A COMPARATIVE STUDY EVALUATING THE DIFFERENTIAL EFFECTIVENESS OF BEHAVIOR MODIFICATION TREATMENT GROUPS AND GROUPS WITH AN ADDED COMPONENT, RATIONAL EMOTIVE THERAPY

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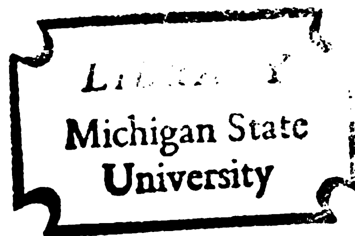

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presented by

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ABSTRACT

A COMPARATIVE STUDY EVALUATING THE DIFFERENTIAL EFFECTIVENESS OF BEHAVIOR MODIFICATION TREATMENT GROUPS AND GROUPS WITH AN ADDED COMPONENT, RATIONAL EMOTIVE THERAPY

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The problem of interest in this research was to determine whether adding cognitive restructuring to behavior modification outpatient treatment groups increases behavioral change. The cognitive restructuring selected was Rational Emotive Therapy and the model of behavioral social group work used was the one developed by Lawrence and Sundel (1972) and further refined by Lawrence (1973).

Thirty-six mental health outpatient clients were randomly selected and randomly assigned to one of three treatment groups. Fourteen clients actually completed treatment. The first treatment condition was behavior modification plus Rational Emotive Therapy, the second behavior modification only, and the third behavior modification plus Rational Emotive Therapy excluding pretests. Clients were measured on pregroup and postgroup baselines of two behaviors, a self-report questionnaire, a series of three vignettes, the Rational Behavior Inventory developed by

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Shorkey and Whiteman (1973), the Collins-Curran scale of rational thinking, and the Curran therapist evaluation form. Clients attended six 2½-hour treatment sessions. Each session was planned in advance according to a prescribed treatment regimen.

The first aspect of the study was concerned with determining whether or not behavioral change was increased in the combined treatment condition. As predicted, behavioral changes were significantly higher in the experimental group, although change occurred in the desired direction in both treatment conditions. The third group lost significance because of a loss in membership caused by external circumstances. The second hypothesis in the study predicted that rational thinking would be increased in the Rational Emotive Therapy plus behavior modification condition over the behavior modification only condition. No significant results were found. The rational Behavior Inventory showed an increase in rational thinking in the experimental group from pretest to posttest, but the difference was not significant.

The final aspect of the study tested for client generalization of behavioral problem-solving methods. Results indicated that in two instances generalization did not occur. In the third case, where generalization did occur, the problematic situation was broader in scope than in the first two instances.

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CHAPTER I

INTRODUCTION

Behavior modification has become one of the major frameworks for social group work practice. Lawrence and Sundel (1972) applied behavior modification principles to social group work with adults. Rose (1967) provided a behavioral group model for working with children. The particular problem of interest in this research is to determine whether adding a cognitive element to the model of social group work developed by Lawrence and Sundel (1972) and further refined by Lawrence (1973) increases behavioral change. Despite increasing interest among behaviorists in cognitive restructuring (Lazarus and Meichenbaum, 1971), this interest has not yet been strongly reflected in the behavioral social group work literature. The specific cognitive component selected for this study is Rational Emotive Therapy developed primarily by Albert Ellis (Ellis and Harper, 1961). The intent of this research is to ascertain whether adding a cognitive dimension to therapeutic group input actually increases behavioral change in clients.

The population of interest in the research is the typical outpatient client in a mental health center or family agency. The aim of the research is to test out behavioral

and cognitive treatment in an actual clinical setting, with all of the resultant hazards that exist away from either an inpatient unit or a laboratory setting.

The research for the project was conducted at Ingham Medical Mental Health Center, which serves a client population over 18 years of age. Actual clients were used as subjects in an attempt to increase the generalizability of the research. Clients at a community mental health center or a family agency differ from university students, often used in laboratory studies, in a number of significant ways. These differences include educational level, socio-economic status, degree of verbal ability, age, life style, and value systems. L'Abate (1969) spoke of the "behavior without its context" (L'Abate, 1969, p. 482). He went on to argue for taking client characteristics into context in evaluating behavioral techniques. The present research is an extension of the experimental method to the clinical setting.

Using clients as subjects creates some problems, however. One problem is that there is a limited client population at any one mental health center or family agency. This becomes particularly problematic when the target of research is groups. Having a large number of groups for comparison becomes nearly impossible unless the researcher uses several settings in one experiment. Using several settings is hampered by financial considerations.

A second problem is that clients come to an agency primarily to solve their problems, not to aid the researcher or to be suitable subjects according to research standards. An example of this type of problem is that subjects may drop out before the research is completed because they have achieved their objectives. There is an essential difference between client status and subject status. The core difference is that the client has a real problem, for which he has sought help.

A third problem with clinical research is that one cannot keep outside factors from influencing outcome. For example, a strike at Oldsmobile would be an influential event in the lives of many clients, over which a researcher would have no control. Perhaps this category of research difficulty is the reason why a number of studies are conducted in closed settings, such as state and Veterans' Administration hospitals. However, the question can be raised: What is the difference between those people in closed institutions and those in open settings?

Despite the difficulties of doing research in outpatient settings, more such research is needed. Behavior modification and cognitive therapy need to be examined in the context of community treatment. Research in a clinical setting can provide valuable information to social group workers. For example, will clients pay for the type of group conducted? Also, will the therapist be able to adhere

to the prescribed treatment regimen? The present research provides an experimental design within a community context aimed at measuring the effect of adding Rational Emotive Therapy to behavioral social group work.

CHAPTER II

A HISTORICAL PERSPECTIVE OF SOCIAL GROUP WORK

Social group work has undergone several major transformations since its beginning between 1900 and 1910. The purpose of early group work was social reform, and most early group workers practiced in settlement houses (Briar, 1972). Examples of early leaders in group work include Canon Barnett and Jane Adams, who were also leaders in the settlement house movement (Wilson and Ryland, 1949). Canon Barnett established the first settlement house, where working men and university men could come together, share ideas, and work for common economic and social goals (Wilson and Ryland, 1949).

Early group work emphasized a situational view of problematic behavior. Wilson (1956) cogently summarized the time at which group work emerged:

> Social Group Work, as one of the methods of the social work profession, was introduced during the first quarter of this century. It emerged at a time when there was a renewed dichotomy within the profession between those social workers who primarily regarded the causes of social problems as within people, in contrast to others who located the causes primarily within the social situation in which people with problems were living (p. 27).

The aim of early group work was to gather together people with similar problems, both to achieve personal growth and to act on the environment.

Following World War I there was a conservative atmosphere in the United States which was reflected in group work practice. Settlement houses became less the locus of group work activity and social reform less important as a purpose. The shift was to leisure time agencies, such as the Y.M.C.A., Y.W.C.A., Boy Scouts, and Girl Scouts. Social participation, democratic processes, personal growth, and direct contact among people of varied backgrounds were emphasized to the same extent.

A key figure in the development of group work as a method of social work was Grace Coyle. Coyle taught at Western Reserve, which offered the first courses in group work in 1923 (Konopka, 1961). Prior to 1946, group work was not clearly aligned with the profession of social work. Group work also had roots in recreation and education. In 1946 Coyle addressed the members of the American Association for the Study of Group Work in Buffalo, New York, on the topic, "On Becoming Professional" (Coyle, 1947). In this speech she argued that there was a common factor between casework, group work, and community organization, and that factor was that all three are based on understanding human relations. During the same conference the American Association for the Study of Group Work voted to affiliate with social work.

Other leaders in the World War II and post-World War II eras were Harleigh B. Trecker, who published Social Group Work in 1949; Gisela Konopka, who wrote Therapeutic Group Work with Children in 1949; and Gertrude Wilson and Gladys Ryland, who wrote Social Group Work Practice, also in 1949.

It is interesting to note Konopka's view of the World War II era and its influence on social group work. She stressed the importance of individualization in the group and contrasted it to her experiences in Nazi Germany. She stated:

> . . . I must say that my first encounter with social group work in 1941 was a revelation. Having just come from a society that seemed to present an inescapable gulf between the individual and the group--which insisted that the individual be sacrificed to the interest of the group--I found the concept of individualization in and through the group exhilarating (Konopka, 1961, p. 9).

This focus on individuals in the group rather than the group solely as a whole has been prevalent in the history of group work. The authors cited thus far developed a body of knowledge that heavily emphasized personal growth and social contribution. Coyle stated:

> We believe that each individual should be encouraged to develop his own powers to the fullest and we believe he should freely devote those powers to the social good by full participation in the society in which he lives (Coyle, 1947, p. 67).

It is interesting that early group work was not particularly identified with a labeled population. Group members were considered citizens rather than clients.

Later on, when the rehabilitative approach was accepted, the term client was most often used. Perhaps what was a gain for the profession was a loss for clients, in that a possible stigma exists with the term client.

The fifties saw a struggle between the proponents of therapeutic group work, such as Robert D. Vinter, and the proponents of a more traditional approach as practiced in the leisure time agencies (Briar, 1972). Those with a more traditional view often characterized group work as being for the healthy and casework as dealing with the client population with problems. According to Papell and Rothman (1966), there are three models of social group work: the social goals model, the remedial model, and the reciprocal model. Thus, even in the sixties and seventies, three elements are preserved in different forms of group work: social action, individual growth, and problem solving. Individual problem solving was the last to be introduced into group work.

The Vinter model, which is consistent with both the behavioral and cognitive aspects used in this research, emphasizes: (1) the individual as the focus of change, (2) specificity of goals, (3) contract, (4) the group as a means to change, (5) stages of group development, and (6) interventions in the social environment (Vinter, 1967).

Since the development of the Vinter model, the application of behavior modification to social group work

has occurred. This writer has noted that advocates of the Vinter model and advocates of behavioral social group work are careful not to see the two approaches as mutually exclusive. One could predict an article in the future by someone presenting a blend of the two approaches as a unified approach.

CHAPTER III

RELEVANT LITERATURE

Behavior Modification

In contrast to much of both the current and historical social group work literature, more than 70 journal articles, mainly by psychologists, have been published since 1960 on the application of behavior modification to groups. Generally, behavior modification techniques are as effective when applied in a group as when applied individually. More than half of the journal articles dealt with operant techniques, which are the concern of this research.

A number of studies have been conducted to demonstrate the effectiveness of positive reinforcement in a group. Abudabbeh, Prandoni, and Jensen (1972) worked with a group of five adolescent boys and demonstrated that chips that could be exchanged for money, candy, or telephone calls could be used to increase different units of verbalization; specifically, statements related to self, feelings, personal problems, and group interactions.

Aiken (1965) and Bachrach, Candland, and Gibson (1961) in separate laboratory studies determined that the frequency of verbalizations can be increased through positive reinforcement. Similarly, Hauserman, Zwerback and Plotkin

(1972) used tokens as reinforcement to show that verbal interactions of adolescents who were state hospital patients could be increased during group therapy.

Reinforcement can also be used to increase attention, cooperation, and persistence (Bedner, Zelhart, Greathouse, and Weinberg, 1970). Thus, specific verbal behaviors, more general behavior patterns both verbal and nonverbal, and the frequency of verbalizations can be modified.

Liberman (1970), in a study in an outpatient mental health center, was able, through prompts and verbal reinforcement, to increase expressions of cohesiveness. Miller and Miller (1970) increased group attendance of welfare families by using concrete reinforcers. Shapiro (1963), using 60 adult women as subjects divided into three-person groups, proved that a type of verbal statement, "disagreement," could be increased more by using contingent rather than noncontingent reinforcement. Similarly, Ullman, Krasner, and Collins (1961) used positive reinforcement with a group of male Veterans' Administration hospital inpatients to increase the frequency of "emotional words."

Oakes (1962) added another dimension to the reinforcement research when he conducted a study using flashes of signal light that indicated the subject's statement showed "psychological insight." By using this technique he was able to increase certain verbalizations.

In addition to reinforcement, the effect of modeling has been studied by several other behavioral researchers. Kramer (1968) used taped models to increase selected responses in study skill groups. Moore and Sipprelle (1971) obtained results indicating that group subjects observing a model receiving reinforcement for specific verbal statements showed a significant increase in the frequency of similar statements. In a like vein, Sarason and Ganzer (1973) tested the effectiveness of using models with groups of delinquent boys. Modeling and imitation resulted in greater short- and long-term changes than did the normal institutional rehabilitation program.

Two other techniques common to behavior modification are behavioral rehearsal and role playing. Hedquist and Weinhold (1970) compared a behavioral rehearsal procedure that included problem specification, role playing, behavioral rehearsal, and *in vivo* practice with a social learning procedure that included teaching problem-solving skills. The desired behavior change was assertiveness, and both groups produced a higher level of assertive behavior. Lomont, Gilner, Spector, and Skinner (1969) also demonstrated that assertion therapy taught by means of role playing increases assertive behavior.

One study by Heckel, Wiggins, and Salzberg (1962) dealt with negative reinforcement. They used an unpleasant auditory stimulus in a psychotherapy group as a negative

reinforcement to decrease the amount of silence in a group. Periods of silence were significantly decreased.

Six studies were concerned with the effect of punishment in groups. Studies by Aikin (1965); Bachrach, Candland, and Gibson (1961); Hastorf (1965); and Tyler and Brown (1967) failed to demonstrate that punishment was effective. However, a unique research effort by Levinson, Ingram, and Azcarate (1967) found that the group itself could be used as punishment. Inmates at a boys' training school could earn their way out of the group by not receiving misconduct reports. The group was aversive in the sense that the boys saw the group as useless; therefore the group was the punisher. The Tyler and Brown (1967) study contrasted "time-out" with punishment and found that "time-out" was shown to decrease misbehavior, whereas verbal reprimands did not.

To summarize the operant behavior modification literature, positive reinforcement, negative reinforcement, shaping, modeling, behavioral rehearsal and role playing, and punishment have been proven to be possible techniques for group treatment. These techniques have been used to influence the frequency and duration of verbal behavior of group members, the type of verbal behavior of group members attending group sessions, group cohesiveness, and group participation.

Two social work models of group treatment were offered in the literature. Sheldon Rose (1967) presented a model for group work with children. The second model is the one provided by Lawrence and Sundel (1972), which incorporates a number of behavioral techniques into a specific sequential group procedure. The Rose (1967) and Lawrence and Sundel (1972) studies are unusual in that they tested a comprehensive behavior approach to group treatment and also suggested utilization of group dynamic principles if they further individual goals. The way these authors incorporated punishment was to teach its limits and present its side effects.

Group Rational Emotive Therapy Literature

Albert Ellis saw Rational Emotive Therapy as being compatible with behavior modification (Ellis, 1973a). The clearest explanation of Rational Emotive Therapy is contained in the popular work by Ellis and Harper, A Guide to Rational Living (1961). Another concise article explaining Rational Emotive Therapy is that by Albert Ellis (1973b) in Psychology Today.

