THE EFFECT OF RATIONAL EMOTIVE EDUCATION ON
IRRATIONAL BELIEFS, ASSERTIVENESS, AND/OR
LOCUS OF CONTROL IN FIFTH GRADE STUDENTS,

by

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Chapter 1

INTRODUCTION

Students in the upper elementary school age group are in the emotional stage of development when awareness of and concern about interpersonal relationships are becoming heightened (Kohlbert, LaCrosse, and Hicks, 1970). These students are cognitively able to understand and communicate concrete and abstract thoughts. At this educational level, learning skill of exploring, understanding, and acting can be transferred to interpersonal responses (Carkhuff, Berenson, and Pierce, 1976).

The development of students in terms of cognitive, affective, and behavioral processes occurs within a socio-cultural system. The student's first social encounters are usually with mother, father, and family. A second major encounter is with the school. As the student interacts with these social situations, significant beliefs about self and the world are influenced.

As programs in affective education are proposed as important strategies in assisting in the emotional development of children, elementary school counselors are becoming increasingly involved with curriculum. Elementary counselors are applying Gestalt techniques to explore feelings (Brown, 1975), personal values, and interpersonal relationships (Bessell and Palomares, 1970; Dinkmeyer, 1970).
Transactional analysis has been adapted for use with children (Freed, 1971), and behavior-modification techniques have been employed in the classroom as psychological education (Goshko, 1973).

During the elementary-school years, or the period of middle childhood, students learn to think in terms of causality. Thus, if a teacher is angry at a student (an external event), the student's cognitive or evaluative responses may be that "I am bad" or "I am no good," and the resultant emotional response (an internal event) may be a feeling of dejection. Consequently, the child comes to see the external event as the cause of his or her emotional response; and this type of thinking is generally reinforced by parents, peers, and other adult models.

The theory and practice of rational emotive therapy (RET), developed by Albert Ellis (1972), involves a cognitive approach that holds promise in the field of affective education. RET consists of a theory of personality, a system of philosophy, and a cognitive technique of psychological treatment. The theory focuses on persons changing their way of viewing their problems, since Ellis believes that persons' negative emotional reactions do not result directly from events or experiences, but instead stem from their beliefs about events or experiences.

From the outgrowth of RET, rational emotive education (REE) maintains that persons are responsible for and have the ability to control their thoughts and, thereby, their emotions and behavior. Protinsky (1976) stated that students can become more inner-directed
and will tend to then develop a more optimistic view of life and its problems. It therefore seems reasonable that SEE could affect a change in students' perception of control and its locus, which would be beneficial to their emotional well being.

The range of locus of control is from internal direction defined as control by self to external defined as control by others (Levenson, 1974). Inner-directed students perceive control of events and happenings as the result of managing tasks or situations in which they are involved. Perceived control, as measured through research studies, seems to make a great difference in response to academic achievement (Richter, 1957). From the research reviewed it can be concluded that the more action-oriented therapies which stress the learning and effecting of contingent results appears to be the optimal approaches for changing persons' perception of causality control. Though there seems to be considerable consistency in the research on changes in perceptions of control, most of the researchers noted a need for clear descriptions of the therapeutic approaches and for subjects to be selected randomly from various age groups.

The thrust of RET for use in schools is both educative and preventive. The emphasis of the RET approach is to teach critical thinking and problem-solving designed to assist children to deal more effectively with their feelings and environment (Knaus, 1972). Healthy, fully functioning people feel that they can make an effective impact on their environment by engaging in assertive behavior which makes them feel in charge of themselves and which affects other people in constructive ways.
Assertive behavior is primarily concerned with two major interpersonal goals: anxiety reduction and social skill training. These are to be accomplished without experiencing undue amounts of anxiety or guilt and without violating the rights and dignity of others in the process.

Researchers have recognized a continuum of assertive behaviors and response styles from nonassertive on one end of the continuum to aggressive on the other. Assertive behaviors result from training in behavioral rehearsal, shaping, modeling, coaching, and homework assignments (Wolpe, 1958). In the professional literature, elementary school age students are being given attention as subjects of Assertive Training courses to determine if behavioral changes can be measured in terms of academic achievement, personal self-worth, and career choice. Therefore, being assertive would tend to enhance a student's holistic view of self and environment.

REE, locus of control, and assertiveness have commonalities that are compatible with the educational framework in elementary schools. First, skill training as a cognitive influence on behavior is advocated both academically and emotionally in the total development of children. Second, rehearsal of skills through role play, logical generalized application, and homework reinforcement is evident in assignments for experiential learning. And third, accountability through observation and testing provides follow up for the educator as well as for the students. Therefore, the elementary school is an appropriate setting for teaching the skills of REE as part of the affective educational program for young students.
Changes occurring as a result of REE may be determined by evaluating students' rational belief systems. The belief system of locus of control may be changed by an intensified training program of REE since control is a cognitive perception which is learned and can be altered as determined by behavioral theorists (Phares, 1976). Assertiveness can also be influenced through learning skills, rehearsal, and overcoming cognitive dissonance with previously learned behaviors and emotions.

Therefore, the parameters of this study focused on REE as an agent of change. The REE treatment was evaluated as to its effect on irrational beliefs, assertiveness, and/or locus of control as it influences students' belief systems. This study pioneered research with upper elementary students from a total school system population. Fifth grade students were the subjects of this study because they have the cognitive ability to learn the principles of REE, are at a maturation point in development which enables them to be responsive to their belief systems, and because research with this age group was non-existent in a large scale study dealing with REE and the three aforementioned variables.

DEFINITION OF TERMS

In this study the following definitions were used:

1. **Rational Emotive Therapy (RET):** a cognitive, emotional, and behavioral therapy that defines appropriate feelings and rational beliefs as those aiding human survival and happiness. This is defined as those feelings and rational beliefs that enable persons to accept objective reality, live amicably in a social group, engage in
productive work, and enjoy selectively chosen recreational pursuits (Ellis, 1975).

2. **Rational Emotive Education (REE):** an educative process in which students are taught to apply the principles of Rational Emotive theory which when practiced increase rational thinking, emoting, and behavior.

3. **Rational Emotive Imagery (REI):** a technique of mental rehearsal of rational thoughts, feelings, and actions.

4. **Irrational Beliefs:** disturbance-creating thoughts that provoke illogical and/or self-defeating philosophies of life.

5. **Locus of Control:** perceived relationship between the behavior of the individual and the individual's circumstances.

6. **External Perception:** belief that important events in life are independent of personal behavior.

7. **Internal Perception:** belief that important events in life are generally controllable through personal behavior.

8. **Assertiveness:** interpersonal behavior in which persons sustain their rights in such a way that the rights of others are not violated.

9. **Aggressive Behavior:** assertive behavior carried to the extreme for self-enhancement usually at the expense of others.

10. **Non-assertive Behavior:** denying or inhibiting expression of actual feelings which may result in feeling hurt or anxious as a result of inadequate interpersonal actions.
ORGANIZATION OF THE STUDY

This study presents an educational experiment designed to investigate the effect of Rational Emotive Education on irrational beliefs, assertiveness, and/or locus of control. Fifth grade students were randomly assigned to experimental and control groups for testing and observation. The experimental groups received a ten week course in REE provided by elementary counselors who were trained in the techniques of REE (Appendix A). Using the Solomon Four-Group Design, the students in the experimental and control groups were pre-tested and post-tested on selected instruments. The study focused first on REE, second on assertiveness, and third on locus of control.

Rational Emotive Education

Rational emotive education proves particularly applicable to classroom adaptation since it closely follows an educational rather than a medical or psychodynamic model of psychotherapy (Ellis, 1975). REE is an application of RET that holds that humans disturb themselves and malfunction mainly because of their erroneous and irrational beliefs, attitudes, values, and philosophies.

Albert Ellis is primarily associated with the development of RET. Ellis (1973:167) was trained in the traditional classical psychoanalytic approach, becoming disillusioned with this approach when he realized that:

No matter how much insight his clients gained, nor how well they seemed to understand the events of their early childhood and to be able to connect them with their present emotional disturbances, they still retained tendencies to create new troubling symptoms.
In defining his theoretical position, Ellis discovered that the source of his clients' emotional difficulties and psychological misperceptions was not simply a result of what happened in the past but was a reflection of an on-going process in their lives at present.

The rational emotive view of man is dominated by the principal that emotion and reason, thinking and feeling, are entwined in the psyche. Ellis (1958:36) explained the connection between the cognitive and affective domains this way:

thinking and emoting are closely interrelated and at times differ mainly in that thinking is more tranquil, less activity-directed mode of discrimination than is emotion . . . and thinking and emoting are so closely interrelated that they usually accompany each other, act in a circular cause-and-effect relationship, and in certain respects are essentially the same thing, so that one's thinking becomes one's emotion and emoting becomes one's thoughts . . . both thinking and emoting tend to take the form of self-talk or internalized sentences; and that for all practical purposes, the sentences that human beings keep telling themselves are to become their thoughts and emotions.

Ellis further emphasizes that in the process of growing up, the child is taught to think and feel certain things about himself and others and to evaluate them in terms of good and bad. Psychopathological behavior, Ellis points out, is illogical and irrational, associating bad or negative emotion with things which really are not. The rational emotive view emphasizes that persons are born with the potential to be rational and logical but become illogical because of distortions during childhood and repetitions of the distortions in later years. Therefore, persons' emotional disturbances are largely a result of their thinking illogically or irrationally and this may be corrected if they learn to minimize their irrational thinking and replace it with rational thinking.
REE consists of teaching techniques which synthesize the cognitive and emotional facets of persons' existence. The goal of REE is effective self-analyses through the perceiving of specific feelings and actions, evaluating them objectively instead of irrationally and then changing them through effort and practice so that persons may obtain or achieve what they want. The goal is fully achieved when persons become capable of introspectively analyzing and correcting their distortions of the world.

