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EFFECT OF REDUCTION OF PHYSIOLOGICAL ANXIETY ON COUNSELING STUDENTS' EMPATHY AND ANXIETY

By

Richard Walter Ober

A DISSERTATION

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ABSTRACT

EFFECT ON REDUCTION OF PHYSIOLOGICAL ANXIETY
ON COUNSELING STUDENTS' EMPATHY AND ANXIETY

By

Richard Walter Ober

The purpose of this study was to measure the effectiveness of Autogenic Training (AT) and electromyograph (EMG) biofeedback using the frontalis muscle in reducing counselor verbal and general anxiety and in increasing empathy. Twenty-two master's and two doctoral counseling students who were beginning the first practicum in their respective programs volunteered for this study. Fifteen of the master's students, those in rehabilitation counseling and placement, received a .5 bonus on their final grade for their participation in the study.

The subjects were separated into high and low levels of anxiety on the basis of a frontalis EMG anxiety score which was obtained in the following manner. Each subject's EMG output was measured for a six-minute period while he or she watched a videotape of a role played client who made intentionally anxiety provoking statements. A second reading was taken during an eight-minute baseline period. This latter score was subtracted from the former score for each subject and the scores were rank ordered. The median score served as the dividing point between high and low levels of anxiety.

Subjects in the high and low levels of anxiety were randomly assigned to three treatment groups. The first group received 25 minutes of EMG biofeedback and three 25-minute sessions of taped AT relaxation instructions per week. The second group listened to 80 to 85 minutes of audiotaped information in counseling and psychology per week and met

with this researcher for 10 to 15 minutes each week to discuss this material or other issues. This treatment was intended as a placebo. The third group received no treatment. The treatments were given for a four-week period.

The outcomes were measured by Carkhuff's Empathic Understanding scale (EU), the Judgments of Verbal Anxiety scale (JVA), and the IPAT Anxiety Scale Questionnaire (ASQ). Ratings for the first two scales were taken from subjects' interviews with coached clients. The data were analyzed by a two-way Analysis of Variance of the posttest. There were high and low levels of anxiety for the first factor, and three levels--relaxation treatment, information treatment, and no treatment--for the second factor. The following planned comparisons were used to test for main effects: relaxation treatment was compared to information treatment; relaxation treatment was compared to no treatment; and the high anxiety level was compared to the low anxiety level. Two complex comparisons measured interaction effects. The first compared the relaxation and information groups to high and low levels of anxiety. For the second, the relaxation and no treatment groups were compared to both levels of anxiety. Only one of the above, the comparison of the relaxation and treatment groups for the EU scale, approached significance ($p < .063$). The four measures--the EMG anxiety score, the EU, JVA, and the ASQ--were intercorrelated. Only one of these, the correlation for the JVA and ASQ, was significant (.428, $p < .023$).

There are several possible reasons for the failure to find significance in this study. The procedure for establishing high and low levels of anxiety may not have accurately measured the subjects' levels of anxiety. While subjects in the relaxation group achieved some degree of

relaxation, the treatment may not have been powerful enough to effect the hypothesized change. The small sample size would have required relatively high F ratios to achieve statistical significance, and one or two extreme individuals in the relaxation group may have adversely effected the means of scores on the outcome measures. Finally, it is possible that the combined effect of instruction during regular practicum supervision and continual exposure to clients during practicum resulted in increased counselor empathic communication and reduced anxiety, such that significant differences among treatment groups could not be measured.

The hypothesis which motivated this study, that relaxation will improve the performance of anxious counselors, was still seen as plausible and worthy of further inquiry. Future research could focus on understanding the nature of counselor anxiety, its measurement, its specific effects on performance, and procedures by which it can be reduced. Attention should be given to employing intensive designs to measure the effectiveness of treatments.

This volume is dedicated with love to my wife, Martha, who had to live with me while I undertook this study and to my son, Matt, who had to live without me.

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I would like to express my gratitude to the members of my committee who were so helpful and supportive throughout my program of study. First and foremost is Bob Winborn, the thinking man's pragmatist, whose expert piloting through the shoals and channels of academia were invaluable. I would like to thank Jim Engelkes for his thoughtful criticism (and subsequent improvement) of this study and his support during my job-seeking efforts. I am grateful to Herb Burks, whose words of encouragement seemed to come when they were most needed. Al Kirk was most helpful in guiding my selection of psychology courses and in providing support during the refinement of the proposal for this study.

There are two other persons from whom I have greatly benefited during the past three years. Bruce Burke helped me believe in my capabilities and in the rightness of my judgment during several critical periods. Norm Kagan has taught me that what people learn about themselves, by themselves has potentially greater impact than the interpretations and insights which we may give them.

I owe all of these men a great deal. This is not, however, the type of debt one repays, but is an obligation which is fulfilled by future service to colleagues, students, and clients.

Thanks are also due to doctoral colleagues, coached clients, and raters who helped with this study. My greatest thanks go to my N of 24, those practicum students who volunteered to serve as subjects.

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CHAPTER I

PROBLEM, RATIONALE, AND RELATED RESEARCH

Problem

The goal of counselor education programs is the teaching of counseling skills and the development of counselor attitudes which will facilitate client functioning during the counseling process. Training in specific response techniques, i.e., stylized counselor responses to client statements, often comprises a significant portion of master's level counselor education. While such skill training should not be seen as the substance of counseling (Mahon & Altman, 1977), it does give the counseling student some of the techniques needed to foster a caring relationship with the client and to maximize client self-exploration, goal definition, and initiation of the change process. Consequently, much research has been done regarding the effectiveness of teaching these response skills. This study was undertaken to add to our understanding in this area by assessing the effectiveness of a specific treatment, Autogenic Training in conjunction with biofeedback, in reducing the anxiety of students enrolled in a counseling practicum. The effectiveness of this treatment was assessed by measures of empathy, verbal anxiety, and general anxiety.

It is particularly important for counselors to communicate empathy. The ability for the counselor to convey to the client that the latter is understood, that someone shares in his or her present affective experience,

is seen by some as a necessary, if not sufficient, factor in the change process (Rogers, 1961). Others may not accord it this importance, but certainly feel that the counselor's communication of empathy and the client's apprehension of it are facilitative in the counseling process (Carkhuff, 1969).

Anxiety has long been identified as a source of interference in the learning and performance of a wide range of behaviors (Gaudry & Spielberger, 1971). Its negative effect on counselors' learning and performance of specific response skills has long been hypothesized (e.g., Bandura, 1956; Bergin & Solomon, 1970). Much recent research in counseling and psychology has focused on the effect of anxiety on counselor performance and the assessment of various treatment procedures to reduce anxiety. The results of these research studies, however, have been mixed. For example, Miller (1973) found that systematic desensitization was effective in reducing counselor trainee anxiety on one outcome measure, the State Anxiety Inventory, but not on another, the Multilevel Measure of Interpersonal Behavior. Carter and Pappas (1975), on the other hand, found no significant differences for a multivariate analysis of anxiety measures between one group which received systematic desensitization treatment and another which received a placebo treatment. Likewise, Graub (1975) found that subjects who received Autogenic Training were rated higher on some dimensions of the Counselor Verbal Response Scale than a no treatment group, while Fontaine (1976), using alpha wave training, found no significant difference between treatment and control groups on Truax's accurate empathy ratings. Some of the factors which may have contributed to the differences in these findings include unreliable outcome measures, limited understanding of the construct of anxiety,

non-additive effects of one treatment on several types of anxiety, and lack of initial identification of the levels of subjects' anxiety. These and other studies will be discussed in detail in a following section containing a review of related literature.

Given the importance of the communication of empathy in the counseling process, the interference of anxiety in counselors' verbal performance, and the availability of techniques which reduce anxiety, it would be beneficial to devote further research efforts to study in this area. Appropriate considerations in future designs might include the identification of highly anxious counselors on a specific variable and the provision of treatment which corresponds to that variable.

This chapter includes a general overview of the design of this study and a discussion of theory and related research. A discussion of procedures used in this study, biofeedback with the frontalis muscle and Autogenic Training, is offered in the latter section.

Theory and Related Research

The theoretical and research bases for the procedures used in this study are reviewed in this section. The rationale for the study is presented to indicate those areas for which extended discussion is appropriate. The specific areas covered include the process of anxiety, previous research in the nature and treatment of counselor anxiety, and the implications of these findings for the present study. Theory and research which are related to the relaxation treatment used in this study--EMG biofeedback and Autogenic Training--are also covered.

Rationale

The purpose of this study was to measure the effectiveness of physiological relaxation on the increase of empathy and the reduction of

verbal and general anxiety of counseling practicum students. The subjects were divided into high and low levels of anxiety by electromyograph readings which were taken while they watched an anxiety provoking videotape. They were divided into high and low anxiety groups because it was hypothesized that the relaxation treatment would have its greatest effect on individuals in the high anxiety group; this hypothesis could be tested by identifying highly anxious subjects before treatments were administered.

Subjects were randomly assigned to three treatment groups. The first group received biofeedback in combination with Autogenic Training, the second received a placebo treatment, and the third received no treatment. The outcomes were measured by an empathy rating scale, a verbal anxiety scale, and a standardized anxiety measure. Ratings for the first two measures were taken from subjects' interviews with coached clients.

This study also attempted to avoid some of the criticisms of research offered by Goldman (1976, 1977). First, the number of subjects was not large, thus enabling quality treatment to be provided. Second, real people, if not real clients, were used in the procedure during which outcome data were obtained, thereby making this study more similar to the actual counseling situation. Third, the outcome criteria represented important counselor behaviors, the increase of empathic communication and the reduction of anxiety. It was also felt that improving counselor performance by changing counselor behavior was an important issue (Loesch, Crane, & Rucker, 1978). Finally, subjects in the relaxation treatment group personally experienced the process and benefit of the relaxation procedure (Hector, Elson, & Yager, 1977).

Process of Anxiety

Overview. Current research and theoretical positions do not present a unified model of the process of anxiety. The following description represents a conciliation of diverse theoretical viewpoints to provide a reasonable, workable model as a basis for this study.

Anxiety consists of four major components: the stimulus, the neurophysiological response, the cognitive or phenomonological process, and the behavioral or expressive aspect (Spielberger, 1972). There is general agreement that a specific stimulus is the initial step in the production of anxiety, although the capacity for a stimulus to provoke anxiety will vary from person to person. It is also widely acknowledged that the behavioral or expressive aspect is the end result of the process of anxiety. There is, however, considerable disagreement among theorists regarding the relationship between the cognitive process and the physiological response. It is not clear whether a person's cognitive appraisal of a stimulus results in the physiological response or if the physiological reaction to the stimulus leads to the cognitive awareness of the emotional reaction.

Lazarus and Averill (1972) have stated that emotion follows from the subject's appraisal of any situation. The organism perceives, identifies, assesses, decides, and compares for appropriate emotional response, then responds emotionally. Izard (1972) believed that an individual's reaction to anxiety-provoking stimuli occurs much too quickly to permit this process of evaluation. Some situations require an immediate emotional reaction. It was also Izard's contention that physiological responses are preparations for adaptive action, the result of our evolutionary past. Accordingly, physiological responses are more immediate,

more enduring, and, in essence, more instinctive than cognitive responses.

Izard argued for the influence of the physiological on the cognitive, which has a reciprocal effect on the physiological.

> Once out on the intrapsychic scene, it seems highly probable that emotion will influence the subsequent stages of appraisal (cognitive assessment of stimulus conditions) and all other organismic processes and activities. It seems highly unlikely that a person can complete an appraisal without some interaction between cognition and emotion (1972, p. 65).

Moreover, he viewed cognition as enabling the organism to further identify objects or events as appropriate sources of anxiety. Spielberger (1972) and Schachter (1964) agreed with Izard that emotional states have both cognitive and physiological components, but they viewed the cognitive as as having a stronger effect on the physiological.

Implications for this Study. For the above reasons, physiologically measured anxiety was the focus of this study. Physiological responses also have the advantages of greater ease and reliability of measurement, and are amenable to modification by a wide range of techniques. Anxiety was defined as a "sociopsychophysiological phenomenon experienced as a foreboding, dread, or threat to the human organism whether the threat is real or imagined dangers, the source of which may be conscious or unconscious" (Lesse, 1970, p. 13).

No attempt was made to identify the source of subjects' physiological anxiety. It would be difficult to differentiate between anxiety which was rooted in enduring personality characteristics, in situational variables, or in the stress of modern living which people generally experience. Moreover, the treatment for all of these would essentially

be the same for the population of interest, a program of relaxation.

The contemporary person rarely is placed in the situation where the real alternatives are fight or flight. Social conditioning through the cognitive processes mentioned above can, however, produce similar reactions to situations which threaten psychological safety. This is the counselor trainee's situation. He or she has invested time, financial resources, and self-esteem in succeeding as a counselor. In addition to these self-generated pressures, the counselor trainee is also concerned about supervisor evaluations, grades, and a host of other issues related to his or her interaction with clients. Thus, initial counseling experiences would appear to elicit anxiety often in the beginning counselor.

Dynamic conceptualizations of anxiety were not considered in this study. The anxiety experienced by the subject was viewed as the result of reactions to specific stimuli in the counseling situation (Bandura, 1977) and, hence, were modifiable through direct intervention.

The outcomes of this study were measured by ratings of excerpts of interviews for verbal anxiety and empathy and by a standardized test for anxiety. Verbal behavior is in part neuromuscular behavior, and as such may be influenced by general relaxation efforts. The results of other studies have demonstrated a relationship between a reduction of anxiety and an improvement of verbal behavior on the dimensions of interest.

Research on Anxiety in Counseling

The counseling research in this area may be divided into two categories, those studies which were designed to gain an understanding of the nature and effects of counselor anxiety, and those which measured the effects of treatments intended to reduce anxiety. They shall be considered in respective order, followed by a section relating this previous

research to the present study.