Three Rational Emotive Therapy studies are of particular interest, in that they involve the use of R.E.T. in group situations. A study by Meichenbaum, Gilmore, and Fedoravicius (1971) compared R.E.T. to group desensitization and found both to be equally effective for decreasing anxiety.

Trexler and Karst (1972) compared the effectiveness of R.E.T. and relaxation techniques for the problem of speech anxiety. Their results indicated that R.E.T. was more effective than relaxation. McClellan and Stieper (1973) conducted a pilot study in group marriage counseling using a combination of three techniques--programmed instruction, R.E.T., and psychodrama--with clients of an outpatient Veterans' Administration clinic. They found that group members lessened anxiety and stress about specific problems and increased their positive communication. There was, however, continued concern about sex, money, and child management, but the level of anxiety in these three areas had decreased.

Limited research has been conducted using Rational Emotive Therapy in groups. The present research is an effort to add to the current body of literature on this subject.

CHAPTER IV

METHOD

Hypotheses

The hypotheses for the study are as follows:

Hypothesis 1a: Research--Behavior modification plus Rational Emotive Therapy in outpatient treatment groups significantly increases behavioral change for clients as compared to behavior modification treatment groups alone.

1b: Null--No difference exists in the level of behavioral change between clients in outpatient treatment groups who receive behavior modification plus Rational Emotive Therapy and those who receive behavior modification only.

Hypothesis 2a: Research--Behavior modification plus Rational Emotive Therapy in outpatient treatment groups significantly increases rational thinking by clients as compared to behavior modification treatment groups alone.

2b: Null--No difference exists in the level of rational thinking between clients in outpatient treatment groups who receive behavior modification plus Rational Emotive Therapy and those who receive behavior modification only.

Hypothesis 3a: Research--Clients in behavioral and rational emotive outpatient treatment groups will be able to generalize by applying behavioral problem-solving methods to other situations.

3b: Null--No difference exists on the measures of behavioral problem solving on pretests and posttests for clients in outpatient behavioral and rational emotive treatment groups.

Operational Definitions

Behavior modification refers to the Lawrence and Sundel (1972) model of behavioral group treatment. This model includes:

1. establishment of protreatment norms such as group attendance,
2. enlistment of each group member's participation in aiding other group members in problem specification and skill practice,
3. selection by the therapist of interventions based on a planned curriculum that outlines the sequences of behavior expected of group members,
4. evaluation each week for the purpose of establishing proximate goals for the next week, and
5. inclusion of group maintenance goals in the planning.
6. Concepts taught to group members are:
   a. problem specification,
   b. antecedents, behavior, and consequences,
   c. selective reinforcement, extinction, punishment, time-out, and modeling, and
   d. baselining, which is the counting and recording of the problematic behavior by the client.
7. The format of the sessions is:
   a. sharing of goals for the session,

b. teaching of a particular concept, i.e., problem specification,

c. use of examples to clarify concepts,

d. use of role plays, actual examples, or behavioral rehearsal to make the concepts applicable to the problems of group members,

e. review of behavioral assignments, and

f. giving of new behavioral assignments.

Worker techniques include mini-lectures, demonstrations, illustrations, and feedback throughout group sessions. Handouts are given defining behavioral terms and explaining giving and receiving positive evaluations and criticisms and making requests (Walter, 1973).

Walter (1973) defined the constituent techniques for behavioral groups to clarify the means as:

> 1. Behavior re-enactment: a technique to obtain response display of a target behavior for assessment or modification (via feedback). This technique involves verbal interchanges exemplifying a previous behavioral situation or one similar to a previous situation and may employ either client-client or client-therapist dyads.
> 2. Behavioral skits: A technique to demonstrate behavioral events for illustrating behavioral principles, appropriate v. inappropriate behaviors, or appropriate behaviors (such as in modeling).
> 3. Behavior rehearsal: A technique involving instructions to the client to exhibit in the presence of the group a desired behavior. The purpose of rehearsing a behavior may be to bring that behavior under discriminative control, to shape the form of the behavior, to strengthen an infrequent behavior or all of these.
> 4. Corrective feedback and instructions: A technique combining a discrimination training procedure, using verbal contrast or designations of one or more behaviors, and behavior prescription. Corrective feedback

may occur alone, (the group may be used in providing corrective feedback alone) and instructions may be aimed at in-session responding or extra-session responding or both.
5. Instigation: Prescribing certain behaviors the client is to exhibit in his natural environment (p. 2).

An operational definition of Rational Emotive Therapy is the teaching of 11 irrational assumptions and the A, B, C, and D of R.E.T. These concepts were taught by giving clients printed handouts, using mini-lectures, reinforcing rational behavior, and challenging irrational behavior. The handout follows:

Irrational Assumptions

1. It is a dire necessity for an adult to be loved or approved of by almost everyone for virtually anything he does.
2. One should be thoroughly competent, adequate, and achieving, in all possible respects.
3. Certain people are bad, wicked, or villainous and that they should be severely blamed and punished for their sins.
4. It is terrible, horrible, and catastrophic when things are not going the way one would like them to go.
5. Human unhappiness is externally caused and that people have little or no ability to control their sorrows or rid themselves of their negative feelings.
6. If something is or may be dangerous or fearsome, one should be terribly occupied with or upset about it.
7. It is easier to avoid facing many of life's difficulties and self-responsibilities than to undertake more rewarding forms of self-discipline.
8. The past is all important and that because something once strongly affected one's life, it should definitely do so.
9. People and things should be different from the way they are and that it is catastrophic if perfect solutions to the grim realities of life are not immediately found.

10. Maximum human happiness can be achieved by inertia and inaction or by passively and uncommittedly "enjoying oneself."
11. A person should be rational about almost everything he does or feels.

A B C Theory

A (Situation) -- B (What I tell myself about the situation) -- C (How I act or feel)

(Ellis and Harper, 1961)

The ABCD theory is a method by which a person can evaluate the actual situation, what he tells himself about that situation, which is apt to be the controlling variable, and his own action. The D, which was used in the group but not covered in the handout, stands for dispute. The client is taught to dispute irrational beliefs.

Outpatient treatment groups designate clients who have come for help with a problem and who are not confined to an inpatient unit. The clients are living on their own.

Rational thinking is defined as successfully avoiding irrational assumptions in the process of decision making.

Selection of Subjects

Subjects selected were regular clients at Ingham Medical Mental Health Center, which serves a client population over 18 years of age. Ingham Medical Mental Health Center provides service to the southern portion of Lansing and Ingham County. Clients tend to be in a middle or lower income range, and more females than males are seen for treatment.

The subjects were selected at random from those who called in for an appointment during a three-week interval in October. Those who agreed to participate were then randomly assigned to one of three treatment groups. All but two clients who showed up for the first interview agreed to participate. Of the 36 contacted by telephone, 16 arrived for the first interview. Subjects excluded from the research were active psychotics, substance abusers, and those with marital problems. The rationale for exclusion of active psychotics is that treatment could not easily be confined to a once-a-week group session. Short periods of hospitalization are often utilized by the case manager, and during an acute episode the client may be seen daily. Thus it would be difficult to separate the impact of group treatment from other therapeutic contacts. Substance abusers were ruled out because other means of treatment are available under the administration of the Tri-County Mental Health Board. Persons with marital problems were excluded because it is methodologically unsound to compare dyads in a group to individuals in a group. No attempt was made to select clients who were more highly motivated than other clients. Subjects were the regular clients who came to the center for help, which resulted in heterogeneously composed groups.

Of the 14 subjects who finished the study, the mean age was 36; four were males and ten were females. The educational range was from a high school drop-out through a

person holding a doctorate degree. Several were professionals, two were factory workers, several were clerical workers, one was a government employee, one was unemployed, and several were housewives.

Independent Variable

The independent variable was method of group treatment. Treatment one consisted of behavior modification according to the Lawrence and Sundel (1972) model. Treatment two consisted of behavior modification according to the Lawrence-Sundel model plus the addition of a Rational Emotive Component.

Dependent Variables

One dependent variable used was a multiple baseline. Each subject was asked to baseline has problematic behavior from the time of the initial interview to the first session (usually one week) and again one week after the last group session. To get some measure of control, the client was also asked to baseline a second problematic behavior that was not specifically dealt with in the group sessions.

A second dependent measure was a client self-report instrument developed and used by Lawrence (1973) in his current research (see Appendix A). This instrument provides data on the problems selected for both baselines. In addition, it asks about relationship changes and also asks

the subject to rate the group and different aspects of the group.

Another dependent measure was a set of three vignettes developed by the Lawrence team with questions designed to elicit whether or not a client can apply the concepts taught in the group (see Appendix A).

Two newly developed instruments were used to measure change in rational thinking. The first, the Rational Behavior Inventory, was developed by Shorkey at the University of Texas and Whiteman at Michigan State University (1973) (see Appendix A). This instrument provides both an over-all index of rationality and subscores on 12 rationality factors. The present study used the over-all index. The Rational Behavior Inventory was originally tested on university students who had a mean score of 29.5. Each factor was measured by a Guttman scale with a coefficient of reproducibility of .90 or greater. The total test had a split-half reliability of .73 using the Spearman-Brown formula.

The second instrument was developed by Curran and Collins (1973) (see Appendix A), and was originally used for three groups, which included teachers, students, and helping professionals. This scale is in the process of being further refined. Since both of the measures of rationality are in the developmental stage, results using them are preliminary.

The final dependent measure was the therapist rating scale developed by Curran (1974) (see Appendix A).

Design

Thirty-six subjects were randomly selected and randomly assigned to one of the two treatment conditions or a third group, which was the Rational Emotive Therapy plus behavior modification condition. However, the third group was not pretested, with the exception of baselining the two problems. The purpose of the third group was to check the effect of the pretests.

All three groups were conducted by an experienced social group worker trained to use both the Lawrence and Sundel (1972) model and the Rational Emotive Therapy plus behavior modification model. The therapist conducting the groups had no special interest in one treatment condition over another.

Procedure

Initial Contact

The client contacted the referral secretary by telephone or in person. The secretary then determined the nature of the problem and obtained demographic information from the client. The fee was set and the general agency procedure explained to the client. It was at this point that psychotics, substance abusers, and those with marital problems were screened out. Of those subjects remaining, a table of random numbers was used to randomly select and then randomly assign subjects to one of the groups.

Telephone Contact

The name and telephone number of the potential client were given to the therapist, who called to schedule an interview. At this point the clients were usually told they would be receiving group treatment.

Initial Interview

The therapist spent approximately an hour interviewing clients. He used the following checklist, adapted from one developed by Harry Lawrence (1973). The therapist was free to change the order of the interview, depending on the circumstances the client presented.

Initial Interview Checklist

____I. Introductory amenities

____II. Overview of interview

  ____A. Identify problem

  ____B. Nature of groups

  ____C. Two assessment activities

  ____D. Research component

____III. Nature of group service

  ____A. Time schedule

    ____2nd interview individual--pretests

    ____3rd starts group

    ____6 sessions, 2½ hours each

    ____1 or 2 follow-up sessions

____B. Group sessions

____5-7 people

____training in personal management of problems through group interaction and direction by group leader

____to learn method of problem solving to apply to other problems

____focus only on problem agreed to

____no pressure to discuss history or other personal things

____C. Group rules

____attend all sessions

____no socializing

____written and behavioral assignments

____IV. Verbal statement of client interest

____A. Questions

____B. Interest in continuing

____V. Problem inventory and selection

____A. List with examples

____B. Selection

____VI. Specification

____A. Description and examples

____B. Prebase--frequency, magnitude, and duration

____VII. Baseline plan

____A. Importance of recording

____B. Forms

____C. Demonstrate and practice

____D. Ask C if task is reasonable

____E. Phone (arrange to phone C and give number where you can be reached)

____VIII. Research component

____A. Collecting information about group

____B. Report for others to use method

____C. No deception

____D. Absolute confidentiality, no way to identify people in scientific reports

____IX. Sign consent forms

____X. Pretests

____XI. Overview of next session

____A. More assessment

____B. Written assignments will be discussed

____C. Get C commitment to bring data

____D. 3rd session will start group

____XII. Arrange appointments

____A. Next one

____B. Group meeting times

In the case of those subjects entering the Rational Emotive Therapy plus behavior modification treatment groups, a brief explanation regarding the nature of the groups was added.

Second Interview

A second interview was conducted to administer the pretests to those receiving them.

The Six Group Sessions

During the six sessions the worker taught concepts by defining them and giving handouts with the definitions, gave and reviewed behavioral assignments, used behavioral skits and behavioral re-enactment, used behavioral rehearsal, cited and elicited examples, and reinforced goal-oriented activity by group members. In the behavior modification treatment condition the following procedure was used:

Session 1.--Baselines were reviewed, behavior specification was taught, and new assignments were given. Specification included questions such as who, when, where, and how often.

Session 2.--Assignments were reviewed; the concepts, "antecedents," and "consequences" were taught; and new assignments were given.

Session 3.--Assignments were reviewed; positive reinforcement, punishment, and avoidance behavior were taught as concepts; and new assignments were given.

Session 4.--Assignments were reviewed, ways to increase desired behavior while decreasing undesired behavior (extinction and differential reinforcement) were taught, and new behavioral assignments were given.

Session 5.--Assignments were reviewed, methods of giving and receiving positive evaluations and making requests were taught, and new assignments were given.

Session 6.--Assignments were reviewed, giving and receiving criticism was taught, and group members were asked to keep the final baseline for the posttest session. All concepts taught in the six sessions were reviewed.

In the behavior modification plus Rational Emotive Therapy sessions, all of the above were included session by session. In addition, during the first session the Irrational Assumptions and A, B, C concepts of Rational Emotive Therapy were handed out. This handout was briefly explained and examples were given. In the second session the D (dispute) of Rational Emotive Therapy was explained and examples were given. In all sessions rational thinking and challenging of irrational thinking were reinforced. The use of rational thinking was included in the behavioral assignments.

All group sessions were recorded and the researcher listened to randomly selected interviews to verify that the treatment schedule was followed and that each treatment condition followed as preplanned.

Final Interview

The final interview was held to administer the posttests and collect the final baseline data.

CHAPTER V

RESULTS

The results are organized into seven major sections. The first section contains the results of individual pre- and postgroup baselines of problematic behaviors. The second section provides a comparison of group results of analyses of variance on baseline behaviors when the baseline scores were converted to an interval scale. Following next are the analyses of variance for measures of rational thinking. The fourth section reports analyses of variance for generalization of behavioral problem-solving skills. The next part looks at analyses of variance of client reports and estimates of improvement by the therapist. The second through the fifth sections report analyses of variance on the dependent measures by pair comparisons rather than over-all comparisons. The sixth section presents correlations between selected dependent variables. The final section provides a report of whether or not the therapist followed the prescribed treatment regimen for each group.