REE specifically applies itself to working with children, since it is a cognitive-emotive-behavioral system of therapy which employs, along with persuasive teaching, many dramatic-evocative exercises (Ellis, 1975) which may be taught along with regular school subjects. Homework assignments in REE may be given along with similar assignments in academic areas.

The principles and practices of REE teach students the "ABCs" of personality formation and disturbance creation. Thus, it shows students that their emotional consequences (at C) do not stem directly from the Activating experiences or events (at A) that occur in their lives, but rather from their Belief systems (at B) about these Activating experiences.

Rational thinking is:

... that form of thinking or action which (1) is based on objective facts, (2) is life-preserving, (3) helps achieve self-defined goals, (4) enables a person to function with a minimum of significant conflict, and (5) enables a person to function with a minimum of significant conflict with their environment (Mauitsby, 1975:17).
Elementary school age students may not be able to comprehend this vocabulary. The wording can be made relevant by using criteria three, four, and five in asking students what they want for themselves, how can they get it without getting into trouble with themselves or into conflict with others.

Rational Emotive Education: A Manual for Elementary Teachers was specifically designed for fourth through eighth grade students. It provided both a rationale and procedural demonstrations for use of rational mental health concepts of everyday life. The program was divided into three sections: (1) rational emotive education background information and basic classroom techniques; (2) lessons and activities which deal with feelings, mistake-making, and challenging; (3) special activities aimed at reducing common classroom behavioral problems such as prejudice, stereotyping, and irresponsibility. The series of lessons helped students minimize their reactions to disappointment and frustrations, to cope more effectively with problems stimulated by outside events, and to more fully accept themselves by learning a systematic approach in challenging irrational assumptions.

REE comprises a system of personality change that encourages using philosophic, affective, and behavioristic techniques to help students to "get better" rather than "feel better" by making major philosophic reconstructions in their life styles. The reconstruction is reinforced through assertion training, behavior rehearsal, and role playing. Assertiveness is then a desired outcome of REE and may be a measurable variable in determining the effects of rational training.
Assertiveness

Since 1970 there has been a steady increase in professional literature relating to assertive behavior. Assertion training teaches people, through a variety of techniques, to be neither too passive nor overly aggressive. The proper balancing of assertiveness accomplishes the joint goals of defense of personal rights without infringing on the rights of others.

Assertion techniques involve some suggestion or effects of expectations induced by instructions. Wolpe's (1969) technique of assertiveness training sometimes simply involves exhorting a person to go out and "stand up" to an authoritarian figure or to tell somebody what is wanted from them. But there are also ways of teaching assertiveness that involve behavioral rehearsal. In these situations, the persons pretend they are asserting themselves in various situations. This technique involves desensitization because very unassertive people are often frightened of doing anything that might offend other people. Desensitization in assertion training is a way of encouraging such a person gradually to do the things he or she is afraid of doing.

The profile of an assertive individual specifies that persons who are judged as being assertive:

... tend to respond to interpersonal problems quickly and in a strongly audible voice with marked intonation and do not automatically accede to the demands of others, and are more likely to request that the interpersonal partner change his (her) behavior (Eisler, 1972:330).

Changes occurring as a result of Assertive Training can be evaluated across three major dimensions: self-report measures,
behavioral changes, and physiological changes (Alberti, 1976). The changes that occur also influence a person's belief system about control over life happenings or events. The assertive behaviors are often the results of rational imagery rehearsal, inner directed statements, and self imposed actions. All of these would then seem to influence locus of control perception in individuals exposed to REE which emphasizes assertiveness.

Locus of Control

The locus of control construct was introduced into the psychological literature in the early 1960's as it developed within social learning theory. Rotter's (1954) social learning theory includes four basic concepts in the prediction of behavior: behavior potential, reinforcement value, expectancy, and the psychological situation.

According to social learning theory, behavior potential is a function of both expectancy and reinforcement value. If a person develops the expectancy that behavior A will be followed by event B, and if event B is valued, the probability that A will be performed will be high (Rotter, Chance, and Phares, 1972). The probability that a behavior will occur will be low unless the individual develops the expectancy that the behavior can result in the receipt of the reward.

Some individuals develop the belief that the rewards they receive are usually a function of their own behavior. They generally expect their actions to be followed by appropriate consequences, be
they positive or negative. Therefore, they perceive themselves to be in control of their environment. In social learning theory, these persons are termed Internals since they perceive the locus of control in their lives to be internal to themselves.

Other individuals develop the belief that their circumstances are often not a function of their own efforts. Generally they do not expect their actions to necessarily result in appropriate consequences. They believe that circumstances are often determined by such external forces as chance, luck, fate, or powerful others (Seligman, Maier, and Solomon, 1971). These persons are termed Externals in social learning theory since they perceive the locus of control in their lives to be largely external to themselves. Presumably, the lack of explicit situational cues (instructions) allows the subjects to react to their own characteristic manner—as an "internal" or an "external" (Phares, 1976).

Belief in predominately external or internal control over the consequences of one's behavior is a concept that has wide application. Locus of control operates both as a belief directed toward one specific situation and as a generalized expectancy covering many diverse situations. If the cues of the specific situation are strong enough, the behavior of most individuals will be similar, regardless of their generalized beliefs. When the situation is ambiguous, the behavior of individuals is more likely to reflect their generalized locus of control beliefs.

Learning and performance are influenced, expectancies for future success or failure are differentially stimulated, and even such
phenomena as cognitive dissonance and reactance can be influenced. In social contexts, internals are more independent and more reliant upon their own judgments. Most of the early research suggests a greater tendency for internals to initiate efforts for social change, although more recent work suggests it may be externals who are more militant or more likely to seek social change. The fact that locus of control is related to behavior as it is reinforced in a systematic way leads to the assumption that more research is necessary into the specificity of conditions, application of appropriate discrimination among situations, and among different age groups.

There is a need to incorporate conceptions of locus of control into both diagnostic and therapeutic efforts (Phares, 1976). Careful evaluation of persons' locus of control beliefs in various life areas can be very beneficial in applying techniques that will enhance an internal locus of control if the individual lacks sufficient self-confidence to mediate certain desired behaviors or that will reduce an internal locus of control if it causes undesirable quantities of anxiety. Since RET through REE professes to be able to help students shape their belief system to be in control of their lives, it seemed productive to test locus of control as a variable.

HYPOTHESES

Theoretical assumptions and inferences led the investigator to believe that there would be significant measurable changes in irrational beliefs, assertiveness, and locus of control but for the
purposes of statistical testing, the hypotheses will be stated in the null form.

Hypothesis 1: There will be no difference between experimental and control group scores on the Children's Survey of Rational Concepts after the Rational Emotive Education is terminated.

Hypothesis 2: There will be no difference between experimental and control group scores on the Revised Rathus Assertiveness Schedule after the Rational Emotive Education treatment is terminated.

Hypothesis 3: There will be no difference between experimental and control group scores on the Intellectual Achievement Responsibility Questionnaire after the Rational Emotive Education treatment is terminated.
Chapter 2

REVIEW OF THE LITERATURE

Rational Therapy was uniquely oriented toward a dramatic-evocative and didactic methodology (Ellis, 1962, 1965, 1971; Ellis and Harper, 1970, 1971) and is educative and reeducative in procedures which can be adapted to a teaching situation. Descriptive data demonstrating how RET principles can be employed with non-disturbed young persons has been published (Ellis, 1969, 1972; Ellis, Wolfe, and Mosley, 1966; Glicker, 1968; Hauck, 1972; Lafferty, Dennerll, and Rettich, 1964; McGory, 1967; Wolfe, 1970). Experimental investigation of RET, using large school populations with appropriate design and control, is sparse.

REE was active and directive in teaching individuals how to develop more rational cognitive-emotive processes. In a recent study Knaus (1972) used a series of five REE modules with two groups of elementary school children. One group of twelve students was selected from a list of children considered "in need of help" by the school counselor. The other group of twelve students was selected from the "normal" school population. Six children of the disturbed group and six children of the normal group were randomly assigned to no-contract control groups. The six children in each treatment group saw the experimenter every day for one-half hour for four consecutive weeks.
After the treatment period, the Test Anxiety Scale for Children (Sarason, 1960) was given to all students. Results indicated that both treatment groups had significantly less anxiety (p < .05) than the comparable control groups. A number of deficiencies with internal and external invalidity are results of: (1) students not randomly selected from the entire school population and no pretest was administered to assess any initial differences; (2) an attention placebo control group was lacking and, therefore, effects of special attention and experimenter personality were not controlled for; (3) an adequate description of the population used was not provided; and (4) only one dependent variable was used.

Meichenbaum and Goodman (1971) investigated an applied therapeutic approach derived mostly from RET to elementary school children. The efficacy of a cognitive self-instructional training procedure in altering the behavior of "impulsive" school children was examined. The study involved fifteen second grade students assigned to a remedial class because of hyperactivity, poor self control, and scores in the dull normal range on intelligence tests. They were randomly assigned to three groups: a cognitive training group, an attention-placebo control group, and a no-contact control group. The groups were equated for sex. The children were seen individually for four one-half hour treatment sessions over a two week period. The training procedure required that the impulsive child talk to himself, first aloud, then in a whisper, then by merely moving his lips and then to self verbalize covertly. The results indicated that the treatment group involved significantly (p < .05) relative to the control groups on the Poreus Maze Test, some selected
performance subtests of the WISC, and Kagan's MFF test, which is a measure of impulsivity. Improved performance for the treatment group was also evidenced in a one month follow up assessment. The study demonstrated that constructive self verbalizations to increase the self control of young children could be taught and carried over into prolonged behavior. The sample used in this study was from a deviant population, the children were seen individually and not in groups, and the sample was small. For these reasons, generalizing to a normal population for affective education is limited.