Study of Anxiety. Russell and Snyder (1963) used an analog to study the relationship between counselor experience and type of reaction to hostile and friendly coached clients. They hypothesized (a) that both experienced and inexperienced counselors would be more anxious when counseling hostile rather than friendly clients and (b) that the inexperienced counselors would be more anxious than the experienced counselors with both types of clients. Three of the four measures of anxiety--eyeblink rate, Clients' Scale for Counselor Anxiety (CSCA), and Judgments of Verbal Anxiety (JVA), a rating scale of counselor verbal anxiety--supported the first hypothesis. Palmar sweat measures were in the expected direction but were not significant. Only one measure, eyeblink rate, supported the second hypothesis, although the JVA nearly reached the level of significance. The authors concluded that client hostility, not counselor experience, was a factor in the degree of anxiety manifested by the counselor. The only relationships among the measures were between eyeblink and the CSCA and eyeblink rate and the JVA.

The above study yielded several important findings. The first is the presence of measurable anxiety during the experimental manipulation. The second is the lack of concordance among measures, even among physiological measures like eyeblink rate and palmar sweat. It is important for the purposes of this study to note that the more sensitive measure of anxiety, eyeblink rate, and the measure of verbal anxiety, were positively related.

In an attempt to demonstrate the relationship between anxiety and the development of empathy, Pennscott and Brown (1972) administered the Taylor Manifest Anxiety Scale once per term over a three-term year-long

period to master's level counseling students. Subjects' scores on the Taylor Manifest Anxiety Scale decreased significantly over the one-year period. They correlated these scores with Truax's measure of accurate empathy, taking one rating at the beginning and one at the end of the second term. The correlation between the measures was .015. The authors suspect that one reason for the lack of relationship between the two measures was due to the measurement of empathy over one term only.

Roberts (1977) studied the relationship of physiological anxiety (as measured by the Palmar Finger Sweat Bottle), a rating of non-verbal anxiety, and a self-report of empathy, warmth, fear, and anxiety to counseling graduate students' verbal response skills. These response skills were measured by Truax's accurate empathy, nonpossessive warmth, and genuineness scales. Videotaped client actors played seductive, angry, aggressive, and rejecting roles. He found that subjects' verbal response skills and physiological anxiety increased significantly when the client behaved in a seductive manner; subjects' verbal response skills decreased and nonverbal anxiety increased when the client was angry and aggressive. This supports previous research indicating that anxiety can affect verbal response skills. No significant differences were found between subjects' verbal response skills and self-report of anxiety. Physiological, behavioral, and self-report anxiety measures were found to assess three different reactions in the subjects.

Bowman, Roberts, and Giesen (1977) used skin conductance, heart rate, and subjects' estimates of their physiological responses to measure anxiety under different counseling conditions. It was found that counselors were more anxious when counseling a coached client than when reading. Subjects could predict with moderate accuracy how much subjective

anxiety they would experience, and physiological estimates of anxiety taken shortly before the treatment conditions had moderate predictive value for the amount of anxiety subjects would experience while actually in the experimental situation. There was no relationship between physiological and subjective measures of anxiety, but the two physiological measures were related.

An important conclusion of this study was the presence of at least two anxiety systems--the subjective and the physiological--which worked in an independent but parallel manner. Furthermore, while Russell and Snyder (1963) demonstrated the anxiety-producing potential of counseling hostile clients, this study demonstrated the anxiety-producing potential of counseling sessions generally.

Bowman and Roberts (1978) partially replicated the previous study. They compared the anxiety which counselors manifested during a counseling session with that manifested during a conversation. The findings supported the previous research, that one can predict to a moderate degree the amount of physiological or self-reported anxiety one will experience in actual counseling sessions.

This study also demonstrated that counselors experienced as much anxiety during a conversation as during a counseling session. Actually, the two situations were not that dissimilar; the clients were coached clients, and the conversations were held with people whom the counselors had never met. Apparently the two situations were perceived by the subjects as highly similar.

Bowman and Roberts (1979) recently replicated the above study but used inexperienced counselor trainees and included a baseline period in the design. The results were mixed: they found a significant increase

in heart rate during both conversation and counseling periods. Self-ratings and skin conductance data indicated that the subjects experienced greater anxiety during the interview than either during baseline or conversation periods.

Reduction of Anxiety. One of the earliest studies which attempted to reduce counselor anxiety was done by Lesh (1970). He hypothesized that the practice of Zen meditation would reduce anxiety and permit the subjects to attend to inner, spontaneous, empathic feelings. The subjects were counseling graduate students; three groups, one treatment and two control, were established in an unidentified manner. The subjects in the treatment group practiced zazen meditation (a method of developing the Zen openness to awareness) as a group for one-half hour per day for a four-week period. The results indicated that the treatment group improved in their empathic ability as measured by the Affective Sensitivity Scale, one control group remained about the same, and the other decreased in empathic ability. Although it was not stated, pretests were apparently used along with other unspecified instruments which measured openness to experience and self-actualization.

The shortcomings of this study include uncertain formation of groups, questions regarding analysis, lack of a placebo treatment, and unspecified instruments. Yet the initial success of relaxation-related treatment in the improvement of empathy was encouraging.

Monke (1971) employed systematic desensitization using a standard hierarchy to provide relaxation treatment to school counseling master's students. Treatment and no treatment group differences were significant for self-report using the State-Trait Anxiety Inventory, but were not significant for heart rate, skin conductance measures, and Judgments of

Verbal Anxiety ratings. The significant findings in the self-ratings could have been due to placebo effects. The author did not identify pretreatment levels of anxiety or the dimensions of anxiety under consideration.

Miller (1973) compared the effect of systematic desensitization and no treatment in reducing the anxiety of counseling students in a beginning practicum. The treatment group showed significant reduction of anxiety on one outcome measure, the State Anxiety Inventory, but not on the other, the Multilevel Measure of Interpersonal Behavior. The no treatment group showed no significant differences between pretests and posttests on either measure. Since the design lacked a placebo treatment, one cannot be sure whether the significant difference obtained by the systematic desensitization group was due to attention or some other non-treatment effect. There is a possibility that the treatment subjects were seen in groups, not individually. Furthermore, the apparent use of gain scores may have masked changes in the control group's performance on the outcome measures.

Fry (1973) sought to examine the effect of systematic desensitization on Carkhuff's core-conditioning training (empathy, respect, genuineness, and concreteness). In this study, it was assumed that any anxiety which counselors experienced in interpersonal situations was the result of their own lack of nurturing by significant others. If their fear of intimacy could be reduced, effective interpersonal functioning could be increased.

The subjects, human service workers enrolled in an evening course, were matched on relevant factors and were assigned to treatment and no treatment groups. The treatment groups were desensitized for emotionally positive tone of voice, positive facial expressions, steady eye contact,

and posture denoting physical and emotional proximity. The outcome measures, the Carkhuff scales measuring the core conditions mentioned above, were taken on ratings of a role-played interview, an actual interview, and subjects' responses to five stimulus expressions. The results indicated that the treatment group scored significantly higher than the no treatment control group. The treatment group subjects reported significant anxiety reduction.

There are several methodological difficulties with this study. Since no placebo was used, one cannot be sure whether the improvement of the treatment group was the result of special attention from the examiner. It is curious to note that the treatment group achieved higher outcome ratings on the responses to stimulus expressions. That is, their responses to the non-personal measure were higher than the control group ratings, despite the fact that they were desensitized for interpersonal stimuli.

Another difficulty with this study is the use of matching to form "equal" groups. Subjects were matched on the Affective Sensitivity Scale, the Wisconsin Relationship Orientation Scale, the Taylor Manifest Anxiety Scale, and demographic variables. They were not matched on a pretest on outcome measures, although they appear to have been roughly equal on those dimensions. It is possible, however, that non-random assignment resulted in the placement of subjects into the treatment group which evidenced greater gains than the no treatment group due to the interaction of the treatment and individual factors. In any case, the procedure used to assign subjects to treatment groups was not appropriate for the Analysis of Variance statistical test.

Graub (1975) found that autogenic training was successful in reducing

the verbal anxiety of therapist trainees and in improving some performance dimensions using the Counselor Verbal Response Scale. The study did not identify highly anxious trainees. The differences between the treatment and no treatment groups were not maintained over a four-month period.

Fontaine (1976) used volunteer graduate students in counselor education and social work, assigning them to five groups: real alpha wave training (AWT) with empathy instructions; bogus AWT with empathy instructions; real AWT with relaxation instructions; bogus AWT with relaxation instructions; and a no treatment control group. The outcome measure for empathy was the Truax accurate empathy rating of recorded interviews; the outcomes for anxiety were measured by the Galvanic Skin Response (GSR) and self-report.

The following results were obtained: GSR was significantly higher for bogus AWT than for real AWT; the real AWT group was rated significantly higher on accurate empathy than the bogus AWT group; the correlation between anxiety measures and empathy was negative but was not significant. However, no significance was obtained between any of the experimental and no treatment groups on the three criterion measures.

Carter and Pappas (1975) employed three groups of graduate counseling students in their study. One group received systematic desensitization to stressful counseling situations. A second received a placebo treatment consisting of discussion of feelings and behaviors stemming from interpersonal anxiety in other than counseling situations. A third received no treatment.

A multivariate analysis, using six measures, was employed to test the effect of treatment. There was a significant treatment difference between the two treatment groups and the control group. There was no

significant difference between the two treatment groups. The reason for these results may be easily seen, as the placebo group could have served as a therapeutic device for the reduction of interpersonal anxiety. Individual counseling is, if anything, an interpersonal relationship. The four measures which accounted for the significant differences in the multivariate analysis were extraneous overall movement, small movement, speech disturbance, and a self-rating of state anxiety.

Using 39 graduate counseling students, Walters (1978) measured the effect of skin temperature biofeedback relaxation, relaxation alone, and no treatment on three measures. The outcome measures were the Recognition-Assessment Empathy Inventory, the Affective Sensitivity Scale, skin temperature taken at three periods, and the Rotter Internal-External Control of Reinforcement Scale. The only significance was found for the Rotter scale, with the relaxation alone group rated higher on the Tranquility, Elation, and Composite scores of that instrument. Again, highly anxious subjects were not identified beforehand, and the gains of some highly anxious subjects may have been minimized by non-anxious subjects. Moreover, the author might have selected another physiological response (like EMG) which has a more direct relationship to anxiety.

Implications for this Study. Several trends in the research reviewed above are important for the present study. The first is the relationship between physiological anxiety and verbal activity. Russell and Snyder (1963), Graub (1975), Carter and Pappas (1975), and Roberts (1977) found a negative relationship between quality of verbal behavior and anxiety. This seems reasonable inasmuch as the process of speech is a combination of neuromuscular and cognitive factors. The relationship between anxiety and empathy was also important for the present study.

Fontaine (1976) found they were negatively, but not significantly, related. Fontaine (1976), Lesh (1970), and Fry (1973) all found that relaxation treatment resulted in an increase in levels of empathy.

These findings have two implications for the present study. The first is the suggestion that if anxiety interferes with verbal behavior, then the reduction of anxiety may be related to improvement in the quality of verbal behavior. The second implication is the relationship between the reduction of anxiety and increase in empathy ratings. Accordingly, the reduction of anxiety may result in an increase in the empathy ratings of counselor responses.

The results of these previous studies have further implications for the design of the present study. The first is the need to identify the anxiety level of subjects in order to assess the differential gains of high and low anxiety groups. While a large percentage of beginning counselors will most likely feel some anxiety during a counseling session, it is doubtful whether such anxiety in all cases will be sufficiently high to be significantly reduced by the treatment. By separating subjects into high and low anxiety groups, the researcher may measure the gains of the high anxiety group which would contain the subjects for whom changes in the desired direction would be expected. Accordingly, the design of this study separated subjects into high and low anxiety levels, as described in Chapter II.

A fourth implication for this design is the desirability of specifying the type of anxiety the researcher wishes to reduce and a treatment corresponding to that anxiety. Those studies based upon this approach more frequently found significant differences in the hypothesized direction. For example, Fry (1973) used systematic desensitization to reduce

interpersonal anxiety and found that the treatment group scored significantly higher on Carkhuff's core-conditioning responses than the no treatment group. Also, Graub (1975) used Autogenic Training to reduce physiological anxiety and found that the treatment group scored higher on the CVRS than the no treatment group. The present study, for this reason, has focused on the reduction of physiological anxiety by a combination of electromyograph biofeedback and Autogenic Training.

The final implication for the present study which has been taken from this review is the inclusion of a placebo group. Of the eight treatment studies examined, only three contained groups which received placebo treatment. One yielded no significant differences (Fontaine, 1976) among treatments. Another found that the placebo and treatment groups were significantly lower on the anxiety measure than the control group, but no significant differences were found between the treatment and placebo groups (Carter & Pappas, 1975). The results of a third study indicated significant improvement on the criterion measure for the placebo group alone (Walters, 1978). It was therefore seen as important to include a placebo in this study to measure the effects of factors other than specific treatment which would otherwise be confounded with treatment.

Biofeedback, Electromyograph, and Autogenic Training

This section addresses the theoretical and research bases for the employment of these procedures in this study.

Biofeedback. Biofeedback was selected as a treatment procedure because of its proven effectiveness in reducing anxiety (Brown, 1974, 1977; Blanchard & Epstein, 1978; Hassett, 1978; Pelletier, 1977). The process of biofeedback has several basic components. Some physiological aspect of the subject is measured, and this measurement is immediately

and constantly conveyed back to the subject. The subject is then able by various means to alter the measurement in the desired direction. An example may be seen in a simple procedure by which finger temperature can be raised. An ordinary thermometer is taped to a subject's finger. By repeating certain phrases (e.g., "My hands feel warm and relaxed") the subject can raise the finger temperature in about 15 or 20 minutes (Brown, 1977). The subject's perception of the increase in temperature is information (feedback) that the process is effective. Typically, however, the apparatus is much more complex. The physiological function is usually amplified electronically to produce a signal which is convenient for the subject to use, like a tone, light, digital display, or dial reading. Whatever the equipment, the procedure is the same; the signal informs the subject of his or her progress in altering the physiological state.