Baseline Behaviors

Each client selected one and if possible two problematic behaviors to measure. The first problem measured was

subject to modification in the group and the second one was not subject to modification by group procedures. The client wrote down the baseline information. In some cases the client forgot or wrote a narrative so that it was necessary for the therapist to make an estimate based on a conversation with the client. The individual baselines for group one, which was the group receiving behavior modification, Rational Emotive Therapy pretests, and posttests, follow:

Client one was a 33-year-old female in the process of obtaining a divorce. She was in a middle-income range. Figure 1 shows the behavior that was modified in the group. The goal was to decrease the number of periods of anxiety each week. Figure 2 shows the baselines of the second behavior, which was not dealt with in group sessions. The goal was to decrease the frequency of angry outbursts each week. For this client both negative behaviors decreased.

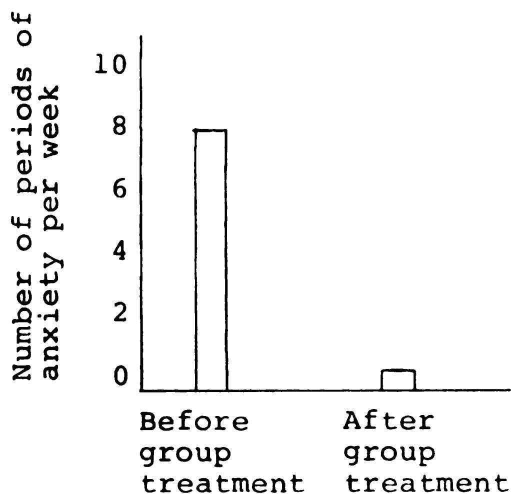


Figure 1.--Number of periods of anxiety per week.

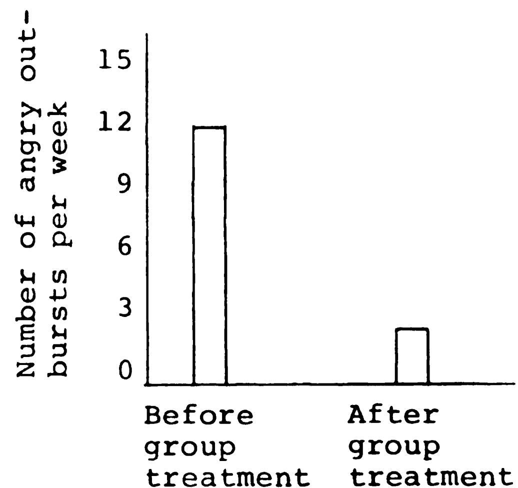


Figure 2.--Number of angry outbursts per week.

Client two was a 32-year-old male who works for the federal government. Figure 3 reports the results of the problematic behavior worked on in the group, which was to decrease the number of times he presented himself as a loser. Figure 4 reports a second goal, which was not worked on in the group. He wanted to increase the number of times he gave behavioral criticism rather than "name-calling" criticism.

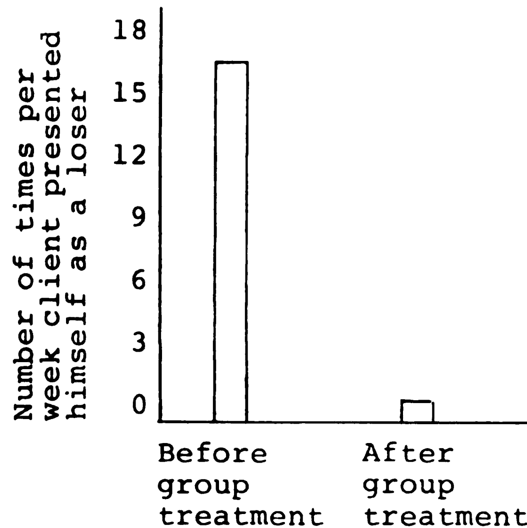


Figure 3.--Number of times per week client presented himself as a loser.

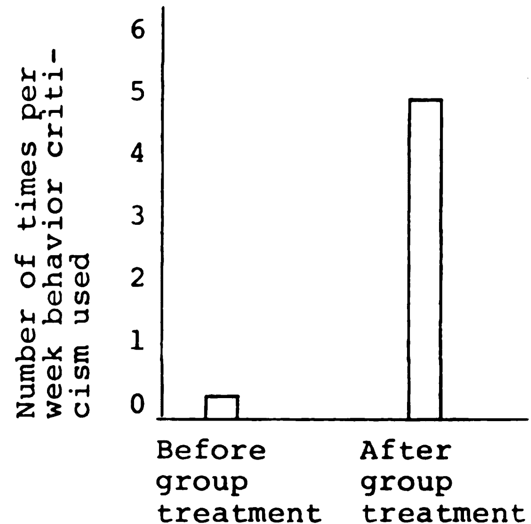


Figure 4.--Number of times per week behavior criticism used.

The client achieved change in the direction desired in both cases.

Client three was a 28-year-old woman who had recently been divorced. She was also employed and was in a middle-income range. Figure 5 shows the behavior worked on in the group, which was to decrease the periods of depression per

week. Figure 6 shows the second problematic behavior, lack of assertiveness. Figure 6 reports an increase in assertive behavior. The client achieved change in the desired direction in both instances.

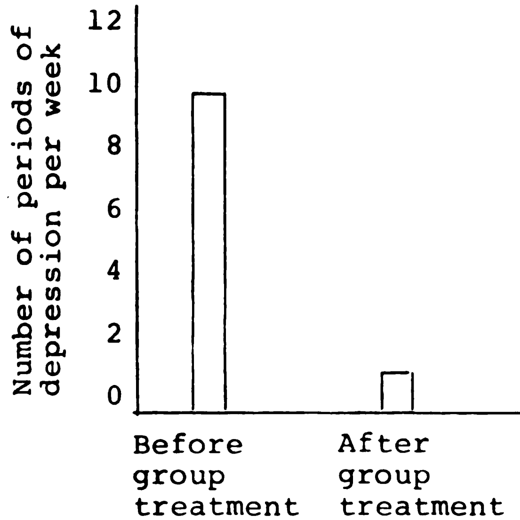


Figure 5.--Number of periods of depression per week.

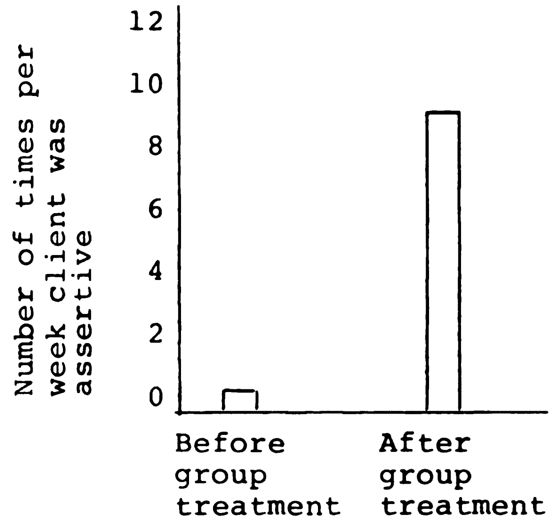


Figure 6.--Number of times per week client was assertive.

Client four was a 25-year-old woman who was trying to increase her assertive behavior. She was not able to select a second behavior. Figure 7 shows her baselines. Change occurred in the desired direction.

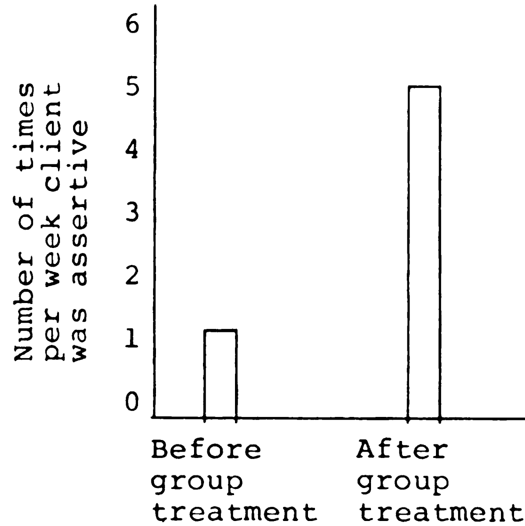


Figure 7.--Number of times per week client was assertive.

Client five was a 27-year-old woman employed as a clerical worker, who wished to increase her assertive responses to her boyfriend. Her second problematic situation was that she wanted to decrease the frequency of dependent actions. Figure 8 shows the behavior worked on in the group and Figure 9 shows the control behavior. Change occurred for both behaviors in the desired direction.

Client six was a 21-year-old female student. Her problem chosen for group treatment was to increase uninterrupted study periods. Her usual pattern was to daydream while she was supposed to be studying. She did not provide a second problematic behavior. Figure 10 gives the results for this client. Change was in the desired direction.

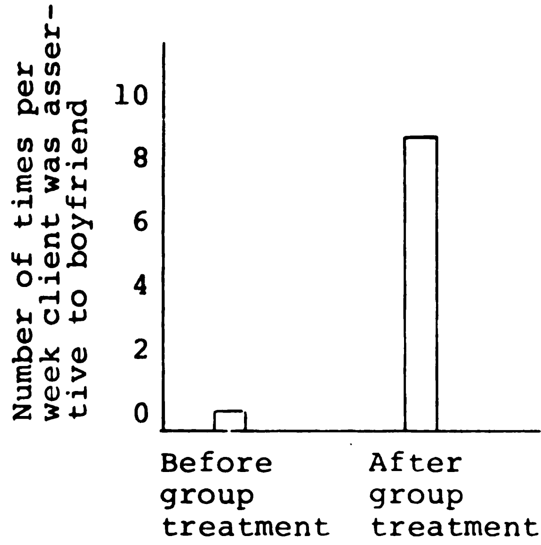


Figure 8.--Number of times per week client was assertive to boyfriend.

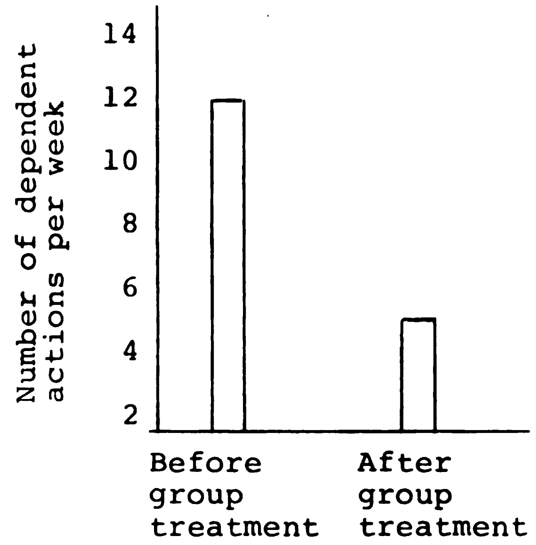


Figure 9.--Number of dependent actions per week.

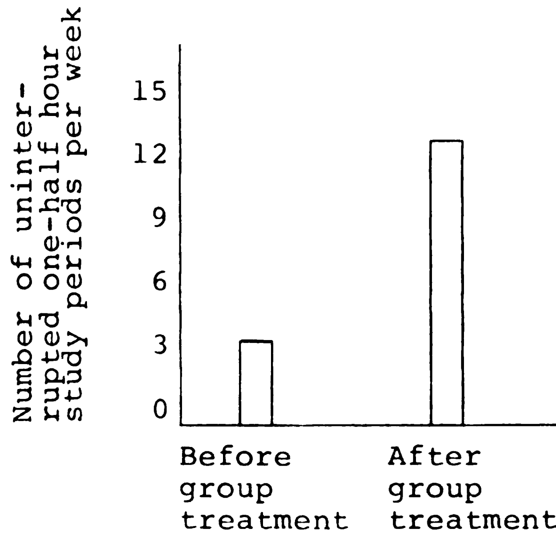


Figure 10.--Number of uninterrupted one-half hour study periods per week.

To summarize, clients in group one all achieved changes in both the target behavior and a second behavior, if one was selected.

Results now are given for group two, which received behavior modification only along with the pretest and posttest.

The seventh client cited was a 57-year-old woman who was separated from her husband. She would have liked a reconciliation, but was extremely passive. The problem she identified was to increase her assertive behavior. She did not specify a second problem. Figure 11 gives the baseline data. She increased her assertive behaviors from one to three.

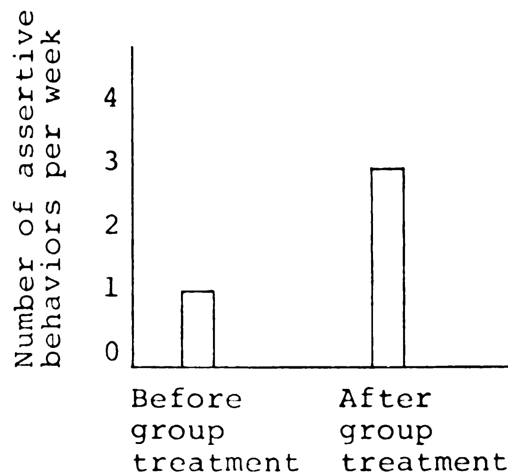


Figure 11.--Number of assertive behaviors per week.

The eighth client was a 54-year-old, overweight housewife who wished to change her eating behavior. Her husband was a professional man with higher than average earnings. A second set of baselines could not be obtained. Figure 12 shows she decreased the snacks she usually had on shopping trips.

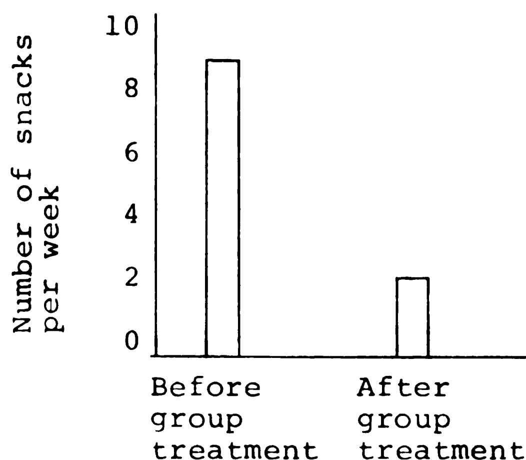


Figure 12.--Number of snacks per week.

The ninth client was a 23-year-old unemployed male who lived with his elderly parents. He had relatively few contacts with women. He had a second goal related to sexuality, but it was a long-range goal that was inappropriate for a second set of baselines. Figure 13 cites approach responses to women. Minimal change occurred for this client.