Ellis (1973) advocated preventive Rational Emotive counseling for all students in a school setting to decrease the possibility of developing personality maladjustments in later life. Ellis has found Rational Emotive counseling more effective with older elementary children through his study at the Living School, which is a private school operated within the Institute for Advanced Study in Psychotherapy in New York City. This school is designed to teach its pupils the principles of rational, sensible living along with regular school subjects. The Living School has produced significant results (Alberti, 1972, 1973, 1974; Knaus, 1974). These studies are done on the population within the school who are selected on the basis of their "normalcy" but attention to intelligence quotients, socio-economic status, and sex are not delineated.

An article by Clicken (1968) indicated the need for and appropriateness of applying REE with elementary school children. He contended that other therapeutic techniques impose modes of behavior,
consequences, and non-cognitive solutions on students. Glicken asserted that young students can understand and apply the principles of RET and thereby benefit from control over their behavior and beliefs. These contentions have not been empirically tested with large groups of elementary school age children but the value of REE with young children is encouraged.

In another study DiLoreto (1971) compared the relative effectiveness of Systematic Desensitization (SD), Rational-Therapy (RT), and Client-Centered (CC) group psychotherapy in the reduction of interpersonal anxiety in introverts and extroverts. Drawing from a pool of six hundred volunteers (adults), one hundred pretested subjects were randomly assigned, within stratified blocks, to one of ten introvert and ten extrovert groups, then randomly assigned to one of three treatment or two control conditions. The sixty subjects in the treatment groups received roughly eleven hours of RT, CC, or SD group counseling. Before, during, and after treatment, test batteries and behavior ratings were administered and behavior ratings were recorded. Among the numerous conclusions of this study it was found that "if in addition to a reduction in self-reports of anxiety, the expected goal involves changes in behaviors outside of the treatment setting, then RT seems to be the treatment of choice." In terms of changes in interpersonal behavior outside the treatment setting only the RT approach was significantly (p < .05) different from the attention placebo control group.

RT was developed for the principal purpose of treatment with people with emotional disturbances, and there is now experimental and
clinical evidence that RET can be applied with other populations as well.

LOCUS OF CONTROL

Locus of control is a personality construct which refers to a person's perceptions that he or she possesses or lacks the power to control what happens to him or her. Studies over the last decade suggest that measures of internality-externality are promising predictors of individual differences along a variety of dimensions (Lefcourt, 1966; Rotter, 1966).

Klein (1970) found that locus of control has been positively associated with achievement performance; with goal directed work involving more problem solving and less self accusatory statements and gestures; with less failure avoidant, defensive goal-setting, and more aggressive, success striving patterns. Internal-External (I-E) control has also been associated with social adjustment and personal achievement. Internal individuals are likely to describe themselves as active, striving, achieving, powerful, independent, and effective (Hersch and Scheibe, 1971).

Lefcourt and Ladwig (1965) found that current behavior evidenced more goal striving effort in externally oriented persons if existing prior successes were cognitively linked to new goals. They also found that cue explication alters external subjects' behavior in the direction of more goal striving internally controlled behavior. Lefcourt (1966:206) states:
When controllability is absent for a prolonged length of time as in the case of concentration camps and slavery, people accommodate to these circumstances by ceasing efforts to behave competently and they begin to appear as passive and irresponsible objects.

Dweck (1976) examined ways in which social cues, in conjunction with a child's history, influenced the child's interpretation of and reaction to failure feedback in evaluative settings. The findings suggested that the way in which a child reacts to another's behavior is largely dependent upon subtle but powerful social cues within situations.

Wolk and DuCrette (1973) suggested that the theory of achievement motivation, particularly as offered by Atkinson (1958, 1964), can best be utilized while considering locus of control as a moderator variable.

Williams and Moffat (1974) have also shown that exposure to controllable outcomes can immunize human objects against the effects of subsequent uncontrollability. Using omission of entertaining material as the aversive stimulus, subjects were exposed to either zero, fifteen, or thirty controllable omissions of the entertaining material. The next phase of the experiment exposed the subjects to one hundred uncontrollable omissions of the entertaining material. The findings that prior exposure to controllable outcomes serves to reduce the effects of subsequent lack of control suggests that skill training can alter locus of control through cognitive processing.

Phares (1955) and James (1957) constructed the first internal-external control scales. The subjects tested showed that externals had more unusual shifts in their expectancy for success and that when persons believe they are in control of what happens, positive reinforcement
leads to increasing certainty for future success. When individuals are involved in situations where personal competence can affect outcomes they tend to perform more actively and adequately than when situations appear less controllable.

The scales which have been used to study locus of control with children (Rotter, 1966; Bialer, 1961; Crandall, Katovsky, and Crandall, 1962; Coleman, 1966) focus primarily on one realm of performance such as academic achievement. For this reason there has been criticism of response bias which limits global application to affective education.

Averill (1973) outlined three major types of personal control: (1) behavioral (direct action on the environment), (2) cognitive (the interpretation of events), and (3) decisional (having a choice among alternative courses of action). Skill training in coping with these three types of personal control indicate through research (Seligman and Maier, 1967) that externals and internals cannot generalize to a variety of other tasks not represented in the training. However, the loss of perceived control is not taken as a simple isolated incident, but rather as a pervasive and profound reaction.

In a report which covered a nationwide assessment of older children, Coleman (1966) found that for minority groups a sense of being in control of one's own successes and failures was the single most important factor predicting academic achievement. These conclusions are criticized because attitudes were measured using only three statements:
1. Everytime I try to get ahead, something or somebody stops me.

2. Good luck is more important than hard work for success.

3. People like me don't have much of a chance to be successful in life.

The correlation of these variables with achievement was .4 and .5. The critics do emphasize the generalizability of this study but it is cited in the literature as valid information on which to base other studies.

McArthur (1970) found that locus of control scores shift with relevant environmental control. Basing his research on the following findings of Coleman (1966:23):

A pupil attitude factor, which appears to have a stronger relationship to achievement than do all the "school" factors together, is the extent to which an individual feels that he has some control over his own destiny ... The responses show that minority pupils, except Orientals, have far less conviction than whites that they can affect their own environment and futures.

McArthur strengthened the argument that locus of control could be manipulated so that a new belief system could replace a previous one.

Bialer's (1961) Children's Locus of Control Scale is a twenty-one item questionnaire originally designed to study the perception of success and failure in mentally retarded and normal children. The Bialer scale samples more general social experiences as opposed to exclusively school related activities. Bialer (1961:303) found that "those procedures and those circumstances confronting a person engaged in long-range pursuits offer similar challenge to one's ability to
overcome the tensions experienced in rejecting seductive diversions." Bialer also concluded that chronological age per se is not the most salient aspect of maturation with regard to locus of control. Rather, it is the growth of mental age, the extent of vocabulary development, and usage that becomes associated with a sense of being able to determine the shape of one's life and to act assertively in one's own behalf.

Locus of control in children has been studied with emphasis on behavioral change and academic performance. Data on changes occurring because of didactic teaching and self analysis is not evident in the literature.

**ASSERTIVENESS**

Empirical data on assertiveness as it pertains to elementary school age children is severely limited. Therefore, to provide a review of literature that is broad and comprehensive it is essential that this subject not be limited to young persons.

Any therapeutic procedures which have the behavioral goals of increasing the client's ability to engage in such expression (in a socially acceptable manner) have been called Assertive Training (Rimm and Masters, 1973). Assertive Training has been evident in university settings, with adolescent females, adult women, deviant personalities, and salespersons. To date there is little data concerned with the young. Even more evident is the lack of validity in measurement instruments.

Assertiveness is expressive behavior which involves both effectiveness and empathy in interpersonal relationships. Constructing a
personal belief system is a goal for assertive behavior. Assertiveness is very closely associated with a humanistic model in the sense that it supports the individualized recognition of self as an important living being who is entitled to thought, emotions, and feelings which need not be sacrificed or negotiated away in a relationship with someone else.

Joseph Wolpe (1958, 1969, 1970) has made major contributions to Assertiveness Training and describes this technique as one of the major procedures by which a person can reciprocally inhibit and eliminate interpersonal anxiety. Wolpe advocates assertion to situation specific (i.e., a person can be assertive on the job but be passive at a party).

This view is in opposition to Salter (1949) who saw assertiveness as a personality construct. Salter represents the Trait theorist's point of view while Wolpe would seem to espouse Social Learning Theory (Mischel, 1968).

A program of assertive training, researched by Eisler and his colleagues (Eisler, Miller, and Hersen, 1973a), primarily isolated some of the specific behavioral components of assertiveness. It was found that high assertive subjects could be differentiated from low assertive subjects on six specific behavioral measures: (1) latency of response (to the annoying individual), (2) content requesting new behavior (subjects requesting that the annoying individual change his or her behavior), (3) affect (appropriate vocal expressiveness), (4) loudness of speech, (5) compliance content (not acceding to the annoying individual), and (6) self-ratings on Wolpe-Lazarus Assertiveness questionnaire (Wolpe and Lazarus, 1966). Thus, this first empirically derived profile was applied to subjects for further study.
Assertiveness has been defined by Alberti and Emmons (1970:86) as "... behavior which enables a person to act in his own best interests, or stand up for himself without undue anxiety, to express his rights without denying the rights of others." Studies done on the learned behaviors of subjects who have been exposed to assertive techniques is limited almost entirely to adult subjects.