Biofeedback may be performed simply by the subject's monitoring of the physiological measurement and "trying to make it change." This change can often be facilitated by the use of imagery, suggestion, or relaxation.

Biofeedback has been practiced in recognizable form since the early 1950's (Gaarder & Montgomery, 1977). During the 1960's it gained widespread attention, particularly because of its use in assisting individuals to achieve higher states of consciousness through monitoring electroencephalograph (EEG) readings.

Research efforts continue to refine treatment procedures and compile empirical support for its effectiveness in treating a wide range of human problems. The physiological functions which can be monitored and "fed back" to the subject and the problems for which they are used include the following (Blanchard & Epstein, 1978): skin temperature as a treatment

for migraine headaches and circulatory problems; heart rate for cardiac disease; blood pressure for hypertension; electroencephalogram (EEG) for seizure disorders and as a method of achieving altered states of consciousness; and electromyograph (EMG) for the reduction of muscular tension and the rehabilitation of damaged muscles. The EMG biofeedback procedure employed in this study will be discussed further in the following section.

While the procedure for biofeedback is straightforward, the psychophysiological mechanism by which change is effected is not clearly understood. Brown (1977) felt that several components may be involved. The first is operant conditioning, in which the change effected in the physiological measures is reinforcing to the subject. This reinforcement results in the increased probability that the behavior will occur again. The second is stress reduction. Biofeedback is used to reduce anxious feelings which result in increased muscle and visceral tension. The subject becomes aware of feelings of relaxation and can discriminate among different levels of stress and relaxation. Feedback may be given on a variety of physiological states. The third component is the cognitive mechanism. The subject can, on the basis of biofeedback information, alter a signal in the desired direction. The awareness of the current state is the essential factor in producing change.

While all of the above factors may play some role in biofeedback, they are clearly not independent. But the question has yet to be answered: what is the physiological process of biofeedback? How does the provision of information result in the change of a bodily state? Some evidence supports the contention that voluntary control can be extended to the autonomic nervous system (Gaarder & Montgomery, 1977), that is, one may

be taught to exert the same type of control over his or her heart as one has over the biceps. While others question the studies which suggest this (Hassett, 1978), biofeedback can be an effective clinical tool regardless of our lack of understanding of how it works (Brown, 1977).

Biofeedback has served another important function in addition to its clinical application. It has served as the meeting point of diverse, even opposed theoretical perspectives. As Brown has stated (1977), the two major foci in the treatment of illness were traditional medicine (surgery and drugs) and analytically based treatment. The use of biofeedback has bridged this mind-body polarity by offering cogent evidence that mental processes can be employed to alter physical states. The person not only receives treatment but, in a sense, becomes it. The use of biofeedback has also facilitated the unlikely rapprochement of those concerned with external events and those concerned with internal states. For example, the achievement of an internal state can be measured by the EEG, and the behavioral effects of that state, such as creativity, can also be measured. One may carry this thesis further by arguing that biofeedback also brings together East and West. Eastern practitioners of meditation have claimed the control of bodily functions like heart rate (Green, Green, & Walters, 1970). Western technology provides equipment which informs one of the success of bodily control. Thus, the practices of Eastern Masters are supported and augmented by physiological measurement.

Electromyograph. The physiological function which was selected for use with biofeedback in this study was the electromyograph (EMG). This measurement represents the amount of muscular activity in a specific muscle group. The muscle selected for this study was the frontalis. The frontalis extends from just above the eyebrows over the top of the head to

a point about two thirds of the way down the back of the skull.

EMG indicates the degree of muscle activity. All muscles are composed of a number of muscle fibers. Groups of fibers form single motor units, and many motor units make up muscles as we know them. Neural impulses are delivered from the brain through the spinal column to individual motor units. The impulses then travel to the many muscle fibers. The action of each muscle fiber is discrete. It contracts about one-half its length when fired by a neural impulse. The stimulation of many muscle fibers results in the contraction of the muscle. The more fibers that are stimulated, the greater the contraction. The EMG measures the neural impulses which are delivered to a number of muscle fibers. The unit of measurement for this electrical activity is called "micromohs."

The measurement of the EMG is accomplished by the careful placement of silver-chloride electrodes on the forehead after the skin is cleansed (Hassett, 1978). One electrode is placed about one and one-half inches above each eyebrow. A third electrode, the ground, is placed over a boney portion of the forehead, such as in the center near where the scalp begins. The ground serves as an electrical reference point. It measures the amount of extraneous electrical impulses emanating from within the subject, like the pumping action of the heart, or outside the subject, like fluorescent lights, television monitors, or computer terminals. By subtracting the amount of electrical energy measured by the ground (which measures no EMG's) from that which is measured by the other two electrodes, one can obtain the EMG output from that muscle. This signal is then amplified and displayed in some fashion to the subject.

The employment of the frontalis muscle EMG in biofeedback has several advantages. This muscle is sensitive to anxiety precipitated by

threatening interpersonal and social stimuli, and EMG reduction is the easiest type of biofeedback to learn (Brown, 1977). Furthermore, the frontalis is a direct expressor of stress within the neuromuscular system and is convenient to use. Since it is not a postural muscle (i.e., does not require use when the subject is standing, sitting, or reclining) the position of the subject is not critical (Gaardner & Montgomery, 1977).

EMG biofeedback has been used to treat headache, subvocalization, and stuttering (Blanchard & Epstein, 1978). Brown (1977) lists 27 emotional and physiological disorders which may be treated with this procedure. The effectiveness of EMG biofeedback relaxation has been examined in several recent studies. Townsend, House, & Addario (1975) found that EMG biofeedback and relaxation subjects were rated lower on anxiety than a control group. Canter, Kondo, & Knott (1975) showed that subjects who received EMG biofeedback and relaxation were rated lower on self and therapist ratings of anxiety than those who received progressive relaxation. These results supported the use of EMG biofeedback in this study.

Autogenic Training. Autogenic Training (AT) was selected as the relaxation procedure for use in this study. AT was developed by Schultz in the early thirties; he based his original studies on work done by Vogt (Schultz & Luthe, 1959). AT was developed from and as an alternative to hypnosis, which has the disadvantage of subject inactivity and the potential for dependence on the hypnotherapist. AT does provide the subject with the sensations of heaviness, warmth, and resultant relaxation which one experiences in hypnosis.

There are three elements in AT (Luthe, 1963). These are: (a) the subject's assumption of a comfortable position with minimal internal or external disturbance, (b) the subject's repetition of autogenic phrases,

and (c) the maintenance of a passive mental attitude. The phrases are offered by an actual person or recording and follow a specific sequence. They describe feelings of warmth, heaviness, relaxation, and comfort in various parts of the body. The subject is instructed to repeat the phrases to himself--not to "try" to relax, but to "let it happen."

AT, as described by Schultz and Luthe (1959) can be done in three stages. The first stage consists of focusing on bodily feelings of warmth, heaviness, and relaxation. These are called the "standard exercises." Once these have been mastered, a series of "meditative exercises" may be performed. These focus on visual imagery such as colors, objects, and, finally, abstract concepts. The third stage, "special exercises," enables one to become aware of one's own feelings, until one "communes with the unconscious" (Brown, 1974, p. 130). Only standard exercises were used in this study.

There is a potential problem in using AT. It is possible that subjects may experience "autogenic discharges" when using any one of these types of exercises. These discharges occur because the state of relaxation and consequent lowered cortical control permits the brain to receive a "flood of downward, helter-skelter, ungoverned motor impulses" (Brown, 1974, p. 131). The subject may experience shaking of the whole body, muscle twitching, or feelings of floating or detachment. These reactions are not serious if the individual is in good mental and physical health, and they cease with the termination of the exercise.

AT has been selected for use as a relaxation technique in this study for several reasons. First, it does not require the specific instruction and close supervision needed for progressive relaxation to be effective. Second, it demands less "effort" than progressive relaxation; that is,

one listens to and repeats to oneself the autogenic phrases. The tedium and discomfort of progressive relaxation are avoided. Third, many of the subjects in this study had previous exposure to progressive relaxation in a counseling strategies course. Such previous experience could present a confounding variable. Fourth, AT is more in keeping with current, popular relaxation techniques, and therefore had potential for attracting greater student interest in the study.

Both biofeedback and AT are effective when used alone. Biofeedback does not require the subject to do anything but be aware of information about the physiological state he or she is trying to change and, by a "nebulous process of intentions and decisions" (Brown, 1977, p. 6), effect that change. AT can be effective without information on the physsiological state (Luthe, 1963). Yet by combining both, one can perhaps enhance the achievement of increased relaxation and reduced anxiety.

CHAPTER II

EXPERIMENTAL DESIGN AND METHODOLOGY

Subjects

Volunteers for this study were sought from students enrolled in their first counseling practicum in the Department of Counseling, Personnel Services, and Educational Psychology, College of Education, Michigan State University during the Spring 1979 term. This researcher presented the purpose and procedures of this study (as described in Appendix A) to several practicum groups; 24 agreed to participate. The number of studdents who volunteered from the different counseling programs are: two master's students in agency counseling; 15 master's students in rehabilitation counseling and placement; five master's students in school counseling; and two doctoral students in urban counseling. Those volunteers in the rehabilitation practicum were offered a .5 bonus on their final grade in the practicum if they participated in this study. For example, a subject who received a grade of 3.0 for the practicum course would receive a 3.5 for their final grade after the addition of the .5 bonus. No other individuals were given incentives.

The subjects for this study were not randomly drawn from a defined population. For this reason, demographic information which describes the sample on relevant characteristics is offered in Table 2.1, thus permitting the identification of the population to whom the results of this study may be generalized.

Table 2.1

Demographic Characteristics of the Sample

Sex	Males	Females			
	7	17			
	29%	71%			
Age	Under 25	26–30	31–35	36–40	Over 40
	5	8	7	3	1
	21%	33%	29%	13%	4%
	$\bar{X}$ = 31.34			S.D. = 8.13	
Marital Status	Single	Married	Widowed	Separated	Divorced
	10	7	1	2	4
	42%	29%	4%	8%	17%
Ethnicity	Caucasian	Hispanic			
	22	2			
	92%	8%			
Counseling Program	Agency	Master's Rehabilitation	School	Doctoral Urban	
	2	15	5	2	
	8%	63%	21%	8%	
Number of Credit Hours Completed, End of Spring Term, 1979	Master's $\bar{X}$	Master's S.D.	Doctoral $\bar{X}$	Doctoral S.D.	
	32.73	8.5	38.5	2.5	
Years of Paid Work Experience for All Subjects	Master's $\bar{X}$	Master's S.D.	Doctoral $\bar{X}$	Doctoral S.D.	
In Counseling	1.23	2.61	5.0	3.0	
In Human Services (includes above)	5.27	5.6	7.5	3.5	
Previous Experience in Relaxation	None	Minimal	Moderate		
	16	5	3		
	67%	21%	13%		

Procedures

Introduction

This section includes the method by which subjects were divided into high and low anxiety levels, the types of treatments used in the study, and the method by which outcome data were obtained.

Throughout these procedures, all subjects were seen individually, thereby maintaining the individual as the unit of analysis and providing greater statistical power. It is possible that subjects, particularly those who received different experimental treatments, discussed their various experiences and expectations with one another. This is undesirable for it could weaken the steps which had been taken to keep the individuals independent. It was, however, unavoidable.

In an attempt to reduce the bias in experimental treatment which might have been introduced by practicum supervisors, no supervisors were informed of the participation of any of their students in this study. Two of the supervisors served on the researcher's dissertation committee and were well acquainted with the nature of the study, but had no knowledge of individual participation. At the end of the study, however, a list of participating rehabilitation counseling placement students was given to the coordinator of that practicum to enable those students to receive the .5 bonus on their final grade.

Establishment of High and Low Anxiety Levels

This study included a procedure whereby the physiological anxiety which subjects experienced during a simulated counseling session was used to establish high and low anxiety levels. As discussed in Chapter I, previous studies have failed to identify subjects' levels of anxiety before treatments were administered. In these studies it is likely the

relaxation treatments were more beneficial for highly anxious subjects; yet, analysis strategies were not included to measure their gains. By assessing each subject's level of physiological anxiety, the performance of high and low anxiety groups could be assessed on the outcome measures. This procedure had a further advantage of making groups more heterogenous on this variable. The design had greater precision for both of these reasons.

A similar procedure was employed by Chapman (1974) in his research on anxiety. He used electromyograph (EMG) as a blocking variable in a study measuring EMG output during variations of observation. The subjects were matched and assigned to three groups on the basis of previous EMG readings. The analysis strategy did not, however, include a test of main effects for the EMG levels.

In this study 22 of the 24 subjects were seen individually for the measurement of physiological anxiety. They were informed that the purpose of the procedure was to separate subjects into high and low anxiety groups. The procedure consisted of measuring subjects' EMG output during an eight-minute baseline period and during a six-minute period while the subjects watched a videotape of a client. This procedure is described in detail below.

The EMG device employed was a J&J model M55 B, used with non-disposable silver-chloride electrodes, disposable adhesive discs and a standard conductive gel. The skin was prepared by first abrading the three forehead electrode contact areas with a commercially available skin cleanser containing aluminum oxide particles. This preparation caused slight discomfort as it removed the topmost layer of skin cells, but it provided excellent impulse conduction. These contact areas were then

cleansed with alcohol and the electrodes were attached. Recleansing and reattaching were performed if electrode placement was not satisfactory. Electrode placement was easily checked by the skin resistance readings on the J&J M55.

Each subject was individually placed on the EMG device for an eight-minute period to obtain a baseline reading. Subjects were instructed to sit quietly and "see if the needle goes down," that is, to watch the EMG output dial. No specific relaxation instructions were given. This researcher then left the room for the eight-minute period. The mean EMG output was computed for this period by a J&J Model LSC 150 digital integrator.

After the baseline measurement was taken, the subject was informed that he or she would be viewing a stimulus videotape. The following instructions were given:

> In just a minute you will be watching a videotape of a man who is roleplaying a client. I want you to imagine that you, a counselor, are seeing this client for the first time, alone, in a private office, in a counseling setting which makes sense to you. You have no information about him. I want you to attend to what he says to you. You don't have to respond to him. His statements are not necessarily related to one another, but generally follow in the order in which they might occur in an actual counseling interview. Some of the things he says may be seen by some as anxiety provoking.