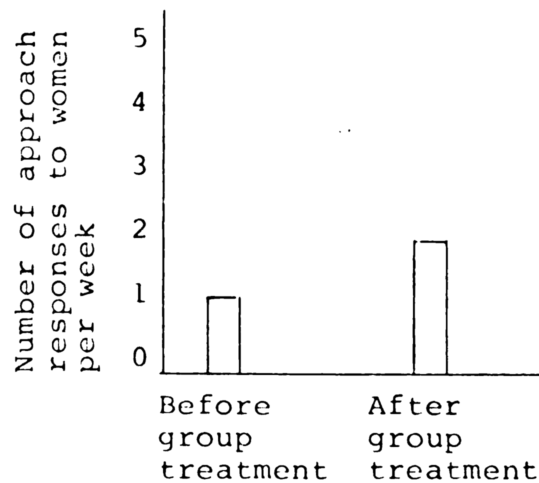
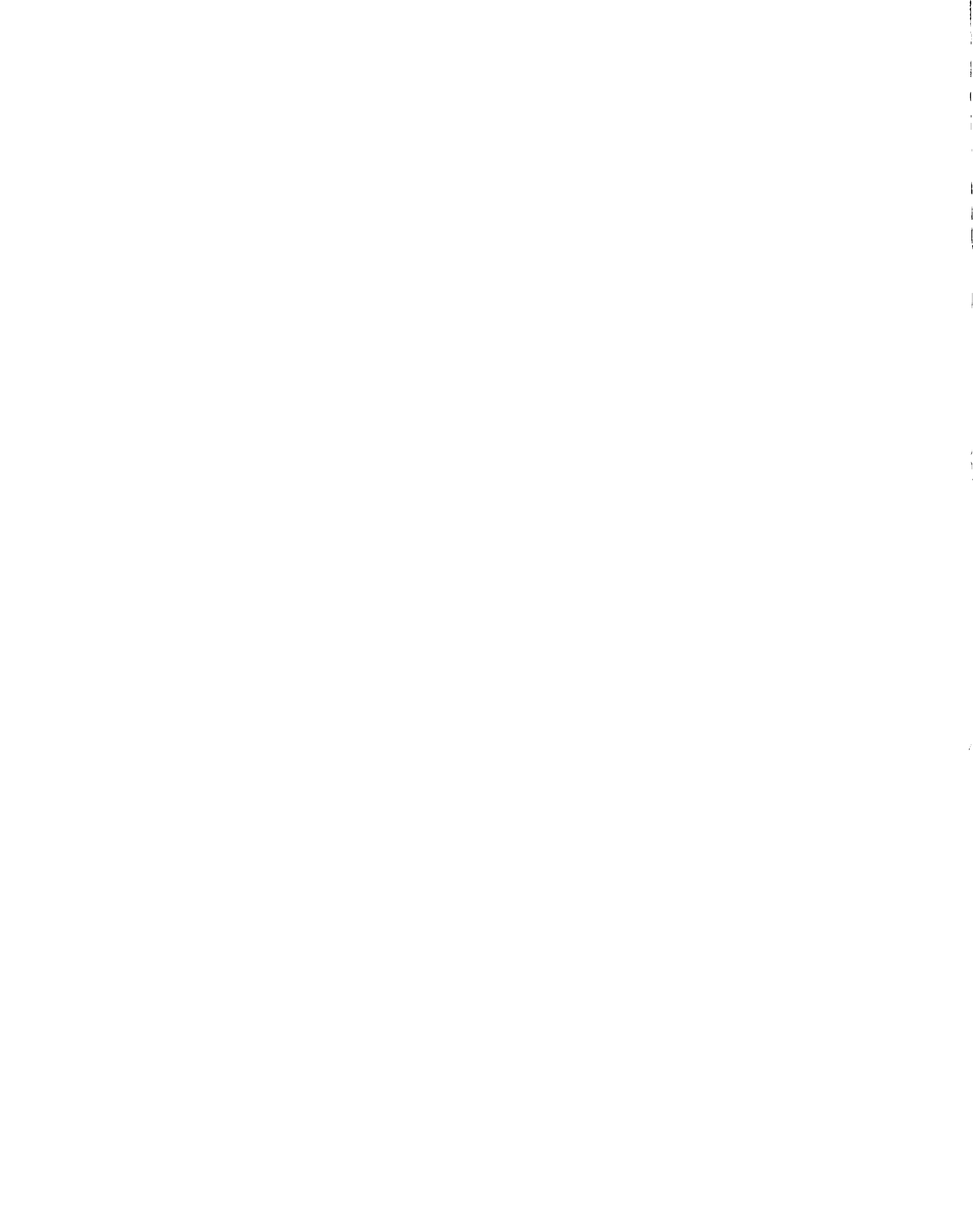


Figure 13.--Number of approach responses to women per week.

A 60-year-old male in a professional occupation was the next client in the behavior modification only treatment condition. Figures 14 and 15 present changes in the two problematic behaviors. Figure 14 shows change in the frequency of anxiety attacks the client had related to his wife. Figure 15 shows the number of family arguments per week about the problem of who would wash the dishes. Both behaviors showed some decrease in the desired direction.

The final client in this group counted depressive episodes and worked on this in the group. He kept track of a second behavior, which had to do with externalizing perceptions and feelings. He wrote a long narrative to the therapist regarding this behavior, which was not dealt with in the group. It was not possible to quantify this behavior



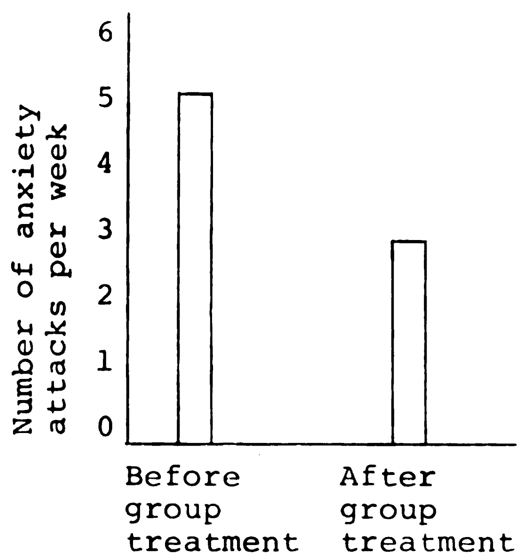


Figure 14.--Number of anxiety attacks per week.

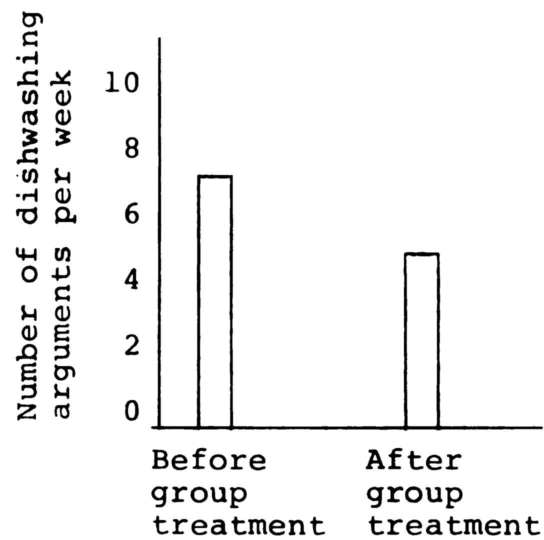


Figure 15.--Number of dish-washing arguments per week.

at the time of group termination. The client was a 33-year-old employed male. Figure 16 shows the decrease in depressive episodes.

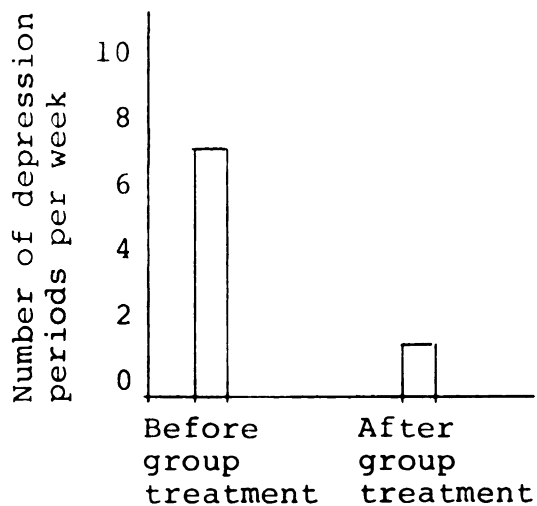


Figure 16.--Number of depression periods per week.

As in group one, clients in group two did report change in the desired direction in all behaviors reported.

The final group received both behavior modification and Rational Emotive Therapy. However, only posttests were given with the exception of baseline material. Only three subjects completed this group. This failure to complete the treatment sequence will be covered in the discussion section.

The twelfth client of this research was a 57-year-old unemployed female. Figures 17 and 18 show the results for this client. Figure 17 indicates a decrease in staying in bed all day. Figure 18 depicts increased verbal assertiveness.

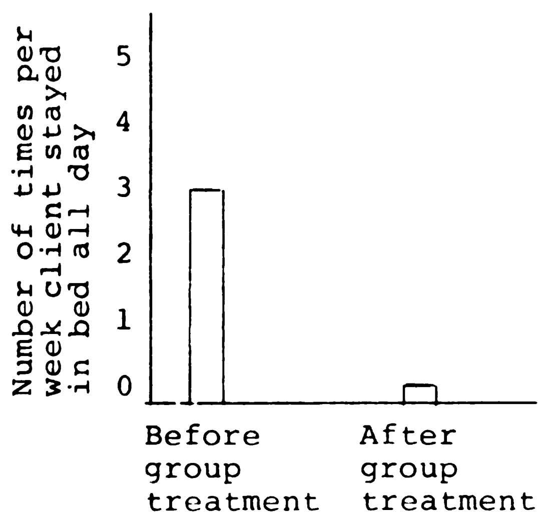


Figure 17.--Number of times per week client stayed in bed all day.

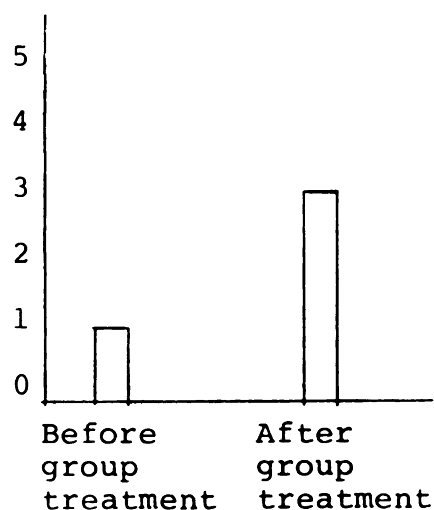


Figure 18.--Number of times per week client was verbally assertive.

The next client was a 26-year-old, recently divorced female who was coping with the effects of the divorce. Figures 19 and 20 show the results for this woman. Her avoidance of people was charted in Figure 19 and her initiation of conversations in Figure 20. Both show a change in the desired direction.

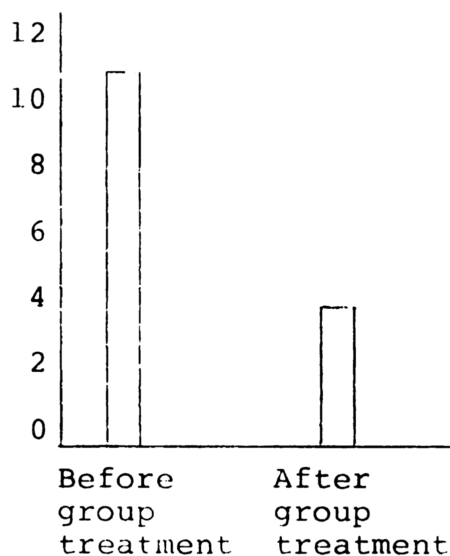


Figure 19.--Number of times per week client avoided people.

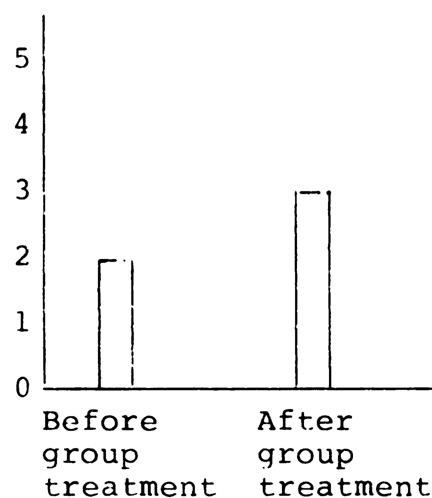


Figure 20.--Number of conversations initiated per week.

The last client reported was a 59-year-old housewife whose major problem was anxiety attacks. She was the wife of a professor. The numbers of pre- and postgroup anxiety attacks are shown in Figure 21. Figure 22 shows the number of times the client judged she was behaving in a rigid manner. No change occurred in rigidity.

A summary of group three indicates that change occurred in all but one instance.

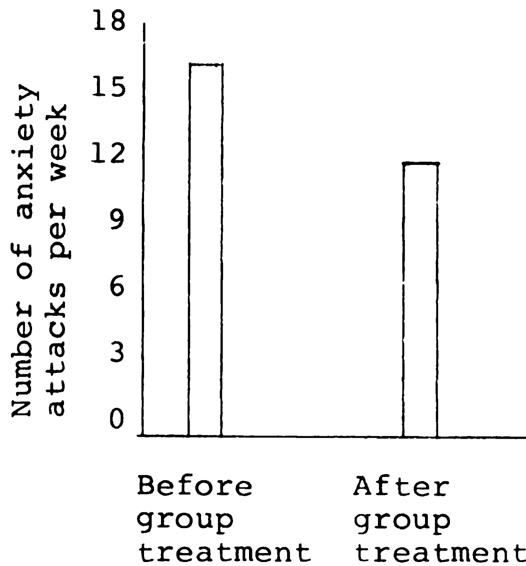


Figure 21.--Number of anxiety attacks per week.

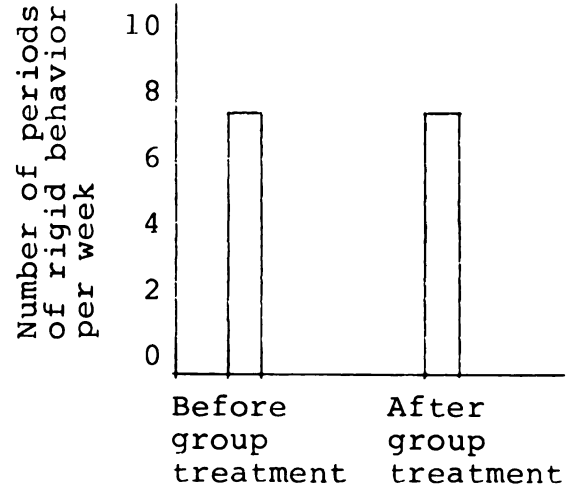


Figure 22.--Number of periods of rigid behavior per week.

Analyses of Variance of Baseline Behaviors

To provide comparisons among subjects and between groups, individual scores were converted to an interval scale similar to the Goal Attainment Scaling (see Appendix B) used in several services at Ingham Medical Mental Health Center. Each client reported a criterion level for desired change. The scale is indicated as follows:

1 = No change

2 = Less than criterion level

3 = Criterion level

4 = Improvement above the criterion level

5 = Elimination or the highest level of achievement

Each client was given a rating based on his stated criterion level. Table 1 summarizes the analyses of variance

between the three treatment conditions. The significance level was set at .05.

Table 1.--Analyses of variance of baseline behaviors.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 4.50	(b) 2.80	1,9	8.55*
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretest(c).	(a) 4.50	(c) 3.33	1,7	3.09
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretest(c).	(b) 2.80	(c) 3.30	1,6	.42

*Significant at .05 level.

