

Again, Trexler and Karst (1972), in a partial replication and expansion of the earlier study (Karst & Trexler, 1970), investigated the efficacy of rational-emotive therapy as compared to attention-placebo and no-treatment control groups in the treatment of public-speaking anxiety. The results demonstrated on self-report and behavioral measures (with trained independent raters), that RET was more

effective than the placebo or no treatment conditions. A subsequent self-report follow-up six months after completion revealed that the improvement had been maintained.

Straatmeyer (1974) tested Meichenbaum's and Trexler and Karst's results by attempting to determine the effectiveness of rational-emotive therapy not only in the reduction of speech anxiety, but to the reduction of interpersonal anxiety. In addition to the group receiving the RET treatment, an attention placebo, consisting of a discussion of the nature and debilitating effects of anxiety was used. Another group served as a control with no treatment being administered. Two self-report and two behavioral measures were employed to assess the effectiveness of each treatment. The results showed that the RET approach was significantly better (at the .05 level) than both the attention placebo and no-treatment groups. The hypothesis that RET dealing with speech anxiety does generalize to interpersonal anxiety was also statistically confirmed.

One of the most advanced comparative studies in psychotherapy (Bergin & Suinn, 1975) a study conducted by DiLoreto (1971) investigated the effectiveness of rational-emotive therapy, systematic desensitization and client-centered therapy in the treatment of subjects with interpersonal anxiety. The study involved 100 college student

volunteers who reported high interpersonal anxiety and a desire for treatment. Twenty were assigned to each treatment group and an equal number to a placebo therapy group and a no-contact group, with approximately half of the subjects being introverts and half extroverts. The results indicated that all the treatment conditions significantly differed from both control conditions on all the dependent measures, except that the client-centered group did not achieve significance on the interpersonal activity scale. Systematic desensitization achieved the greatest amount of anxiety reduction with both personality types; rational-emotive therapy produced more significant decreases in anxiety with introverts than did client-centered; and client-centered was more effective than rational-emotive therapy with extroverts.

DiLoreto's results appear overall to indicate that systematic desensitization was the most effective treatment. A follow-up assessment three months later, however, indicated that students who received rational-emotive therapy reported more change in their behavior at that time than students receiving either desensitization or client-centered therapy. Specifically, they exhibited more interpersonal interactions and assertive behavior. Thus while systematic desensitization was most effective in reducing anxiety, rational-emotive therapy was most successful in changing behavior.

While this study is important as one of the pioneer efforts in comparing RET with other treatment modalities, and may appear to support the notion that the practice of self-verbalizations to dispute irrationalities concerning performance anxieties will have long range effects, this researcher thought the DiLoreto study had methodological limitations.

First, the failure to match subjects on initial level of anxiety may have helped to cause the anxiety level difference in the follow-up assessment. Another major criticism appears to be the nature of the "placebo" treatment. This group met for discussions of university life, academic problems, and study skills for only three sessions. Thus, they could have been cued that this was not "treatment" and that they were not expected to change.

For the most part, however, the desensitization procedure was superior to the other two primary treatments. Rational-emotive therapy was effective for only introverted subjects, and for this subpopulation, it proved to be just as effective as desensitization. Although there undoubtedly are a number of ways to interpret DiLoreto's findings (e.g., introverted subjects may be more susceptible to attitude change than extroverted individuals; anxiety in social situations may be cognitively mediated only for introverts), DeLoreto's data reveal that introverts were initially more interpersonally

anxious than were extroverts. This is particularly relevant in light of the population in this study DiLoreto used volunteers from an Introductory Psychology course, where no less than 100 out of a class of 600 students qualified as being "socially anxious." Thus, for subjects whose social anxiety was more severe and probably closer to that typically found in clinical settings, the rational-emotive and desensitization conditions produced equivalent improvement.

Kanter (1975) further explored DiLoreto's findings in his doctoral dissertation Relative Effectiveness of Rational Restructuring and Self-Control Desensitization in the Reduction of Interpersonal Anxiety where he compared the effectiveness of a cognitively oriented approach for anxiety reduction with an approach emphasizing the use of relaxation as the primary coping skill. The treatment in-session procedures included progressive relaxation training, rational-emotive therapy, and a waiting list control group.

The findings indicated that each of the three therapeutic procedures resulted in significant decrements in anxiety at post-testing which were either maintained or improved upon at follow-up. Although rational restructuring, desensitization, and a combined treatment were effective in reducing anxiety, the overall pattern of the findings indicated that they were not equally effective. Between-group comparisons at post-testing revealed that rational

restructuring was more effective than desensitization in reducing state anxiety, trait anxiety, and irrational beliefs. When compared with waiting-list controls, rational restructuring was also significantly more effective on a greater number of variables than was desensitization. Rational restructuring also produced significant within-group improvement on many more variables than did desensitization. Finally, there was a greater tendency for rational restructuring to result in generalization of anxiety reduction to nonsocial situations.

In a very well-controlled study, Wein, Nelson and Odom (1975) investigated the effectiveness of RET with anxiety. The results for the behavioral measure indicated that RET was as effective as systematic desensitization, while both were superior to the verbal extinction treatment and the two control conditions. RET was the only effective treatment as measured by self-report. These results support the effectiveness of cognitive therapy and indicate that, in comparison with desensitization, it is equivalent, if not more effective.

The first published rational emotive study to include an actual patient population was that of Molesky and Tosi (1976). The authors hypothesized that RET would be more efficient than progressive relaxation in the treatment of adult stutterers.

The results of this study strongly support the

effectiveness of rational-emotive therapy over progressive relaxation in reducing stuttering behavior as well as the accompanying anxiety and irrational attitudes concerning stuttering. These results were sustained at follow-up.

A review of the research studies and literature on the efficacy of RET in the reduction of various forms of anxiety has been presented. The basic assumption underlying rational-emotive therapy is that an individual can learn to control anxiety by modifying the cognitive set with which he approaches potentially upsetting events.

This review has shown that some demonstrated support for the efficacy of RET exists. However, methodological problems limit their generalizability. Due to the sometimes absence of placebo and no-treatment groups, the conditions under which rational-emotive therapy may be effective are not thoroughly demonstrated. It is one of the purposes of this study to provide data which will help demonstrate the effectiveness of RET in the reduction of anxiety when compared with progressive relaxation, as well as, attention placebo and no-treatment groups.

Progressive Relaxation

With the publication of Jacobson's Progressive Relaxation in 1929, training in relaxation was introduced as a potentially effective therapeutic procedure for various forms of tension and anxiety. Perhaps because of the 50-200 training sessions recommended by Jacobson and maybe

also because of the Zeitgeist within psychotherapeutic circles at that time, Jacobson's book made little impact. It was not until Wolpe (1958) modified the relaxation technique and incorporated it into systematic desensitization that the procedure actually achieved professional recognition.

Although it is not yet clear exactly how relaxation training lowers anxiety, there is little doubt that it works. Physiological studies have shown that muscular relaxation has definite physiological consequences, including decrease in pulse rate, blood pressure, and skin conductance (Jacobson, 1938; Paul, 1969). There exists evidence from research to indicate that relaxation training can represent an effective therapeutic procedure (Goldfried, 1973; Jacobson, 1938; Kirsch, 1975; Suinn, 1968; Staples, 1978).

Additional investigations into the effects of relaxation procedures have been less impressive. Johnson (1968) concluded in his study of high test anxiety that progressive relaxation was not effective in reducing anxiety in college students. Goldfried (1971) did not find progressive relaxation to be effective in reducing anxiety in undergraduate students.

Because of the conflicting evidence on the benefits of relaxation procedures, the current clinical status of relaxation training is unclear. Reports can be found in

the literature in which relaxation was employed as the main treatment procedure (e.g., Snyder & Oetting, 1966) but others in which it was used as an attention-placebo control (e.g., Trexler & Karst, 1972).

It is the purpose of this section of the literature review to examine outcome research concerning procedure relaxation and anxiety reduction.

Outcome Studies Concerning the Effectiveness of Progressive Relaxation in the Reduction of Anxiety

In 1938, Edmond Jacobson completed Progressive Relaxation, the book which was the culmination of his studies on relaxation theory. His theory was that by systematically tensing and releasing various muscle groups and by learning to attend to and discriminate the resulting sensations of tension and relaxation a person may almost completely eliminate muscle contractions and experience a feeling of deep relaxation. Much research has strived to further test and elaborate on this theory.

One of the first researchers to examine the effectiveness of progressive relaxation was Gordon Paul. Paul and his students reported a series of investigations (1969a, 1969b, 1969c) concerning the effects of relaxation training. In the first of these studies (Paul, 1969a)

the experimenter was examining the extent to which relaxation training reduced physiological arousal and subjective distress and resulted in effects different from those produced by either hypnotic suggestion or control procedures. One-third of the subjects were trained in progressive relaxation, one-third received direct hypnotic suggestion designed to produce relaxation, and the remaining control group was simply told to sit quietly and relax.

The results indicated significantly reduced discomfort and arousal within each session and, more importantly, significant differences among the three groups on all but the skin conductance measure. During the first session the progressive relaxation procedures resulted in greater relaxation by all measures than did control procedures. The progressive relaxation procedures also produced greater heart rate and muscle tension decreases than did hypnotic induction; hypnosis produced greater reduction in respiration and subjective anxiety than control procedures did. Paul concluded that, overall, progressive relaxation is superior to hypnotically induced or self-induced relaxation.

In his second report (1969b) Paul attempted to assess the relationship between successful relaxation performance and various personality characteristics of potential importance in predicting an individual's responsiveness to particular techniques. Paul concluded that responsiveness to relaxation or hypnotic procedures was not related to the personality dimensions of extraversion or emotionality.

Paul's third report (1969c) attempted to evaluate the use of progressive relaxation in decreasing physiological response to stressful imagery. Imagery data were collected on the same sixty subjects, and composite physiological responses to the stress scenes visualized before and after training were analyzed. The author concluded that relaxation (progressive or hypnotic) does not produce inhibition of physiological response to stressful visualizations.

The fourth study in this series investigated the efficacy of tape-recorded versus live (therapist present) relaxation training (Paul & Trimble, 1970). Thirty college females were assigned to one of three treatment conditions: progressive relation, hypnotically induced relaxation, and self-relaxation control. The procedures and measurements were identical to thos employed in the previous studies, except that all training was conducted solely via tape-recorded instructions (therapist absent). The data from these tape-instructed groups were then compared to those from the previous studies conducted with live training. The results showed that taped relaxation sessions alone were not as effective as live relaxation training.

The research by Paul was by no means an exhaustive report on the effects of progressive relaxation but was quite important in its time for determining the success of relaxation training.

Progressive relaxation has been demonstrated to be an effective method of reducing performance anxiety (Meichenbaum, Gilmore & Fedoravicious, 1971; Paul, 1966). Yet, despite the high incidence of performance anxiety among students in required speech courses, it has not been widely used to overcome this problem.

One of the reasons for progressive relaxation's lack of widespread use is conflicting reports concerning its effectiveness in reducing anxiety. Reports by several investigators (Cooke, 1968; Davison, 1968; Lang, Lazovik & Reynolds, 1965; Rachman, 1965, 1968) have consistently pointed to one conclusion. Relaxation training, when used as a therapeutic procedure in and of itself, is not very effective in reducing anxiety.

The author feels that a major stumbling block in the studies of the effectiveness of progressive relaxation in reducing anxiety is the researcher's difficulty in measuring relaxation. Staples (1978) made a comparison of EMG feedback, progressive relaxation and autogenic training as relaxation techniques. The proponents of all three relaxation methods held that one goal of their methods was to lower muscle tension, so that the level of integrated EMG was an obvious measure. To a large extent, however, relaxation is also a subjective experience which ought to be measured by self-report. However, no validated measure of relaxation exists. Thus, the subjective aspects of relaxation must

be measured by more indirect means. In accord with this assumption and since relaxation training is used primarily to reduce anxiety and tension, Staples chose the Multiple Affect Adjective Checklist (MAACL) as the means for measuring anxiety reduction as demonstrated by progressive relaxation. Although all three methods produced significant relaxation within each session, and measures of anxiety decreased across sessions, the progressive relaxation subjects liked their training the most and felt they achieved a better understanding of deep relaxation than did the subjects in the other two conditions. Although Staples' research was not highly significant, it was an attempt to define and measure relaxation by an anxiety rating instrument.

Other researchers have worked with relaxation alone. Although earlier studies suggest that relaxation alone is less effective than desensitization, two concluded otherwise. Freeling and Shemberg (1970) examined the relative contributions of relaxation alone, imagery alone, and relaxation plus imagery (standard desensitization). They found relaxation alone led to equal reductions on subjective measures of test anxiety compared to relaxation plus desensitization, with these two methods being superior to imagery alone. On the other hand, imagery was found to lead to substantial improvements on a behavioral task as compared to the other methods. Laxer and Walker (1970) also studied

test anxiety and concluded that relaxation alone was a successful approach.