The videotape contained 11 short scenes of a 30-year-old man who "faded in," made a statement, then "faded out." The client's statements included questions about the subject's competence and caring, references

to his life experiences and repugnant attitudes, ambiguous aspirations for intimacy with the subject, and threats of violence toward the subject. Appendix B contains the script of this videotape. The "client," a Ph.D candidate in counseling psychology, was chosen for his lack of contact with master's counseling students and his acquaintance with video-materials which were designed for affective stimulation. The script for these 11 scenes was written by this researcher and was adjudged to be anxiety producing by several doctoral students in counseling, who were all experienced counselors.

The videotape was approximately six minutes long. This researcher sat behind the subject and recorded the mean EMG output, as shown on the scorekeeper, for each minute in the six-minute period. The subject saw neither the scorekeeper nor the EMG dial. At the end of the videotape period, the subjects were given general feedback on the EMG levels for baseline and videotape periods. Each subject was asked about his or her current affective state to insure that the vignettes had not been severally disturbing to anyone. The subjects were told that this researcher would be making decisions regarding who would be included in the study and would contact them within one week.

The EMG output measured during the baseline period was subtracted from the EMG output obtained during the videotaped period. This yielded a score for each subject indicating anxiety as measured by the EMG. The frequency distribution of these scores is shown in Figure 2.1. Subjects above the median were identified as the high anxiety group, those below the median as the low anxiety group. Both high and low levels were randomly assigned to three experimental groups.

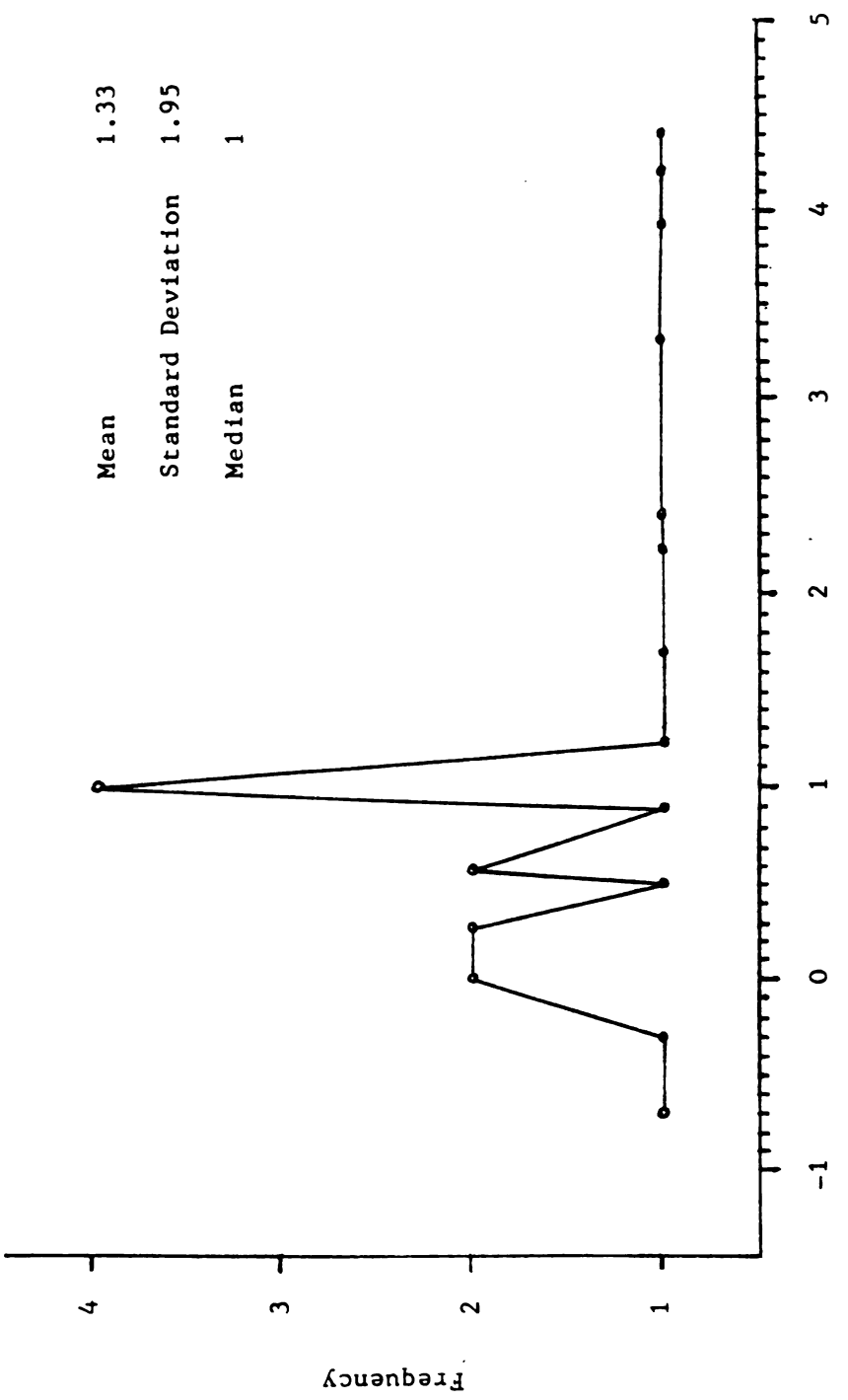

Figure 2.1. Differences in EMG Microvolt Measurements Obtained from Videotape Period Minus Baseline Period

The two subjects who failed to keep appointments for this initial phase were placed at the bottom of this ranking of the index of anxiety. This placement of the two subjects in the low anxiety level was carefully considered. A central purpose of this study was to measure a change in those subjects who were highly anxious. By assigning those two subjects to the low anxiety group, one could be sure of the characteristics of the high anxiety group, i.e., that all subjects in that group were high on the variable of interest.

Treatments

The three experimental treatments included in this study were a relaxation group which received a combination of biofeedback and Autogenic Training, a placebo group which received information in counseling and psychology, and a no treatment control group. Each treatment procedure is described in detail below.

Relaxation Treatment. The subjects in the relaxation group were seen individually by this researcher once per week for four weeks. As subjects came for the first session, they were again told that the purpose of the study was to measure the effect of various experiences on counselor performance. The subjects in this treatment group were informed that the researcher was interested in the effects of relaxation using biofeedback and Autogenic Training (AT). They were also informed of the method of obtaining outcome data. Taped ratings of their interviews with coached clients and scores on a standardized anxiety test would be collected. The confidentiality of all information was restated.

Each session consisted of placing the subject on the EMG device for approximately 25 minutes. Skin preparation followed the procedure

described previously and care was taken to maintain consistent electrode placement from session to session.

A minus threshold with a sound signal was used during each session. As the subject relaxed, the sound which represented the EMG output level of the frontalis muscle was lowered in tone. Once the EMG output was reduced to a certain level, the sound shut off. This served as a reinforcer for the subjects' relaxation efforts. The EMG range and threshold level were established individually for each subject and were generally lowered in subsequent sessions. The threshold level was adjusted to the point where the sound was off approximately 25% of the time. This allowed the subject to receive information regarding his or her progress in relaxation during the session, yet allowed some reinforcement for the termination of the sound. For the first session, subjects listened to the AT relaxation tape which was made by this researcher (Appendix C). For subsequent sessions no tape was used.

Subjects in this group were asked to listen to the AT audiotape and practice relaxation three times per week in addition to the weekly biofeedback sessions. Thus, each subject received a total of one and one-half hours of treatment per week for four weeks.

Subjects were informed that some individuals have experienced feelings of anxiety and discomfort when they used AT. They were instructed that if they began to feel anxiety, tingling, or any other type of discomfort, they were to stop the relaxation sessions and check with this researcher. These feelings, however, were not reported by any subject.

All subjects in this group received all four biofeedback sessions. During each session, this researcher asked about progress in the

practice relaxation sessions. All reported that the practice sessions were progressing well. Many subjects commented on some aspect of the practice sessions, such as when the best time was for them to listen to the relaxation tapes, problems they had in practicing relaxation, or other effects of relaxation, e.g., reduced test anxiety. These comments led this researcher to believe that the subjects were indeed listening to the tapes as requested. Furthermore, subjects had lower levels of EMG output as measured by reduced thresholds with each session. This indicated that relaxation was effective.

A biofeedback procedure was incorporated into the treatment to provide a method of monitoring subjects' progress in relaxation. The inclusion of such a procedure enabled this researcher to be more confident that subjects were actually performing the autogenic exercises. In a study comparing autogenic training and progressive relaxation on physiological outcomes, Madden (1976) suspected that the subjects' lack of motivation, hence limited practice of procedures, led to a lack of significant differences between treatments. The limited use of biofeedback procedures in the present study attempted to control for this possibility.

The primary focus of this treatment was AT. To include EMG biofeedback as a full treatment could, perhaps, have improved the precision of this study by intensifying treatment. It would, however, also have limited the generalization of the results to other counselor education programs because of the expense of the necessary equipment. Since AT would require at most a cassette recorder, many more counselors, supervisors, and counselor educators would be able to employ this procedure if it proved effective in reducing counselor anxiety.

Information Treatment. Subjects in the information group were seen individually once per week for four weeks. They were informed that the purpose of the study was to measure the effect of various experiences on counselor performance. These subjects were specifically told that this researcher was interested in the effects of helpful information in counseling and psychology on their performance on the outcome measures.

This "helpful information" consisted of eight audiotapes of presentations by significant figures in counseling and psychology (Appendix D). These presentations covered general issues, such as Kohlberg's theory of moral development and Skinner's discussion of the complexity of reinforcers in modern life. The subjects were also told that since they had had courses in specific techniques in counseling, the tapes to which they would listen were more abstract and theoretical. They were apprised of the method of obtaining the outcome date. Taped ratings in interviews with coached clients and scores on a standardized anxiety test would be collected. The confidentiality of the information gathered during the study was reaffirmed.

Subjects were asked to listen to the tapes while resting in a quiet place. During their weekly meetings with this researcher they discussed whatever they wished of the previous week's tapes and received the next week's tapes. The subjects usually commented on some aspect of the tapes. This suggested to this researcher that the subjects were listening to them. During these sessions other issues were often discussed, such as their experiences in the practicum placement. These sessions lasted approximately 10 to 15 minutes. Since they listened to 80 or 85 minutes of tapes per week, the total time of treatment of a subject in this group was about one hour, 35 minutes per week. All subjects in

this group were seen for the required number of times.

Information treatment was included in this design to expose a group of subjects to conditions which were similar to those of the relaxation group, yet did not contain any specific treatment which could have produced positive effects on the outcome measures. It was, therefore, a placebo group. These subjects, like those in the relaxation group, saw this researcher once per week and listened to audiotapes for about an equal period of time. Yet they were not given specific relaxation instructions, nor did the presentations contain any specific information which could improve counselor performance on the outcome measures.

No Treatment Control. The third group was a no treatment control group. These subjects were informed that they would not be asked to do anything during the treatment period but would be contacted in several weeks to arrange for an interview with a coached client and take the anxiety questionnaire.

Outcome Interviews

At the end of the treatment period, all subjects arranged for a session when all the materials needed for the outcome measure were gathered. This consisted of the completion of the Anxiety Scale Questionnaire and an interview with the coached client. Empathic Understanding and Judgments of Verbal Anxiety were taken from this interview. This section describes the preparation and procedures for the interviews with the coached clients.

The coached clients were all women, a 19-year-old junior majoring in nursing, a 21-year-old senior majoring in communication, and a 23-year-old senior also majoring in communication. These unpaid volunteers were recommended to this researcher by a doctoral candidate

colleague who had supervised them during an independent study. Women coached clients were preferred because most of the subjects were women, and there was less opportunity for qualities of heterosexual interaction to present a confounding variable during the outcome interview. Moreover, if male coached clients were used, their portrayal of the same role played by the women coached clients might have had a different impact on the subjects. If the role were modified for male clients, further variability might have been introduced. For these reasons, it was decided that only women coached clients would be used, and thereby a standard client stimulus would be maintained. The limitations of this procedure are discussed in Chapter IV.

The coached clients met with this researcher as a group for approximately two hours to devise and refine their role. During this training period, each was interviewed by a doctoral student while the others observed. These interviews were critiqued for the coached clients' ability to elicit the desirable responses from the counselors and for the consistency of the role among coached clients. A description of the role played by the coached clients is contained in Appendix E.

An additional coached client was used for an emergency situation. One regular coached client cancelled for a period when she was scheduled to be interviewed by four subjects. Inasmuch as the end of the term was approaching, this researcher thought that it was advisable to locate another coached client and complete the outcome interviews for those subjects. Since neither of the other two coached clients was available, this researcher recruited a paid volunteer from a class on interpersonal communication. She was given a 10-minute orientation to her role and task as a "client."

Subjects signed up for available interview times with the coached clients. As this researcher did the actual scheduling, an attempt was made to keep one coached client from getting a disproportionate number of interviews. While assignments were not made in a truly random manner, they were made without regard for any factor other than subject and coached client availability.

When clients came in for interviews, they were asked to read and, if they approved, to sign a release of information form (as shown in Appendix F), to provide demographic data, and to complete the anxiety questionnaire. Some subjects had already completed the first two tasks. All had been previously informed of the purpose and nature of the interview, but were given additional instructions at that time:

> You are going to interview this client for a 10-minute period. She is a coached client, that is, not a real client, and she will present a standard client problem. Use the time to help the client explore her current concerns, paying particular attention to any feelings she may have which are associated with those concerns. You do not have to explain the purpose of counseling, just focus on the client's difficulties and her feelings about them.

Individual audiotapes were made for each of these sessions, and a previously assigned random number was affixed to each of the audiotapes.