McFall and Marston (1970) investigated behavior rehearsal in assertive training by having nonassertive subjects listen to tape-recorded stories. The subjects were to respond on tape in an assertive manner to the recorded situations. Subjects were divided into feedback and no-feedback groups. The feedback group was permitted to hear their responses in repeated replays. The no-feedback group was instructed to "think back" to previous responses. All subjects were to evaluate themselves, and were provided criteria to facilitate self-evaluation. Measurement of pulse rate, self-ratings of anxiety and satisfaction, and a pre-post treatment behavioral test by five judges indicated significant improvement on all measures by the treatment group as compared to the control group scores. A two week follow-up was staged to assess the generalizability in a specific situation. The subjects were recorded on tape as they responded to a telephone conversation with a magazine "salesperson." The conversations in the follow-up were rated in the behavioral test. This data failed to indicate significant enduring gains from the treatment. The subjects who participated in this study were, through self-description, non-assertive. The judges' criteria was not carefully designed and
implications of personal bias may have contaminated ratings. Also, treatment effects were adjudged significant only when combined scores were compiled.

McFall and Twentyman (1973) assessed relative contributions of rehearsal, modeling, and coaching under varied conditions: (1) rehearsal, modeling, and coaching; (2) rehearsal and modeling; (3) rehearsal and coaching; (4) rehearsal only; (5) modeling and coaching; and (6) no treatment. The researchers concluded that "rehearsal and coaching accounted for virtually all of the treatment variance." The measured outcomes from the study were limited to verbal refusal which would lead to the belief that modeling is not an effective treatment. However, verbal response is only one observable behavior of assertiveness.

Assertive training of female psychology students was studied by Rathus (1972). The subjects were assigned randomly to an assertive training group, a discussion group, or no-treatment group. The training group was to practice prescribed assertive behaviors twenty-five times a week and to record their rehearsal in a journal. Assessment was made on a pre-post self-report measure (Rathus, 1972). Judges also rated interview tapes of subjects on a one to five scale as to assertive responses in specific social situations. No significant improvement was evident in the group ratings by the judges. The subjects who received assertive training reported improvement on a self-report measure post-test. The study would have had more impact had a correlation of self-report and judges' ratings on assertive behavior been found.
Three treatment components were emphasized in a study by Eisler, Hersen, and Miller (1973b): (1) test-retest control; (2) practice control; and (3) modeling condition. The modeling condition subjects were shown a videotaped assertive model trained to produce specific assertive behaviors. These subjects interacted four times to each of the six situations presented. The sequence of stimulus, response assertive model was outlined in the treatment methodology. The practice control group subjects followed the same sequence deleting the assertive model. The control group subjects were tested, exposed to only the stimulus model, and retested. The modeling condition subjects scored higher in overall assertive behaviors of loudness of speech, duration of reply, greater affect, and requests for new behaviors. No differences were obtained among the three groups on measures of duration of looking, latency, or compliance. This study was one of the first to employ manipulation of specific behavioral components indicating that strict instructional designs and valid measurement enabled an empirical base to be generated for future research.

Assertive training with children was studied by Bower, Amatea, and Anderson (1976). The purpose of this study was to develop a short-term program of assertiveness training procedures for children who were identified as unable to assert themselves at school with their peers and teachers. Specific activities were developed to help the six subjects learn concrete ways of behaving assertively. Eleven small group sessions of thirty to forty minutes focused on discussion and
activities. Three criterion instruments were administered pre-post to evaluate the program. An observation checklist was developed for teachers' ratings as to demonstrated behaviors such as raising a hand in class, initiating play with other students and talking to others in social situations. Subjects rated themselves as to their perception of personal assertiveness. Also, a simulated situations test was given in which each child responded to a series of five hypothetical problem situations. Assertiveness increased as measured on all three tests. Statistical validity was not evident in this study. Also, the subjects were expected to demonstrate gains in assertive behavior after training since the basis of selection was being nonassertive. A lack of a control group or placebo group diminishes the possibilities for generalizable findings.

Literature relating to assertiveness continually suggests that more research is necessary. Investigators state a need for large groups of children to be used and that they be randomly selected from "normal" populations.
Chapter 3

METHODOLOGY USED IN THE STUDY

The REE program was designed to facilitate rational behavior training with groups of elementary school children. Focus of irrational beliefs that may cause undue anxiety, lack of personal control for action, and self-defeating feelings are then disputed and replaced with learned rational beliefs. The purpose of this study was to determine if REE had an effect on irrational beliefs, assertiveness and/or locus of control.

The experimental method was utilized to investigate the effectiveness of Rational Emotive Education in producing significant changes in irrational beliefs, assertiveness, and/or locus of control in fifth grade students. Solomon's Four-Group Design was chosen as the design for the investigation. The basic steps used in the planning, implementation, and conduct of this investigation are discussed in this chapter.

SELECTION OF THE SUBJECTS

The school district in which the investigation was conducted is one of the largest counties in terms of pupil enrollment in south-western Virginia. Its pupil enrollment exceeds 20,000 with individual grade enrollments averaging from 1,800 to 2,000 pupils.
Population

The population from which the sample was drawn was defined as those students in grade five in the local school district attending elementary schools with elementary guidance counselors during the school year 1977-78. There were fifteen schools in the school district with full time elementary counselors all indicating an interest in this research project.

Sampling Method

The investigator randomly selected two hundred students from the total population of fifth graders whose school had a full time counselor. One hundred students were then randomly selected as the experimental group and the remaining one hundred were assigned to the control group.

One experimental group of fifty randomly selected students took the pre-tests and post-tests while the remaining fifty students took only the post-tests. Both of the experimental groups were administered all three instruments which were the Children's Survey of Rational Concepts Form C, the Intellectual Achievement Responsibility Scale, and the Revised Rauth Assertiveness Schedule.

The other one hundred students were randomly assigned to two separate control groups of fifty each. One control group was administered pre-tests and post-tests while the remaining control group was post-tested only. Both of the control groups were administered all three instruments (Figure 1).
Elementary Schools
With Counselors

R
N = 200

Experimental Group
R
N = 100

Control Group
R
N = 100

Experimental (E₁)
Pre-Test
Post-Test
R
N = 50

Experimental (E₂)
Post-Test
R
N = 50

Control (C₁)
Pre-Test
Post-Test
R
N = 50

Control (C₂)
Post-Test
R
N = 50

R = Random assignment of pupils to groups.
N = Number assigned to each group.

Figure 1

Organization of the Random Sample
SELECTION OF INSTRUMENTS

Three instruments were used to measure the effect of REE on irrational beliefs, locus of control, and assertiveness. The following data is supportive information as to the selection of each instrument.

Children's Survey of Rational Concepts
Form C (Ages 10-13)

The Children's Survey of Rational Concepts Form C (CSRC) measures rational beliefs of students. The students responded to thirty-eight open-ended statements about school, family, and themselves by selecting one of four possible conclusions. The CSRC was normed on thirty subjects in each grade fourth through seventh at the Institute for Rational Living school and at a public elementary school in New York City. Test-retest reliability was .84 after a six week period. The reading level of the test was adjudged by the test constructors to be fourth grade according to the Dolch vocabulary inventory. It was suggested by William Knaus, author of the test, that the test be read to young children. However, it was his opinion that all fifth grade students could read and comprehend the questions with some help from the test administrator.

Intellectual Achievement Responsibility Questionnaire

The Intellectual Achievement Responsibility Questionnaire (IAR) was developed by Crandall, Katkovsky, and Crandall (1965). The IAR measures locus of control solely in intellectual achievement
situations. Developed in the context of a larger program of research on achievement, the IAR attempts to assess children's beliefs in reinforcement responsibility exclusively in intellectual-achievement situations (Phares, 1976).

Another characteristic of the IAR is its focus on measurement of locus of control with significant others such as parents, teachers, or peers in their environment. Also important to the IAR is the equal number of positive and negative events. Crandall, Katkovsky, and Crandall theorized that the forces leading children to assume credit for causing positive outcomes might be quite different from those causing the taking of blame for unpleasant outcomes. Thus, the IAR yields three scores. There is the total I (internal or self responsibility score) and also subscores for beliefs in internal responsibility for successes (I+) and for failure (I-).

The IAR is composed of thirty-four forced-choice items. Depending on the reading and comprehension levels of the students, the authors recommend an oral form of presentation to ensure proper understanding of the items.

The norming sample consisted of 923 elementary and high school students. In general, distributions were skewed in the internal direction for all age groups and both sexes. Test-retest correlations over two months were .69 for total I, .66 for I+, and .74 for I- for children in grades three, four, and five. Ninth grade students produced similar correlations (.65, .47, and .69). In subsequent testing, correlations between IAR subscores and a measure of social desirability
lead to the conclusion that social desirability accounts for relatively little of the variance in IAR scores.

Criterion behaviors and IAR scores have shown a relationship in many studies. McGhee and Crandall (1968) reported that internals on the IAR achieve higher school grades than do external subjects. Chance (1965) reported relationships between IAR scores and several achievement indexes, including reading skill, math performance, spelling, and even IQ.

All the data reviewed suggests that while internality on the IAR is related to report card grades, there is a tendency for I+ (self-responsibility for success) to predict young girls' grades and I- (self-responsibility for failures) to predict for young boys. Present research is studying the discrepancy phenomenon as it may relate to subjective judgments about work, efforts, or attitude, aspects in which an internal is likely to excel.