More direct evidence for the effectiveness of relaxation training comes from Zeisset (1968), who studied the effect of relaxation as a means of coping with interview anxiety. In addition to training hospitalized patients in relazation techniques, Zeisset also instructed them to actually attempt to make use of this skill whenever they felt themselves becoming anxious in day-to-day situations. It was found that relaxation training, when presented to individuals as an active coping skill, was more effective than either a no-contact or attention-placebo control group.

Johnson and Sechrest (1968) conducted a study during the same year as Zeisset and found dissimilar results. The object of their study was to compare the effects of desensitization, relaxation training, and no treatment on test-anxious college students. It was hypothesized that it is primarily counterconditioning which accounts for the therapeutic effects and that relaxation training alone would not produce as great an improvement as would full desensitization. Results showed that desensitization subjects attained significantly higher grades than either of the other two groups of subjects, which did not differ from each other.

This review has shown that the data that is available concerning the effectiveness of progressive relaxation in

the reduction of anxiety is inconclusive at this time. It is one of the purposes of this study to provide data which will help clarify the relationship between progressive relaxation and anxiety reduction.

Difference by Sex in Effectiveness of Treatment

As one of the stated hypotheses of this research is that males and females will gain equally in anxiety reduction within any treatment, the purpose of this section of the literature review is to clarify the relationship between sex differentiation and anxiety reduction. There is a limited amount of data available to clarify this relationship.

Most studies have indicated that females tend to be more fearful than males (Geer, 1965; Manosevitz & Lanyon, 1965) and at least one has found sex differences on individual items (Manosevitz & Lanyon, 1965).

The most useful study conducted was one by Hodges and Felling (1970) entitled: Types of Stressful Situations and their Relation to Trait Anxiety and Sex. Hodges and Felling agreed with Spielberger and Smith (1966) who has emphasized the importance of identifying stimuli which are perceived as stressful by those individuals who report that they are frequently anxious. Investigations of the effects of various stressful situations on anxiety have typically ignored the importance of the type of stress used, assuming

that situations which are generally perceived as threatening will have the same effect on everyone, regardless of sex.

The results indicated that females tend to be more apprehensive than males in situations involving physical danger or pain, but that males are just as likely as females to indicate anxiety in situations involving speech, social or academic failure, and dating. The data indicated that the sex differences occur primarily for physical danger and pain, but not for the other types of situations. It is interesting to note the failure to find sex differences in situations involving speech, social and academic failure, and dating. Apparently many of the stressful situations frequently found in college life are just as threatening for men as women.

Additionally, the literature reviewed indicated that death anxiety among females is higher than among males. Lester (1967) has reported large differences beween the sexes. When he reanalyzed Middleton's 1936 data, Lester (1970) determined that men tended to think of death and dying more than women but expressed less negativism toward death. A replication of Middleton's research design (Lester, 1971) yielded the same results. Templer, Ruff, and Franks (1971) and Templer (1970) also have substantiated that females have higher death anxiety scores than do males. Also subjective life expectancy and death anxiety are inversely related for females but not for males (Handal, 1969).

Manosevetz and Lanyon (1965) suggest that the usual large number of females in anxiety reduction studies may be explained by their greater susceptibility to or willingness to admit anxiety.

Coursey (1977) conducted a study which examined the effectiveness of four relaxation treatments as measured by the Taylor Manifest Anxiety Scale and the State-Trait Anxiety Inventory. The results showed no difference in group effectiveness as well as no difference by sex in any of the measures.

In summary, few studies concerning the effectiveness of therapy have focused on sex differences. It is one of the purposes of this study to provide data concerning the relationship between treatment effect and sex differentiation.

Schedule of Treatments

One of the purposes of this study was to test the effectiveness of a short-term economical therapeutic intervention for the reduction of anxiety in college students. The author chose seven session treatments as the time frame for an efficient and effective treatment.

Significant reduction in anxiety level has been found using group methods by Trexler and Karst (1972) employing as few as a five session program, as did Straatmeyer (1974), and Reister, Stockton, and Maultsby (1977). Hyman and Warren

(1978) used a six session treatment, while Kanter (1975) found that significant change was assessed in anxiety level using a seven session program. Thus, it appears that studies have shown that significant change in levels of anxiety can be found in short-term treatment using a cognitive approach.

Additionally, Suinn (1968) found that a one hour session for a period of five weeks, using a combination of desensitization treatments was successful in reducing the reported anxiety of treated students. Fremoun and Zitter (1978) found that after each treatment group met for five one-hour sessions, that cognitive restructuring was effective for reducing social anxiety in college students. Meichenbaum (1971), Staples (1978), and Thompson (1976), all found significant results in anxiety reduction using eight session treatments.

In the Bernstein and Borkovec manual for Progressive Relaxation Training (Bernstein & Barkovec, 1973), the authors suggest a time table of about ten sessions but admit that this time table is "a relatively conservation one for generating progress." Kahn, Baker and Weiss (1968) have found improvement in the reduction of anxiety in as little as two sessions. While the number of group sessions which have shown significant reduction in anxiety range from two to ten sessions, this author felt that a program of seven sessions was the best for the optimal combination of efficiency and effectiveness in reducing anxiety.

Summary

Chapter 2 was an integration of the findings of the studies that have been researched concerning the key variables addressed in this study.

The effects of Rational Emotive Therapy and Progressive Relaxation in the reduction of trait anxiety of undergraduate students was reviewed by analyzing outcome studies of each therapy. Although there was demonstrated support for the efficacy of each treatment in anxiety reduction, methodological problems limited their generalizability. Additionally, the lack of placebo and no-treatment groups impacts the strength of some research.

Differences concerning the effectiveness of treatment on anxiety as related to sex was reviewed and the limited amount of data available was inconclusive.

The effectiveness of a short-term therapeutic intervention was documented by the review of ten studies which used a similar time frame as this study.

Chapter 3

METHODOLOGY

Chapter Three describes the method and the instruments that were used to examine the effectiveness of Rational Emotive Therapy and Progressive Relaxation in the reduction of trait anxiety in undergraduate students. A description of the population from which the sample was drawn and an explanation of how the sample was selected is presented. The specific procedures that were used to choose the sample are stated. The measurement instruments that were used are described. The dependent variables were measured by the State-Trait Anxiety Inventory (STAI) (A-Trait Scale) (Spielberger, Gorsuch, & Lushene, 1970), Multiple Affect Adjective Checklist (MAACL) ("In General") (Zuckerman & Lubin, 1966), and the Anxiety Rating Scale (ARS) (Golabek, 1980). The four treatments included: rational-emotive therapy, progressive relaxation, attention placebo, and a no-treatment group.

Population and Sample

A total of fifty-one undergraduate students from the University of the Pacific in Stockton, California, participated in the study. The procedures used to choose

the sample were such that other research may replicate this study. An advertisement with an introductory cover letter (Appendix B) was sent to each faculty member at the University of the Pacific. The instructions were for the faculty members to read the prepared advertisement to each class that they taught. Two telephone numbers were listed where students could call to register for the workshops. Someone was available to take participants' calls from 7:00 A.M. until 12:00 A.M., daily for one week prior to the workshops thus allowing ample time for subjects to register. When subjects responded to the advertisement, they were randomly assigned to one of four treatment groups and received a typed letter (Appendix C) designating the time and place of their treatment. Emphasis was placed on the subject making a commitment to attend each session, as classes could not be made up. Additionally, each subject received a personal phone call to acknowledge their receipt of the treatment schedule and to confirm their commitment to attend the workshops. It was required that subjects not be engaged in group or individual therapy at the time of the sessions.

Bernstein and Paul (1971) discussed some of the typical practices that limit outcome generalizability, including the fact that most outcome studies in behavior

therapy have used college students who were either paid or received course credit for their participation. In contrast, participants in the present study were motivated solely on their desire to reduce their levels of anxiety. Table 1 illustrates the distribution of students according to sex and treatment.

Table 1

Distribution of Students According to Sex and Treatment

	RET	PR	AP	NT	Total
Males	6	8	7	6	27
Females	8	6	5	5	24
Total	14	14	12	11	51

Instrumentation

Three instruments were used to compare the treatment effects:

State-Trait Anxiety Inventory (STAI) (A-Trait Scale). The State-Trait Anxiety Inventory (STAI) is comprised of separate self-report scales for measuring two types of anxiety: state anxiety (A-State) and trait anxiety (A-Trait).

State Anxiety is characterized by feelings of tension and apprehension that are consciously perceived at any particular moment. As A-State may vary and fluctuate over time, much current research has tested the intensity of that fluctuation. It has been found that repeated administrations of the inventory lead to greater reliability in differentiating among subjects (Howard & Diesenhaus, 1965).

Trait Anxiety (A-Trait) denotes a disposition to respond to anxiety states. The concept of trait anxiety is that of a relatively enduring personality characteristic-anxiety proneness. A person who is defined as being high in trait anxiety is not a person who necessarily shows evidence of high anxiety at any given point in time, but is rather a person who is prone to respond to certain specified conditions with anxiety responses.

The STAI (A-Trait) scale consists of twenty statements that ask people to describe how they feel, "in general" (Appendix D). Test-retest reliability data on the STAI are presented in Table 2 for subgroups of subjects who were included in the normative sample of undergraduate college students. The students retested after one hour were successively exposed during the test-retest interval to the following experimental conditions: a brief period of relaxation training; a difficult IQ test; and a film that depicted

accidents resulting in serious injury or detah.

Table 2

Test-Retest Reliability for College Undergraduates

Time-Lapse:	1 hour T/R		20 day T/R		104 day T/R	
	N	r	N	r	N	r
A-Trait						
Males	88	.84	38	.86	25	.73
Females	109	.76	75	.76	22	.77
A-State						
Males	88	.33	38	.54	22	.31
Females	109	.16	75	.27	22	.31

The test-retest correlations for the A-Trait scale were reasonably high, ranging from 173 to .86. Test-retest reliabilities for the A-trait scale for male and female college undergraduate students over a six month period are .73 and .77, respectively, indicating that the trait measure is quite stable (Spielberger, Gorsuch, & Lushene, 1970).

Evidence of the concurrent validity of the STAI A-Trait scale is presented in Table 3. Correlations with the IPAT Anxiety Scale (Cattell & Scheier, 1963), the Taylor Manifest Anxiety Scale (Taylor, 1953, and the Affect Adjective Checklist "General Form" (Zuckerman & Lubin, 1966) are reported. It may be noted that the correlations between the STAI, the IPAT, and the TMAS are for both male and female college

students. These correlations indicate that the A-Trait scale measures essentially the same concept and may be interpreted in the same context.

Table 3

Correlations Between the STAI A-Trait Scale and Other Measures of Trait Anxiety

Anxiety Scale	College Females (N=126)			College Males (N=80)		
	STAI	IPAT	TMAS	STAI	IPAT	TMAS
IPAT	.75			.76		
TMAS	.80	.85		.79	.73	
AACL	.52	.57	.53	.58	.51	.41

correlations indicate that the A-Trait scale measures essentially the same concept and may be interpreted in the same context.

The STAI is both a reliable and valid instrument for measuring degrees of anxiety. Research with the A-Trait scale is highly correlated with other measures of trait anxiety (Gorsuch, 1969; Hodges, 1967; Lamb, 1969; Sachs, 1969).

Multiple Affect Adjective Checklist (MAACL)/ The Multiple Affect Adjective Checklist provides a measurement of state and trait anxiety, depression and hostility. Similar to the State-Trait Anxiety Inventory (STAI) the scores obtained when subjects check how they generally feel are used as a trait measure; when subjects are told

to respond in terms of how they feel today, the results are regarded as a state measure. For purposes of this study the "In General" form was used and scored to measure only levels of anxiety.

The MAACL contains 132 adjectives, alphabetically arranged in three columns. Because the checklist takes only a short time to complete the inventory has primarily been used as a research tool to evaluate the effectiveness of different types of therapy rather than for routine diagnostic applications. The research emphasis has been on establishing the construct validity of the instrument rather than obtaining a broad stratified standardization sample.

The "In General" form of the MAACL Anxiety Scale correlates moderately well with other tests to measure anxiety. The Taylor Manifest Anxiety Scale has shown significant correlations with clinically rated anxiety. The "In General" form of the MAACL Anxiety Scale correlates .62 with the MAS in measuring anxiety in undergraduates. The correlations in Table 4 show additional correlations of the MAACL Anxiety Scale with other Anxiety Questionnaires (Zuckerman & Lubin, 1966).

The split-half reliability of both forms of the three MAACL scales is high when the items are divided by the traditional odd-even method. The internal reliability coefficients for college students are significant at .72 ($p<.01$).

Table 4

Correlations of MAACL Anxiety Scale with Anxiety Questionnaires

MAACL Form	Questionnaire	Sample	N	r
General	Welsh A Scale	College	283	.65
General	Maslow Security	College	283	-.69
General	Cattell IPAT	College	246	.56

The data suggests that the MAACL Anxiety Scale provides a brief, valid self-report trait measure of anxiety and may be used to obtain a quick estimate of the general level of anxiety.