During the process of obtaining the outcome interview audiotapes, four doctoral students in counseling also had interviews with coached clients to obtain tapes for assessing rater validity for the empathy scale. These interviews were randomly interspersed among the subjects' interviews. This researcher asked these counselors to give examples of two good and two poor interviews. The coached clients had been told

that they would be interviewed by four doctoral students and were informed of the rationale for this procedure, but were not told who these counselors were beforehand. The coached counselors followed the same procedures as the subjects during these interviews. All tapes were identical, and were identifiable only by a random number.

The raters were informed that they would be rating several tapes as a check on their validity, but were not informed of which tapes these were. The scores given to these tapes by the raters corresponded to the level of empathy which the doctoral students were asked to demonstrate, and their ratings approximated those which this researcher gave to these tapes.

All of the coached clients were apprised of the confidential nature of the subjects' performance during the interview. As this researcher later listened to the interviews, his impression was that each coached client had performed well and that a consistent role was maintained by all.

Subjects were given an opportunity to indicate whether they wanted information about the results of the study and feedback on the interview. When all interviews were completed, those subjects in the information and control groups who could be contacted were invited to experience one session on the biofeedback apparatus. Four subjects accepted this offer. This offer was made after subject participation in the study was no longer required; it was felt that to make this offer sooner would imply that one treatment was better than another.

Measures

Three measures were used to assess the outcomes of this study. The first two are Carkhuff's Empathic Understanding scale and Russell and

Snyder's Judgments of Verbal Anxiety. Since both of these scales require the rating of counselor responses, the rating procedures are discussed after the scales themselves are described. The Anxiety Scale Questionnaire, the third measure, is covered in the final section.

Empathic Understanding

The first measure which was used in this study was the Empathic Understanding scale (EU; Carkhuff, 1969). This is perhaps the most widely used instrument in counselor education. It requires that each counselor response receive a one to five point rating, depending on the level of empathy communicated to the client. It has demonstrated considerable capacity to discriminate between the empathy levels of various groups in the expected directions. Moreover, several of the studies which were previously reviewed indicated that EU could measure increases in empathy which were apparently effected through relaxation treatment. This was important for the purpose of this study.

The widespread use of the EU by counselor educators has not been without criticism. Gormally and Hill (1974) have offered cogent recommendations for rater selection and rating procedures which were followed in this study.

First, the raters had been purposely selected for their lack of experience in counseling. Raters who are experienced counselors or psychotherapists often tend to "punish" those they are rating by giving a lower rating than warranted to a marginal response. Second, inter-rater reliability was checked several times during the rating. Third, tapes were randomly presented for rating and both raters worked on approximately the same tapes at the same time, thus equalizing fatigue and practice effects. Tapes were identified only by a random number,

and all tapes were identical.

Judgments of Verbal Anxiety

The second measure employed was the Judgments of Verbal Anxiety (JVA; Appendix G), developed by Russell and Snyder (1963). This scale measured counselor anxiety by rating the presence of 16 indicators of counselor anxiety in counselor statements. These 16 indicators are: direct statement of anxiety; avoidance of interaction; direct interruption; impersonal or premature interpretations; unnecessary reassurance; disapproval of client behavior; intellectualization; inappropriate personal references; failure to finish sentences; repetition of words or phrases; stuttering; blocking or lack of fluency; poor voice quality; apology for counselor error or deficiency; inappropriate laughter; and anxiety as revealed by some behavior not otherwise specified. Russell and Snyder obtained excellent results in using this instrument to discriminate between anxious and non-anxious counselors in their study, obtaining significance at the .001 level.

To this researcher's awareness, this instrument has been used in only one other study (Monke, 1971). No significant differences were found in that study using this or any objective measure.

Raters

Two women served as raters for these two instruments. One was 22 years-old and had recently received her bachelor's degree in social work. She had had some interview training but no counseling preparation. The other was a 20 year-old junior majoring in community development. She had had no training in counseling or interpersonal communication. They were paid for their efforts.

The raters were trained for approximately three hours before rating

began. Training consisted of an orientation to the study and the measures, and practice with rating tapes. After a statement was rated, each shared her rating and the rationale for it. When both raters gave the same scores to responses approximately 80% of the time and these scores concurred with this researcher's interpretation of the scoring criteria, the raters began actual tape rating. It should be noted that raters were trained on portions of two subject interview tapes. When actual rating began, however, the ratings made during training were disregarded and those tapes were included with the others.

All rating was done within a four-day period. Both raters worked separately but on the same tapes at approximately the same time. Through this method, an attempt was made to equalize practice and fatigue factors. Every counselor response for the 10-minute period was rated. The raters were situated in the College of Education during the times they were rating, and this researcher was available for the clarification of issues and responses to questions. Interrater reliability was measured by the Pearson Product Moment Coefficient of Correlation. Correlations for both instruments were calculated when raters had completed their ninth and eighteenth tapes. When correlations were calculated for 18 tapes, considerable divergence for both measures was observed. The raters were retrained briefly, and interrater reliability was subsequently increased. The final interrater reliability was .89 for Empathic Understanding and .73 for Judgments of Verbal Anxiety.

IPAT Anxiety Scale Questionnaire

The IPAT Anxiety Scale Questionnaire (ASQ; Krug, Scheier, & Cattel, 1976) is a 40-item standardized group instrument which assessed overt and covert symptoms of anxiety. The selection of items was based

on Cattell's research (1973) on personality factors. The items which were included in this scale represented proportionally those factors of which anxiety is a component. These factors include Tense/Relaxed; Apprehensive/Self-Assured; Emotionally Stable/Emotionally Unstable; Suspicious/Trusting; and Uncontrolled/Self-Controlled.

Test-retest reliabilities for this measure vary from .93 for intervals of one week to .70 for those of two years. Split-half reliabilities range from .78 to .92 when corrected to full test length. This type of reliability is more important for this study because it demonstrates the accuracy of the current assessment of a changeable characteristic, anxiety. The validity of this instrument has been demonstrated several ways. Its correlation with the pure anxiety factors is .90 average across several studies. Its correlation with clinical judgments of anxiety is approximately .90 when these judgments are corrected for low reliability. When its scores are correlated with those of other anxiety measures and both are corrected for imperfect reliability, the correlation approaches .90 (Krug et al., 1976). Moreover, this instrument is highly resistant to response distortion due to social desirability (Schmidt, 1969).

The ASQ has demonstrated the capacity to measure the reduction of anxiety in several studies. Sherman, Mulac, & McCann (1974) and Nicoletti (1973) showed that this instrument was able to measure the effects of treatment procedures which reduced speech anxiety. Sherman and Plummer (1973) reported that subjects who received generalized anxiety reduction treatment scored lower on the ASQ than a control group. These results indicate the appropriateness of this instrument for this study.

Ethical Issues

Efforts were made throughout the conduct of this study to assure that subjects' rights were protected under the ethical standards of the American Personnel and Guidance Association (1976) and American Psychological Association (1973). The following points outline these efforts:

1. The confidentiality of the participation of each subject was assured. No information regarding any individual was available to any person other than this researcher, with the following exceptions. A list of names of participating rehabilitation practicum students was given to the practicum coordinator. This was necessary for him to give each subject a .5 bonus on their final grade for their participation and was done with the agreement of those students involved. Coached clients were aware of subjects' performance during the outcome interview, but had no knowledge of their score on any measure. Raters knew the subjects only by random number. Both raters and coached clients were apprised of the confidential nature of any subject's performance. In addition, all subjects signed release of information forms (Appendix F) permitting the use of data for analysis and a description of the sample. All audiotapes were erased when the report of the study was completed.

2. Responsibilities of researcher and subjects were clearly stated when subjects were first seen individually. These included time commitment per week, number of weeks, the demographic information which would be required, the nature of the outcome measures, the interview with the coached clients, and confidentiality.

3. It was made clear to each subject that participation was voluntary and none of the information gathered would have any effect on their grade for the practicum course. Those in the rehabilitation practicum

were informed that their participation by itself would qualify them for a .5 bonus on the final grade.

4. The potential for harmful effects, though minimal, was present with the practice of AT. These harmful effects included muscle twitching, feelings of floating or detachment, or shaking of the whole body. Accordingly, subjects were apprised of this possibility and the appropriate action to take should negative effects occur.

5. Since the research hypotheses in the following section differ from the expectations which were communicated to the subjects at the beginning of the study, necessary deception was employed. A summary of results, correcting the deception, was sent to all participants when the report of this study was completed.

While the information treatment was not expected to reduce counselor anxiety, it is suggested that the subjects in this group might have benefited from the information contained in these tapes. They included presentations by prominent, current thinkers in the field of human behavior. It is possible that this information contributed to the subjects' general understanding of those factors which shape our behavior.

Hypotheses

The null hypothesis was stated thus: There is no significant difference in the ratings of Empathic Understanding, ratings of Judgments of Verbal Anxiety, or scores on the Anxiety Scale Questionnaire among high and low anxiety levels of counseling practicum students who receive relaxation treatment, information treatment, or no treatment.

The research hypothesis, however, stated that the relaxation group would have significantly higher EU ratings and significantly lower JVA

ratings and ASQ scores than the other two groups. Furthermore, it was hypothesized that subjects in the high anxiety level would have significantly lower EU ratings and significantly higher JVA and ASQ scores than subjects in the low anxiety level. The final and most important hypothesis is that the greatest differences among the three groups would be in the high anxiety level. Since these subjects had been assigned to that level because of their high anxiety, the relaxation treatment should have its greatest effect on subjects in this level. It was hypothesized that they would have significantly higher EU ratings and significantly lower JVS ratings and ASQ scores than the two other groups in that level.

Experimental Design and Analysis of the Data

A 2 x 3 factorial design was employed, as shown in Figure 2.2. The first factor, physiological anxiety, had high and low levels. This design was employed to provide greater precision. The second factor contained the experimental manipulations. These were relaxation treatment, information treatment, and no treatment. Each criterion measure was tested independently.

Figure 2.2

Experimental Design

	Relaxation Treatment	Information Treatment	No Treatment
High Anxiety			
Low Anxiety			

A two-way Analysis of Variance (ANOVA) of the posttest was selected as the analysis strategy as it provides an appropriate test of significance with simple random assignment (Campbell & Stanley, 1963). Planned comparisons were used to test for significance among treatments, between anxiety levels, and in interactions. In these comparisons the relaxation treatment group was compared separately to the information treatment group and to the no treatment group. The review of previous studies provided sufficient reason to expect that if significant differences were found between treatments, they would occur between the relaxation treatment and the other treatment groups. The use of this procedure provided greater power than the omnibus F test to reject the null hypothesis if it were false.

All cells contained equal numbers of subjects. This permitted the ANOVA to be robust for violation of the assumption of equality of variance. Since fixed effects were used, the test was robust for the violation of the assumption of normality.

CHAPTER III

ANALYSIS OF RESULTS

Description of Results

The results of the analysis of the data are reviewed in this chapter. Each of the measures, Empathic Understanding (EU), Judgments of Verbal Anxiety (JVA), and the Anxiety Scale Questionnaire (ASQ) are covered in that order. The means and standard deviations for each outcome measure for cells, treatment groups, and levels of anxiety are given in Table 3.1.

The data were analyzed by a Control Data 6500 computer at the Computer Center, Michigan State University. Results had to attain the .05 alpha level before they were considered statistically significant.

A two-way Analysis of Variance of the posttest with planned comparisons was employed as the analysis strategy. There were three levels of the treatment factor, including relaxation, information, and no treatment. The anxiety factor contained high and low levels.

The following planned comparisons were made for each of the outcome measures to test for main effects: (a) a comparison of the relaxation treatment group and the information treatment group; (b) a comparison of the relaxation treatment group and the no treatment group; and (c) a comparison of the high and low levels of anxiety across treatment groups. Two complex comparisons were employed to test for interactions of treatment and anxiety level. The first compared high and low levels of

Table 3.1

Means and Standard Deviations of Cells, Treatment Groups, and Levels of Anxiety for the Outcome Measures

Level of Anxiety	Relaxation Group	Information Group	No Treatment Group
Empathic Understanding			
High	$\bar{X}$ 3.05 S.D. .28	$\bar{X}$ 3.38 S.D. .34	$\bar{X}$ 2.7 S.D. .19	$\bar{X}$ 3.09 S.D. .3
Low	$\bar{X}$ 2.85 S.D. .49	$\bar{X}$ 2.92 S.D. .69	$\bar{X}$ 2.73 S.D. .24	$\bar{X}$ 2.91 S.D. .55
Total Treatment Group		$\bar{X}$ 3.15 S.D. .52	$\bar{X}$ 2.71 S.D. .22	$\bar{X}$ 3.0 S.D. .43
Judgments of Verbal Anxiety			
High	$\bar{X}$ 6.17 S.D. 4.53	$\bar{X}$ 7.0 S.D. 6.49	$\bar{X}$ 7.75 S.D. 4.01	$\bar{X}$ 3.75 S.D. 3.09
Low	$\bar{X}$ 7.58 S.D. 4.27	$\bar{X}$ 9.38 S.D. 5.76	$\bar{X}$ 6.75 S.D. 2.25	$\bar{X}$ 6.63 S.D. 4.8
Total Treatment Group		$\bar{X}$ 8.19 S.D. 6.13	$\bar{X}$ 7.2 S.D. 3.13	$\bar{X}$ 5.17 S.D. 3.95
Anxiety Scale Questionnaire			
High	$\bar{X}$ 25.67 S.D. 10.03	$\bar{X}$ 27.5 S.D. 10.15	$\bar{X}$ 24.25 S.D. 8.62	$\bar{X}$ 25.25 S.D. 11.32
Low	$\bar{X}$ 26.5 S.D. 7.58	$\bar{X}$ 27.0 S.D. 5.6	$\bar{X}$ 22.25 S.D. 10.05	$\bar{X}$ 30.25 S.D. 7.04
Total Treatment Group		$\bar{X}$ 27.25 S.D. 7.88	$\bar{X}$ 23.25 S.D. 9.34	$\bar{X}$ 27.75 S.D. 9.18

anxiety with relaxation and information treatments. The second compared both levels of anxiety with relaxation treatment and no treatment.