The difference that was significant was between the behavior modification plus Rational Emotive Therapy condition and the behavior modification only condition. The other two comparisons were not significant at the .05 level. The research hypothesis was supported by the first comparison and the null hypothesis by the third comparison.

Analyses of Variance of Measures of Rational Thinking

It was predicted that clients in the rational therapy treatment condition would receive a more rational score than

those who were not in that treatment condition. In order to determine this, F ratios were computed for the pre- and posttests for the behavior modification plus Rational Emotive Therapy condition and also for the behavior modification only condition. A posttest comparison was computed to measure differences between groups. Table 2 shows the F score for pretest-posttest differences on the Rational Behavior Inventory for the behavior modification plus Rational Emotive Therapy condition and also for the behavior modification only condition. A higher mean indicates a more rational score.

Table 2.--Analyses of variance for the Rational Behavior Inventory.

Comparison	Means		Degrees of Freedom	F
	(a)	(b)		
Prebehavior modification R.E.T.(a) with postbehavior modification plus R.E.T.(b)	20.67	23.50	1,10	2.97
	(c)	(d)		
Prebehavior modification(c) with postbehavior modification(d)	25.20	25.40	1,8	.004

The F scores were not significant. Table 3 provides the posttest score comparisons between all three groups. The F scores were not significant. The posttest scores are less meaningful because of the pretest differences between groups. An F for gain scores was computed for

groups (a) and (b). An F of .02 was obtained and was not significant at an .05 level.

Table 3.--Posttest analyses of variance between groups on the Rational Behavior Inventory.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 23.50	(b) 25.40	1,9	4.66
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretest(c).	(a) 23.50	(c) 28.30	1,7	.621
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretest(c).	(b) 25.40	(c) 28.30	1,6	2.33

The second test used to measure rational thinking was that developed by Collins and Curran (1973). Tables 4 and 5 are the analyses of variance for the Collins and Curran scale. Table 4 compares pre- and posttests for the two treatment conditions. A lower score indicates more rational thinking. Neither F was significant. Posttests were compared in Table 5. No significance was found. A gain score was computed with an F of .00, which was not significant.

Table 4.--Comparison on the Collins-Curran scale--analyses of variance.

Comparison	Means		Degrees of Freedom	F
Prebehavior modification plus R.E.T.(a) with postbehavior modification plus R.E.T.(b)	(a) 49.50	(b) 45.50	1,10	1.06
Prebehavior modification(c) with postbehavior modification(d).	(c) 44.40	(d) 43.80	1,8	.02

Table 5.--Posttest comparisons between groups on the Collins-Curran scale.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 45.50	(b) 43.80	1,9	.09
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretest(c).	(a) 45.50	(c) 45.33	1,7	.01
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretest(c).	(b) 43.80	(c) 45.33	1,6	.10

To summarize, neither the Rational Behavior Inventory nor the Collins-Curran scales of rational thinking showed significance on any of the measures reported. Thus the second hypothesis was not supported. Those subjects receiving Rational Emotive Therapy did not respond more rationally on the rational thinking scales.

Analyses of Variance for Generalization of Behavioral Problem Solving

One of the research questions raised was whether or not clients could extend their knowledge of behavior modification problem-solving methods to new situations. This was tested in a series of three vignettes developed by Lawrence (1973) dealing with different types of problem situations. Each vignette has a range of possible scores from 0 to 7. Vignette 1 deals with a marital problem. Vignettes 2 and 3 depict child-related problems. Table 6 provides a comparison of pre- and posttests for all three vignettes for the behavior modification plus Rational Emotive Therapy and treatment and the behavior modification only treatment. None of the F ratios for the vignettes produced significant scores at .05, but the pre-post on Vignette 3 of the R.E.T. group was one of the higher F scores of this research.

Table 6.--Analyses of variance of pre- and posttest comparisons on generalization vignettes.

Comparison	Means		Degrees of Freedom	F
	Pre	Post		
Prebehavior modification plus R.E.T. with postbehavior modification plus R.E.T. on Vignette 1	3.17	4.67	1,10	1.52
Prebehavior modification with postbehavior modification on Vignette 1	2.60	4.60	1,8	2.32
Prebehavior modification plus R.E.T. with post behavior modification plus R.E.T. on Vignette 2	4.50	4.83	1,10	.53
Prebehavior modification with postbehavior modification on Vignette 2	3.20	3.60	1,8	.084
Prebehavior modification plus R.E.T. with postbehavior modification plus R.E.T. on Vignette 3	1.33	2.50	1,10	4.62
Prebehavior modification with postbehavior modification on Vignette 3	4.20	5.00	1,8	.31

To test the generalization hypothesis between groups, analyses of variance were employed. Table 7 summarizes the generalization findings for Vignette 1. A level of .05 was used. No significance was found.

Table 8 charts the same information for Vignette 2. None of the measures proved significant at the .05 level.

Table 7.--Analyses of variance posttest group comparisons on generalization Vignette 1.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 4.67	(b) 4.60	1,9	.00
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretest(c).	(a) 4.67	(c) 4.33	1,7	.03
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretests(c).	(b) 4.60	(c) 4.33	1,6	1.84

Table 8.--Analyses of variance posttest group comparisons on generalization Vignette 2.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 4.83	(b) 3.60	1,9	.62
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretest(c).	(a) 4.83	(c) 6.00	1,7	.51
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretests(c).	(b) 3.60	(c) 6.00	1,6	1.84

Table 9 summarizes the generalization findings for Vignette 3.

Table 9.--Analyses of variance of posttest group comparisons on generalization Vignette 3.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 2.50	(b) 5.00	1,9	8.77*
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretest(c).	(a) 2.50	(c) 2.67	1,7	.05
Behavior modification only with pretests(b) and behavior modification plus R.E.T. without pretests(c).	(b) 5.00	(c) 2.67	1,6	3.28

*Significant at .05 level.

Results indicate that the F of 8.77, which compares the behavior modification plus R.E.T. with behavior modification only, was significant at the .05 level. Gain scores were computed for all three vignettes; none was significant at .05.

A summary of the vignettes as a test of generalization indicates only one instance of significance, which was on Vignette 3. The three vignettes were combined into an index comparing pre- and posttest scores. A t test was

computed for both treatment conditions. In the combined treatment the difference was significant at .01 and in the behavior modification group the difference was significant at .025.

Analyses of Variance of Client Reports and Therapist's Estimate of Improvement

Clients had a choice of ratings from 0-7 on a continuum from very much worse to very much better. Mean scores are reported in Table 10.

Table 10.--Mean scores on client problem checklist.

Treatment	Mean
Group 1--Both treatment conditions, pretests and posttests	5.67
Group 2--Behavior modification only, pretests and posttests	5.40
Group 3--Both treatment conditions, no pretests	6.00

The mean scores indicate a high level of change in the clients' estimate in all three groups

Table 11 shows F scores for all three groups. None of the F ratios was significant.

A second part of the Lawrence (1973) evaluation was a listing of the number of relationships that could improve during the duration of group treatment. It was possible to

Table 11.--Analyses of variance of clients' problem checklists.

Comparison	Means		Degrees of Freedom	F
Both treatments(a) and behavior modification only(b).	(a) 5.67	(b) 5.40	1,9	.87
Behavior modifidation only(b) with both treatments (no pretests)(c).	(b) 5.40	(c) 6.00	1,6	2.57
Both treatments with both treatments but no pretest.	(a) 5.67	(c) 6.00	1,7	.89

indicate up to 12 relationships had improved. For example, a client indicated he was getting along better with his neighbors, co-workers, and wife. The example would give a score of three. Analyses of variance did not indicate any significant differences. Results are shown in Appendix B. It is interesting to note that the mean for all three groups is 5.1. This tends to suggest some generalization of methods learned in the groups to multiple relationships.

A third part of the Lawrence (1973) evaluation asked clients whether or not they needed help on their selected problem or another problem at the conclusion of the group. No significance was found; results are reported in Appendix B.

The last section of the Lawrence (1973) instrument asked a series of questions about the source of help. No significance was found. Appendix B includes these data.

In general, cleints reported favorably on the self-report measures. However, no distinctions could be made between treatment conditions.

The final part of this section concerns an evaluation by the therapist on client change for all three groups. Results are cited in Table 12.

Table 12.--Curran therapist rating scale analyses of variance.

Comparison	Means		Degrees of Freedom	F
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both received pre- and posttests.	(a) 312.00	(b) 226.40	1,9	12.43*
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretests(c).	(a) 312.00	(c) 230.33	1,7	3.57
Behavior modification only with pretests(b) and behavior modification plus R.E.T. without pretests(c).	(b) 226.40	(c) 230.33	1,6	.00

*Significant at .05 level.

A significant difference at .05 was found between the two treatment conditions. To an extent this supports all three hypotheses. However, the group that was not pretested and that received both treatments did not show a difference between itself and the behavior modification only group. That finding does not support the hypotheses.

Correlations of Dependent Variables

Table 13 presents correlations on relevant dependent variables.

Table 13.--Correlations.

Instruments	Correlation
Collins and Curran and Rational Behavior Inventory pretest	-.63
Collins and Curran and Rational Behavior Inventory posttest	-.46
Vignette 1 and Vignette 2 (posttest)	.55
Vignette 1 and Vignette 3 (posttest)	.03
Vignette 2 and Vignette 3 (posttest)	-.39

It should be noted that the Collins and Curran and the Rational Behavior Inventory correlate in a negative relationship. This is appropriate in that one was scored positively and one negatively. Although the correlations are not extremely strong, there is some evidence of a relationship. The other relationship above .5 is that between Vignette 1 and Vignette 2.

Validation of Therapist Interventions

To assess whether or not the group worker followed the prescribed treatment regimens, a neutral evaluator was

employed. The person selected was a graduate student in communications who was trained to distinguish between behavior modification and Rational Emotive Therapy. Each session of a group was audio-taped. From these audio-tapes 33 randomly selected two-minute intervals were rated. The evaluator did not know which treatment condition she was rating. She rated a segment either as R.E.T., Behavior Modification, or neutral. In no case was the therapist rated as doing an inappropriate treatment. He was following the specified regimen in 15 instances. In 18 instances clients were talking and it was not possible to determine the treatment from the random time.

Summary of Results

Although behavioral change occurred in all three groups, there was a significant difference between the behavior modification plus R.E.T. and the behavior modification only groups. The combined treatment produced a significantly higher level of change, as measured on an interval scale. Thus the hypothesis that behavioral change is increased by adding a cognitive component was supported. The Curran (1974) therapist rating scale confirmed this finding.

Two measures were used to determine the effects of group treatment on rational thinking--the Rational Behavior Inventory (Whiteman and Shorkey, 1973) and the Collins-Curran Inventory (1973). No significant results were found;

however, the Rational Behavior Inventory showed an increase in rational thinking but not at a significant level.

Three vignettes with questionnaires were used as tests of generalization. Significant change was found between the behavior modification plus R.E.T. treatment and behavior modification only condition on Vignette 3. The behavior modification only group scored higher. The other two vignettes resulted in no significant differences between treatment conditions.

A questionnaire (Lawrence, 1973) was administered to clients following treatment. Included in this measure were a client report on improvement, a count of the number of relationships that had improved, a count of whether the client needed help with his problem or another problem, and a report on the source of help. These measures indicated changes occurred in all three groups but there was no difference between groups.

The final measure was the use of an independent observer to evaluate whether or not the therapist was administering the prescribed treatment. In all instances he was adhering to the treatment regimen.

CHAPTER VI

DISCUSSION

The discussion is divided into four major sections. The first relates this particular study to research problems of clinical settings. The second discusses specific results and the implications for each of the three hypotheses. Section three cites some effects that participation in the research project had on the clients. The final section contains suggestions for future research, both clinical and laboratory.

Research in Clinical Settings

Gordon Paul (1969) listed the four domains of clinical research as clients, therapists, time, and criteria. By criteria he meant treatment effectiveness. It is in the client domain that particular problems arise for group research. Sample size is the first client-related problem considered. As noted earlier, group outpatient studies are less frequent than either laboratory or inpatient studies. Of the operant studies reviewed in Chapter III, only seven dealt with outpatient groups. Of the seven, four compared two groups, two examined only one group, and the Lawrence and Sundel (1972) study examined differences in three groups.

It would be ideal statistically to be able to have enough groups in each treatment condition so that group means rather than individual scores could be used for a part of the analysis. It would be preferable to have six or seven groups in each treatment condition. However, obtaining such a large number of clients is not possible nor feasible without access to a research grant. The present study attempted to provide the largest sample size possible within the bounds of the agency in which the research took place.

A second client domain problem previously noted was that clients do not come to an agency as research subjects but rather for help with a concrete problem. This writer participated as a group worker in the current Lawrence research (Lawrence, 1973). An incident occurred that illustrates the type of frustration a clinical researcher can encounter. A client was trying to increase his verbal communications with women in the hope that he could establish a meaningful relationship with a woman in the near future. Eight sessions were slated for the group, but the client eloped and left the state between the fifth and sixth sessions. He sent this writer a letter stating he was delighted with the group and his goal achievement. However, he was not available for posttests and thus had limited value as a research subject.

In this study the domain of the therapist presented no problems, in that the same therapist had the expertise to conduct all three groups.

Time presented a significant problem. Two subjects were lost because of a combination of extremely inclement weather and time. The third group, which received both behavior modification and Rational Emotive Therapy but no pretest, lost the two members, leaving only three in the group. Heavy snowstorms caused the Mental Health Board to close the center on the dates scheduled for the last two sessions of this particular group. The group sessions were rescheduled, but by the time the group met again the two clients were not available. Because of a difficult pregnancy one woman was too ill to return for treatment. During the same period, the second client had been called to another state to be with a seriously ill family member. The loss of these subjects plus the time lapse caused by the rescheduling make the results for this third group much less meaningful. Because of the small n remaining, the effect of the pretest was not determined.

One problem occurred in measuring treatment effectiveness. As noted earlier, in a few instances clients did not baseline. The problem arose when the client did not return the requested frequency counts but rather brought back a narrative which, in the client's eyes, indicated growth or self-discovery. The baseline figure was then obtained by the therapist after a discussion with the client regarding the frequency of the problematic behavior. He made as accurate an estimate as possible and asked the client

to verify his figure. Because the self-report method of baselining is viewed with skepticism by some researchers, behaviorists are making increased use of trained observers for baselining. It is probable that a trained observer observing the client in his actual life situation could have provided more precise data, but such observation presents several complications for clinical researchers. First, no set of observers is readily available to be with clients outside of treatment groups. Second, such an observer might be neither desired nor tolerated by at least a portion of the clients. (This could be particularly true if they had watched the 1973 television special series that followed the life of an American family. There have been some indications that the ubiquitous presence of the observer might have affected the Loud family, even to the extent of facilitating the dissolution of the family unit.) In addition, if someone else were to baseline, the therapeutic value of baselining would be lost for the client. Patterson and Gullion (1967) indicated that sometimes the process of client baselining brings behavior change in the desired direction. The clients in this research found the baselining and other required recording both revealing and meaningful.