The Anxiety Rating Scale (ARS). The Anxiety Rating Scale (ARS) was constructed as a behavioral instrument to measure the level of S's anxiety as observed by another individual (Golabek, 1980). The scale consists of a range (1 through 9) which describes various levels of anxiety (Appendix F). The rater is asked to check the point which most accurately indicates the recent general level of anxiety of the subject whose name appears on the scale.

Each subject in the study was required to complete a consent form which verified their understanding that the researcher would contact two of the three individuals they named concerning the anxiety reduction workshops. The

Anxiety Rating Scale was forwarded to two of the individuals named with a cover letter indicating that the subject had completed a consent form with full knowledge that they would be contacted. The rater was instructed to indicate the general level of anxiety of the person named on the ARS, and to rate the individual accurately, for the subject had been instructed that the reply would be held in strict confidence and would not be shared with the individual at any time. A self-addressed, stamped envelope was enclosed with each scale.

The letters were mailed directly after the end of the first session. If replies were not received within two days a follow-up letter was forwarded to each rater, with an additional self-addressed, stamped envelope enclosed. Immediately after the last session of the work-shop weries, the raters were again asked to rate the recent general level of anxiety in the subject, and the identical follow-up procedure was used. This intensive follow-up assured compliance as all of the 102 anxiety ratings were returned by raters. The ARS and two cover letters are included in Appendix F.

Procedures

The first session consisted of behavioral contracting, testing and orientation to the treatment. All subjects were asked to sign a contract (Appendix G) indicating the

importance of attending each session. The contract stated that any questions asked would be kept confidential and that any subsequent use of the results would be anonymously presented in terms of combined summaries of all people involved. Additionally, subjects were instructed not to discuss their treatment with members of other groups. Each subject was required to complete a Personal Data Questionnaire (Appendix H) to provide the researcher with the address and telephone number for each subject, in case there was a need for the researcher to contact the subject directly. Each subject was asked if they were currently undergoing therapy, or had been previously involved in anxiety reduction workshops. No subject replied affirmatively.

All subjects were administered the STAI (A-Trait Scale), and the MAACL ("In General") during the first session. The examiner read the instructions out loud while having the subjects read the directions silently, allowing the subjects the opportunity to raise questions. The examiner, for the purpose of research applications, instructed the subjects explicitly to respond to all of the items. An objective observer was employed to critique the researcher's presentation of treatments to assure that treatments were not contaminated by experimenter's bias. The observer randomly attended two classes of each treatment and completed a checklist to assess experimenter bias and

teaching method (Appendix I).

All subjects were readministered the STAI (A-Trait) and MAACL ("In General") during the last session, and Anxiety Rating Scales were immediately forwarded to previously contacted raters. Subjects were at no time informed as to what the other treatments were, and were not told anything about the design of the study until after the last session.

The No-Treatment group attended the first and last day of sessions only. At the first session, the NT group was informed that because of scheduling their class would be postponed for a period of time. All subjects completed the consent form, questionnaire, and measurement instruments. Each subject was contacted by telephone and rescheduled to attend a class which was held on the same day as the last session for the other treatments. All subjects were readministered the measurement instruments. After the completed instruments were collected, an anxiety workshop was held for the NT group using RET techniques.

At the close of the PR and AP treatment sessions, subjects were provided the opportunity to attend an additional anxiety reduction workshop which described, in full, Rational Emotive Therapy techniques for reducing anxiety.

Treatments

Rational Emotive Therapy. All subjects were instructed that they would be required to actively participate in the treatment process. In keeping with the directive-cognitive approach of R.E.T., The Leader's Guide to Time Limited Rational-Emotive Group Psychotherapy (Ball & Grieger, 1978) was used to instruct subjects that anxiety reduction could be realized in the workshop by a structured approach of instruction and homework assignments. Consequently, many instructional materials were used.

The goal of the Rational-Emotive Therapy treatment was to teach the subjects precisely how to understand, dispute, and invalidate their self-defeating irrational beliefs about themselves, about others, and about their anxieties. The use of rational-emotive methods to show subjects how to attack their irrational premises in terms of feelings was the method used to reduce anxiety.

The RET treatment was divided into seven sessions. The instructional materials that were used in each session of the RET treatment are listed in the Appendix. These instructional materials were in the form of transparencies for use with an over-head projector.

Session 1 - The first session consisted of an orientation, signing of a behavioral contract, and testing.

Session 2 - The second component of the treatment made the subjects aware of their thoughts, self-verbalizations, and self-instructions which contribute to anxiety.

Materials: Rational-Emotive Therapy's A-B-C of Emotional Disturbance (Appendix J)
The A-B-C Theory of Emotion According to Dr. Albert Ellis (Appendix K)
How I Cause My Own Disturbance (Appendix L)

Session 3 - The third component of the RET treatment was a discussion of the twelve irrational ideas underlying irrational anxiety.

Materials: The Twelve Irrational Ideas (Appendix A)

Session 4 - The fourth component of the RET treatment was to have the subjects recognize that they can change their thinking, and abandon their irrational ideas by directly contradicting and denying the irrational ideas the subject tells themself.

Materials: Questions to Ask in Disputing Irrational Beliefs (Appendix M)

Session 5 - The fifth component of the RET treatment was to actively show the subjects that they were maintaining their disturbance by their thinking. The use of specific irrational examples served to reinforce this component.

Materials: Overcoming Test Anxiety (Appendix N)
Irrational Beliefs that Maintain Test Anxiety (Appendix O)
How To Overcome Test Anxiety (Appendix P)
Some Irrational Beliefs As To Why We Choose To "Love" Someone (Appendix Q)
"Disturbed" Feelings That Result From The Loss of Love (Appendix R)

Session 6 - The sixth component of the RET treatment was an overview of the treatment to encourage, persuade, and reinforce the subject that it is important to actively engage in some activities which will counteract the irrational behavior.

Throughout the sessions, the subjects were asked to complete Rational Self Help Forms (Appendix S). Two completed Rational Self Help Forms (Appendix T) served as an example to the group. In addition, a Follow Up Assignments Form (Appendix U) was utilized to assure subject participation.

Session 7 - Posttest administrations and summary.

Progressive Relaxation Treatment Group. The treatment of this group focused on the method of progressive relaxation developed by Bernstein and Borkovec (1973). The treatment consisted of seven sessions with measurement instruments being administered during

the first session and seventh sessions.

The PR workshop began with an introduction and presentation of the rationale of the theory, and an outline of the procedure. Exercises began with emphasis on the sixteen muscle groups which were, over the sessions, reduced to seven and then to four muscle groups, and then to the process referred to as "counting." At the end of the first training session, a relaxation tape, prepared by the researcher was given to each subject for daily home practice. The subjects were instructed to keep a record of daily home practice, and bring it to the next training session for the researcher's review.

Session 1 - Orientation, behavioral contract, testing.

Session 2 - Two trials of 16 muscle group training procedures.

Session 3 - Seven muscle group training procedures.

Session 4 - Four muscle group training procedures.

Session 5 - One trial of four muscle group training procedures and two trials of "relaxation by recall procedures."

Session 6 - One trial of four muscle group training procedures and two trials of "relaxation by recall procedures."

Session 7 - Posttest and Overview of Relaxation by recall with counting.

The Attention Placebo Treatment. The intent of a placebo treatment is to afford an index of improvement due to factors of attention, suggestion, and any demand characteristics inherent in the measure of a treatment. It is essential to assess the extent of improvement resulting from non-specific group treatment factors such as expectation of relief, suggestion, workshop relationships, and group spirit. The purpose of the attention placebo used in this research was to provide attention to the group in order to equate it with the experimental group while involving the subjects in a treatment procedure which was designed to have no therapeutic effect on the reduction of anxiety.

Rosenberg (1969) described four different types of learning styles and the adjustments in teaching methods that were necessary to accommodate those styles. Subjects in the AP group were exposed to the belief that through the understanding of the different types of learning styles, they could better reduce anxiety, although there is no evidence to support such a theory. The subjects' interests were maintained by hearing a lecture on a different learning style each session. Additionally, subjects were given reading assignments and asked to prepare five examples of each learning style for each session. As an attention placebo, the learning style lectures exposed the subjects to

an overview of characteristics of learners and its possible effects on class room adjustments. As all subjects were undergraduate students, this treatment served to maintain interest without providing any known therapeutic effect.

The outline for the attention placebo treatment was as follows:

Session 1: Orientation, behavioral contract, testing.

Session 2: Introduction to an overview of the four different "learning styles" (Rosenberg, 1968) and the concept of diagnostic interpretation.

Session 3: Rigid-Inhibited Style.

Materials: Rigid-Inhibited Learner
Rigid-Inhibited Adjustments in Teaching Methods (Appendix V)

Session 4: Undisciplined Style

Materials: Undisciplined Learner (Appendix W)
Undisciplined Adjustments in Teaching Methods (Appendix W)

Session 5: Acceptance-Anxious Style
Acceptance-Anxious Learner
Acceptance-Anxious Adjustments in Teaching Methods (Appendix X)

Session 6: Creative Style

Materials: Creative Learner
Creative Adjustments in Teaching
Methods (Appendix V)

No Treatment Group. A group of eleven undergraduate college students were randomly assigned to a no-treatment group. At the time of the first session all subjects were given the same pretest instruments as the other treatments groups and were asked to complete a personal data questionnaire indicating where they could be contacted. At the end of the treatment session the individuals in this group were told that because of scheduling their section of the anxiety workshop would be rescheduled in the future. All subjects were recontacted by telephone and all attended another session held on the same day as the last session for the other treatment groups. After completing all posttest instruments subjects participated in an anxiety reduction workshop using R.E.T. techniques.

Hypotheses

H_{1a}: There will be a significantly greater reduction in self-reported anxiety for undergraduate students who are instructed in the Rational-Emotive Therapy procedure than those in the Progressive Relaxation, Attention Placebo and No-Treatment groups as measured by the pre-to-post difference scores of the State-Trait Anxiety Inventory (A-Trait).

H_{1b}: There will be a significantly greater reduction in self-reported anxiety for undergraduate students who are instructed in the Rational-Emotive Therapy procedure than those in the Progressive Relaxation, Attention Placebo and No-Treatment groups as measured by the pre-to-post difference scores of the Multiple Affect Adjective Checklist "In General".

H_2: There will be a significantly greater reduction of observed anxiety for undergraduate studnets who are instructed in the Rational-Emotive Therapy procedure than those in the Progressive Relaxation, Attention Placebo and No-Treatment control groups as measured by the pre-to-post difference scores as perceived by external observers rating the Anxiety Rating Scale.

H_{3a}: Males and females will gain equally in anxiety reduction within any treatment according to the pre-to-post difference scores of the State Trait Anxiety Inventory (A-Trait).

H_{3b}: Males and females will gain equally in anxiety reduction within any treatment according to the pre-to-post difference scores of the Multiple Affect Adjective Checklist ("In General").

H_{3c}: Males and females will gain equally in anxiety reduction within any treatment according to the pre-to-post difference scores of the Anxiety Rating Scale (ARS).

Statistical Analysis

The first, second, and third hypotheses were tested by using ANOVA with the independent variables being treatment and sex, and the dependent variables being scores on the State Trait Anxiety Inventory (A-Trait), and the Multiple Affect Adjective Checklist ("In General") and the rater score on the Anxiety Rating Scale (ARS)

The first, second, and third hypotheses were also tested by ANCOVA with the independent variables being treatment and sex, and the dependent variable being scores on the State Trait Anxiety Inventory (A-Trait), the Multiple Affect Adjective Checklist "In General") and the Anxiety Rating Scale (ARS) with pre-test scores as the co-variant.

Table 5 illustrates the paradigms being used.

Table 5

Method of Statistical Analysis

Hypotheses	Analysis	Dependent Variable(s)	Independent Variable(s)
H_1, H_2, H_3	ANOVA on the pre-to-post test difference scores	STAI-(A-Trait) MAACL-("In General") ARS	Treatment: RET, PR, AP, NT Sex
H_1, H_2, H_3	ANCOVA on the pre-to-post test difference scores	STAI-(A-Trait) MAACL-("In General" ARS	Treatment: RET, PR, AP, NT Sex

The alpha levels were set at the .05 level of signifance. The reason this particular level was chosen

was because this alpha level balances out the possibility of a Type I or Type II error. The nature of this study did not lend itself to the need of maximizing or minimizing either of the above mentioned errors.

Summary

In Chapter Three a detailed description of the procedures used to study the problem was presented. The chapter began with a description of the population from which the sample was drawn and an explanation as to how the sample was selected. After the population and sample were described, the specific measurement instruments used in this research and the validity of each measurement instrument for the purposes proposed was discussed. A detailed description of the particular procedures employed explained how the particular groups were contacted and how the data was obtained. As the research involves an experimental component, the treatments were carefully delineated based on the criterion of replicability.

Chapter Three ends with a statement of the specific hypotheses that were tested in the study, and an explanation of the statistical analysis used.

Chapter Four shows the statistical analyses that were performed in the study. A statement of findings about each hypothesis and the rejection or failure to reject the hypothesis is provided.