Table 3.2 shows the intercorrelation of the measures used in this study. Only one, a .428 correlation between the JVA and the ASQ, was significant (p less than .023).

Table 3.2

Intercorrelation of Measures

		Electro-myograph	Anxiety Scale Questionnaire	Judgments of Verbal Anxiety
Emphatic Understanding	r =	.223	.288	-.176
	p less than	.16	.097	.217
	n =	22	24	24
Judgments of Verbal Anxiety	r =	-.298	.428	
	p less than	.089	.428	
	n =	22	24	
Anxiety Scale Questionnaire	r =	.055		
	p less than	.404		
	n =	22		

The significant, positive correlation indicated that the ASQ and the JVA measure, to a moderate degree, the same component of anxiety.

Table 3.3 contains the five planned comparisons for the EU scale. The comparison of the relaxation and information groups approached the .05 level of significance (p less than .063). One cannot claim that these results indicate a trend in the hypothesized direction, however, the comparison between the relaxation and no treatment groups did not approach significance (p .497). There was no significant difference between the high and low levels of anxiety (p less than .265).

First the complex planned comparison, relaxation treatment and

Table 3.3

Analysis of Variance for the Empathic Understanding Scale

Source of Variance	df	Mean Square	F Ratio	P Value
Paired Planned Comparisons				
Relaxation Treatment and Information Treatment	1	.705	3.9	.063
Relaxation Treatment and No Treatment		.087	.481	.497
High and Low Levels of Anxiety	1	.24	1.327	.265
Complex Planned Comparisons				
Relaxation and Information Treatment and High and Low Levels of Anxiety	1	.159	.877	.361
Relaxation and No Treatment and High and Low Levels of Anxiety	1	.078	.433	.519
Error	18	.181		

information treatment groups were compared to high and low levels of anxiety; this comparison was not significant (p less than .361). The second complex comparison of the relaxation and no treatment groups and high and low levels of anxiety was also not significant (p less than .519).

Table 3.4 contains the results of the planned comparisons for the JVA scale. There were no significant differences between the comparison of the relaxation and information groups (p less than .783), or between the relaxation and no treatment groups (p less than .212). The means of these groups correspond to one of the research hypotheses and apriori reasoning; these are 8.19, 7.2, and 5.17 for the relaxation, information and no treatment groups, respectively. One would expect that the real treatment group would have the highest mean, followed by the placebo group, then the no treatment group. The failure to find significance might be related to the large standard deviations for these groups. This would result in inflated mean squares, thus making significance difficult to obtain. The comparison for the high and low levels of anxiety was not significant (p less than .464). The complex comparisons of the relaxation and information groups and high and low levels of anxiety were not significant (p less than .379), nor was significance found for the complex comparison for the relaxation and no treatment groups and the two levels of anxiety (p less than .915).

Table 3.5 shows the results of the planned comparisons for the ASQ. The comparison of the relaxation and information groups was not significant (p less than .291), nor was the comparison of the relaxation and no treatment groups (p less than .913). There were no significant differences between high and low levels of anxiety (p less than .823). The

Table 3.4

Analysis of Variance for the Judgments of Verbal Anxiety Scale

Source of Variance	df	Mean Square	F Ratio	P Value
Paired Planned Comparisons				
Relaxation Treatment and Information Treatment	1	1.688	.078	.783
Relaxation Treatment and No Treatment	1	36.0	1.672	.212
High and Low Levels of Anxiety	1	12.042	.559	.464
Complex Planned Comparisons				
Relaxation and Information Treatment and High and Low Levels of Anxiety	1	17.521	.814	.379
Relaxation and No Treatment and High and Low Levels of Anxiety	1	.25	.012	.915
Error	18	21.535		

Table 3.5

Analysis of Variance for the Anxiety Scale Questionnaire

Source of Variance	df	Mean Square	F Ratio	P Value
Paired Planned Comparisons				
Relaxation Treatment and Information Treatment	1	96.333	1.186	.291
Relaxation Treatment and No Treatment	1	1.0	.012	.913
High and Low Levels of Anxiety	1	4.167	.051	.823
Complex Planned Comparisons				
Relaxation and Information Treatment and High and Low Levels of Anxiety	1	24.083	.297	.593
Relaxation and No Treatment and High and Low Levels of Anxiety	1	3.25	.372	.549
Error	18	81.222		

complex comparison of the relaxation and information groups and the high and low levels of anxiety was not significant (p less than .593). The second complex comparison of the relaxation and no treatment groups and both levels of anxiety was also not significant (p less than .549).

Conclusion

It was concluded that the results of the analysis of the data supported the retention of the null hypothesis. Neither information nor relaxation treatment were more effective than no treatment in reducing anxiety or increasing empathy as measured by the respective scales. Moreover, no significant differences were found between levels of anxiety on these measures. There were no significant interactions.

The moderate positive correlation (.428) between the ASQ and the JVA was statistically significant (p less than .023). This indicated that both of these instruments measured some aspect of the subjects' anxiety. This finding lends support to the validity of the JVA in the assessment of anxiety.

CHAPTER IV

SUMMARY, DISCUSSION, AND CONCLUSION

Summary

The purpose of this study was to measure the effect of relaxation on counselors' communication of empathy, verbal anxiety, and general anxiety. The subjects were 22 masters and two doctoral students in their initial counseling practicum at Michigan State University. They were initially divided into high and low anxiety levels by scores obtained from frontalis muscle electromyograph (EMG) readings. To obtain these readings, a baseline period EMG reading was subtracted from an EMG reading taken while the subjects watched a videotape of a coached client who intentionally made anxiety-provoking statements. The median score of this variable was used to divide subjects into high and low levels of anxiety.

The subjects in the high and low anxiety levels were randomly assigned to three groups. The first group received approximately 30 minutes per week of frontalis muscle EMG biofeedback provided by this researcher and three 25-minute sessions per week of audiotaped Autogenic Training relaxation instructions. The information group was seen for 10 to 15 minutes per week by this researcher and listened to approximately 90 minutes per week of audiotaped information in counseling and psychology. The third group received no treatment.

At the end of the four-week treatment period, each subject

interviewed a coached client for 10 minutes. Audiotapes of these interviews were used to obtain ratings of the two outcome measures, the Empathic Understanding scale (EU), and the Judgments of Verbal Anxiety scale (JVA). A third outcome measure, the Anxiety Scale Questionnaire (ASQ), was administered to the subjects immediately after these interviews.

Each outcome measure was analyzed by a posttest Analysis of Variance. There were no significant differences among treatment groups or between high and low levels of anxiety for any of the measures. There were no significant interactions. The planned comparisons of the relaxation and information groups for the EU scale approached the .05 level of significance (p less than .063). The correlation between the ASQ and the JVA was moderate, though significant (.428, p less than .023).

The subjects' performance on the outcome measures was compared for any relationship to various demographic variables as described in Table 2.1. The specific variables which were examined were sex, age, years of experience in human services and counseling, marital status, and counseling program. While it is possible that there is a relationship between any of these variables or a combination thereof in the larger population, none was identified in this sample.

Discussion

Results Approaching Significance

Only one of the planned comparisons approached significance. The mean of the Empathic Understanding scale for the relaxation treatment group was higher than the mean for the information treatment group (p less than .063). This could be interpreted as supporting the research hypothesis in the direction of significance but for an

additional factor: there was no difference approaching significance between the relaxation treatment and the no treatment groups on the same measure. Therefore, any suggestion that relaxation may have been more effective than information treatment in increasing EU ratings is countered by the finding that no treatment was as effective as relaxation.

Possible Sources of Nonsignificance

This section contains a review of possible reasons for the failure to find significance in this study. Any one of these factors, alone or in combination with others, may have been the source of lack of significance. This discussion is also offered to indicate those areas where the alleviation of methodological shortcomings may improve the design of future research.

Theoretical Basis of the Study. A basic premise of this study was that anxiety interfered with the communication of empathy. This postulation can draw from two sources of support. The first is the widely established relationship between anxiety and performance (e.g., Gaudey & Spielberger, 1971; Krug et al., 1976), in which high levels of anxiety usually interfere with performance of specific tasks. The reduction of anxiety leads to improved performance. One may expect that is as true of the communication of empathy as it is of other types of tasks.

There is, moreover, further evidence to support the relationship of the reduction of anxiety with the increase of empathy. A review of several of the studies cited in Chapter I indicated that the reduction of anxiety resulted in an increase in empathy. Fontaine (1976), for example, found that a group of graduate students in counselor education and social work which received alpha wave training (AWT) relaxation were

significantly higher on Accurate Empathy ratings than a similar group who received bogus AWT. Fry (1973), using human service workers as subjects, found that the group which received systematic desensitization to emotionally positive client behaviors were rated higher on Carkhuff's ratings of empathy, respect, genuineness, and concreteness than a no treatment group. These results suggest that further investigation of this hypothesis is warranted.

Formation of Levels of Anxiety. The effectiveness of the methods used to establish high and low levels of anxiety must be considered. The procedure of subtracting the baseline frontalis muscle EMG from the EMG taken while the subjects watched an anxiety-producing videotape to obtain a leveling variable has not been used previously in counseling research. The validity of this procedure could only be supported by evidence that subjects were appropriately placed in high and low levels of anxiety. Subjects in the high anxiety level of the relaxation group making the greatest gains in the hypothesized direction would constitute such evidence. Since no significant differences were found, the validity of this procedure has yet to be established.

The above aspect of this study should receive further inquiry. The use of the EMG output from the frontalis muscle as an index of anxiety has many advantages, such as its sensitivity to threatening interpersonal and social stimuli (Brown, 1977). Moreover, it is not susceptible to response distortion as are some standardized tests. Further research with frontalis EMG output could provide information regarding the validity of this procedure as a blocking or outcome variable. Some of the factors which may have led to the lack of significance in using this procedure in this study include unreliability of measurement or inadequate

validity for its specific purpose.

This procedure was intended to separate subjects into high and low anxiety levels. If it failed to accomplish this, one could not adequately test the hypothesis that relaxation treatment would have its greatest effect on subjects in the high anxiety group. This would, however, not influence the test for the main effects for treatment. The high and low anxiety levels were disregarded in the test for significant differences among treatment groups.

There were no significant correlations of the EMG scores with either of the other two anxiety measures or with the EU scale. These findings are similar to those of some previous studies in which there has been little relationship between physiological and other measures of anxiety (Bowman et al., 1977; Monke, 1971; Roberts, 1977).

Sample Size. Small sample size is often cited as a possible reason for lack of significance. This may have been a factor in this study where the total sample size was 24, with eight per treatment group and four per cell. There are two problems caused by small sample sizes. The first is the reduced degrees of freedom which in turn requires a higher F ratio to obtain significance. The second problem caused by a small sample size is the increased likelihood that extreme subject variation on the outcome measure will reduce the mean treatment effects. In this study, for example, the presence of one or two individuals in the relaxation group who were remarkably nonempathic before treatment and remained so despite treatment may have accounted for lack of significance on that outcome measure.

Treatments. Informal researcher observation and reduced EMG biofeedback thresholds indicated that relaxation group subjects became more

relaxed as treatment progressed. It is possible, however, that the effects of global relaxation were not generalized to counselor-client interactions. If such were the case, a more specific technique of anxiety reduction, such as progressive relaxation and systematic desensitization, might have proven more effective in reducing counselor anxiety. This treatment procedure has been effective in previous studies (Miller, 1973; Fry, 1973; Carter & Pappas, 1975).

Another concern is the length of the treatment period. Clients in the relaxation group had a total of approximately 16 hours of treatment. This might not have been long enough to maximize the effects of Autogenic Training, and a longer period might have enhanced treatment. This could be supported by the lack of significant differences among treatment groups on the general anxiety measure, the ASQ. If the relaxation treatment had been effective, a reduction of generalized anxiety as measured by this instrument would have been expected.

There is also the possibility that the information treatment was not an effective placebo. The information contained in the audiotapes might have had a beneficial effect on the subjects' communication of empathy, or might have in some manner reduced the anxiety which they experienced in the counseling situation. For example, some of Rogers' statements might have helped these subjects see themselves as persons who could aid others in becoming more open to experience. Although this appears improbable, it must be mentioned as a possible factor.

There are several difficulties in giving placebo treatments. For one thing, it is difficult to provide a placebo which appears to be a treatment, yet has no treatment effects (Campbell & Stanley, 1963). Another problem is the beneficial effect of participating in research,

regardless of the treatment given (Borg & Gall, 1976). The subjects' belief that they are receiving something that should make them better counselors may be sufficient to produce gains on the outcome measures. Receiving treatments or simply being included in a research study may cause the subject to attend to certain aspects of their performance, thus effecting their rating on the outcome criteria.

A final concern related to the treatments provided in this study was the possible effect of a single treatment-giver. One must ask whether there were any qualities regarding this researcher, who administered all treatments, which nullified any positive effects of treatment. Although this is unlikely, it must be included as a possible consideration.

Sex of Coached Clients. The exclusive use of women as coached clients for the outcome interviews represents a limitation of this study. Although the rationale for this has been discussed, it is possible that the use of another procedure to control for the sex of the coached client would have yielded different results for the EU and JVA scales. While this procedure probably did not contribute to the lack of significant findings, the use of only women coached clients would limit the generalizations which could be made from this study.

Effect of Practicum and Supervision. Another factor which might have contributed to the lack of significant findings was the effect of practicum and supervision. It is possible that the combined effects of instruction during regular supervision and continual exposure to clients during the practicum resulted in increased counselor empathic communication and decreased counselor anxiety. These inadvertent treatments might have had effects on all subjects such that the additional effects of relaxation were minimized. Consequently, significant differences among

groups could not have been measured.

Outcome Measures. Consideration must be given to the appropriateness of the outcome measures used in this study. Each measure will be considered individually.

The EU scale has been used widely and successfully in counselor education research (Hefele & Hurst, 1972). Its use as an outcome measure in this study was further supported in that a variation of Carkhuff's training model was used in teaching specific response skills to most of the subjects. Furthermore, interrater reliability was very high. It seems likely that if the treatments had had the hypothesized effect, this instrument would have been capable of measuring differences.