Rathus Assertiveness Schedule

The Revised Rathus Assertiveness Schedule (RAS) is an assertiveness inventory for use with pre-adolescent children. Rathus (1973) developed a study with college students in which moderate to high test-retest reliability, moderate to high split-half reliability, and satisfactory validity all were obtained with a thirty-item schedule for measuring assertiveness. A later study was done to determine the usefulness of the Rathus Assertiveness Schedule (RAS) with pre-adolescent and early adolescent students and the readability was found to be above their comprehension level.
A readability level computed for the original RAS was determined to be mid-tenth grade. As a result of this, the authors modified some of the vocabulary. The readability check on the modified RAS was computed to be low seventh grade. The RAS was then administered to 18 seventh grade males, 18 seventh grade females, 18 eighth grade males, 18 eighth grade females, ranging in age from eleven to fourteen, and who were randomly selected from the total population of a public junior high school. After eight weeks had passed, the modified RAS was readministered to the same seventy-two students.

According to Rathus (1973, 1974), a shortened nineteen-item version of the RAS could be reliably used. A Pearson product moment correlation coefficient was run on both the modified thirty-item and the modified nineteen-item RAS to determine test-retest reliability. The results (thirty-item \( \eta_{xx} = .760, p < .01 \); nineteen-item \( \eta_{xx} = .830, p < .01 \)) indicated good stability over a two-month period. A similar computation between total odd and total even factors measured by the modified RAS demonstrated moderate to high homogeneity.

In all of the comparisons, the t-ratios that were obtained indicated no significant difference between the samples at the .01 level. The modified RAS and the shorter modified nineteen-item RAS can be reliably used with pre-adolescent and adolescent students.

The twenty-seven statements have a possible rating of +3 indicating very characteristic of self to -3 indicating very uncharacteristic of self. The test yields a + and a - score.

The instruments just described were selected as a result of a survey of the test literature and examination of the actual
instruments and manuals. Although these instruments addressed the specific behaviors studied, concern was expressed as to the appropriateness of these tests for the age group in the study. This concern was particularly notable with respect to the IAR and the RAS.

DESIGN

The Solomon Four-Group Design was considered for this study because of its help to external and internal validity and its possibilities for analyzing data. Campbell and Stanley's *Experimental and Quasi-Experimental Designs for Research* describes the arrangement of the groups and observation points as follows:

\[
\begin{array}{cccc}
R^* & 0_1 & X & 0_2 \\
R^* & 0_3 & X & 0_4 \\
R^* & X & 0_5 \\
R^* & 0_6 \\
\end{array}
\]

(Experimental Group 1)

(Control Group 1)

(Experimental Group 2)

(Control Group 2)

\(R^*\) denotes random assignment

\(0_1, 0_2, \ldots, 0_6\) denotes observation or testing points

Kerlinger (1964) points out that the design is a strong one in that the demand for comparison is well satisfied with the first two lines and the second two lines, the randomization assures statistical equivalence of the groups, and history and maturation are controlled with the first two lines of the design.

The pre-test-post-test group design is paralleled with the experimental and control groups lacking the pre-test, thus the main effects of testing and the interaction of testing and the treatment are determinable.
TREATMENT OF SUBJECTS

Each counselor was given a list of the fifth grade students in their schools who had been randomly selected as the sample population. Each counselor received the list of students designated as Experimental Group 1, Experimental Group 2, Control Group 1, and Control Group 2. Only students in Experimental Group 1 and Control Group 1 were pre-tested while all groups received post-tests (Table 1). The tests were administered and scored by the counselor in each school. Test scores were reported to the investigator for analysis.

Students who were randomly selected in Experimental Group 1 and Control Group 1 were pre-tested on the Children's Survey of Rational Concepts Form C, the Intellectual Achievement Responsibility Questionnaire, and the Revised Rathus Assertiveness Schedule. The counselors then taught REE to the two experimental groups using the manual, Rational-Emotive Education: A Manual for Elementary School Teachers. The REE lessons from the manual were presented once weekly for a ten-week period. The students were instructed in the principles of RET, challenging irrational beliefs through self-questioning and action, challenging feelings of inferiority, coping with mistake-making and imperfection, and identification of behaviors when demanding and catastrophizing. Teaching techniques of role play, gaming, and lecturing were employed by the counselors. Homework assignments were given each week in the form of written work, observations, or practice exercises such as REI's. One such exercise instructed the students to close their eyes and imagine that they remain calm while
Table 1
Data Collection

<table>
<thead>
<tr>
<th>Pre-Test Data Collection</th>
<th>Post-Test Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group ($E_1$)</td>
<td>Experimental Groups ($E_1, E_2$)</td>
</tr>
<tr>
<td>Control Group ($C_1$)</td>
<td>Control Group ($C_1, C_2$)</td>
</tr>
</tbody>
</table>
giving a speech or taking a test. They reported on their thinking and actions while imagining the situation. The lessons are further detailed in outline form in Appendix B. Pupils in the experimental and control groups received routine guidance services with the exception of the groups who received REE.

Upon completion of the treatment period of ten weeks, the same tests were administered to Control Group 1 and Control Group 2 and to Experimental Group 1 and Experimental Group 2. The scores were reported to the investigator for statistical analysis.

A random sample of students in the experimental groups and their teachers were interviewed one week after post-testing was completed. The anecdotal data were collected so that subtle changes in the students not noted by quantitative data could be evaluated. The questions used in the interview appear in Appendix C.

TREATMENT OF DATA

Two experiments were conducted with the pre-test-post-test groups \( E_1 \) and \( C_1 \) serving as one experiment. The second experiment was conducted with all groups, \( E_1, E_2, C_1, \) and \( C_2 \), who were post-tested. Even though the qualifications of two true experimental designs have been fused, Campbell and Stanley (1963), Burroughs (1971), Isaac and Michael (1972), and Kerlinger (1964) all concur that the results of the simultaneous experiments in the Solomon Four-Group Design are not equivocal and that there is no one statistical procedure to cover all comparisons possible with the design.
Data for comparisons between the two pre-tested groups were analyzed using analysis of covariance (ANCOVA). Comparisons between all Experimental and Control students without regard to pre-test were analyzed using analysis of variance (ANOVA). The acceptance or rejection of each hypothesis was based on .05 level of significance.
Chapter 4

ANALYSES OF DATA

The purpose of the study was to determine the effect of Rational Emotive Education (REE) on irrational beliefs, assertiveness, and/or locus of control in fifth grade students. Two hundred students were randomly selected and randomly assigned to an Experimental Group or a Control Group. The Experimental and Control Groups were then randomly divided into Experimental Group 1 \( (E_1) \), Experimental Group 2 \( (E_2) \), Control Group 1 \( (C_1) \), and Control Group 2 \( (C_2) \) with fifty students in each group. Groups \( E_1 \) and \( C_1 \) were pre-tested and groups \( E_1, E_2, C_1, \) and \( C_2 \) were post-tested.

The Children's Survey of Rational Concepts Form C (CSRC), the Revised Rathus Assertiveness Schedule (RAS), and the Intellectual Achievement Responsibility Questionnaire (IAR) were used as pre-tests for groups \( E_1 \) and \( C_1 \) and post-tests for groups \( E_1, E_2, C_1, \) and \( C_2 \). In addition to the quantitative data, anecdotal remarks were collected. Findings relevant to both types of data are reported in this chapter.

STATISTICAL ANALYSES

The data were organized and subjected to statistical analyses as described in Chapter 3.
Analysis One

The first comparison was made between the pre-tested groups, \(E_1\) and \(C_1\). Tests of homogeneity of regression and within cells regression suggested that analysis of covariance (ANCOVA) was an appropriate analytical technique. In this instance, the five subtest scores were used in combination as a single covariate. Five univariate F tests were conducted to test effectiveness of the treatment (REE) on the five independent variables. Table 2 depicts the pre-test-post-test scores for all groups \(E_1\), \(E_2\), \(C_1\), and \(C_2\) under varying conditions of treatment. Significance in favor of the \(E_1\) group was found in one instance—that of CSRC scores—as evidenced by the univariate F of \(17.84\) (\(df = 1, 93\)) as illustrated in Table 3. In no other instance did statistical significance occur.

Analysis Two

A second analysis dealt with all two hundred subjects in groups \(E_1\), \(E_2\), \(C_1\), and \(C_2\). This statistical technique sought to determine whether (a) the REE lessons had an effect on post-test scores, (b) conditions of pre-testing had an effect on post-test scores, and/or (c) interaction existed between conditions of pre-testing and treatment (REE).