Chapter 4

RESULTS OF THE STUDY

This chapter is organized into the following sections: descriptive data; statement and analysis of the first null hypothesis; statement and analysis of the second null hypothesis; statement and analysis of the third null hypothesis; and a summary.

Descriptive Data

A total of fifty-one undergraduate students participated in the study. Five students dropped out after the first class. Of the fifty-one who participated, twenty-seven were males and twenty-four were females. All of the participants were completed a pre- and post-test of three instruments that were used to test the effectiveness of the four treatments. The three instruments were the State-Trait Anxiety Inventory (STAI) (A-Trait Scale), Multiple Affect Adjective Checklist (MAACL) ("In General"), and the Anxiety Rating Scale (ARS). The four treatments included: Rational-Emotive Therapy, Progressive Relaxation, Attention Placebo, and a No-Treatment group.

An observer, using the Observer Checklist for Identification of Biased Presentation (Appendix I), reported no significant differences concerning biased presentations of the leader between the rational-emotive therapy, the

progressive relaxation or the attention placebo groups. The criteria included: amount of enthusiasm, eye contact, planning, vocal expression, logical sequence, rapport, and focus of lesson.

Statement and Analysis of the First Null Hypothesis

Hypothesis number one can be stated in two parts:

H_{1a}: There will be no significant differences in the reduction of self-reported anxiety for college students who participate in Rational-Emotive Therapy (RET), Progressive Relaxation (PR), Attention Placebo (AP), or No-Treatment groups (NT) as measured by the pre-to-post-test difference scores of the State-Trait Anxiety Inventory (A-Trait Scale).

The mean scores for the college sample specified by Spielberger, Gorsuch, and Lushene (1970) are 36 for males and 37 for females. The frequency distribution for all pre-test scores of the STAI falls exactly at the mean for males and females - 36.0.

The mean scores and standard deviations of the pre-tests and post-test of the State-Trait Anxiety Inventory are presented by group in Table 6.

Table 6

Means and Standard Deviations of Pre-Test and Post-Test Scores on the STAI for Four Treatment Groups

		Pre-test		Post-test	
Group	N	Mean	Std. Dev.	Mean	Std. Dev.
RET	14	41.50	9.00	33.71	7.98
PR	14	44.21	11.71	40.35	11.41
AP	12	35.58	5.64	32.58	6.50
NT	11	38.09	7.85	35.81	7.62

Table 7 presents an analysis of variance (ANOVA) on the STAI difference scores from pre-test to post-test.

Table 7

Analysis of Variance of the State-Trait Anxiety Inventory Difference Scores from Pre-test to Post-test

Source	SS	df	MS	F	P
Between Groups	237.90	3	79.30	3.43	<.05
Within Groups	1086.25	47	23.11		
Total	1324.15	50			

Table 8 presents an analysis of co-variance (ANCOVA) of the STAI difference scores from pre-test to post-test by group and sex with pre-test scores as a co-variate.

Table 8

Analysis of Co-Variance of the STAI Difference Scores from Pre-test to Post-test by Group and Sex with Pre-test Scores as a Co-variate

Source	SS	df	MS	F	P
Group	177.54	3	58.18	2.91	<.05
Sex	41.71	1	41.71	2.05	>.05
Group x Sex	77.37	3	25.79	1.27	>.05
Error	852.12	42	20.28		
Total	1324.15	50			

Both the analysis of variance (ANOVA) and the analysis of co-variance (ANCOVA) reveal group differences to be significantly different at the .05 level. The interaction between sex and group was not significant.

Duncan's multiple range tests revealed a significant amount of anxiety reduction of the Rational-Emotive Therapy group from the Progressive Relaxation, Attention Placebo and No-treatment groups at the .05 level. There was no significant difference between the Progressive Relaxation and Attention Placebo and No-Treatment groups, or the Attention Placebo or No-Treatment Group (Table 9).

Table 9

Analysis of Duncan's Multiple Range Test for the State-Trait Anxiety Inventory A-Trait Scale

Contrast	Outcome
RET - PR	Reject null
RET - AP	Reject null
RET - NT	Reject null
PR - AP	Fail to reject null
PR - NT	Fail to reject null
AP - NT	Fail to reject null

According to the findings of the State-Trait Anxiety Inventory (A-Trait Scale) H_{1a}, as stated in the null, is rejected.

The second part of hypothesis one can be stated in the null as:

H_{1b}: There will be no significant differences in the reduction of self-reported anxiety for college students who participate in Rational-Emotive Therapy (RET), Progressive Relaxation (PR), Attention Placebo (AP) or No-Treatment (NT) groups, as measured by pre-to-post test difference scores of the Multiple Affect Adjective Checklist (MAACL).

The means and standard deviations of the pre-test and post-test scores of the MAACL are presented by group in Table 10.

Table 10

Means and Standard Deviations of Pre-test and Post-test Scores on the Multiple Affect Adjective Checklist for Four Treatment Groups

		Pre-test		Post-test	
Group	N	Mean	Std. Dev.	Mean	Std. Dev.
RET	14	7.28	4.64	3.42	3.58
PR	14	8.28	5.82	6.21	5.23
AP	12	5.75	4.76	4.41	4.64
NT	11	5.72	3.66	5.81	3.76

The Multiple Affect Adjective Checklist manual (Zuckerman & Lubin, 1966) lists mean scores for the college students norm group at 5.6 for males and females. The frequency distribution for males and females on the pre-test score of the MAACL for this research group placed the mean score at 6.0, demonstrating a mean anxiety level greater than the normative sample.

Table 11 presents an analysis of variance on the MAACL difference scores from pre-test to post-test.

Table 11

Analysis of Variance of the Multiple Affect Adjective Checklist Difference Scores from Pre-test to Post-test

Source	SS	df	MS	F	p
Between Groups	101.46	3	33.82	2.53	>.05
Within Groups	626.21	47	13.32		
Total	727.68	50			

Table 12 presents an analysis of co-variance (ANCOVA) of the MAACL difference scores from pre-test to post-test by group and sex with pre-test scores as the co-variate.

Table 12

Analysis of Co-Variance of the MAACL Difference Scores from Pre-test to Post-test by Group and Sex with Pre-test Scores as the Co-Variate

Source	SS	df	MS	F	p
Group	69.446	3	23.14	2.29	>.05
Sex	6.755	1	6.75	.669	>.05
Group x Sex	39.46	3	13.15	1.30	>.05
Error	424.29	42	10.102		
Total	727.68	50			

According to the findings of the MAACL, H_{1b}, as stated in the Null Form, cannot be rejected.

Statement and Analysis of the Second Null Hypothesis

Hypothesis number two can be stated in the null form as:

H_2: There will be no significant differences in the reduction of anxiety for college students who participate in Rational-Emotive Therapy (RET), Progressive Relaxation (PR), Attention Placebo (AP), or No-Treatment (NT) groups as measured by the difference scores on the Anxiety Rating Scale (ARS).

The pre-treatment and post-treatment means and standard deviations are presented by group in Table 13.

A Pearson product-moment correlation was computed on the results obtained from the raters of the ARS. The coefficient which yielded .56 is considered significant at the .01 level (Glass and Stanley, 1970). Thus the reader can interpret the results of the ARS with a moderate level of reliability.

Table 13

Means and Standard Deviations of Pre- and Post-Treatment Ratings on the Anxiety Rating Scale for Four Treatment Groups

		Pre-test		Post-test	
Group	N	Mean	Std. Dev.	Mean	Std. Dev.
RET	28	6.25	1.22	3.46	0.90
PR	28	5.60	1.67	4.60	1.57
AP	24	5.08	0.97	4.75	.78
NT	22	5.09	1.59	5.22	1.55

Table 14 presents an analysis of variance on the ARS difference scores from pre-test to post-test.

Table 14

Analysis of Variance of the Difference Scores from Pre-test to Post-test on the Anxiety Rating Scale

Source	SS	df	MS	F	p
Between Groups	63.78	3	21.26	19.76	<.05
Within Groups	50.56	47	1.07		
Total	114.35	50			

Table 15 presents an analysis of co-variance (ANCOVA) of the Difference Scores from Pre-test to Post-test on the Anxiety Rating Scale with Pre-test scores as a co-variant.

Table 15

Analysis of Co-variance of the Difference Scores from Pre-test to Post-test on the Anxiety Rating Scale with Pre-test Scores as a Co-variant

Source	SS	df	MS	F	p
Group	40.335	3	13.44	15.95	<.05
Sex	.472	1	.475	.561	>.05
Group x Sex	1.88	3	.627	.744	>.05
Error	35.396	42	.843		
Total	114.35	50			

The results of the ANOVA and ANCOVA indicate that there were significant group differences in anxiety reduction according to the ARS at the .05 level. The interaction between sex and group was not significant.

Duncan's multiple range test revealed a significant amount of anxiety reduction of the RET group from the PR, AP, and NT groups. Additionally there was a difference between the PR group and the NT group (Table 16).

Table 16

Analysis of Duncan's Multiple Range Test for the Anxiety Rating Scale (ARS)

Contrast	Outcome
RET - PR	Reject Null
RET - AP	Reject Null
RET - NT	Reject Null
PR - AP	Fail to Reject Null
PR - NT	Reject Null
AP - NT	Fail to Reject Null

According to the findings of the Anxiety Rating Scale (ARS), H_2, as stated in the null form is rejected.

Statement and Analysis of the Third Null Hypothesis

All three instruments--the State-Trait Anxiety Inventory (STAI) (A-Trait), the Multiple Affect Adjective Checklist (MAACL) ("In General") and the Anxiety Rating Scale (ARS)--were employed as measurements to test this hypothesis. Hypothesis number three can be stated in the null form in three parts. The first part can be stated:

H_{3a}: Both males and females will gain equally in anxiety reduction within any treatment according to the pre-to-post test difference scores of the State-Trait

Anxiety Inventory (A-Trait Scale).

The means and standard deviations of the pre-test and post-test scores on the A-Trait Scale, according to sex, are presented in Table 17.

Table 17

Means and Standard Deviations of Pre-test and Post-test Scores on the STAI According to Sex

		Pre-test		Post-test	
Sex	N	Mean	Std. Dev.	Mean	Std. Dev.
Male	27	38.81	8.77	35.70	8.67
Female	24	41.58	9.90	35.75	9.52

The ANCOVA, used to determine if there were any sex differences in the effectiveness of anxiety reduction within treatments, revealed no difference, according to the STAI. According to the findings presented in Table 8, H_{3a}, as stated in the Null Form, cannot be rejected.

The second part of hypothesis number three can be stated in the null as:

H_{3b}: Both males and females will gain equally in anxiety reduction within any treatment according to the pre-to-post-test difference scores of the MAACL.

The means and standard deviations of the pre-test

and post-test scores on the MAACL are presented in Table 18.

Table 18

Means and Standard Deviations of Pre-test and Post-test Scores on the MAACL According to Sex

		Pre-test		Post-test	
Sex	N	Mean	Std. Dev.	Mean	Std. Dev.
Male	27	6.00	3.97	4.85	4.24
Female	24	7.83	5.56	5.04	4.66

The ANCOVA used to determine if there were any sex differences in the effectiveness of anxiety reduction within treatments on the MAACL revealed no differences. According to the findings presented in Table 12, H_{3b}, as stated in the Null Form, cannot to rejected.

The third part of hypothesis three can be stated in the null form in the following manner:

H_{3c}: Both males and females will gain equally in anxiety reduction within any treatment according to the pre-to-post-test difference scores of the ARS.

The means and standard deviations of the pre-treatment and post-treatment scores on the ARS are presented according to sex in Table 19.

Table 19

Means and Standard Deviations of Pre-test and Post-test Treatment Ratings on the Anxiety Rating Scale According to Sex

		Pre-test		Post-test	
Group	N	Means	Std. Dev	Means	Std. Dev.
Males	54	5.11	1.44	4.37	1.18
Females	48	6.04	1.29	4.56	1.59

The ANCOVA used to determine if there were any sex differences in the effectiveness of anxiety reduction within treatments on the ARS revealed that there were no differences. The data, presented in Table 15, provide insufficient evidence to reject the null. All of the instruments show conclusively that hypothesis three, as stated in the null form, cannot be rejected.

Summary of Results on Hypotheses

All of the hypotheses are stated in the null.

Hypothesis 1_a (H_{1a}) stated that there would be no difference in the amount of anxiety reduction for students between treatments according to the STAI.

This hypothesis was rejected.

Hypothesis 1_b (H_{1b}) stated that there would be no difference in the amount of anxiety reduction for students

between treatments according to the MAACL.

Evidence was not obtained to reject the null.

Hypothesis 2 (H_2) stated that there would be no difference in anxiety reduction for students between treatments according to the ARS.

This hypothesis was rejected.

Hypotheses 3_a, 3_b, 3_c (H_{3a}, H_{3b}, H_{3c}) stated that there would be no difference in anxiety reduction between males and females within any treatment according to the STAI, MAACL, and ARS. Evidence was not obtained to reject the null.