A second problem with baselining was controlled in this study. From a research point of view it would be ideal to have a weekly frequency count of the occurrence of the problematic behavior. However, because behavioral assignments

were also used, it was felt that clients might become overwhelmed with paper work. Thus, record keeping was kept within reasonable limits for the clients and baselines were only obtained prior to the group and subsequent to the group.

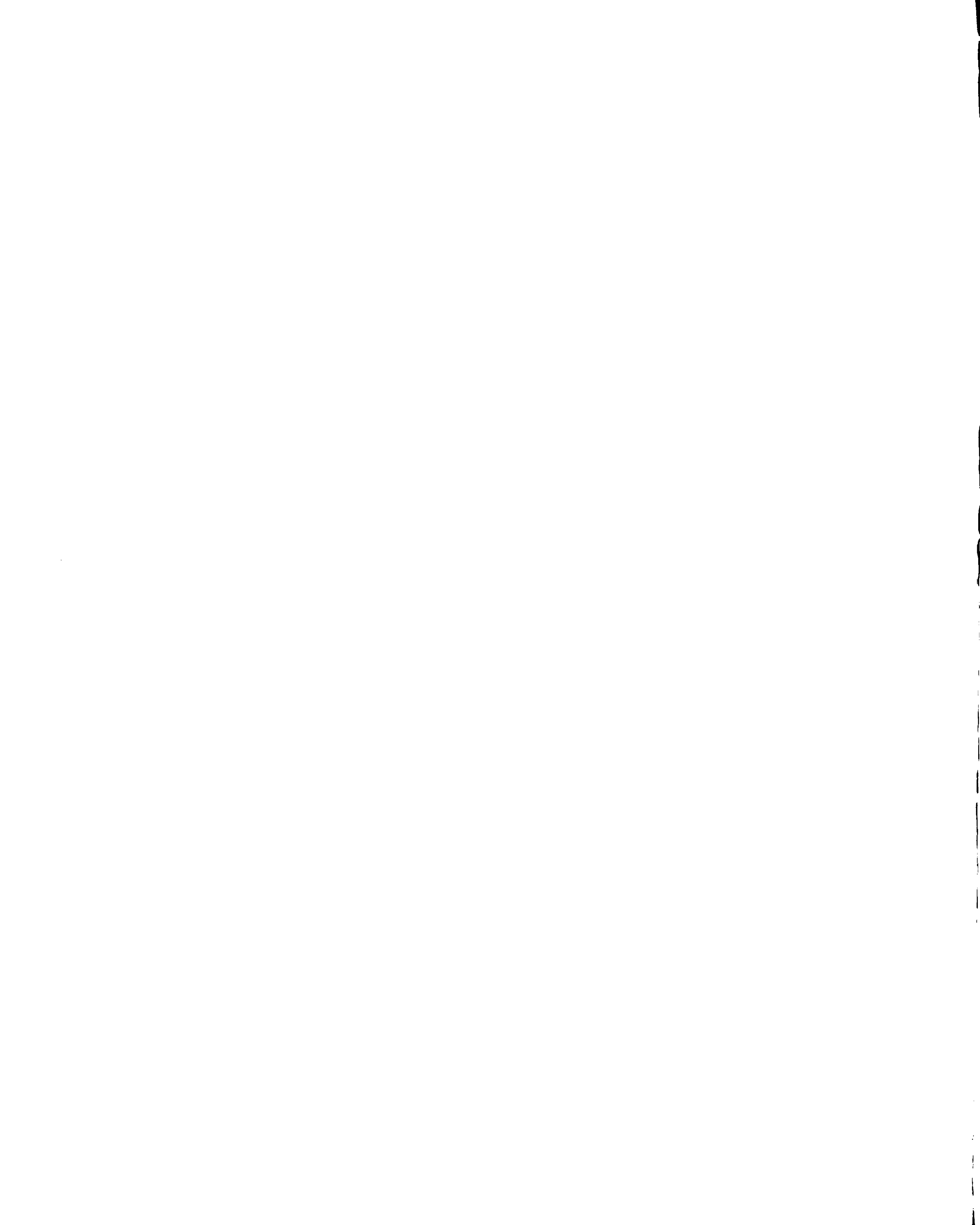
Discussion of and Implications of the Results

The individual baselines (Figures 1 through 22) showed impressive behavioral changes for a majority of the clients. Changed problematic behaviors included: reducing anxiety attacks and depressive episodes, reducing impulsive or angry outbursts, decreasing presentation of self as a loser, increasing appropriate criticisms, increasing assertive behavior, decreasing dependency, increasing studying behavior, decreasing snacking behavior, decreasing arguments, increasing out-of-bed time, decreasing avoidance of people, and increasing verbal contacts. These changes occurred in all three treatment conditions. The findings indicate that the two treatment modalities are appropriate for a wide range of problematic behaviors. The client self-report scores provide verification for this finding. It is interesting to note that change occurred almost as frequently on the baselines of the second problem as on the baselines of the target problem. Therefore, the use of the second problem as a control was not effective. It seems likely that clients generalized the problem-solving methods presented in group sessions to the second problem. Wolf

and Risley (1971) pointed out the problem of a second baseline:

> One possibility is that there will be induction from one baseline to the next. That is, the change that a treatment condition seems to produce in the treated behavior may also appear in the second baseline that is intended to act as a control. The fact that change occurs across both behaviors diminishes the usefulness of the second baseline as a control (pp. 316-317).

In the current study it seems quite probable that there was generalization of learning between behaviors. In some cases the second baseline selected by the client was actually worked on as a target problem for someone else in the group. For example, client four worked to increase assertiveness while assertiveness was the control behavior for client three. Under these conditions it would be expected that change would occur in the second problem baselined by client three. A second reason for expecting change in the second problem is that in some instances both problems a client cited were interrelated in some way. For example, one client worked on getting out of bed and her second problem was increasing verbal assertiveness. Getting out of bed increased the probability that she would be more likely to be in contact with people, thus increasing the opportunities for verbal assertiveness. Keller (1963) noted that generalization is more apt to occur between two stimuli when they are physically similar to each other if all other factors are equal. To avoid generalization effects, it would have been preferable to elicit a second problem quite different



in as many respects as possible from the first problem. However, as previously noted, clients come with actual problems, not problems specifically tailored for research.

The analysis of variance using an interval scale for the baselined behaviors did show a significant difference between the behavior modification only and behavior modification plus Rational Emotive Therapy treatment conditions. The group receiving the combined treatment produced significantly greater changes than those receiving behavior modification alone. The major hypothesis of the study is supported by this finding. The finding is further substantiated by the significant differences found between the groups on the Curran therapist rating scale. The fact that the third group, which also received the combined treatment, did not fare as well is not seen as particularly challenging to the findings because the third group lost two-fifths of its membership. It appears from this research that adding a cognitive component to behavior modification does increase its potency. An implication of this finding is that clients for whom there was an urgency for rapid behavioral change could be included in a behavior modification and Rational Emotive Therapy group without any loss of efficiency compared to behavior modification alone. Clients who need to change rapidly in order to protect themselves or someone else represent a significant portion of outpatient clinic populations. Examples include child-abusers, people with behavior

that is jeopardizing their continued employment, and those who are seriously violating the law.

The second hypothesis in this study predicted that clients in the combined therapy treatment condition would receive a more rational score than those who were not in that treatment condition. Although the results did not affirm this hypothesis at an .05 level of significance, the results on the Rational Behavior Inventory gave an F score of 4.66 between the two treatment conditions. The high F in postscores is accounted for by pretest differences, as indicated in Table 2. The Rational Behavior Inventory used a cut-off point on each item, which determined whether or not the score was judged to be rational. It was noted in this research that many subjects moved one step on the scale from the pretest to the posttest. Such movement did not give them a rational score but it did indicate movement toward rationality.

The third hypothesis tested for generalization of behavioral problem-solving methods to new situations, as represented in the vignettes. The third vignette showed greater pre-posttest differences in the combined treatment condition than did the other vignettes. This vignette also showed significant difference at .05 between the behavior modification plus R.E.T. and the behavior modification only group. The behavior modification only group scored higher. One could speculate that the content of this vignette was

broad enough for more people to relate to it since it dealt with both marital and child-rearing problems. The scores on this vignette did not correlate with either of the other two. It is probable that the third vignette was a large factor in the significance of the combined index. The correlations were .03 and -.39. Vignettes 1 and 2 dealt with a single issue, and correlated at .55. One could extend the principles of behavioral generalization to state a client can generalize to a new problem and situation to the extent that it is similar to his problem and situation. Therefore, for a single man to generalize problem-solving skills to a child management discussion might be too far removed from his situation. Thus, perhaps the ideal generalization test would be a vignette designed by the researcher based on data gathered from the actual subjects, including age, sex, marital status, and presenting problem. The vignette could then present a problem within the realm of possibility for clients. Another measure of generalization was a total of the number of relationships on the checklist that had improved during group sessions. Although there were no significant differences between groups, the over-all mean was 5.1 relationships. This is logical in that some of the clients' goals were across people; i.e. to be assertive did not always state a particular person as a recipient of the behavior. Thus for some clients generalization was built in to the treatment. Others improved their relationships

with people without being specifically trained to do so. One could argue that there was a modeling effect between subjects.

It was pointed out in the results that a trained observer validated the therapist interventions. The therapist was employing the appropriate treatment in the appropriate treatment conditions. This is one of the most exciting findings of the research. Because behavior modification and Rational Emotive Therapy can be operationalized and the operations can be followed relatively precisely, the research is replicable. Although it is true that each client is unique and each problem specific to the client, the procedures of therapy can be standardized. Such a finding indicates that group work can be based on theory and knowledge rather than on the individual style of a particular worker. One of the values of both treatment methods utilized in this research was that they were taught to clients rather than simply practiced on the clients. The importance of this approach is that in a time of future crisis the methods of behavior modification and Rational Emotive Therapy are known and available to the client.

Some Additional Effects of Client Participation in the Research

From the beginning clients were interested in participating in the research effort. Comments were made such as "I'm glad they are doing this," and "It is good that

people want to know whether or not we are helped." It became apparent that participation in the research had special meaning to the clients involved. One speculation arising from this fact is that the process of asking clients to participate in a rather intensive evaluation restores some of the dignity they may have felt they lost when they became clients. The research process seems to give a direct message to clients that their opinions, feelings, behavior, and change levels are important.

The person conducting the treatment groups made the observation that the clients seemed to give more validity to the treatment modalities because of the research effort than they might have otherwise. For example, there was less than the usual amount of grumbling about receiving group treatment rather than individual treatment.

Finally, the therapist received a number of positive evaluative comments about the research and the groups. Several group members indicated they wanted to read the research findings. This is particularly interesting, in that subjects were not aware of the comparisons being made.

Suggestions for Future Research

The first recommendation is that the comparison between behavior modification outpatient group treatment and behavior modification plus Rational Emotive Therapy be replicated by other researchers in mental health centers and

family agencies. Such replication is one way to counter the problem of small n's in clinical settings. Replications would have the added value of providing data for reliability checks on the dependent measures. Since so little research has been done in behavioral and cognitive social group work, most of the dependent measures are newly developed.

A second recommendation for clinical research grew out of the observations of clients' reactions to the research process. Clients who are participants in a research project could be measured on self-esteem scales among the posttests. Their scores could be compared with clients who did not participate in research but were given a self-esteem scale at the termination of the treatment. A large n could be collected over a period of a year at Ingham Mental Health Center, for example, since at least five or six research projects are conducted each year with the client population at that center.

It could be argued that generalization of the problem-solving methods could be improved with specific generalization training. It would be interesting to compare behavior modification groups with generalization training and behavior modification groups without generalization training. Generalization training could consist of elicitation from clients of other problems to which they could apply behavior modification principles. Clients in the experimental group

could practice problem specification, identification of antecedents and consequences, reinforcement, and extinction. Generalization research could be conducted in both the laboratory and the clinic. Techniques for maximizing generalization could be refined in a laboratory, then taken to an outpatient clinic population for testing. Generalization is an important issue since a large number of clients in outpatient settings have been clients previously (Van Westen, 1974). If they were able to generalize their learning to new situations, it would not only be of immeasurable benefit to the client, but would also provide for a more efficient use of mental health personnel.

Another possible study for laboratory research would be a test of the length of time required for Rational Emotive Therapy or behavior modification to be reflected on paper and pencil dependent measures. In this study the rate of behavior change was much higher than attitudinal change. It would be worthwhile to determine if the lack of attitudinal change was a function of time.

The last recommendation for clinical research would be to determine how cognitive restructuring operates to increase or decrease behaviors. One could begin by asking clients to keep a diary of thoughts surrounding particular behaviors. Such a simple effort could point to a direction for future research. For example, it might give an estimate

of whether antecedent or consequent thoughts are crucial to particular behaviors.

Conclusion

Lazarus (1973) highlighted the problems of clinical treatment and research with humans in his discussion countering Wolpe's statement that "Human neuroses are like those of animals in all essential respects" (Wolpe, 1968, p. 559). He challenged Wolpe's statement by saying:

> When confronted by people intent on self-destruction, torn asunder by conflicting loyalties, crippled by too high a level of aspiration, unhappily married because of false romantic ideals, or beset by feelings of guilt and inferiority on the basis of complex theological beliefs, I fail to appreciate the clinical significance of Wolpe's (1958) neurotic cats and sometimes wish that life and therapy were really as simple as he would have us believe (Lazarus, 1973, p. 13).

The current study was an attempt to incorporate one human complexity, cognition, in the form of Rational Emotive Therapy, into behavior modification research. This approach is consistent with Lazarus' (1973) view that behavioral techniques can be used as a starting point for increasing therapeutic effectiveness.

APPENDICES

APPENDIX A

QUESTIONNAIRES

APPENDIX A

Questionnaire 1
(Lawrence, 1973)

Evaluation by Group Member

Name: ______________________________ Date: ________________________

1. The following are the stated problems and objectives that you worked on in the group. Please rate the extent to which each problem has changed by placing an X in one of the boxes.

(1) Problem | Objective

Very Much Worse	Worse	Slightly Worse	No Change	Slightly Better	Better	Very Much Better

(2) Problem | Objective

Very Much Worse	Worse	Slightly Worse	No Change	Slightly Better	Better	Very Much Better

(3) Problem | Objective

Very Much Worse	Worse	Slightly Worse	No Change	Slightly Better	Better	Very Much Better

Number of Client Relationships

Check which of the following relationships you think have improved in some way since you have been in the group:

___Work supervisor or employer	___Friends of the opposite sex
___Workers you supervise	___Friends of the same sex
___Co-workers	___Neighbors
___Parents	___Children
___Brothers and sisters	___Other relatives
___Husband and wife	___Myself

Please circle any of the above relationships which you think have become worse since you have been in the group.

II. Please answer the following questions according to your own opinion. (Check either yes or no)

	Yes	No
1. Do you think you need further professional help at this time on the problems you worked on in the group?	___	___
2. Do you think you need professional help at this time on other problems?	___	___

III. Please rate the following experiences you had in the group according to how helpful you consider them to have been to you personally. (Circle one number of each experience.)