The JVA scale was chosen for its previously demonstrated ability to discriminate between counselors with high and low levels of verbal anxiety (Russell & Snyder, 1963). The conditions of the previous study were unlike those of the present study, however. Russell and Snyder used coached clients who intentionally produced high and low levels of anxiety by playing the roles of hostile and friendly clients. Using the JVA, these researchers were able to measure differences between treatments and levels of experience. In the present study, the coached clients were not instructed to provoke anxiety in the subjects, but to play a normal client role. Thus, the subjects' verbal anxiety might not have been marked enough to be measured by this measurement.

The correlation between the JVA scale and the ASQ was moderate and significant (.428, p less than .023). This indicated that the JVA scale was measuring some aspect of anxiety which was also measured by the ASQ. This finding lends support to the validity of this instrument. While the JVA identified some level of anxiety and can achieve acceptable

interrater reliability, it did not detect any differences among treatment groups or levels of anxiety.

The ASQ has the highest demonstrated validity and reliability of the three measures used in this study (Krug et al., 1976). Previous studies have indicated that the ASQ is capable of measuring the effects of relaxation treatments (Nicoletti, 1973; Sherman et al., 1974; Sherman & Plummer, 1973). As mentioned previously, the lack of effectiveness of relaxation in this study as measured by this instrument was more likely due to inadequate treatment than to problems with this measure.

Implications for Future Research

The theory which motivated this study--that the reduction of anxiety will lead to improved counselor empathy and verbal performance--has occasional support in previous research and may warrant consideration for continued investigation. The following discussion includes recommendations for further research in this area taken from observations on this study.

One approach to broaden understanding of this area would be to devote further study to examining the effect of anxiety on counselor performance as a precursor to studying the effects of treatments on reducing anxiety. This has been the approach of Russell and Snyder (1963), Roberts (1977), and Bowman and colleagues (Bowman & Roberts, 1978, 1979; Bowman et al., 1977). Some of the areas which may be beneficial for further inquiry are the types of measures which best assess counselor anxiety over the course of counselor preparation, the effect of counselor anxiety on interview behavior, and the characteristics which may be used to identify levels of anxiety. Future researchers would be better able to measure treatment effects with a more solid measurement basis.

A variety of physiological measures have been used in previous studies, including alpha waves (Fontaine, 1976), skin conductance (Monke, 1971), heart rate (Bowman et al., 1977), eyeblink rate (Russell & Snyder, 1963), and skin temperature (Walters, 1978). Recent research has indicated that hormones which are produced as a result of stress and anxiety can be measured in blood and urine samples (Mason, 1975). It may be appropriate to assess idiographic physiological responses to anxiety stimuli. For some individuals, anxiety may be best measured by EMG; for others, heart rate may be the best indicator of anxiety. It seems likely that the most effective procedures for the assessment of physiological anxiety would be to identify the most reactive modality for an individual. The use of such measurements can add greatly to the body of knowledge concerning the sources, effects, and treatment of anxiety. Of course, the goal for counselor educators is the reduction of anxiety which impairs counselor performance.

An increase in sample size will almost always be beneficial in improving precision. However, consideration should be given to working with anxious practicum students using an intensive design. Such a design could include individualized treatment given over a longer period of time, with the subjects themselves serving as controls. Subjects' performance on outcome criteria could be measured at several periods during which they may or may not have received treatment.

While this study focused on empathy and verbal and general anxiety, there are other important counselor variables which could be considered in the measurement of the effects of relaxation on counselor performance. These include the rating of nonverbal counselor behavior, client rating of counselor performance, measurement of change in counselor personality

variables, and, in the case of real clients, the assessment of client behavior such as depth of self-exploration or behavioral change. These variables may assess changes which cannot be adequately measured by those examined in this study.

Conclusion

This study failed to demonstrate that relaxation treatment resulted in increasing counseling practicum students' empathy and decreasing their verbal and general anxiety when compared to information treatment and no treatment. Furthermore, there were no significant differences between the two levels of anxiety on any of the outcome measures. Despite the lack of significance, previous research has given some support to the hypothesis that relaxation treatment improves counselor performance. The recommendations discussed in the preceding section may be beneficial in providing greater precision in future research in this area.

APPENDIX A

APPENDIX A

PRESENTATION TO PRACTICUM GROUPS FOR SOLICITATION OF VOLUNTEERS

I have asked _____ to give me a few minutes
(name of practicum supervisor)

of your time to ask your help in some research I'm doing. I'm interested in studying the relationship between practicum students' physiological anxiety and counseling skills. Specifically, I would like to ask for volunteers who are interested in trying biofeedback equipment. As a result of the measurements which I will take, certain students will be offered the opportunity to participate in a further experience to measure the effectiveness of methods of relaxing and improving counseling skills.

I'd like to say a little about biofeedback. This is a procedure whereby a person is given information on some physiological state of their body--their heart rate, the heat their body gives off, or the amount of activity in a muscle group, for example. The person is given this information in the form of a sound signal, a number, or the reading on a dial. He or she is then able to raise or lower the signal in the desired direction by various techniques. Biofeedback can be used to reduce heart rate, increase the temperature in one part of the body, and indicate when a person is more relaxed. It is remarkable how biofeedback enables people to gain control over some physiological responses which they previously were unable to control.

The specific equipment with which I am working is the electromyograph.

This is a device which measures the energy which is given off by a particular muscle group, in this instance the muscles on the forehead. These muscles are particularly sensitive to tension and nervousness which occur throughout the body.

What I am offering you is an opportunity to be placed on the EMG device for about 15 minutes. The EMG is measured by electrodes which I will place on your forehead. They stick with a little bit of adhesive and there is little discomfort. For the first eight minutes I will record your EMG level; for the last six minutes I will measure your reaction to the videotape of a client. This client will say things which would tend to provoke anxiety in some counselors.

I am asking you to do this for two reasons. Biofeedback is becoming very popular in a wide variety of settings such as education, counseling, psychology, medicine, and rehabilitation. This is an opportunity for you to experience this innovative technique. Secondly, your participation will provide me with data on how anxious counselors are with clients and whether they can learn to relax.

As I mentioned previously, I will obtain data on the EMG reading for all volunteers. From among these, some students will be offered the opportunity to further participate in this study. They will be assigned to one of three groups--one will receive relaxation training incorporating biofeedback, another will receive helpful information regarding issues in counseling and psychology, and the third will not receive any treatment. The effectiveness of these treatments will be measured by ratings taken from participant interviews with clients which will be arranged.

Any ratings taken in this project will not affect participants'

grades in this course. Individuals' data will be confidential and will be known only to me. The time requirement for those who participate in the second aspect of this study will be 1½ to 2 hours per week for four weeks. Most of this can be done on your own time: 30 minutes of this per week will be scheduled with me at your convenience. Those in the group which will receive no treatment will not be required to do anything during this period. During the fifth week, I will ask all participants to complete an anxiety questionnaire and to conduct a 10-minute interview with a client whom I will provide.

APPENDIX B

APPENDIX B

SCRIPT OF VIDEOTAPE OF ROLEPLAYED CLIENT

Statement One

Well, I've had these problems for a long time. I've been talking mostly to my friends but that never seems to help. Things just keep building up and up--sometimes I just want to explode--sometimes I just don't think I can go on any more. I hope you can help me.

Statement Two

I don't know how I got to be this way. Maybe it was my parents. My father would get drunk and come in late and my mother would be lying in the bed and he would ... well, you know. It was pretty horrible--I still have nightmares. How can I get rid of these nightmares?

Statement Three

May be that's part of my problem with other men--you know, wanting to be close to them--wanting to be very close with them. You, you're so kind and understanding, I think you're the one who will be able to help me.

Statement Four

I know a lot of this is really heavy. It's a lot to lay on someone new to this business like you. But can you handle it? I mean, do you know what I feel? I got all this stuff inside me. Do you really think

you can help me? Are my problems too much for someone who is just a student?

Statement Five

I've noticed something about you that's a little, well, different. I mean that's cool with me--people think I'm strange and I'm really okay. But, you know, I just want to check out with you if the way you are causes problems for people. Come on, you know what I mean. You can be straight with me. Why should I care?

Statement Six

This isn't getting me anywhere! I've talked and talked and I've still got these things inside me eating me up. What good can talking do? How can that help me? How can talking help solve my problem? You're supposed to be the counselor ... counsel me! Solve my problems! If you can.

Statement Seven

Things really started getting bad in Viet Nam. I was a grunt--an infantry man. It was my job to kill gooks. I was a good grunt too. Course I was never straight. Every time I went out on a mission I got high on anything I could smoke, snort or shoot up. It helped me do my job better. "If they're gooks, blow 'em away," I used to say. Didn't matter if they were on their side, on our side, or civilian. You can't trust any of them.

Statement Eight

You know, I like having someone to talk to. It kind of takes some of the load off. I like talking to someone who doesn't jump in with

advice or ask dumb questions or tell me to forget it and feel better. I really like talking to you.

Statement Nine

Can we be friends? I hope so. I hope you can come out from behind that counselor mask and really be a friend to me. You know I find you an attractive person--strong, secure, safe to be with. What a shame to let it melt away at the end of the session. Maybe we can get together and talk some more later on. Would that be okay?

Statement Ten

Sometimes I'm not sure you like me or even want to help me. I get this hunch that there's something about me that you don't like. And I think that I know what it is. It kind of pisses me off, knowing that you dislike me for that reason. I don't think it's very nice of you to feel that way. You're supposed to be a caring person. I wonder how many other poor bastards you screwed up because of your attitude.

Statement Eleven

I feel like I've done all the work here. I've talked about some things that were really hard for me--really painful. There you are, not saying a damn thing. Do you even care about me? Do you even know who I am? You're starting to piss me off. I'd like to kick the shit out of you. Give me one good reason why I shouldn't kick the living shit out of you.

APPENDIX C

APPENDIX C

AUTOGENIC PHRASES

I feel very calm and quiet.
I feel very comfortable and quiet.
I am beginning to feel quite relaxed.
I am beginning to feel quite relaxed.
My feet feel heavy and relaxed.
My feet feel heavy and relaxed.
My ankles feel heavy and relaxed.
My ankles feel heavy and relaxed.
My knees feel heavy and relaxed.
My knees feel heavy and relaxed.
My hips feel heavy and relaxed.
My hips feel heavy and relaxed.
My feet, my ankles, my knees, and my hips all feel heavy and relaxed.
My feet, my ankles, my knees, and my hips all feel heavy and relaxed.
My stomach and the whole center portion of my body feel heavy and relaxed.
My stomach and the whole center portion of my body feel heavy and relaxed.
My hands feel heavy and relaxed.
My hands feel heavy and relaxed.
My arms feel heavy and relaxed.
My arms feel heavy and relaxed.
My shoulders feel heavy and relaxed.
My shoulders feel heavy and relaxed.
My hands, my arms, and my shoulders all feel heavy and relaxed.
My hands, my arms, and my shoulders all feel heavy and relaxed.
My neck feels heavy and relaxed.
My neck feels heavy and relaxed.
My jaws feel heavy and relaxed.
My jaws feel heavy and relaxed.
My forehead feels heavy and relaxed.
My forehead feels heavy and relaxed.
My neck, my jaws, and my forehead all feel heavy and relaxed.
My neck, my jaws, and my forehead all feel heavy and relaxed.
My whole body feels heavy and relaxed.
My whole body feels heavy and relaxed.
My breathing is getting deeper and deeper.
My breathing is getting deeper and deeper.
I can feel the sun shining down on me warming the top of my head.
The top of my head feels warm and heavy.
The top of my head feels warm and heavy.
The relaxing warmth flows into my right shoulder.
My right shoulder feels warm and heavy.
My right shoulder feels warm and heavy.

My breathing is getting deeper and deeper.
The relaxing warmth flows down to my right hand.
My right hand feels warm and heavy.
My right hand feels warm and heavy.
The relaxing warmth flows back up to my right arm.
My right arm feels warm and heavy.
My right arm feels warm and heavy.
The relaxing warmth spreads up through my right elbow into my right shoulder.
My right elbow, my right shoulder feel warm and heavy.
My right elbow, my right shoulder feel warm and heavy.
The relaxing warmth flows slowly throughout my whole back.
I feel the warmth relaxing my back.
My back feels warm and heavy.
My back feels warm and heavy.
The relaxing warmth flows up my back and into my neck.
My neck feels warm and heavy.
My neck feels warm and heavy.
The relaxing warmth flows into my left shoulder.
My left shoulder feels warm and heavy.
My left shoulder feels warm and heavy.
My breathing is getting deeper and deeper.
The relaxing warmth flows down to my left hand.
My left hand feels warm and heavy.
My left hand feels warm and heavy.
The relaxing warmth flows back up to my left arm.
My left arm feels warm and heavy.
My left arm feels warm and heavy.
The relaxing warmth spreads up through my left elbow into my left shoulder.
My left elbow, my left shoulder feel warm and heavy.
My left elbow, my left shoulder feel warm and heavy.
The relaxing warmth flows to my heart.
My heart feels warm and easy.
My heart feels warm and easy.
My heartbeat is slow and regular.
My heartbeat is slow and regular.
The relaxing warmth flows down into my stomach.
My stomach feels warm and quiet.
My stomach feels warm and quiet.
My breathing is deeper and deeper.
My breathing is deeper and deeper.
The relaxing warmth flows down into my right thigh.
My right thigh feels warm and heavy.
My right thigh feels warm and heavy.
The relaxing warmth flows down into my right foot.
My right foot feels warm and heavy.
My right foot feels warm and heavy.
The relaxing warmth flows slowly up through my right calf, to my right knee, to my right thigh.
My right leg feels warm and heavy.
My right leg feels warm and heavy.
My breathing is deeper and deeper.
My breathing is deeper and deeper.