Chapter 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

There is a need for an effective, short-term, economical method of reducing anxiety in undergraduate students. Two therapeutic methods employed today for the treatment of anxiety are Rational-Emotive Therapy and Progressive Relaxation. The purpose of this study was to examine the effectiveness of a short-term (seven session) program of Rational-Emotive Therapy and Progressive Relaxation, and their relative effectiveness in the reduction of anxiety in undergraduate students. A second purpose of this study was to examine any differential effects which Rational-Emotive Therapy and Progressive Relaxation might have had on male and female undergraduate students.

Procedures Used to Study the Problem. Fifty-one undergraduate students (27 male, 24 female) participated in a seven session program to reduce anxiety. Group 1 received training in Rational-Emotive Therapy; Group 2 received training in Progressive Relaxation; Group 3 took part in an Attention Placebo group which focused on different learning styles and their effect on the

classroom situation; Group 4 was a No-Treatment group which was given the same pre- and post-test instruments as the other treatment groups but did not participate in a treatment until the completion of all post-test instruments.

Three instruments were used in this study to measure a significant reduction in anxiety. All subjects were administered the State-Trait Anxiety Inventory (STAI) (A-Trait Scale), and the Multiple Affect Adjective Checklist (MAACL) ("In General") during the first and last sessions, to measure pre- and post-anxiety scores. The third instrument, the Anxiety Rating Scale (ARS) was forwarded to two independent raters who were asked to indicate the general level of anxiety of the subject named on the ARS. This instrument provided a behavioral pre- and post-measure for anxiety reduction.

Findings of the Study. The State-Trait Anxiety Inventory revealed a significant amount of anxiety reduction for the Rational-Emotive Therapy group over the Progressive Relaxation, ATtention Placebo and No-Treatment groups at the .05 level. The STAI showed no significant difference between the Progressive Relaxation and Attention Placebo and No-Treatment groups, or the Attention Placebo or No-Treatment group.

The Multiple Affect Adjective Checklist did not

reveal a significant amount of anxiety reduction for the Rational-Emotive Therapy group over other treatments. Additionally, the Multiple Affect Adjective Checklist failed to reveal any significant difference between any of the other treatments.

The Anxiety Rating Scale revealed a significant amount of anxiety reduction for the Rational Emotive Therapy from the Progressive Relaxation, Attention Placebo, and No-Treatment groups. Additionally, the Anxiety Rating Scale revealed that there was a difference between the Progressive Relaxation and No-Treatment groups.

All of the instruments showed conclusively that there were no sex differences as a result of treatment.

Discussion

The first hypothesis stated that there would be a significantly greater reduction in self-reported anxiety for undergraduate students who were instructed in the (RET) procedure than those in the (PR), (AP) and (NT) groups as measured by the (STAI) and the (MAACL). The STAI showed conclusively that there was a significant difference between Rational-Emotive Therapy and all other treatment groups. The Multiple Affect Adjective Checklist, the other self-report measure, failed to show significantly that there was a difference between the Rational-Emotive

Therapy and Progressive Relaxation or Attention Placebo groups, but did show a difference between the Rational-Emotive Therapy and No-Treatment groups.

This researcher suggests that there is an explanation for the divergent results of the self-report measures. Golabek (1980) offered the opinion that as the Multiple Affect Adjective Checklist offers subjects the option of checking a variety of adjectives under one form, that the subject does not quantify the response but checks randomly without regard for which replies are "most" or "least" applicable. Masterson (1975) found that an adjective checklist which imposed some type of quantitative rating scale was distinctly different from one that allowed completely random responses. This researcher is not suggesting that the MAACL is not a valid measure of anxiety; but as the analysis of variance of the MAACL difference scores from pre-test to post-test showed an F value of .06, it might be assumed that the lack of quantitative rating of the instrument accounted for the MAACL not being able to claim significance at the .05 alpha level.

The second hypothesis showed that the greatest reduction of observed anxiety for undergraduate students occurred in the Rational-Emotive group, which showed a significant difference in anxiety reduction when compared

with the Progressive Relaxation, Attention Placebo and No-Treatment groups. Additionally, the Progressive Relaxation group was found to be more effective than the No-Treatment group.

This researcher felt that there was evidence to substantiate why the Anxiety Rating Scale would indicate the effectiveness of Progressive Relaxation over No-Treatment that would not be indicated by the self-report instruments. The Anxiety Rating Scale was forwarded to two friends of each subject who rated the subjects "general level of anxiety." Evidence from research indicates that relaxation training can represent an effective therapeutic procedure (Goldfried, 1973; Jacobson, 1938; Kirsch, 1975; Suinn, 1968; Staples, 1978). Additionally, physiological studies have shown that progressive relaxation has definite physiological consequences, including decrease in pulse rate, blood pressure, and skin conductance (Jacobson, 1938; Paul, 1969). It is these physiological effects which could result in observable measures, that would impact a behavioral measure, such as the ARS, and not the self-report instruments. It is conceivable that subjects' observed behavior may have suggested a generally less active level of anxiety, while subjects' self-reported instruments indicated no cognitive level of anxiety reduction.

Implications of Research Findings--Rational-Emotive Therapy Compared with Progressive Relaxation. The research findings indicated that Rational-Emotive Therapy showed a more significant amount of anxiety reduction over the Progressive Relaxation treatment for college students as measured by the behavioral instrument and one of the self-report instruments. These findings have important applications for both practitioners and theorists.

Progressive Relaxation Therapy traditionally emphasizes emotional relaxation; Rational-Emotive Therapy is basically didactic. Rational-Emotive Therapy gave the subjects an effective technique for analyzing their problems and dealing with their feelings on a cognitive basis. The findings demonstrating a reduction in anxiety for the Rational-Emotive group showed that the subjects quickly learned to analyze and extinguish their undesirable emotional habits while replacing them with more desirable (rational) ones. Lazarus (1976) suggests that modifying inappropriate self-verbalizations will provide for maximal change. Meichenbaum (1973) agrees that therapeutically attending to self-verbalizations will lead to significant behavioral change, greater generalization, and persistence of treatment effects.

A possible reason for the inconsistent findings for

progressive relaxation may rest with the way in which the training procedure is presented to individuals. Although this anxiety-reducing skill may be within an individual's behavioral repetoire, it clearly has little impact if it is never utilized. For the most part, people trained in relaxation are taught how but not when to use this skill and are not taught how to make it a regular part of their lives.

This researcher attempted to assure that the Progressive Relaxation treatment used in this study would not experience this problem by assuring that subjects were told that the training procedures would have the effect of automatically lowering their over-all tension level, so that it would be easier for them to deal with a wide variety of anxiety-provoking situations. The relaxation instructions were modeled after those described by Bernstein and Borkovec (1973), beginning with the alternate tensing and relaxing of various muscle groups during the earlier sessions and moving toward the procedure in which subjects were taught to relax without any initial tension phase. In addition to the relaxation training provided during each session, subjects were required to practice between sessions with tape-recorded instructions and to submit records of their experience and success.

This researcher now feels that although there was a concentrated effort to assure that the Rational-Emotive Therapy and Progressive Relaxation groups consisted of similar components (homework assignments, daily practice, written handouts) it was the attention to the "self-verbalizations" which impacted the Rational-Emotive treatment. The ability of the RET group to actively dispute irrational beliefs concerning anxiety in the group setting facilitated their formulating new, les irrational beliefs.

The implication for the practitioner is that although Progressive Relaxation may be an effective treatment for some types of anxiety, there are some logistical limitations for group applications; for example, the time required for muscle relaxation which takes away from verbal interaction, and the necessity for small groups. Rational-Emotive Therapy, on the other hand, can be effective with groups as large as 30 (Maultsby, Costello, & Carpenter, 1974).

Implications of Research Findings on Target Population. A study by Spielberger and Smith (1966) reviewed in Chapter 2 indicated that females tended to be more apprehensive than males in situations involving physical danger or pain, but that males were just as likely

as females to indicate anxiety in situations involving social activity. Apparently many of the stressful situations frequently found in college life are just as threatening for men as women.

Bandura (1969) has suggested that techniques for the reduction of anxiety should differ, depending on whether the emotional response is directly evoked by conditioned aversive stimuli or is maintained by self-generated symbolic activities. One may speculate that individuals' anxiety reactions that are generalized to many social situations are symbolically mediated, and therefore are best approached by a cognitively oriented intervention strategy. An approach that teaches clients to reevaluate the consequences of their behavior more realistically in various situations would seem to be particularly relevant when anxiety centers around social-evaluative interactions.

As both male and female college students experience anxiety as a result of social situations a cognitively oriented approach, such as Rational-Emotive Therapy would be particularly relevant. The results of the present study support the relative superiority of rational restructuring over progressive relaxation in the treatment of anxiety in college students.

Conclusion

The data from this research indicated that Rational-Emotive Therapy was the most effective treatment of externally observed anxiety, when compared with Progressive Relaxation, an Attention Placebo and a No-Treatment group in a college population.

On the two self-report measures, Rational-Emotive Therapy was found to be more effective in the reduction of trait anxiety than Progressive Relaxation, an Attention Placebo and a No-Treatment group on one instrument the (STAI) and more effective than the No-Treatment group on the othrer instrument the (MAACL).

The data also indicates that there were no sex differences in relation to the effectiveness of Rational-Emotive Therapy, as well as to the effectiveness of Progressive Relaxation, an Attention Placebo and a No-Treatment group.

The data also showed that Progressive Relaxation was more effective than No-Treatment in the reduction of externally observed anxiety.

Recommendations

The following were suggested:

1. That this study be replicated with a follow-up procedure to determine if Rational-Emotive Therapy is

beneficial in the long-term reduction of trait anxiety.

2. That a study be conducted to test the effectiveness of Rational-Emotive Therapy with a relaxation treatment that combines group and individual desensitization methods to reduce reported anxiety in undergraduate students.

3. That a replication of this study be conducted with high school students to test greater generalizability.

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Appendix A

The Twelve Irrational Beliefs

1. THE IDEA THAT IT IS A DIRE NECESSITY FOR AN ADULT TO BE LOVED BY EVERYONE FOR EVERYTHING HE DOES--

instead of his concentrating on his/her own self-respect, on winning approval for practical purposes, and on loving rather than being loved.

2. THE IDEA THAT CERTAIN ACTS ARE AWFUL OR WICKED, AND THAT PEOPLE WHO PERFORM SUCH ACTS SHOULD BE SEVERELY PUNISHED--

instead of the idea that certain acts are inappropriate or antisocial, and that people who perform such acts are <u>behaving</u> stupidly, ignorantly, or neurotically and would better be helped to change.

3. THE IDEA THAT IT IS HORRIBLE WHEN THINGS ARE NOT THE WAY ONE WOULD LIKE THEM TO BE--

instead of the idea that it is too bad, that one would better try to change or control conditions so that they become more satisfactory, and, if that is not possible, one had better temporarily accept their existence.

4. THE IDEA THAT HUMAN MISERY IS EXTERNALLY CAUSED AND IS FORCED ON ONE BY OUTSIDE PEOPLE AND EVENTS--

instead of the idea that emotional disturbance is caused by the view that one takes of conditions.

5. THE IDEA THAT IT IS EASIER TO AVOID THAN TO FACE LIFE DIFFICULTIES AND SELF-RESPONSIBILITIES

instead of the idea that the so-called easy way is invaribly the much harder in the long run.

6. THE IDEA THAT IF SOMETHING IS OR MAY BE DANGEROUS OR FEARSOME ONE SHOULD BE TERRIBLY UPSET ABOUT IT--

instead of the idea that one would better frankly face it and render it non-dangerous and, when that is not possible, accept the inevitable.

7. THE IDEA THAT ONE NEEDS SOMETHING OTHER OR STRONGER OR GREATER THAN ONESELF ON WHICH TO RELY--

instead of the idea that it is better to take the risk of thinking and acting independently.

8. THE IDEA THAT ONE MUST HAVE CERTAIN AND PERFECT CONTROL OVER THINGS--

instead of the idea that the world is full of probability and chance and that one can still enjoy life despite this.

9. THE IDEA THAT ONE SHOULD BE THOROUGHLY COMPETENT, INTELLIGENT, AND ACHIEVING IN ALL POSSIBLE RESPECTS--

instead of the idea that one would do better to accept oneself as a quite imperfect creature, who has general human limitations and specific fallabilities.

10. THE IDEA THAT BECAUSE SOMETHING OR SOMEONE ONCE STRONGLY AFFECTED ONE'S LIFE, IT SHOULD INDEFINITELY AFFECT IT--

instead of the idea that one can learn from one's past experience but not be overly-attached to or prejudiced by them.

11. THE IDEA THAT HUMAN HAPPINESS CAN BE ACHIEVED BY INERTIA AND INACTION--

instead of the idea that humans tend to be happiest when they are vitally absorbed in creative pursuits, or when they are devoting themselves to people or projects outside themselves.

12. THE IDEA THAT ONE HAS VIRTUALLY NO CONTROL OVER ONE'S EMOTIONS AND THAT ONE CANNOT HELP FEELING CERTAIN THINGS--

instead of the idea that one has enormous control over one's destructive emotions if one chooses to work at changing the bigoted and unscientific hypotheses which one employs to create them.