1. Extremely helpful
2. Very helpful
3. Somewhat helpful
4. Not helpful

Group Experiences

Questions and suggestions from other group members	1 2 3 4
Questions and suggestions from the therapist	1 2 3 4
Learning about other members' problems	1 2 3 4
Observing and recording your own problem	1 2 3 4

Telling others about your problems	1 2 3 4
Learning about specifying behavior, reinforcement, and punishment as explained by the therapists	1 2 3 4
Role plays you participated in	1 2 3 4
Learning about specifying behavior, reinforcement, and punishment from the examples of members' problems	1 2 3 4
Demonstrations given by the therapist	1 2 3 4

Questionnaire 2
Vignette 1
(Lawrence, 1973)

Name: ________________ Group: ________________

Date: ________________

Mr. and Mrs. Smith

Mr. and Mrs. Smith have been married for five years and have no children. They both say that their marriage is "on the rocks," and they complain that they are constantly arguing with each other. They both say that they care for each other, and would like to "make their marriage work."

Instructions: Listed below are several questions that might be asked about the Smiths' problem, in order to find out what would be the best thing to do about their situation. Please rank these questions according to how important you think the answers might be in deciding what to do about the situation. That is, what do you think the most important question is, the second most important question, and so on. Please place a "1" beside the most important question, a "2" beside the second most important question, and so on.

Questions:

___How compatible are their attitudes toward marriage?

___What do they argue about, and what are some examples of their arguments?

___What kind of family life did each of them have as children?

___When, where, and how often do they argue?

___Do they have a satisfying sexual relationship?

___What happens just before and right after their arguing?

___Why haven't they had any children?

If you think there are any other questions that would be important to ask, please write them below.

Questionnaire 3
Vignette 2
(Lawrence, 1973)

Name: ________________ Group: ________________

Date: ________________

Mrs. Jones and Jimmy

Part I:

Mrs. Jones is married and is a mother of one child. She is a friend of yours and she has asked you to help her with a problem she has with her two-year-old son, Jimmy. She complains that Jimmy's behavior is becoming intolerable, and she is beginning to question her own ability as a mother.

Instructions: Listed below are several questions that you might want answers to in order to help Mrs. Jones decide what would be the best thing to do about the problem. Please rank these questions according to how important you think the answers might be in deciding what to do about the situation. That is, what do you think the most important question is, the second most important question, and so on. Please place a "1" beside the most important, a "2" beside the second most important, and so on.

Questions:

___How much time does the mother spend away from Jimmy?

___Exactly what does Jimmy do to cause his mother to call his behavior intolerable?

___What attitudes do the father and mother have about child rearing?

___How does the mother behave toward Jimmy when he is behaving badly?

___What kind of problems are there between the mother and her husband?

___When, where, and how often does Jimmy behave badly?

___How was the mother raised as a child?

If you think there are any other questions that would be important to ask, please write them below.

Questionnaire 4
Vignette 3
(Lawrence, 1973)

Name: ______________________ Group: __________________

Date: __________________

Mrs. Jones and Jimmy

Part II:

Mrs. Jones is a housewife. She seldom gets out of the house these days because her son, Jimmy, requires a lot of attention and Mrs. Jones is unwilling to leave him with a babysitter. Before Jimmy's grandmother died six months ago, she used to leave Jimmy with his grandmother occasionally. Mr. Jones works during the day, but he is usually at home in the evening. Mr. Jones considers disciplining Jimmy something that Mrs. Jones is responsible for. Mr. Jones frequently complains, and yells at Mrs. Jones about Jimmy's behavior and the noise he makes around the house. An example of what Mr. Jones might say in an angry tone of voice is, "Can't you keep that kid quiet?"

An example of Jimmy's behavior is that he will come into the kitchen, point to the refrigerator and ask for ice cream or pop. Mrs. Jones says, "No," and Jimmy lies down on the floor and kicks and screams. Then Mrs. Jones either gives Jimmy the ice cream or pop, comforts and distracts him, or spanks him. Jimmy does this three to four times every day.

Instructions: Please answer the following questions by checking the one statement that you think best answers the question. Check only one of the statements for each question.

Question 1: Jimmy's kicking and screaming behavior is probably caused by:

___A. The inconsistency with which the mother behaves toward him.

___B. The loss of his grandmother.

___C. The lack of attention he gets from his father.

___D. The attention he gets from his mother right after he kicks and screams.

Question 2: The mother behaves toward Jimmy's kicking and screaming in the way she does because:

___A. She is confused about the feelings she has toward Jimmy.

___B. Jimmy stops screaming and kicking.

___C. Her personal insecurity makes her behave inconsistently.

___D. She is sometimes angry, and sometimes sympathetic toward Jimmy.

Question 3: The best thing for Mrs. Jones to do in order for Jimmy not to kick and scream whenever she refuses his demands is to:

___A. Spank Jimmy each time he does this and explain to him that children should not behave this way.

___B. To pay absolutely no attention to Jimmy when he is kicking and screaming.

___C. To set up a schedule where Jimmy can have treats only at certain times of the day, and explain this to him every time he asks for treats.

___D. Never to give Jimmy the ice cream or pop after saying "No," and to hold him whenever he kicks and screams to show him he is loved.

Another example of Jimmy's behavior is that he will scream and yell after being put to bed at night. If left alone he will kick the wall, throw his toys and cry. On these occasions, Mrs. Jones usually stays with Jimmy until he falls to sleep. This has been occurring almost every night for three months now.

Instructions: Please check the one statement that best answers the following questions:

Question 4: Jimmy probably has these tantrums almost every night because:

___A. He likes the attention he gets when his mother stays with him.

___B. He doesn't get enough attention from his father.

___C. He is afraid of being alone, which is normal for two year olds.

___D. He is insecure about how much his father and mother love him.

Question 5: The most likely explanation for Mrs. Jones' behavior of staying with Jimmy until he falls asleep is:

___A. She is worried that he will not be healthy if he doesn't get enough sleep.

___B. Mr. Jones gets angry at her when Jimmy is yelling and screaming.

___C. She is worried about the psychological damage that may occur if he cries himself to sleep.

___D. She really enjoys this quiet time with Jimmy.

Question 6: The best thing for Mrs. Jones to do in order for Jimmy to learn to go to sleep without throwing tantrums is to:

___A. Convince Mr. Jones that he should discipline Jimmy at night.

___B. Sit with Jimmy while he is falling to sleep until he grows out of this "stage."

___C. Go into Jimmy's bedroom each time he throws a tantrum, tell him she loves him but wants him to be quiet and go to sleep now, and then to leave the room immediately.

___D. Pay no attention to Jimmy's screaming and yelling after he is tucked into bed.

Questionnaire 5
(Collins-Curran, 1973)

I. Please try to put yourself in this situation and on the check list that follows check those reactions that you feel would be closest to your own. For example, if you feel that you would be very likely to get out of the situation, check "Very likely" under choice 9. If you feel you would be very unlikely to do so, check "Very unlikely" under response 9. Please note: This checklist is to be used only to help us evaluate the procedures of this program; therefore it is not necessary for you to sign your name. Since we are, however, planning to evaluate attitude change during the program it will be helpful if you would put your social security number or your date of birth (day, month, year) at the top right-hand corner.

II. You have just been told by someone close to you (husband, wife, lover, etc.) that they feel that you've outgrown one another and that the relationship is dead. It's not anything in particular that you've done, it's just that they're feeling trapped in the relationship and want to experience other things and other people. They don't feel that there is anything to discuss and just hope that you'll understand.

---

1. Very likely
2. Likely
3. Don't know
4. Unlikely
5. Very unlikely

III.

1 2 3 4 5 1. Try to see the humorous side of the situation.

1 2 3 4 5 2. Take some positive, concerted action on the basis of your present understanding of the situation.

1 2 3 4 5 3. Not worry about it, everything will work out fine.

1 2 3 4 5 4. Talk it over with the person(s) in the situation to see if you can work it out.

1 2 3 4 5 5. Try to put yourself in the other's shoes.

1 2 3 4 5 6. Become involved in other activities in order to help keep your mind off the problem.

1 2 3 4 5 7. Draw upon your past experiences from a similar situation.

1 2 3 4 5 8. Seek some professional help or advice.

1 2 3 4 5 9. Get out of the situation.

1 2 3 4 5 10. Get your feelings out by talking to someone.

1 2 3 4 5 11. Make several alternative plans for handling the situation; after all, you never know what might work.

1 2 3 4 5 12. Try to get some perspective by talking it over with a friend.

1 2 3 4 5 13. Re-examine your own thoughts and feelings--the problem may be with you.

1 2 3 4 5 14. Express your feelings to some "out front" person, to get their reaction.

1 2 3 4 5 15. Try some experimenting.

1 2 3 4 5 16. Try to reduce your tension by smoking, drinking, etc.

1 2 3 4 5 17. Act spontaneously--do the first thing you think of.

1 2 3 4 5 18. Be prepared to expect the worst.

1 2 3 4 5 19. Read some books dealing with the worst.

1 2 3 4 5 20. Confront the person with your feelings.

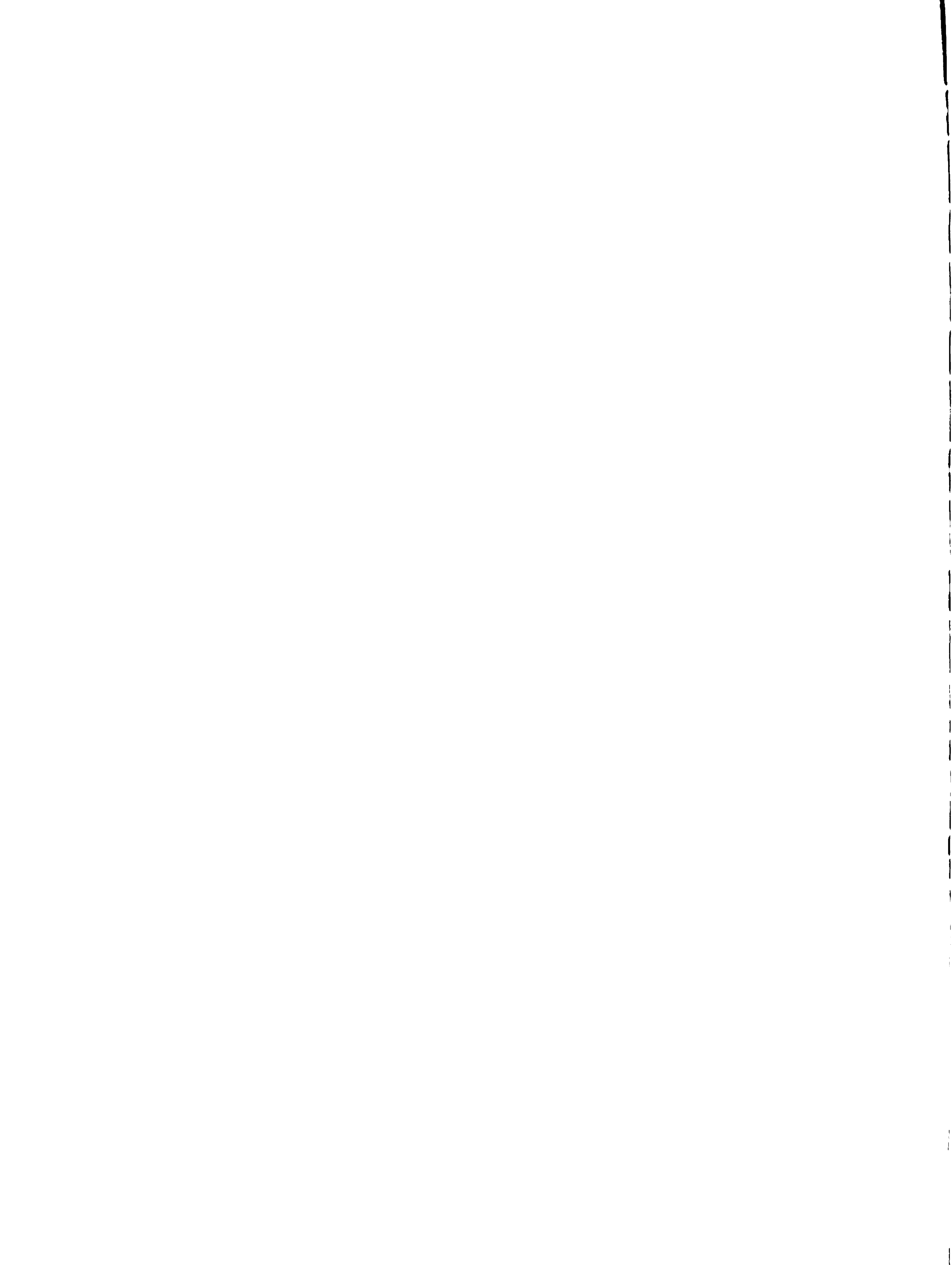
Questionnaire 6
(Rational Behavior Inventory, 1973)

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

		1	2	3	4	5
1.	Helping others is the very basis of life.	1	2	3	4	5
2.	It is necessary to be especially friendly to new co-workers and neighbors.	1	2	3	4	5
3.	People should observe moral laws more strictly than they do.	1	2	3	4	5
4.	I find it difficult to take criticism without feeling hurt.	1	2	3	4	5
5.	I often spend more time in trying to think of ways of getting out of something than it would take me to do it.	1	2	3	4	5
6.	I tend to become terribly upset and miserable when things are not the way I would like them to be.	1	2	3	4	5
7.	It is impossible at any one given time to change one's emotions.	1	2	3	4	5
8.	Incompetency in anything whatsoever is an indication that a person is inadequate or valueless.	1	2	3	4	5
9.	I prefer to be independent of others in making decisions.	1	2	3	4	5
10.	Because a person was once weak and helpless, he must always remain so.	1	2	3	4	5
11.	It is sinful to doubt the Bible.	1	2	3	4	5

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

		1	2	3	4	5
12.	Sympathy is the most beautiful emotion of man.	1	2	3	4	5
13.	I shrink from facing a crisis or difficulty.	1	2	3	4	5
14.	I often get excited or upset when things go wrong.	1	2	3	4	5
15.	One should rebel against doing things, however necessary, if doing them is unpleasant.	1	2	3	4	5
16.	I get disturbed when neighbors are very harsh with their little children.	1	2	3	4	5
17.	It is realistic to expect that there should be no incompatibility in marriage.	1	2	3	4	5
18.	I frequently feel unhappy with my appearance.	1	2	3	4	5
19.	A person should be thoroughly competent, adequate, talented, and intelligent in all possible respects.	1	2	3	4	5
20.	What others think of you is most important.	1	2	3	4	5
21.	Other people should make things easier for us, and help with life's difficulties.	1	2	3	4	5
22.	I tend to look to others for the kind of behavior they approve as right or wrong.	1	2	3	4	5
23.	I like to bear responsibilities alone.	1	2	3	4	5



		1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree				
		1	2	3	4	5
24.	People who criticize the government are either ignorant or foolish.	1	2	3	4	5
25.	I set a high standard for myself and feel others should do the same.	1	2	3	4	5
26.	I usually try to avoid doing chores which I dislike doing.	1	2	3	4	5
27.	Some of my family and/or friends have habits that bother and annoy me very much.	1	2	3	4	5
28.	I tend to worry about possible accidents and disasters.	1	2	3	4	5
29.	I worry over possible misfortunes.	1	2	3	4	5
30.	It makes me angry and upset when other people interfere with my daily activity.	1	2	3	4	5
31.	I get terribly upset and miserable when things are not the way I would like them to be.	1	2	3	4	5
32.	I worry quite a bit over possible misfortune.	1	2	3	4	5
33.	Punishing oneself for all errors will help prevent mistakes.	1	2	3	4	5
34.	One can best help others by criticizing them and sharply pointing out the error of their ways.	1	2	3	4	5
35.	Worrying about a possible danger will help ward it off or decrease its effect.	1	2	3	4	5

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

		1	2	3	4	5
36.	I worry about little things.	1	2	3	4	5
37.	Certain people are bad, wicked or villainous and should be severely blamed and punished for their sins.	1	2	3	4	5
38.	A large number of people are guilty of bad sexual conduct.	1	2	3	4	5
39.	One should blame oneself severely for all mistakes and wrong doings.	1	2	3	4	5
40.	It makes me very uncomfortable to be different.	1	2	3	4	5

Questionnaire 7

THERAPIST EVALUATION OF CLIENT IMPROVEMENT
(Curran, 1974)

Social Functioning

X

0 16 32 48 64 80

Family Functioning

X

0 16 32 48 64 80

Primary Relationships

X

0 16 32 48 64 80

Attainment of Primary Goal

X

0 16 32 48 64 80

Work or School Functioning

X

0 16 32 48 64 80

0=much worse 2=indicates no change 80=greatly improved

APPENDIX B

ANALYSES OF VARIANCE TABLES

APPENDIX B

ANALYSES OF VARIANCE TABLES

Table A.--Analyses of variance of number of client relationships.