The interaction between pre-testing condition and treatment (REE) was not significant at the .05 level (Table 4). Therefore the main effects were interpreted directly. There were no significant differences associated with the pre-test condition. It was concluded
<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental Groups</th>
<th>Control Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E₁ Pre-Test</td>
<td>E₁ Post-Test</td>
</tr>
<tr>
<td>Children's Survey of Rational Concepts Form C</td>
<td>14.76</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.13</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (a)</td>
<td>29.34</td>
<td>28.90</td>
</tr>
<tr>
<td>(Factor characteristic of Self)</td>
<td></td>
<td>8.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (b)</td>
<td>29.04</td>
<td>30.46</td>
</tr>
<tr>
<td>(Factor characteristic of Self)</td>
<td></td>
<td>9.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility</td>
<td>13.06</td>
<td>13.48</td>
</tr>
<tr>
<td>Questionnaire (Self-responsibility for success)</td>
<td></td>
<td>2.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility</td>
<td>10.34</td>
<td>11.16</td>
</tr>
<tr>
<td>Questionnaire (Self-responsibility for failure)</td>
<td></td>
<td>3.05</td>
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<td></td>
<td></td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3

Analyses of Covariance on Pre-Tested Experimental and Control Group Subjects: E₁ and C₁

<table>
<thead>
<tr>
<th>Variable</th>
<th>F (df = 1, 93)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children's Survey of Rational Concepts Form C</td>
<td>17.84</td>
<td>Significant p &lt; .01</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Uncharacteristic of Self)</td>
<td>.46</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Characteristic of Self)</td>
<td>.05</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for success)</td>
<td>.06</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for failure)</td>
<td>.06</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Variable</td>
<td>F (df = 1, 196)</td>
<td>Significance</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Children's Survey of Rational Concepts Form C</td>
<td>0.62</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Uncharacteristic of Self)</td>
<td>0.61</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Characteristic of Self)</td>
<td>0.52</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for success)</td>
<td>0.43</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for failure)</td>
<td>0.42</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>
that the pre-test, per se, had no effect on post-test performance (Table 5).

Univariate tests of the five variables revealed that significance was associated with the CSRC scores as evidenced by the univariate F of 25.324 (df = 1, 196). Significance for the other four variables did not occur (Table 6).

In summary, both analyses (ANCOVA and ANOVA) confirmed that only in the rational beliefs of students, as measured by the CSRC, were significant results obtained after REE. Therefore, a decision was made to reject Ho:1 "There is no significant difference in irrational beliefs as measured by the Children's Survey of Rational Concepts Form C after Rational Emotive Education is terminated."

The data did not show significance on either the RAS or IAR post-test scores. Therefore a decision was made not to reject Ho:2 "There is no significant difference in assertiveness as measured by the Revised Rathus Assertiveness Schedule after Rational Emotive Education is terminated" and not to reject Ho:3 "There is no significant difference in locus of control as measured by the Intellectual Achievement Responsibility Questionnaire after Rational Emotive Education is terminated."

ANECDOtal DATA

Anecdotal data were collected to determine whether subtle changes in the students not measured by quantitative techniques were evident. One week after post-testing fifteen randomly selected students and five randomly selected teachers who were associated with Experimental
### Table 5

**Analysis of Variance Test of Post-Test Differences Attributable to Pre-Testing Condition (E₁ and C₁)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>F (df = 1, 196)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children's Survey of Rational Concepts Form C</td>
<td>0.83</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Uncharacteristic of Self)</td>
<td>0.44</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Characteristic of Self)</td>
<td>0.14</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for success)</td>
<td>0.29</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for failure)</td>
<td>0.76</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>
Table 6
Analysis of Variance Test of Treatment (REE) Effects
Experimental and Control (E vs. C)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$F$ (df = 1, 196)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children's Survey of Rational Concepts Form C</td>
<td>25.324</td>
<td>Significant p &lt; .01</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Uncharacteristic of Self)</td>
<td>.18</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Revised Rathus Assertiveness Schedule (Characteristic of Self)</td>
<td>.10</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for success)</td>
<td>.59</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Intellectual Achievement Responsibility Questionnaire (Self-responsibility for failure)</td>
<td>.01</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>
Groups $E_1$ or $E_2$, were interviewed by the writer using the questionnaire in Appendix C. The investigative questions focused on the three variables of the study, irrational beliefs, assertiveness, and locus of control. The investigator structured the questions in Appendix C so that personal application of the tenets of the REE lessons could be ascertained. The following data are a summary of the interviews.

**Students**

All students interviewed were eager to discuss the lessons and the activities associated with REE. They offered that the classes had been enjoyable and that they remained interested throughout the ten week period.

Questioned as to a change in attitude, four students reported a change was evident in themselves, while six recalled an attitude change in other members of their group. One student commented . . . "They tease me but I talk to myself about just being a mistake-maker."

The students were asked to recall specific application of the lessons. They talked of situations at home or at school which usually resulted in disagreements. They related how they remembered specific language from the lessons such as "not everyone acts their age all the time" and "no one is all good or all bad." Another application was cited by a student who told of a risk taking task at a restaurant which resulted in an assertive behavior. She said, "I ordered for myself at the Holiday Inn. I was scared but I did it." Other comments centered around difficulty remembering what the lessons said to
do when they were not in the class. They said that help was needed to remember what to think or do in specific incidences. Others related that the charts were good reminders. Eleven volunteered that they would like to continue the lessons so they could discuss situations with the counselor and group members. All fifteen students reported attempts at application of the REE lessons.

When asked about handling their emotions and their thinking as taught in the guidance classes, seven thought they were more in control of their actions in emotional situations. Three said they remembered what the lessons had prescribed after the incident had past. Only one example of internal responsibility or control was given by a student who said that he could handle problems himself instead of making excuses. He had received a two day suspension from bus privileges due to offensive language. He reported he "took the punishment and didn't blame anyone."

Other remarks indicated that the students were more aware of possible actions in situations that had previously been stressful. Test taking, being ignored by peers, asking questions in class, and athletic competition were common topics that the students discussed as being less stressful since the REE lessons. A summary statement by one student was particularly poignant: "I try to do like the lessons but it's hard not to act the old way."

Teachers

Three of the five teachers who were interviewed were aware of the REE program that the counselor had used during the ten week guidance
program. The two remaining teachers did not know specifically what
the counselor was doing during the lesson time but were aware that the
students had been enthusiastic about the activities.

In response to the question of attitudinal change, the teachers
reported that, as a class, there had been no major changes but that
individual students behaved differently since the lessons began. Two
teachers reported that students raised their hand more often to answer
questions. Another teacher said that she noticed less arguments on the
playground. She added, "I think the class asks for more directions when
I give homework."

All teachers were pleased with the activities that had been
carried out by the counselors. An example of this was offered by a
teacher who had displayed the "Point of View" stories on a bulletin
board. These stories centered around the theme of seeing the story
from the point of view of the "underdog" in nursery rhymes. The manual
gave the example of a story from the point of view of the wolf in
"Little Red Riding Hood." The students then selected other rhymes to
express the point of view of the maligned.

When asked about reactions to stressful situations it was the
opinion of two teachers that there had been no change, but another
teacher reported, "I don't know what they learned but they seemed more
relaxed during the spelling contest. In fact, one student told me that
everyone makes mistakes and that to be perfect was irrational." The
teacher went on to say that after that statement she read the counse-
lor's REE manual. She was currently trying to use the techniques of
challenging irrational ideas when asking students to act out plays in Language Arts class. She reported having more students participate in verbal exercises after the use of challenging statements.

Parents had not inquired or made comments about the REE lessons to four of the teachers. The fifth teacher recalled that a parent inquired about a change in her daughter's attitude toward homework assignments. The student was completing the tasks with less prodding.

There were two concerns that one teacher had about the guidance lessons. She didn't believe that students needed to be told how to think and she thought some of the things they said was "sassy." These were the only two negative statements during the interview.

Interview Summary

The interviews were conducted one week after post-testing. The investigator randomly selected fifteen students and five teachers associated with Experimental Groups $E_1$ and $E_2$. Each interview was approximately one-half hour in duration.

Questions in Appendix C were posed to each interviewee. The interviews indicated that the students and the teachers were aware of specific changes attributable to the REE lessons. The understanding and use of principles of RET in everyday situations suggested carry-over from cognitive understanding to application of the theory. The interviewed students and teachers expressed usefulness and reward, both intrinsic and extrinsic, through adaptation of rational beliefs.

Specific assertive behaviors were reported. The writer noted that nine out of fifteen students volunteered more information, asked
more questions, or talked more frequently with peers in social situations. Six of the fifteen students reported times when they did not act in an aggressive way but assertively responded to "put-down" such as name-calling and bullying. These behaviors were more highly valued by the students than by the teachers since only one out of five reported assertive behavioral changes in students.

Teachers were more sensitive to locus of control in the students. Three of the five teachers recalled times when students took responsibility for assignment completion. Only two of the fifteen students reported taking responsibility for their part in a dispute or not blaming others for something over which they had control. The teachers did not see this as an attitudinal or locus of control change, but as a positive development in maturation. Therefore students did demonstrate subtle changes in locus of control but the changes were not reported by students as explicitly as were assertive behaviors.

Although, interviews yielded information that was not substantiated by quantitative data, it is notable chat changes in irrational beliefs, assertiveness, and locus of control were observed and reported by the teachers, as well as students. This discrepancy may be attributable either to lack of sensitivity in the testing instruments or to overstatement of reported observations by the teachers and students.
Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The following is a summary of the study, the conclusions drawn from the research, and recommendations. There is also a discussion of the results in terms of specific analyses explaining the difference in quantitative and anecdotal data.

SUMMARY

A literature survey was conducted which revealed possible relationships between the principles of rational emotive theory, irrational beliefs, assertiveness, and locus of control. The need for research data gave support for a large scale study of randomly selected subjects to test these hypotheses.

A random sample of two hundred fifth grade students were randomly divided into Experimental Group E₁, Experimental Group E₂, Control Group C₁, and Control Group C₂. The experimental design selected for the study was Solomon's Four Group Design. The Children's Survey of Rational Concepts Form C (CSRC), the Revised Rathus Assertiveness Schedule (RAS), and the Intellectual Achievement Responsibility Questionnaire (IAR) were selected to measure irrational beliefs, assertiveness, and locus of control respectively.

Twelve elementary school counselors received in-service training in the principles of rational emotive theory and its application
with elementary school age students. The counselors also received training in the administration and scoring of the test instruments.