Appendix B

Advertisement with Introductory Cover Letter

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

DEPARTMENT OF EDUCATIONAL
AND COUNSELING PSYCHOLOGY

Dear faculty member,

As you are well aware, many students seek relief from their problems through drug and alcohol abuse. Unfortunately, there is usually not enough funding to provide an adequate number of college mental health professionals to establish appropriate programs for anxiety reduction, What is needed is an effective, short-term, economical method of delivering mental health services to undergraduate students.

A program to reduce anxiety, utilizing various forms of group workshops, has been designed by doctoral candidate Tom Walsh. The six series workshop, to begin April 10, will be an ideal way to assist students in preparing for final exams. The workshops are scheduled at times convenient to students and there is no charge for attending. Early registration is suggested.

It would be most appreciated if you would take fifty seconds to read the announcement on the following page to your classes. That small committment could provide essential help to a student in the reduction of anxiety.

Thank you for your assistance in this valuable research.

Sincerely,

Tom Walsh

Tom Walsh

INFORMATION ON ANXIETY REDUCTION WORKSHOPS

HERE IS AN OPPORTUNITY THAT YOU WILL NOT WANT TO MISS!

The School of Education at the University of the Pacific has planned a series of workshops to help students to overcome various types of anxiety. The program, utilizing various forms of group workshops, has been designed by doctoral candidate Tom Walsh, who plans to use several different techniques during the one hour long sessions presented twice a week for three weeks.

"Students desire a clear cut, effective means of dealing with problem areas", says Walsh. "The success of this program is that it requires only a short-term commitment from students that can result in a significant reduction of anxiety".

The program will begin on April 10, right after your return from Spring Break. This would seem an ideal way to help prepare for final exams. If you do not want to miss this opportunity than please write down these numbers now.

You may contact DeAnn Christenson at 9-4-6-2-3-4-7

or

Tom Walsh at 9-4-6-2-3-2-8

You should make a point to sign up before leaving for Spring Break, for the closing date is this Friday, March 28.

Appendix C

Confirmation of Enrollment in Anxiety Reduction Workshop

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Postcode 95211

DEPARTMENT OF EDUCATIONAL AND COUNSELING PSYCHOLOGY

Dear

CONGRATULATIONS!
You have made a wise decision in choosing to enroll in the upcoming ANXIETY REDUCTION WORKSHOPS. The response from students across the campus was tremendous, however, a place has been reserved in your name as a registered participant in the program.

The meeting time that has been assigned to you for each of the workshops is: _____

The meeting place for all of the workshops will be: _____

The success of this program requires only a short-term commitment from you that can result in a significant reduction in various types of anxiety. This is an ideal way to help prepare for Final Exams.

If you do not want to miss this opportunity than don't forget to attend the first meeting this THURSDAY, APRIL 10. Mark that date on your calendar, for these workshops will not be presented again.
I am happy that you are one of the students who made the decision to enroll in this program, and I look forward to meeting you this Thursday.

Sincerely,

Thomas A. Walsh, Ed.S.

Appendix D

Self-Evaluation Questionnaire Trait Anxiety Inventory,

Form X2

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

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

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I 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

Appendix E

Self-Evaluation Questionnaire Multiple Affect Adjective Checklist "In General" Form

MULTIPLE AFFECT ADJECTIVE CHECK LIST

IN GENERAL FORM

By Marvin Zuckerman
and
Bernard Lubin

Name..... Age..... Sex.....

Date..... Highest grade completed in school.....

DIRECTIONS: On this sheet you will find words which describe different kinds of moods and feelings. Mark an ☒ in the boxes beside the words which describe how you generally feel. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly.

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MAA 002

1 ☐ active
2 ☐ adventurous
3 ☐ affectionate
4 ☐ afraid
5 ☐ agitated
6 ☐ agreeable
7 ☐ aggressive
8 ☐ alive
9 ☐ alone
10 ☐ amiable
11 ☐ amused
12 ☐ angry
13 ☐ annoyed
14 ☐ awful
15 ☐ bashful
16 ☐ bitter
17 ☐ blue
18 ☐ bored
19 ☐ calm
20 ☐ cautious
21 ☐ cheerful
22 ☐ clean
23 ☐ complaining
24 ☐ contented
25 ☐ contrary
26 ☐ cool
27 ☐ cooperative
28 ☐ critical
29 ☐ cross
30 ☐ cruel
31 ☐ daring
32 ☐ desperate
33 ☐ destroyed
34 ☐ devoted
35 ☐ disagreeable
36 ☐ discontented
37 ☐ discouraged
38 ☐ disgusted
39 ☐ displeased
40 ☐ energetic
41 ☐ enraged
42 ☐ enthusiastic
43 ☐ fearful
45 ☐ fit
46 ☐ forlorn
47 ☐ frank
48 ☐ free
49 ☐ friendly
50 ☐ frightened
51 ☐ furious
52 ☐ gay
53 ☐ gentle
54 ☐ glad
55 ☐ gloomy
56 ☐ good
57 ☐ good-natured
58 ☐ grim
59 ☐ happy
60 ☐ healthy
61 ☐ hopeless
62 ☐ hostile
63 ☐ impatient
64 ☐ incensed
65 ☐ indignant
66 ☐ inspired
67 ☐ interested
68 ☐ irritated
69 ☐ jealous
70 ☐ joyful
71 ☐ kindly
72 ☐ lonely
73 ☐ lost
74 ☐ loving
75 ☐ low
76 ☐ lucky
77 ☐ mad
78 ☐ mean
79 ☐ meek
80 ☐ merry
81 ☐ mild
82 ☐ miserable
83 ☐ nervous
84 ☐ obliging
85 ☐ offended
86 ☐ outraged
87 ☐ panicky
89 ☐ peaceful
90 ☐ pleased
91 ☐ pleasant
92 ☐ polite
93 ☐ powerful
94 ☐ quiet
95 ☐ reckless
96 ☐ rejected
97 ☐ rough
98 ☐ sad
99 ☐ safe
100 ☐ satisfied
101 ☐ secure
102 ☐ shaky
103 ☐ shy
104 ☐ soothed
105 ☐ steady
106 ☐ stubborn
107 ☐ stormy
108 ☐ strong
109 ☐ suffering
110 ☐ sullen
111 ☐ sunk
112 ☐ sympathetic
113 ☐ tame
114 ☐ tender
115 ☐ tense
116 ☐ terrible
117 ☐ terrified
118 ☐ thoughtful
119 ☐ timid
120 ☐ tormented
121 ☐ understanding
122 ☐ unhappy
123 ☐ unsociable
124 ☐ upset
125 ☐ vexed
126 ☐ warm
127 ☐ whole
128 ☐ wild
129 ☐ willful
130 ☐ wilted
131 ☐ worrying

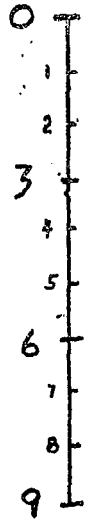
Appendix F

Anxiety Rating Scale with Consent Form and Follow-up Letters

ANXIETY RATING SCALE

_____
SUBJECT

DIRECTIONS: Below is a continuum (1 through 9) which describes various levels of anxiety. Read all statements, then check the point which you feel MOST ACCURATELY indicates the recent general level of anxiety in the person named above.



(S)he seems to have no anxiety.

(S)he appears to experience some mild tension but less than most people.

Her/his anxiety is somewhat more than most people feel.

Her/his anxiety is quite strong, and readily interferes with her/his everyday living.

_____
Name of Rater

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION [illegible]

95211

DEPARTMENT OF EDUCATIONAL
AND COUNSELING PSYCHOLOGY

CONSENT FORM

_____
Date

I, _____ understand that Mr. Tom Walsh will contact two of three friends for information concerning the Anxiety Reduction Workshops research program conducted under the supervision of the Department of Educational and Counseling Psychology. This is done with my full knowledge and consent.

_____
Signature

_____
Date

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

DEPARTMENT OF EDUCATIONAL
AND COUNSELING PSYCHOLOGY

Names of Persons to be contacted concerning

the Anxiety Reduction Workshops

1. NAME _____

ADDRESS _____

2. NAME _____

ADDRESS _____

3. NAME _____

ADDRESS _____

_____

Signature

_____

Date

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

DEPARTMENT OF EDUCATIONAL
AND COUNSELING PSYCHOLOGY

Dear _____,

A personal friend of yours, named at the top of the enclosed ANXIETY RATING SCALE, is enrolled in an Anxiety Reduction Workshop research program conducted under the supervision of the Department of Educational and Counseling Psychology. Your friend completed a copy of the enclosed consent form and named you with full knowledge and consent that I would contact you.

I ask that you take a moment and indicate the recent general level of anxiety of the person named on the ANXIETY RATING SCALE. You are asked to rate the individual accurately, for that person has been instructed that your reply will be held in strict confidence, and will not be shared with the individual at any time.

After you have checked the appropriate level of anxiety, please return the scale to me using the enclosed envelope. If you are on campus, all you need do is when attending class leave the envelope with any Department office and it will be returned to me through campus mail. If you are off campus, a self-addressed stamped envelope has been included.

I sincerely thank you for your consideration and I look forward to your prompt reply. Your imput is most valuable.

Respectfully,

Thomas A. Walsh, Ed.S.

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

DEPARTMENT OF EDUCATIONAL
AND COUNSELING PSYCHOLOGY

Dear _____,

Recently I forwarded you a letter indicating that a personal friend of yours, named at the top of the enclosed ANXIETY RATING SCALE, was enrolled in an Anxiety Reduction Workshop. I asked you to take just a moment and indicate the recent general level of anxiety of your friend. I have not yet received your reply.

I must ask you to take a moment and fill out the enclosed form. Your friend named you because he/she felt that you were someone who could be relied on. Please don't be a disappointment.

After completing the form, simply return to me using the enclosed envelope. All you need do is leave with any secretary, in any campus office, and ask that it be returned to me by campus mail. If you would like you may mail it yourself by bringing it to Bannister Hall (Mail Room by Gym).

I hope you will take the one minute it takes to complete this form. Your imput is most valuable to your friend.

Respectfully,

Thomas A. Walsh, Ed.S.

Appendix G

Contract

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California 95211

DEPARTMENT OF EDUCATIONAL AND COUNSELING PSYCHOLOGY

ANXIETY REDUCTION WORKSHOPS

The purpose of this study is to determine the effect of treatments on the reduction of anxiety. As non-funded research of the Department of Educational and Counseling Psychology, there will be no fee for attending. The program will be conducted under the supervision of Mr. Tom Walsh, Doctoral Candidate.

This study has been divised to meet the busy schedule of undergraduate students. As such, participation will take an hour of your time on the following days:

April	May
10	1
17	6
22	
24	
29	

Each session, participants will be given, free of charge, materials to use in helping reduce anxiety. You should attend each session. Any questions asked will be kept confidential and any subsequent use of the results will be anonymously presented in terms of combined summaries of all people involved.

In addition, because of the tremendous response to these workshops, different groups have been organized. You are asked not to discuss your treatment with members of other groups.

At any time, feel free to contact Mr. Tom Walsh at 946-2328 regarding any comments or if you are not able to participate.

I have been informed of the purpose of this study and consent to participate herein. Signature_____

Date_____

Appendix H

Personal Data Questionnaire

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California [illegible]
95211

DEPARTMENT OF EDUCATIONAL AND COUNSELING PSYCHOLOGY

PERSONAL DATA QUESTIONNAIRE

1. NAME:_____

2. ADDRESS:_____

   CITY_____STATE_____ZIP_____

3. TELEPHONE NUMBER:_____

4. SEX:_____ 5. AGE:_____

6. CURRENT ACADEMIC STATUS:

   FRESHMAN SOPHOMORE JUNIOR SENIOR

7. NATIONALITY:_____

8. MARITAL STATUS:_____

9. RELIGIOUS PREFERENCE:_____

10. You would describe your condition of health as:

    _____

11. Your parents are of what socio-econonic status:

    _____

12. Describe the types of situations which cause you to have anxiety.

    _____

    _____

    _____

13. Have you been involved in Anxiety Reduction Workshops before?

    yes no If yes, when:_____

14. Are you currently undergoing therapy of any type?

    yes no

Appendix I

Observer Checklist for Identification of a Biased Presentation

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

DEPARTMENT OF EDUCATIONAL
AND COUNSELING PSYCHOLOGY

OBSERVER CHECKLIST FOR IDENTIFICATION OF BIASED PRESENTATION

GROUP: PROGRESSIVE RELAXATION, RATIONAL-EMOTIVE THERAPY, ATTENTION PLACEBO

	OBSERVATIO NUMBER	
1. Were compared lesson plans planned and presented in a logical sequence?	yes	no
2. Were lessons presented with an equal amount of enthusiasm?	yes	no
3. Did the leader maintain an equal amount of eye-contact in each lesson?	yes	no
4. Did the leader present the lesson with an equal amount of expression in his voice?	yes	no
5. Did the respective lessons have a logical beginning, middle, and end?	yes	no
6. Did the leader include student-initiated questions and ideas in the discussion, yet keep the lesson "on track?"	yes	no
7. Do you feel that equal rapport was established in each group?	yes	no

Signature of Observer

Date

Appendix J

Rational Emotive Therapy's A-B-C of Emotional Disturbance

A-B-C Theory of Emotional Disturbance

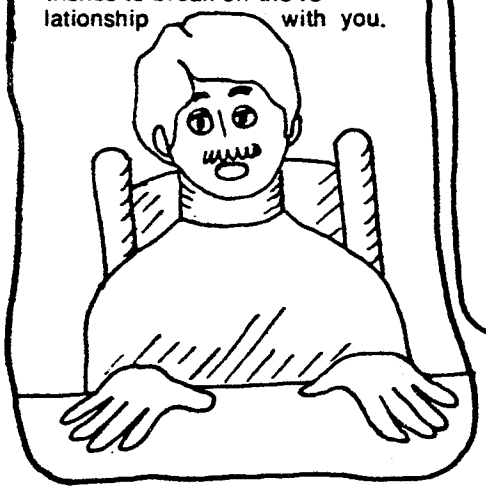
"Men are disturbed not by things, but by the views which they take of them."
— Epictetus, 1st century A.D.