The relaxing warmth flows down into my left thigh.
My left thigh feels warm and heavy.
My left thigh feels warm and heavy.
The relaxing warmth flows down into my left foot.
My left foot feels warm and heavy.
My left foot feels warm and heavy.
The relaxing warmth flows slowly up through my left calf, to my left knee, to my left thigh.
My left leg feels warm and heavy.
My left leg feels warm and heavy.
My breathing is deeper and deeper.
My breathing is deeper and deeper.
The relaxing warmth flows up through my abdomen, through my stomach and into my heart.
My heart feels warm and easy.
My heart feels warm and easy.
My heart pumps relaxing warmth throughout my entire body.
My whole body is heavy, warm, relaxed.
My whole body is heavy, warm, relaxed.
I am breathing deeper and deeper.
I am breathing deeper and deeper.
My whole body feels very quiet and very serene.
My whole body feels very comfortable and very relaxed.
My mind is still.
My mind is quiet.
My mind is easy.
I withdraw my thoughts from my surroundings.
Nothing exists around me.
I feel serene, secure, still.
My thoughts are all turned inward.
I am at ease, completely at ease.
Deep within my mind I can visualize and experience myself as relaxed.
I am comfortable and still.
My mind is calm and quiet.
I feel an inward peace.
I feel a new sense of well being.
I am breathing more and more deeply.
I am going to count to myself from ten to one.
As I approach one, I will feel more awake and alert.
When I reach one, I will be fully awake and fully alert.
Ten
Nine
Eight
Seven
I'm beginning to feel more alert. I open my eyes.
Six
Five
I'm beginning to move my arms, my hands, and my neck.
Four
Three
I'm fully alert.
Two
One
Now I am fully alert, fully refreshed.
My time for relaxation is over.

APPENDIX D

APPENDIX D

CONTENTS OF AUDIOTAPES

These audiotapes were transcribed from master tapes which are available from the Voice library, Main Library, Michigan State University, East Lansing, Michigan.

Tape Number One
25 minutes

Bruno Bettelheim discusses the Freudian implications of children's fairy tales.

Tape Number Two
55 minutes

B. F. Skinner discusses the manner in which sophisticated reinforcers shape social behavior and the benefits of applying learning principles in the creation of a behaviorist Utopia.

Tape Number Three
30 minutes

R. D. Laing discusses the differences between perceived and actual relationships among family members.

Tape Number Four
50 minutes

B. F. Skinner and Carl Rogers debate the relative merits of behaviorism and humanism.

Tape Number Five
30 minutes

Carl Rogers discusses the "new person," who is open to awareness and assumes responsibility for his or her hebavior, and is therefore able to achieve self-actualization.

Tape Number Six
50 minutes

Rollo May and B. F. Skinner respond to audience questions regarding authoritarianism and moral choices.

Tape Number Seven
45 minutes

Lawrence Kohlberg discusses his theory of moral development and the need for moral education.

Tape Number Eight
30 minutes

R. D. Laing discusses problems in communication among family members as a cause and consequence of emotional disorders.

APPENDIX E

APPENDIX E

INSTRUCTIONS TO COACHED CLIENTS

The role you are playing is that of a 21-year-old single woman who lives on campus. She is currently an elementary education major but has doubts about how much she enjoys this field and is not performing well in her courses. Her problems are underscored by her friendship with a roommate who has the same major. The roommate attends parties more frequently than the person whom you are portraying but gets much better grades. You are concerned about having made a mistake in majoring in elementary education, yet are apprehensive about having to "go back," that is, having to change majors and perhaps having to attend school for an additional year or more. The woman you are portraying has periods of depression, doubt, and confusion. She is unsure about her career goals and about her choice of a major.

Give a brief (several sentences) description of the person you are role playing (in the first person, of course) at the beginning of the session <u>if the counselor asks for it</u>. Emphasize your feelings more than facts, but include some of the latter. Don't feel pressured into talking by periods of silence. The counselor has responsibility for the direction of the interview. If the silence continues for a 90-second period, you may restate the <u>last</u> feeling you had. For example, you might say, "I'm really confused/depressed/hurt now."

APPENDIX F

APPENDIX F

RELEASE OF INFORMATION FORM

I have been informed of the nature of this study. I give the undersigned researcher the right to use the audiotape of my interview with the coached client and the anxiety questionnaire for rating purposes. I am aware that any personal information obtained during this study is confidential, and no information pertaining to any participant will be shared with any other person.

_____
(Signature of Student)

_____
Richard W. Ober

APPENDIX G

APPENDIX G

JUDGMENTS OF VERBAL ANXIETY

Criteria and Examples for the Detection of Anxiety in Counselor Interview Statements

1. Direct statements of anxiety (the counselor refers to subjective or physiological expression of his own feelings of tension generated in the interview).

   Counselor: You make me feel a little uncomfortable.
   Counselor: This interview is making me a bit tense.
   Counselor: I'm sweating a bit.
   Counselor: Talking about these things makes me feel uncomfortable.
   Counselor: You're pushing me kind of hard. [Also shows Criterion 6.]

2. Avoidance of the interaction between the two by the counselor asking questions or making statements which serve to change the subject or divert the discussion, the questions or statements introducing new material which is irrelevant to the topic being discussed. (Asking a question or introducing a new topic when it is requested or when you would judge that the previous issue is exhausted would not constitute an avoidance of the interaction by the counselor.)

   Client: School is enjoyable for me in general. It's just that my grades are poor.
   Counselor: I would like us to look at your home life for a moment.

   Client: My advisor is making things miserable for me. He never lets me take electives I want, but only things he goes for.
   Counselor: Did you take the academic course or vocational course in high school?

   Client: I feel that this school is like a country club, and people really should come here to work.
   Counselor: Do you live in one of the dorms or in town?

   Client: My roommate is rather a weird guy. He and I don't get along too well.
   Counselor: It is important for you to think about your progress to date.

3. Direct interruptions (the client's verbalizations are interrupted

by the counselor asking a question or making a statement of his own whether it is pertinent or not. The exception to this are statements of simple agreement like "Uh-huh," "Yeah," etc. Simple agreement includes such things as "I see," "Oh, yes," etc., and does not constitute an interruption. However, longer statements of agreement, e.g., "Oh, yes, I see what you mean" would satisfy this criterion. It is not an interruption if the counselor has been interrupted and he continues his statement even though he interrupts the client in the process. The fact that he is continuing his own statement will be indicated on the transcript by two hyphens [--] before his statement and by the fact that usually his statement will begin with a lower-case letter. [A direct interruption is indicated on the transcript by the client's verbalization being followed by a dash, --.])

Client: Fraternity life is ridiculous. There's all this secret stuff that --
Counselor: Tell me something about your relationship with your roommate.

Client: My brother is okay, but there are a lot of areas of differences that bother --
Counselor: How about your relationship with your parents, your mom and dad?

Client: My advisor doesn't really seem to understand me --
Counselor: You feel that he's really not able to see what your problems are.

Client: Well, I can't recall what --
Counselor: You can't recall what you did know.

Client: It seems to be a matter of disorganization. I can't put things togeth --
Counselor: Would you describe this as a feeling of panic?

Client: I get tense. It's a problem of --
Counselor: You say that you feel you tighten up during exams?

4. Impersonal interpretations or premature interpretations which block the client's discussion. ["Interpretation" is defined here as an explanation by the counselor of the meaning or significance of what the client has or has not done, said, or thought.] (These interpretations may be too deep for him to follow, they may be too deep and too threatening, or they may be so impersonal that the client is unable to relate them to his own situation with meaning. The interpretations may be correct or incorrect, but they must be impersonal or premature in order to satisfy this criterion.)

Client: I want to consider my family in a moment, but first I think I ought to add that I find I tend to reject what my advisor says without really thinking about it.
Counselor: It seems as though you're rejecting things your advisor says much like you would with your father.

Client: My dating relationships are rather good. I'm sure that this isn't causing any of my problems.
Counselor: The fact that you deny the importance of this area so quickly indicates that there is something wrong here.

Client: I'm in a lot of extracurricular activities, maybe too many.
Counselor: The need to join a lot of things often shows insecurity on the part of the person.

Client: And there's another area of difficulty too. My father always tries to run my life.
Counselor: You really feel guilty about not going along with what your father suggests even though you feel it's for your own good.

5. Unnecessary reassurance. (Either too much reassurance or an inappropriate attempt is made by the counselor to instill confidence in the client regarding something he has or has not done, said, or thought, or to indicate that there will be a favorable outcome to a problem. There may be too great a use of suggestion, of the prestige of the counselor, of persuasive arguments, or of the citation of parallel cases in this attempt to reassure.)

Counselor: I'm confident you'll do very well when we get these problems straightened out.
Counselor: You shouldn't feel guilty about this. It's normal to have these thoughts.
Counselor: Other people have done things as bad.
Counselor: It's perfectly all right to feel that way. Many people do.
Counselor: I'm sure you'll be able to work these problems out in counseling.

6. Disapproval. (This includes unwitting disapproval wherein the counselor either intentionally or unintentionally indicates that he disapproves of something the client has or has not done, said, or thought. The client's behavior is revealed as being unacceptable in some way to the counselor. Disapproval is shown through content and sometimes voice. Usually content will be the most important except in cases of sarcasm.)

Counselor: That certainly wasn't a very smart thing to do.
Counselor: Let's go to something a little more interesting.
Counselor: That's all very well, but there doesn't seem to be much point to it.
Counselor: Let's get to the heart of the matter.
Counselor: You've really gotten your life mixed up, haven't you?
Counselor: I doubt if this topic will lead to any real solution of your problems.

7. Counselor intellectualizing and not responding to the client's feelings. ["Intellectualizing" is defined here as the intentional or

unintentional analysis of a problem or discussion of it in purely intellectual terms to the neglect or exclusion of feelings or practical considerations.]

Client: My brother and I don't get along well.
Counselor: Relationships with siblings often are disturbed and can lead to problems in other areas, even school.

Client: I get frustrated because I can't remember.
Counselor: This seems to be an example of the power of repression. [Also shows Criterion 4.]

Client: My real trouble is with tension on exams.
Counselor: This is a common problem and its roots typically are found in poor study habits. [Also shows Criterion 4.]

Client: I was really mad at the guy.
Counselor: At certain times one's feelings are disturbed by the behavior of others.

Client: I've even gotten the feeling that some of my profs have it in for me.
Counselor: Things do not go smoothly in your courses.

8. Introjection of references by the counselor to his own life or becoming too personally involved with the client. (There is a loss of objectivity and the counselor may step too far out of his role toward that of a normal friendship with the client. Whether intentionally or unintentionally, the counselor relates his own situation to the client by his verbalizations to too great a degree so that the counseling relationship may become less effective.)

Counselor: That happened to me once too.
Counselor: I worked through a problem like this, and I think you can too.
Counselor: Oh, I had that course from Sutherland.
Counselor: My department has made me take some courses I didn't want.

9. Unfinished sentence. (The counselor's thought is never completed. Another thought might then be expressed, the old thought might be approached in a radically different way, or silence might follow. The exception to this would be unfinished sentences caused by a direct interruption by the client. [Unfinished sentences are represented in the transcripts by three underlining dashes, _ _ _ , whereas an interrupted sentence would be followed by a dash, --. If there is a pause involved also, dots will be added, _ _ _...])

Counselor: You wanted _ _ _
Counselor: You went to live with your dad and you had _ _ _ You lived in New York with him.
Counselor: Oh, you can't recall what you did know or what you _ _ _... It's just hard for you to remember the material.

10. Repeating words or phrases. (This occurs when his own full words or phrases [either parts or full] are repeated by the counselor in close sequence within a sentence. Also included under this criterion are modifications of words or phrases which closely follow the initial verbalization. The exception to this would be repetitions which seem to be the result of direct interruptions by the client. The repeated words do not have to follow each other directly. As the definition states, they can be in close sequence within a sentence. This does not mean that any word repeated within a sentence is a repetition. Most of them will come up right next to each other either as the same form or a modification thereof. Repeated "yes," "no," and "uh-huh" do not constitute repetitions nor do others of the same general nature. Also if a person is interrupted and he repeats after the interruption what he said immediately before, it is not scored as 10. However, anything repeated on the same side of the interruption is a 10.)

Counselor: Have you, have you tried writing these before _ _ _. [Also shows Criterion 9.]
Counselor: You feel, you feel that it would be good for you.
Counselor: Was this common to all courses, common to them?
Counselor: Do quite a few of your instructors depend, depend on subjective exams?
Counselor: You worked for two summers in a, an office.

11. Stuttering. (This occurs when the counselor repeats parts of words or when a word is left unfinished at the end of a sentence or phrase. The exception to this would be a word left unfinished due to a direct interruption by the client, and this is shown on the transcript by, e.g., pret --. If something is a stutter, it is not counted itself as a repeated word, but only as a stutter. However, if there is a word connected with it that is repeated, then both Criteria 10 and 11 are applicable. A stutter is followed by three underlining dashes, _ _ _ , if it is the last word in the sentence. However, it should only be scored as 11 and not 3 also.

Counselor: You ne-, never thought of that before?
Counselor: Oh, I'd say it's pret-, pretty important.
Counselor: He even sta-_ _ _...
Counselor: Now that is unus-_ _ _

12. Blocking. (This occurs when the counselor gropes for the proper expression and indicates hesitation. There is a lack of fluency in his speech.)

Counselor: Well, in addition to this (uh) let me ask (uh) if this has always been a problem?
Counselor: (Uh) I think eventually you might hope to find some of the (uh)...answers.
Counselor: Have you (uh)...tried writing these out ahead of time?

13. Voice quality. (The counselor's intonation reveals anxiety, there is tremulousness, his voice "cracks," and so forth. Voice quality for #13 refers strictly to voice characteristics such as tremulousness,

cracking, etc., and must never be influenced by content.)

14. Anxiety as revealed by some criterion not defined in the list of criteria and examples.

15. Apologizing to the client for a supposed fault in technique, not being of sufficient assistance, etc.

16. Inappropriate laughter. (If this occurs in the middle of a client statement, it should be scored on the next counselor unit number. This criterion is not appropriate when the client has said something amusing or is revealing amusement himself at the same time.)

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