Pre-tests were administered to Experimental Group $E_1$ and Control Group $C_1$, each having fifty students and scores were reported to the investigator. The ten week guidance program was presented to Experimental Groups $E_1$ and $E_2$ using lessons in *Rational Emotive Education: A Manual for Elementary Teachers*. Post-testing scores were reported to the investigator for statistical analyses from groups $E_1$, $E_2$, $C_1$, and $C_2$.

**Summary of Statistical Analyses**

An ANCOVA and ANOVA were used to analyze data. The results of the ANCOVA and ANOVA revealed that a significant difference at the .05 level was evident on the CSRC, which tested the rational beliefs of students.

The treatment, REE, did not result in statistically significant differences between experimental and control groups on the RAS, used to measure assertiveness. Locus of control post-test scores on the IAR were not significantly changed after REE. The analysis of each statistical procedure indicated no significant difference.

**Summary of Anecdotal Data**

In addition to statistical data, anecdotal remarks were collected to assess the possibility that subtle changes may have occurred that would not be evidenced in the quantitative data. One week after post-testing, fifteen randomly selected students and five randomly
selected teachers who were associated with Experimental Groups E₁ and E₂ were interviewed using questions in Appendix C.

The questions focused on the three variables of the study, irrational beliefs, assertiveness, and locus of control. All interviewees were aware of specific changes attributable to the RET lessons. Cognitive understanding of RET through RET was expressed in examples of application by all students and teachers interviewed.

The anecdotal data on assertiveness indicated a level of conflict which was perhaps not serious but, nevertheless, raised some question as to the sensitivity of the measuring instrument. Although the RAS did not indicate significance, the interviewees provided information that students did behave more assertively after RET. Increased verbalization in class discussions, asking for more directions to complete assignments, and standing up for their rights in argumentative situations are specific examples in which assertiveness was noted by students and teachers after RET.

The interview information on locus of control concluded that most teachers noted changes in responsibility for work completion or similar tasks but only two students reported being responsible for consequences attributable to actions. Therefore, it was concluded that anecdotal data did support subtle changes in locus of control but not as explicitly as rational thinking or assertiveness.

CONCLUSIONS

1. There was a statistically significant difference between experimental and control groups in irrational beliefs after Rational
Emotive Education as measured by the Children's Survey of Rational Concepts Form C.

2. There was no statistically significant difference between experimental and control groups in assertiveness as measured on the Revised Rathus Assertiveness Schedule after Rational Emotive Education. However, assertive behavioral changes were evidenced in anecdotal data.

3. There was no statistically significant difference between experimental and control groups in locus of control as measured on the Intellectual Achievement Responsibility Questionnaire after Rational Emotive Education. It was concluded that in this study the students did demonstrate very subtle changes in locus of control as evidenced in anecdotal data but these changes were not supported statistically.

**Implications**

The tenets of rational emotive theory espouse that a person who thinks rationally can be in control of emotional habits and be relatively independent of other people for psychological and emotional support. From this study, several implications can be concluded about the tenets of RET as they are studied through REE.

First, it appears that fifth grade students can learn and apply the principles of RET and thus be more in control of emotional reactions. They can adeptly use practice exercises such as REI's, risk taking tasks, and role play as reinforcements of the ABC's of the theory. The students in this study who were interviewed were capable of seeing short and long range implications of thinking rationally. The charts and homework
assignments were instruments they used with ease in maintaining awareness of behaviors, feelings, thinking, and challenging of irrational beliefs.

The Rational Emotive Education: A Manual for Elementary Teachers was an adequate teaching tool for the purpose of instructing students in rational emotive education in a classroom situation. And, since students can learn to think rationally, they can be taught to think rationally in conjunction with classroom guidance or as a teacher taught subject in the area of mental health.

Second, REE has implications for practice in critical thinking and decision making skills. Since deductive reasoning is a powerful component in thinking rationally and since the evidence on the CSRC showed that students were capable of reasoning deductively then the elementary school guidance program can stress examination of the belief system of students as it relates to awareness of self and others, values clarification, and decision making.

Third, the concern for appropriateness of instruments was justified by the investigator in that students and teachers stated awareness of behavioral changes in assertiveness and locus of control which were not evidenced in the statistical data obtained on the RAS and IAR. Therefore, future researchers may wish to select different instruments for both qualitative and quantitative analyses.

An interesting observation relates to assertiveness in fifth grade students, since increased assertiveness was evidenced in this study by the students' remarks collected as anecdotal data. The interviews revealed that thinking rationally resulted in behaving assertively.
In specific situations such as raising their hand to seek or volunteer information, being more responsible in class discussions, standing up for their rights in disagreements, and being less aggressive toward younger siblings, both students and teachers noted that these behaviors increased after REE. Therefore, a relationship was suggested in this study between thinking rationally and acting assertively. If this is the case, then further attention of teachers, counselors, and researchers will be needed to build a data base for assessing assertiveness as an outcome of REE.

Assertiveness on the part of students may be interpreted as disrespect by educators as noted on the two of five teacher interviews. This implication would suggest then that inservice training be provided for educators for the purpose of understanding assertiveness and resultant behaviors in students.

REE emphasized the deductive role of thought and behavior through guidance of behavioral experiences and rehearsal, paralleling the learning system of Piaget's assimilation and accommodation theory in which cognitive understanding was modified to match outer reality through concrete experiences. The REE educational model of learning through inductive and deductive reasoning, reinforcement, and follow-up was employed to aid students to improve problem-solving skills and to explore self-actualization. Through this educational model, the students demonstrated an understanding of thinking and reacting rationally in various situations. There are then implications for the development of similar teaching strategies to encourage students to be more internally controlled if being internally controlled is considered advantageous in the development of human potential.
RECOMMENDATIONS

1. Instruction in rational emotive education should be an option in counselor education training for use in upper elementary school guidance and counseling programs.

2. Rational emotive education should be considered by elementary counselors as a classroom guidance strategy to influence rational thinking in students.

3. Elementary classroom teachers should consider rational emotive education as an appropriate curriculum to influence rational beliefs in students. This is recommended only if teachers are educationally prepared to teach and apply the principles of RET to elementary age pupils.

4. Teachers and students attributed changes in certain behaviors to REE. One implication from their remarks may be that REE take priority over packaged materials that are very general in content and have less measurable effect.

5. Future research should be done with younger students to determine if the principles of RET can be applied at an earlier age. In such a study, the researcher should consider cognitive developmental stages of learning.

6. Irrational beliefs may exist in young students who are involved in crisis situations such as divorce, separation, or death. Therefore it is recommended that REE be used to determine possible effects on elementary age students in crisis situations.
7. Personnel in elementary counseling services should do research in their own school setting, using REE with both teachers and students, to provide information related to rational thinking on academic performance and/or the learning environment.

8. Consideration should be given to the development of techniques which measure assertiveness in qualitative as well as quantitative terms.
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APPENDIX A

Workshops for the Counselors
Workshops for the Counselors

The school counselor in each of the selected experimental schools will participate in three (3) training workshops.

Workshop 1

I. General Points

A. A pre-test using Common Trait Inventory (CTI) developed by Maxie C. Maulsby, Jr. (1970)

B. Theoretical background of RET

C. ABC theory

D. Irrational beliefs
   1. Four Magical Beliefs
      a. Masturbation
      b. Awfulizing
      c. "I can't stand it."
      d. Name calling and blaming (self and other-self evaluation

   2. Low frustration tolerance

   3. Ellis' list of irrational beliefs

II. Specific Therapist Behaviors

A. General comments

   1. Rather than telling the client, help them come up with their own insights. This counteracts "goofing" or "laziness" and teaches them to think for themselves.

   2. Being situationally specific is often helpful.

   3. Use of visual aides is often helpful.

B. Use of analogies

C. Showing client why his or her beliefs are false:

   a. Pragmatically leads to poor results
   b. Unfactual (perfectionist, etc.)
   c. Internal inconsistencies
d. false premise
e. false conclusion from a valid premise
f. non-sequitor
g. tautology
h. short range hendonism

III. Practice

A. Informal discussion of specific case studies.

1. Solicitation of irrational B's from the counselors--given A and C, what is B? (i.e., "At point A you are about to take a test and at point C you feel anxious; now, what do you think at point B to get yourself anxious?"

2. Using imagery to help counselors get in touch with their feelings (i.e., as you "picture your husband or boyfriend cheating, how do you feel?"

3. Pointing out that clients are simultaneously thinking rational and irrational thoughts (i.e., "You are saying a rational thing--you don't like it--and an irrational thing--he shouldn't do that."))

4. Contrasting technique (i.e., "If you were to only feel anger, what would you have to think. And, if you were to feel irritated, what would you have to think?" (i.e., "If you were only thinking "I don't like that, what would you feel? Similarly, if you were to think "you shouldn't say that, "what would you feel?"")

5. Use of stories and examples about self or others to show (a) that people can change and (b) specific insights.

6. "Attacking" notion that feelings just happen.

7. Homework assignments to help counselors gain insights.

Workshop 2

The second session will focus on test procedures. This will be conducted as a workshop for the purpose of familiarizing each counselor with the three instruments to be used in assessing the effects of Rational-Emotive Education. Each counselor will be briefed
on providing good testing conditions, good administration, proper timing, and reporting of test scores.

**Workshop 3**

The third session will be conducted for the purpose of exposing counselors in the treatment groups to the application of REE with young students.

I. Role Play

II. Using the manual

III. Questions and discussion
APPENDIX B

Lesson Outline
Lesson Outline

Chapter I

The Nature of Rational-Emotive Education (REE)

Read and study for background information.