It is not the event, but rather it is our interpretation of it, that causes our emotional reaction.

A

Activating experience

Womanfriend breaks the news that she is going out with another man, and therefore wishes to break off the relationship with you.



B

Belief about (or interpretation of the experience)

"I really must be a worthless person."

"I'll *never* find another great woman like her."

"*She* doesn't want me; therefore *no* one could possibly want me."

and/or

"This is *awful!*" "Everything happens to me!"

"That bitch! She *shouldn't* be that way."

"I can't *stand* the world being so unfair and lousy."

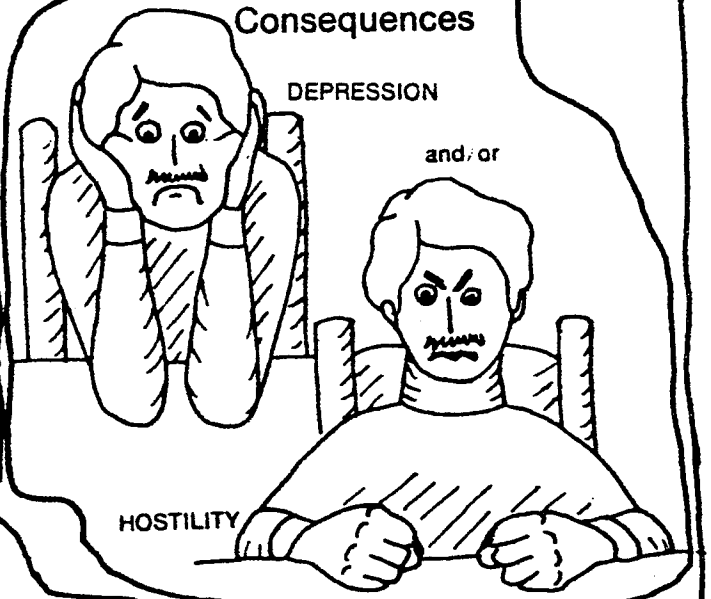
C

upsetting emotional Consequences

DEPRESSION

and/or

HOSTILITY



D

Disputing of irrational ideas

"Where's the evidence that because this woman wishes to end our relationship, that I am a worthless person; or that I'll *never* be able to have a really good relationship with someone else; or even that I couldn't be happy alone?

and/or

"Why is it *awful* that I'm not getting what I want?"

"Why *shouldn't* the world be full of injustices?

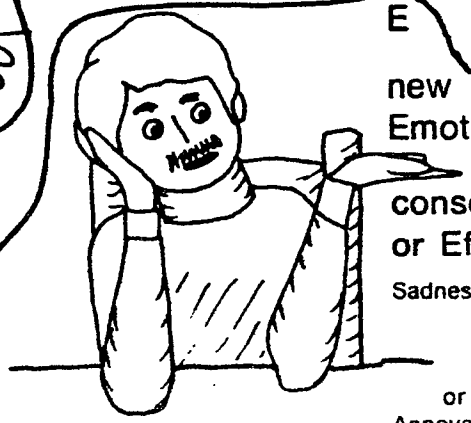
E

new Emotional consequence or Effect

Sadness: ("Well, we did have a nice relationship, and I'm sorry to see it end—but it did have its problems and now I can go out and find a new friend.")

or

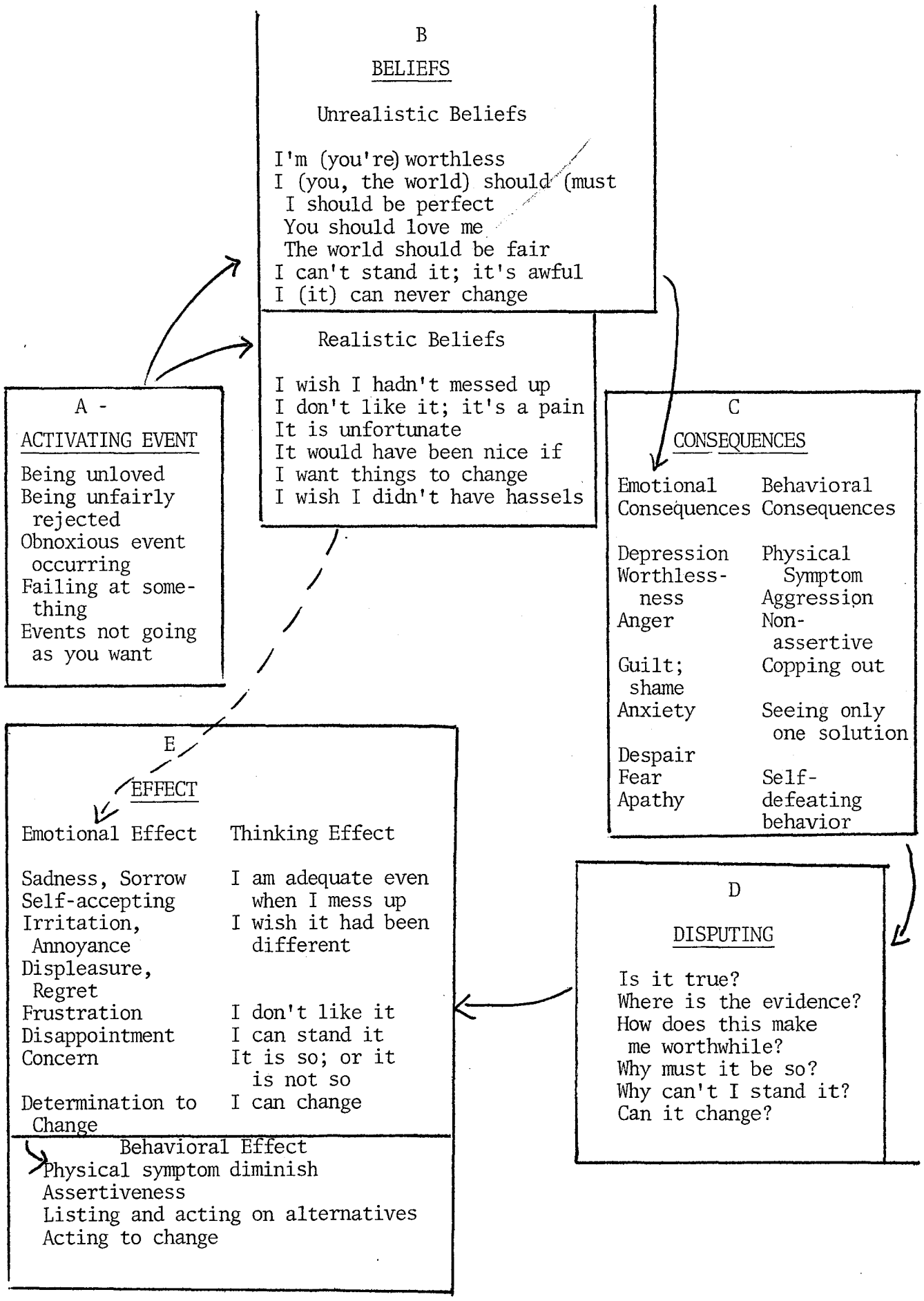
Annoyance: ("It's annoying that she was seeing someone but it isn't awful or intolerable.")



Appendix K

The A-B-C Theory of Emotion According to Dr. Albert Ellis

THE A-B-C THEORY OF EMOTION ACCORDING TO DR. ALBERT ELLIS



Appendix L

How I Cause My Own Disturbance

Date_____ Name_____

HOW I CAUSE MY OWN DISTURBANCE

A. Activating Event (Describe the event about which you became upset or disturbed, e.g. 1) "My mate yelled at me and walked out of the house." e.g. 2) "My child got into a fight after I warned him not to fight ever again.")

Br Rational Belief (An idea about the activating event, e.g. 1) "It's annoying for my mate to scream at me and leave me alone." e.g. 2) "It's unfortunate that my child got into a fight today."

Bi Irrational Belief (An exaggerated idea about the event that can't be supported, e.g. 1) "I can't stand my mate's yelling and leaving me." e.g. 2) "It's horrible that my child disobeyed me and got into a fight."

C. Consequence Your reaction to your irrational belief, e.g. 1) "anxiety, depression," e.g. 2) "very upset, angry."

D. Disputing (Questioning, challenging the irrational idea which causes the consequence, e.g. 1) "Why can't I stand his yelling and my being alone, and why is my mate rotten for doing it?", e.g. 2) "Why is it horrible that my child got into a fight?")

E. Effect-(Cognitive and Behavioral response to the disputing, e.g. 1) "I can stand my mate's yelling and leaving, although I'd prefer he'd stay and talk with me. He's behaving just like a human being often does and I can understand that." e.g. 2) "It's unpleasant, not horrible, that my child was fighting in school. Rather than needlessly get upset, I'm going to see what his problem is with other children and try to teach him how to get along better.)

12/76/db

Appendix M

Questions to Ask in Disputing Irrational Beliefs

QUESTIONS TO ASK IN DISPUTING IRRATIONAL BELIEFS

1. What irrational belief do I want to dispute and surrender?

2. Can I rationally support this belief?

3. What evidence exists of the falseness of this belief?

4. Does any evidence exist of the truth of this belief?

5. What worst things could actually happen to me if I don't get what I think I must?

Appendix N

Overcoming Test Anxiety

OVERCOMING TEST ANXIETY

1. Test anxiety is evoked and maintained by irrational beliefs and irrational demands.

2. The perceived threat of harm stems from the anticipated inability to satisfy these irrational demands, and the catastrophizing of the consequences.

3. The catastrophic consequence is primarily to one's feelings of self-worth, which is irrationally equated with the test outcome.

4. Irrational beliefs, irrational demands and catastrophic predictions are over-learned responses (habits) which are rehearsed before and during a test.

5. Blocking on a test is an avoidance mechanism which is momentarily anxiety-reducing, but serves to maintain both the anxiety and the irrational belief system.

6. Since irrational, self-defeating beliefs are learned habits, they can be unlearned.

7. New, self-enhancing beliefs and behaviors can be learned.

Appendix O

Irrational Beliefs which Maintain Test Anxiety

IRRATIONAL BELIEFS WHICH MAINTAIN TEST ANXIETY

1. FEAR OF FAILURE

2. SELF-DOWNING

3. PERFECTIONISM

4. NEEDS FOR APPROVAL

5. BLOCKING AND LOW FRUSTRATION TOLERANCE

6. ANXIETY ABOUT TEST ANXIETY

Appendix P

How to Overcome Test Anxiety

HOW TO OVERCOME TEST ANXIETY

ACTIVELY CHALLENGE YOUR IRRATIONAL BELIEFS

SINCERELY CONVINCE YOURSELF THAT YOU ARE NOT YOUR TEST SCORE

ACTIVELY WORK ON DISTINGUISHING BETWEEN DEMANDS AND PREFERENCES

PRACTICE THOUGHT-STOPPING

RATIONAL EMOTIVE IMAGERY

SELF REINFORCEMENT

OVERCOMING BLOCKING

IMPERFECTION AND UNCERTAINTY

Appendix Q

Some Irrational Beliefs as to Why We Choose to "Love" Someone

SOME IRRATIONAL BELIEFS AS TO WHY WE CHOOSE TO 'LOVE' SOMEONE

1. MISPERCEPTION

The lover needs the person to be memorably intelligent, beautiful, sexy, or sincere; hence, he/she actually observes the person to have these unpossessed features.

2. FIXATION

The person seeks out members of the opposite sex who have traits somewhat similar to those of a person to whom the individual has a strong fixation.

3. MAGICAL IDENTIFICATION

The person keeps falling in love with someone who has traits that this person magically believes that they will possess if this other person can be induced to love them.

4. NARCISSISM

The person really likes some of his/her own qualities and only becomes highly enamored of individuals with these same qualities.