Comparison	Means		Degrees of Freedom	F
	(a)	(b)		
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both had pre- and posttests.	5.17	3.00	1,9	1.24
	(a)	(c)		
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretests(c).	5.17	4.33	1,7	1.25
	(b)	(c)		
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretests(c).	3.00	4.33	1,6	.26

Table B.--Analyses of variance on clients wishing help at the present time.

Comparison	Means		Degrees of Freedom	F
	(a)	(b)		
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both had pre- and posttests.	.33	.40	1,9	.04
	(a)	(c)		
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretests(c).	.33	1.00	1,7	1.87
	(b)	(c)		
Behavior modification only with pre-test(b) and behavior modification plus R.E.T. without pretests(c).	.40	1.00	1,6	1.26

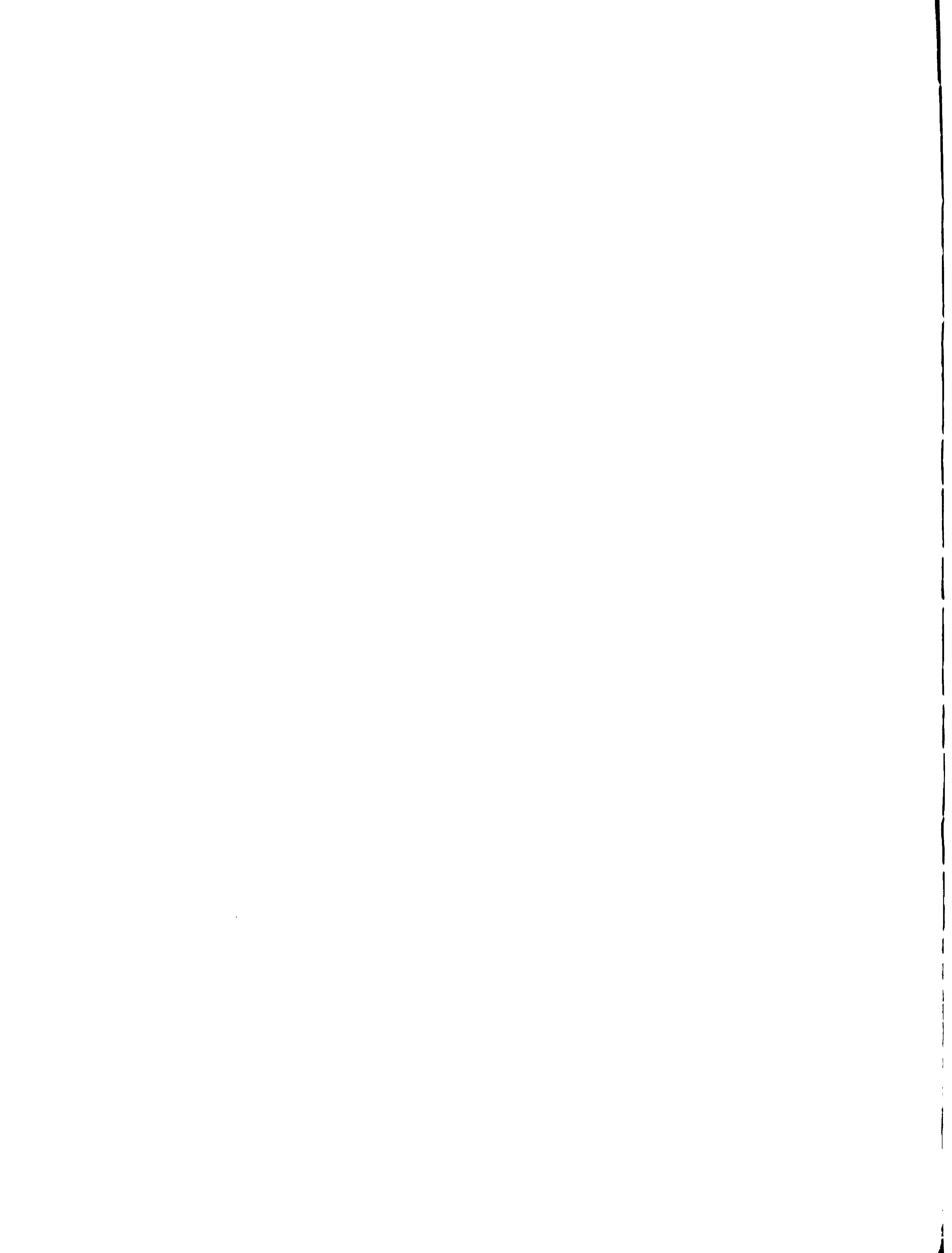


Table C.--Analyses of variance on source of help.

Comparison	Means		Degrees of Freedom	F
	(a)	(b)		
Behavior modification plus R.E.T.(a) with behavior modification only(b). Both had pre- and posttests.	16.50	19.67	1,9	.87
	(a)	(c)		
Behavior modification plus R.E.T.(a) with behavior modification plus R.E.T. with no pretests(c).	16.50	20.20	1,7	.74
	(b)	(c)		
Behavior modification only with pretest(b) and behavior modification plus R.E.T. without pretests(c).	19.67	20.20	1,6	.00

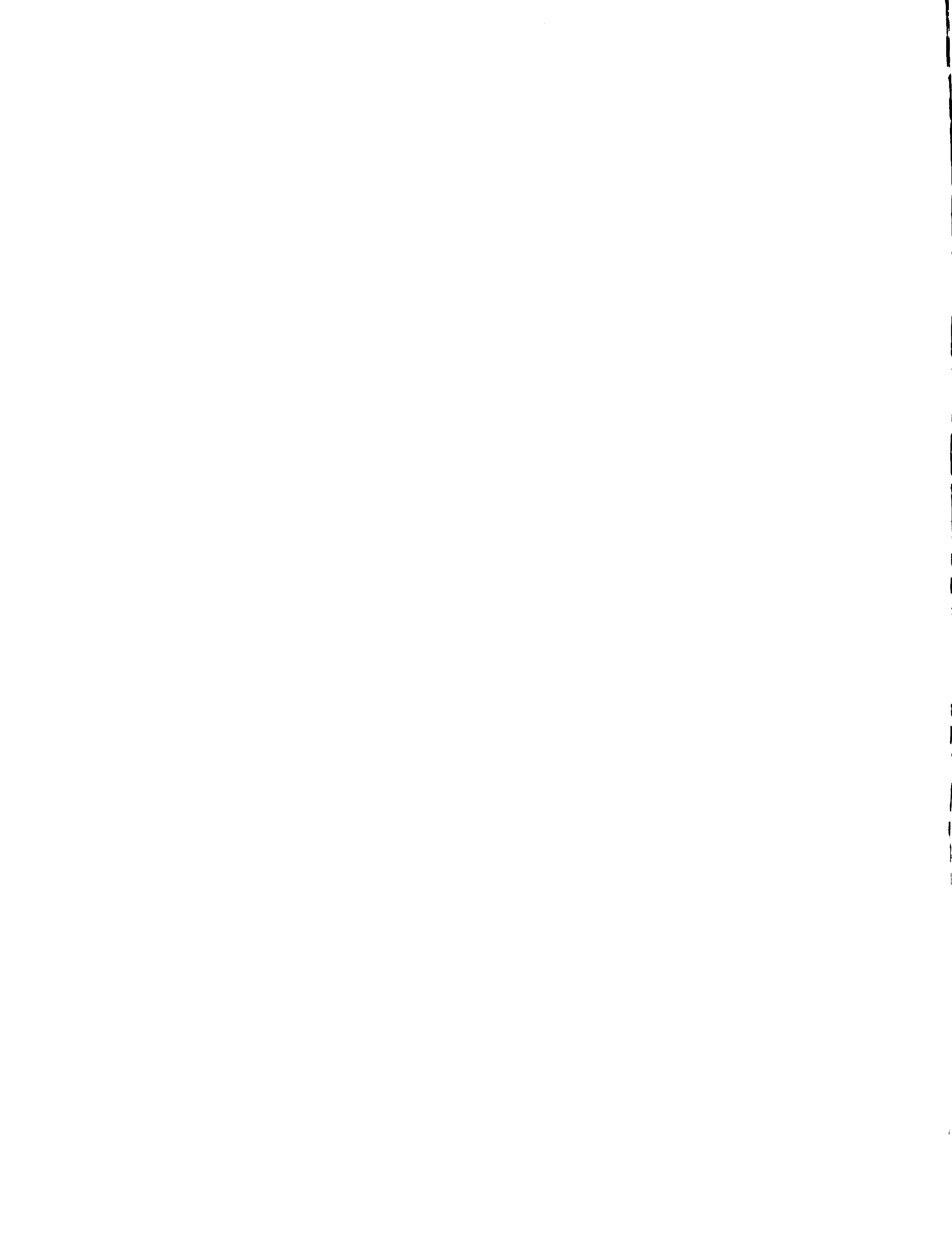


Table D.--Goal attainment scale.

	SCALE HEADINGS AND WEIGHTS				
SCALE ATTAINMENT LEVELS	Scale 1: Weight 1:	Scale 2: Weight 2:	Scale 3: Weight 3:	Scale 4: Weight 4:	Scale 5: Weight 5:
a. most unfavorable treatment outcome thought likely					
b. less than expected success with treatment					
c. expected level of treatment success					
d. more than expected success with treatment					
e. best anticipated success with treatment					
Check whether or not the scale has been mutually negotiated between therapist and client	Yes__ No__	Yes__ No__	Yes__ No__	Yes__ No__	Yes__ No__

Level at intake: ✓
Level at follow-up: *

Level at intake:
Goal Attainment Score:
Goal Attainment Change Score:

Date:

Therapist________
Client__________

APPENDIX C

INDIVIDUAL SCORES

APPENDIX C

INDIVIDUAL SCORES[a]

Baselines on an Interval Scale

Behavior Modification Plus R.E.T.	Behavior Modification Only	Behavior Modification Plus R.E.T. With No Pretests
5	2	4
5	4	4
4	2	2
3	2	
5	4	
5		

Rational Behavior Inventory

Behavior Modification Plus R.E.T.		Behavior Modification Only		Behavior Modification Plus R.E.T. With No Pretests
Pre	Post	Pre	Post	Post
21	21	19	25	23
18	19	27	24	27
21	29	24	21	35
19	22	32	33	
22	26	24	24	
23	24			

Collins-Curran Scale

Behavior Modification Plus R.E.T.		Behavior Modification Only		Behavior Modification Plus R.E.T. With No Pretests
Pre	Post	Pre	Post	Post
34	29	50	44	48
62	59	40	47	46
48	44	52	53	42
55	52	37	31	
55	49	43	44	
43	40			

[a]Clients are in the same order from table to table.

Vignette 1

Behavior Modification Plus R.E.T. Pre	Behavior Modification Plus R.E.T. Post	Behavior Modification Only Pre	Behavior Modification Only Post	Behavior Modification Plus R.E.T. With No Pretests Post
7	7	0	2	5
4	7	3	3	4
3	5	5	7	4
2	2	3	7	
1	4	2	4	
2	3			

Vignette 2

Behavior Modification Plus R.E.T. Pre	Behavior Modification Plus R.E.T. Post	Behavior Modification Only Pre	Behavior Modification Only Post	Behavior Modification Plus R.E.T. With No Pretests Post
7	7	1	0	7
6	7	3	4	7
7	7	3	2	4
3	4	5	7	
1	2	4	5	
3	2			

Vignette 3

Behavior Modification Plus R.E.T. Pre	Behavior Modification Plus R.E.T. Post	Behavior Modification Only Pre	Behavior Modification Only Post	Behavior Modification Plus R.E.T. With No Pretests Post
0	2	2	4	4
2	2	7	7	1
1	3	7	7	3
1	2	3	4	
1	2	2	3	
3	4			

Client Problem Checklist

Behavior Modification Plus R.E.T.	Behavior Modification Only	Behavior Modification Plus R.E.T. With No Pretests
4	5	6
6	6	6
6	4	6
6	6	
6	5	
6		

Number of Improved Relationships

Behavior Modification Plus R.E.T.	Behavior Modification Only	Behavior Modification Plus R.E.T. With No Pretests
7	1	4
7	1	8
3	1	1
5	11	
5	1	
4		

Clients Wishing Help at Present Time

Behavior Modification Plus R.E.T.	Behavior Modification Only	Behavior Modification Plus R.E.T. With No Pretests
0	0	0
0	0	2
1	1	1
1	1	
0	0	
0		

Sources of Help

Behavior Modification Plus R.E.T.	Behavior Modification Only	Behavior Modification Plus R.E.T. With No Pretests
12	29	20
20	20	12
14	29	27
13	11	
20	12	
20		

Curran Scale

Behavior Modification Plus R.E.T.	Behavior Modification Only	Behavior Modification Plus R.E.T. With No Pretests
354	208	156
345	212	343
323	192	192
309	215	
271	305	
270		

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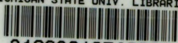
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