5. HOSTILITY

The person hates some figure and becomes infatuated with individuals who possess those features which would tend to be most offensive to the person they hate.

6. SECURITY

The person becomes enchanted with partners who seem to be utterly safe in providing security and will presumably adore them forever.

7. ROMANTIC ILLUSIONS

The person believes that love will always last forever and only permits themselves to become passionately endeared to a person who has the same romantic illusions and who swears undying devotion.

8. CARETAKING NEEDS

The person becomes attached to individuals who will presumably take care of them the rest of their lives and make things (and life) easy for them.

Appendix R

"Disturbed" Feelings that Result from "The Loss of Love"

'DISTURBED' FEELINGS THAT RESULT FROM "THE LOSS OF LOVE"

Anxiety

Jealousy

Depression

Inertia

Hostility

Worthlessness

Appendix S

Rational Self-Help Form

Institute for Rational-Emotive Therapy 45 East 65th Street, New York 10021

INSTRUCTIONS: Please fill out the **ueC** section (undesirable emotional Consequences) and the **ubC** section (undesirable behavioral Consequences) **first.**
Then fill out all the A-B-C-D-E's. PLEASE PRINT LEGIBLY. BE BRIEF!

A **ACTIVATING EXPERIENCES (OR EVENTS)**

B **BELIEFS ABOUT YOUR ACTIVATING EXPERIENCES**

rB **rational Beliefs** (your wants or desires)

iB **irrational Beliefs** (your demands or commands)

C **CONSEQUENCES OF YOUR BELIEFS ABOUT ACTIVATING EXPERIENCES**

deC **desirable emotional Consequences** (appropriate bad feelings)

dbC **desirable behavioral Consequences** (desirable behaviors)

ueC **undesirable emotional Consequences** (inappropriate feelings)

ubC **undesirable behavioral Consequences** (undesirable behaviors)

D **DISPUTING OR DEBATING YOUR IRRATIONAL BELIEFS**
(State this in the form of questions)

E **EFFECTS OF DISPUTING OR DEBATING YOUR IRRATIONAL BELIEFS**

cE **cognitive Effects of disputing** (similar to rational beliefs)

eE **emotional Effects** (appropriate feelings)

bE **behavioral Effects** (desirable behaviors)

Appendix T

Two Completed Rational Self-Help Forms

SAMPLE RATIONAL SELF HELP FORM

Institute for Rational-Emotive Therapy 45 East 65th Street, New York 10021

A **ACTIVATING EXPERIENCES (OR EVENTS)**

My mother and father promised to lend me money and for no good reason refused to go through with their promise.

B **BELIEFS ABOUT YOUR ACTIVATING EXPERIENCES**

rB **rational Beliefs** (your wants or desires)

How unfortunate that they backed out!
I don't like their behavior.
I wish they had kept their promise.
How annoying and irritating!
I'll try to get the money elsewhere, but will find that quite a hassle.

iB **irrational Beliefs**

1. *How awful for them to act that way!*
2. *I can't stand their unfairness!*
3. *They* should *have lent me the money!*
4. *Because they didn't do what they should, that makes them rotten people!*
5. *People will always treat me unfairly like this! How horrible!*

C **CONSEQUENCES OF YOUR BELIEFS ABOUT ACTIVATING EXPERIENCES**

deC **desirable emotional Consequences** (appropriate bad feelings)

Frustration and annoyance. Sorrow and regret
Determination to help change parents' attitudes

dbC **desirable behavioral Consequences** (desirable behavior)

Continued attempts to persuade parents to change
Attempts to get the money in other ways

ueC **undesirable emotional Consequences** (inappropriate feelings)

I felt angry; I hated my parents. I felt depressed.

ubC **undesirable behavioral Consequences** (undesirable behaviors)

I screamed at my parents.
I refused to consider other ways of getting the money.
I pouted and sulked.

D **DISPUTING OR DEBATING YOUR IRRATIONAL BELIEFS**
(state this in the form of questions)

1. *What makes it awful for them to act that way?*
2. *Why can't I stand their unfairness?*
3. *What evidence exists that they* should *have lent me the money?*
4. *How does their unfair treatment of me make them rotten people?*
5. *How do I know people will always treat me unfairly? And must I view it as horrible if they do?*

E **EFFECTS OF DISPUTING OR DEBATING YOUR IRRATIONAL BELIEFS**

cE **cognitive Effects of disputing** (similar to rational beliefs)

1. *Nothing makes it awful, but only inconvenient for them to act that way.*
2. *I can stand their unfairness; though I'll never* like *it.*
3. *I can find no evidence that they* should *have kept their promise to me though I would have found it very nice if they did.*
4. *Their unfairness doesn't make them rotten people, but merely people who have acted rottenly to me in this respect.*
5. *People won't always treat me unfairly—though they may often do so. And if they do, tough! It won't kill me!*

eE **emotional Effects** (appropriate feelings)

I felt irritated and annoyed but not angry.
I felt very disappointed and concerned but not depressed.
I still basically loved my parents but hated some of their traits.
I felt determined to find other ways of raising the money.

bE **behavioral Effects** (desirable behaviors)

I spoke to my parents about my feelings of disappointment and irritation.
I attempted to persuade them to change.
I investigated other means of raising money.

SAMPLE RATIONAL SELF HELP FORM

Institute for Rational-Emotive Therapy 45 East 65th Street, New York 10021

A ACTIVATING EXPERIENCES (OR EVENTS)

I went for a job interview and I failed to get the job.

B BELIEFS ABOUT YOUR ACTIVATING EXPERIENCES

rB rational Beliefs (your wants or desires)

How unfortunate to get rejected!
I don't like getting rejected.
I wish I had gotten accepted.
How annoying!
Looks like I'll have difficulty getting the job I want.

iB irrational Beliefs (your demands or commands)

1. *How awful to get rejected!*
2. *I can't stand this rejection!*
3. *I should have given a better interview and got accepted.*
4. *This rejection makes me a rotten person.*
5. *I'll never get the kind of a job I want!*
6. *I'll always do poorly on job interviews.*

C CONSEQUENCES OF YOUR BELIEFS ABOUT ACTIVATING EXPERIENCES

deC desirable emotional Consequences (appropriate bad feelings)

Sorrow and regret
Frustration and irritation
Determination to keep trying

dbC desirable behavioral Consequences (desirable behaviors)

Continued search for a job
Attempt to upgrade my skills

ueC undesirable emotional Consequences (inappropriate feelings)

I felt depressed. *I felt worthless.*
I felt anxious. *I felt angry.*

ubC undesirable behavioral Consequences (undesirable behaviors)

I refused to go for other job interviews.
I felt so anxious I functioned badly on other interviews.

D DISPUTING OR DEBATING YOUR IRRATIONAL BELIEFS
(State this in form of questions)

1. *Why is it awful to get rejected for a job?*
2. *Why can't I stand this rejection?*
3. *What evidence exists that I should have acted better on the interview and got accepted?*
4. *How does this rejection make me a rotten person?*
5. *In what way will I find it impossible ever to get the kind of job I want?*
6. *Why must I always do poorly on job interviews?*

E EFFECTS OF DISPUTING OR DEBATING YOUR IRRATIONAL BELIEFS

cE cognitive Effects of disputing (similar to rational beliefs)

1. *Nothing makes it awful to get rejected, even though I find it highly inconvenient.*
2. *I can stand rejection, though I'll never like it.*
3. *I can find no reason why I should or must have given a better interview, though it would have proved nice if I had.*
4. *Rejection never makes me a rotten person—but a person with some unfortunate traits.*
5. *I won't find it impossible to get a good job, though I may find it difficult to do so.*
6. *I don't have to do poorly on job interviews always, especially if I try to learn from my errors.*

eE emotional Effects (appropriate feelings)

I felt sorrowful but not depressed.
I felt concerned but not anxious.
I felt self-accepting.
I felt frustrated but not angry.

bE behavioral Effects (desirable behaviors)

I went for some more job interviews.
I started to look into getting some additional training.
I registered with an employment agency.
I sent out more letters applying for jobs.

Appendix U

Follow-Up Assignment Form

1. FOLLOW-UP. What new GOALS would I now like to work on? .....

.....

.....

.....

What specific ACTIONS would I now like to take? .....

.....

.....

2. How soon after feeling or noting your undesirable emotional CONSEQUENCES (ueC's) or your undesirable behavorial CONSEQUENCES (ubC's) of your irrational BELIEFS (iB's) did you look for these iB's and DISPUTE them? .....

.....

.....

How vigorously did you dispute them? .....

.....

If you didn't dispute them, why did you not do so? .....

.....

3. Specific HOMEWORK ASSIGNMENT(S) given you by your therapist, your group or yourself: .....

.....

.....

4. What did you actually do to carry out the assignment(s)? .....

.....

5. How many times have you actually worked at your homework assignments during the past week? .....

.....

6. How many times have you actually worked at DISPUTING your irrational BELIEFS during the past week? .....

.....

7. Things you would now like to discuss with your therapist or group .....

.....

.....

Appendix V

Rigid-Inhibited Style and Rigid-Inhibited Adjustments in Teaching Methods

RIGID-INHIBITED LEARNER

CHARACTERISTICS:

1. Cannot get a job done unless others are immediately available to help him.
2. Oblivious to what is going on in the classroom.
3. Becomes confused and disoriented easily.
4. Misinterprets simple statements.
5. Gives answers which have nothing to do with the questions being asked.
6. Afraid to assert self or show initiative.
7. Shows signs of nervousness (nail biting, crying, tics, rocking).
8. Generally unresponsive, hard to get to know.
9. Upset by change in routine.
10. Rigidly adheres to rules.

RIGID-INHIBITED

ADJUSTMENTS IN TEACHING METHODS

1. Remove ambiguity or complexity
2. Present information in a concrete manner (use pictures)
3. Give child limited choices (routines)
4. Foster a relationship between child and an accepting adult
5. Foster independence
6. Help him avoid use of "all, always, never." (Make him "back up" statements)
7. Have him look for alternative ways of solving problem.

Appendix W

Undisciplined Learner and Undisciplined Adjustments in Teaching Methods

UNDISCIPLINED LEARNER

CHARACTERISTICS:

1. Negativistic: "I won't."
2. Acts defiant, will not do what is asked.
3. Lacks tolerance for task he does not enjoy.
4. Tends toward temper tantrums and wild destruction.
5. Asserts independence in a negative manner.
6. Antisocial tendencies (steals, lies, destroys property, bullies, defies, resents discipline.)
7. Speaks disrespectfully to teacher.
8. Prone to blame teacher or external circumstances when things don't go well.
9. Makes derogatory remarks about the subject being taught.
10. Breaks classroom rules, destructive.

UNDISCIPLINED

ADJUSTMENTS IN TEACHING METHODS

1. Give immediate feedback regarding social consequences of his behavior
2. If doesn't complete work, stay after school
3. Make consequence follow immediately after the act
4. Avoid punitive approach
5. Be consistent!
6. Ask him to write several ways of doing something (answering question, etc.)

Appendix X

Acceptance-Anxious Style and Acceptance-Anxious Adjustments in Teaching Methods

ACCEPTANCE-ANXIOUS LEARNER

CHARACTERISTICS:

1. Tries too hard
2. Wants to show off or impress others
3. Overly sensitive to criticism or correction
4. Worries about pleasing others
5. Frequently seeks teacher contact and approval
6. Excessively competitive and jealous
7. Tries to outdo classmates by producing more quantity
8. Outwardly nervous during tests
9. Fearful of failure
10. Friendly rather than distant in relationship with teacher

ACCEPTANCE-ANXIOUS

ADJUSTMENTS IN TEACHING METHODS

1. Minimize emphasis on external evaluation (evaluate himself)
2. Hold him accountable for completing task
3. Provide many success experiences
4. Help him accept failure (don't use "good or bad," "right or wrong.")
5. Encourage giving opinions
6. Give him many opportunities to think (summarizing, comparing, classifying)

Appendix Y

Creative Style and Creative Adjustments in Teaching Methods

CREATIVE LEARNER

CHARACTERISTICS:

1. Tells stories or describes things in an interesting fashion.
2. Is open to new ideas.
3. Shows persistence in attacking problems.
4. Thinks creatively in new situations.
5. Able to apply what he has learned to a new situation.
6. Can constructively assert himself.
7. Shows initiative in bringing things which relate to classwork.
8. Is flexible.
9. Likely to know the material when called upon to recite in class.
10. Shows respect for teacher but can stand on own two feet.

CREATIVE

ADJUSTMENTS IN TEACHING METHODS

1. Continue to seek the new and different.
2. Approach experiences with keen awareness of uniqueness and strive to find a different content.
3. Stretch his imagination and the imagination of his creative learners daily.
4. Be willing to experiment and allow the creative learners to do likewise.
5. Be unafraid of change. Think boldly.
6. Investigate uncharted fields. Try something different. Avoid repetition.
7. Allow natural curiosity and enthusiasm to provide zest in everyday living. Allow spontaneity to "trigger" ideas.