Chapter II

Orientation to the Principles of Rational-Emotive Therapy

Read and practice homework assignments.

Chapter III

Feelings: The Basics of Rational-Emotive Education

Lesson 1

Student Activity 2
Procedures 1, 2, 3, 4, 5, 6

Student Activity 3
Procedures 1, 2, 3, 4, 5

Lesson 2

Student Activity 4
Procedures 1, 2, 3, 4

Chapter IV

The Art of Challenging Irrational Beliefs through Self-Questioning and Action

Lesson 3

Student Activity 1
Procedures 1, 2, 4, 5, 6, 7, 8, and reinforcement 1

Student Activity 2
Procedures 1, 2, 3, 4, 5

Student Activity 4
Procedures 1, 2, 3, 5, 6
Chapter V

Challenging Feelings of Inferiority

Lesson 4

Select one of the activities that is appropriate to your setting (some of these activities are ones Roanoke counselors have used in other lessons)

Chapter VI

Learning, Mistake-making, and Imperfection

Lesson 4 continued

Student Activity 1
Procedures 1, 2, 3, 4, 5, 6, 7, 8, 9, and any of the Review and Preview exercises if time permits

Lesson 5

Student Activity 4
Procedures 1, 2, 3, 4, 5, 6, 7, and reinforcement 1

Student Activity 5
Procedures 1, 2, 3, 4, 5, 8, 9, 10

or

Student Activity 6
Procedures 1a, 2, 3, 4, 7, 8, and Supplementary Activity

Chapter VII

Demanding, Catastrophizing, and Challenging

Lesson 6

Student Activity 1
Procedures 1, 2, 3, 4, 5

Student Activity 2
Procedures 1, 2, 3, 5, 6, 7

Lesson 7

Student Activity 4
Procedures 1, 3, 4, 5, 6, and Supplementary Activity
Chapter VIII

Special Topics

Lesson 8

Student Activity 1 -- Responsibility, Roles, and Rules
Procedures 1, 3, 4

Student Activity 2
Procedures 1, 2, 3, 4, 5

Student Activity 1 -- Defining and Examining Stereotyping
Procedures 1, 2

Lesson 9

Student Activity 2
Procedures 1, 2, 3, 4, 5, 6, and reinforcement 2 (record will be provided if one is not available in your school)

Student Activity 3
Procedures 1, 2, 3, 4, 5

Student Activity 1 -- The Child's Right to Protest p. 72
Procedures 1, 2, 3, 4

Lesson 10

Student Activity 1 -- Defining and Examining Teasing and Name Calling
Procedures 1, 2, 3, 4, 6

Student Activity 1 -- Defining and Examining Bullying
Procedures 1, 2, 3, 4, 5

Student Activity 2 -- Victims
Procedures 1, 2, 3, 4, 5, 6, 7

Student Activity 3 -- Bystanders
Procedures 1, 2, 3
APPENDIX C

Instruments
CSRB: FORM C (AGES 10-13)
(Children's Survey of Rational Concepts)

Directions: Next to each question there are four possible answers. You are to pick out the answer that you believe is best for you. Write the letter on the answer sheet beside the number of the question.

1. A person who feels angry towards another person thinks:
   a. he can't stand the other person's behavior
   b. the other person has no right to act the way he does
   c. nobody is perfect and this person is no different
   d. all the above answers are correct

2. If a person says it is human to make a mistake and then feels awful when he makes a mistake, he:
   a. can't help feeling that way
   b. generally is a liar
   c. doesn't really believe it is right for him to make a mistake
   d. will always correct his mistakes

3. A person who is angry because the world is not perfect can help get rid of this feeling by:
   a. trying to force the world to be the way he wants it
   b. telling himself that it doesn't matter how the world is
   c. questioning why the world must be the way he wants it to be
   d. giving up and pretending not to care
4. If you see a person who is not acting his age, the first thing:
   a. try to change him by teasing him out of his behavior
   b. ignore him completely
   c. tell him to grow up and act his age
   d. try to understand that not everybody can act their age

5. When a person hates herself when someone laughs at her:
   a. she thinks she needs the other person to like her so that she can like herself
   b. she has to believe the other person is unfair
   c. her grades will start to drop at school
   d. she will never get over feeling that way

6. A person who has trouble learning to read:
   a. will probably have trouble learning everything
   b. is stupid
   c. will have to work harder at it than some of his other classmates
   d. should give up because he is not going to do well

7. A person who feels annoyed when somebody teases him:
   a. believes he doesn't like to be teased
   b. believes it is unbearable when he is teased
   c. believes the other person should be punished
   d. always should go to the teacher for help

8. Any person who gets poorer grades in school than her friends:
   a. is going to be ashamed
   b. is not as good a person as they are
   c. can still accept herself
   d. will find that her friends will stop playing with her
9. What makes a person complex?
   a. a person can have many different qualities like fairness and truthfulness
   b. a person is capable of behaving in many different ways
   c. a person is capable of thinking in different ways
   d. all the above answers are correct

10. Which of the following is an example of a sensible (rational) belief?
    a. I don't like it when somebody is treated unfairly
    b. I can't stand it when I see somebody treated unfairly
    c. people who treat others unfairly should always be punished
    d. all the above answers are correct

11. How would a person feel who had the thought "It really is too bad that I failed the test"?
    a. afraid
    b. ashamed
    c. disappointed
    d. depressed

12. If asked what they think the world is like, different people would
    a. have the same opinion about the world
    b. agree that the world is a great planet to live on
    c. will all state that the world is a complicated place
    d. will have different opinions
13. Which situation can be frustrating?
   a. you put a puzzle together and find some parts are missing
   b. you are not able to do what you want
   c. you can't find the meaning of an important word
   d. all the above situations can be frustrating

14. A person who demands (insists) that things go his way, is most likely to feel:
   a. angry when he doesn't get his way
   b. good, because he is doing something to get his way
   c. great annoyance when he doesn't get his way
   d. both a and c are correct

15. A person's opinions are:
   a. always based upon facts
   b. ideas about something that could either be true or false
   c. always incorrect
   d. based upon unsound assumptions

16. People who spend most of their time thinking how awful everything is:
   a. usually have bad things happen to them
   b. are usually treated unfairly
   c. are hopeful that their life will change if they complain enough
   d. usually solve their problems by facing them

17. Standards or values are most helpful in:
   a. determining what personal goals to work for
   b. knowing what to blame or praise yourself for
   c. knowing who is a good person and who is a bad person
   d. none of the above answers is correct
18. The better method of changing unsound (irrational) upsetting thinking is:
   a. say you are going to stop thinking unsoundly
   b. question unsound (irrational ideas)
   c. insist to yourself that you start thinking only sound rational thoughts
   d. try to forget your upsetting thoughts

19. One thing we know about how people express feelings is:
   a. people who have had the same experience express their feelings in the same way
   b. different people can express the same feeling in different ways
   c. all ways of expressing feelings are appropriate
   d. none of the above answers is correct

20. An example of an unsound assumption is:
   a. day and night follow each other
   b. the milk tasted sour
   c. Ann doesn't like be because her grades are higher than mine
   d. all the above answers are correct

21. You believe something because:
   a. it is a fact
   b. it is your opinion
   c. answers a and b are both correct
   d. answers a and b are both wrong

22. Most bullies have in common:
   a. they really don't like themselves
   b. they always have a lot of money
   c. they never act fairly
   d. both a and c are correct
23. A person who is angry:
   a. has been treated unfairly
   b. sees only one side to the story
   c. is a bad person
   d. all of the above answers are correct

24. Someone who thinks life is awful and will never get better, probably feels:
   a. angry
   b. annoyed
   c. depressed
   d. uncaring

25. Human emotions are most likely to result from:
   a. the way your parents taught you how to feel
   b. how you think about things which happen
   c. how other people think about you
   d. none of the above answers is correct

26. Everybody is likely to feel the same way:
   a. at a birthday party
   b. when they do poorly in school
   c. when they forget their best friend's birthday
   d. none of the above answers is correct

27. Which of the following is not a feeling?
   a. sad
   b. itchy
   c. glad
   d. all are feelings
28. Which of the following is an example of unsound (irrational thinking)?
   a. I really don't like it when I can't play a game well
   b. it makes me sick to see her acting so silly
   c. it is too bad if I am not loved by everybody
   d. none of the above are unsound (irrational) thoughts

29. If a person treats you unfairly, it would be appropriate for you to feel:
   a. angry
   b. good, because you think you are better than they are
   c. annoyed or sad
   d. anxious or nervous

30. A person who tries to think rationally (sensibly):
   a. never is emotionally upset
   b. is friendly only with people who think sensibly
   c. easily solves all his problems
   d. is better able to accept his mistakes

31. If you can accept that a bully has problems:
   a. you have to put up with his behavior
   b. you can try to change the behavior you don't like
   c. you shouldn't be upset if he or she bothers you
   d. you must stay out of his or her way

32. A person can get into emotional troubles by expecting to be:
   a. happy and comfortable
   b. successful
   c. liked by everybody
   d. all the above answers are correct
33. Some people create extra worries and troubles by:
   a. having two problems that are difficult to solve
   b. blaming themselves for having emotional troubles
   c. trying very hard and not succeeding
   d. none of the above answers is correct

34. What is a person who thinks sensibly (rationally) likely to recognize?
   a. if he is nervous he is making himself nervous
   b. if he is nervous, it is because of something that has just happened
   c. if he becomes nervous, he can't help it because he is a nervous person
   d. none of the above answers is correct

35. The best way to deal with worries and troubles is:
   a. forget them
   b. complain about them to your friends and get sympathy
   c. always solve them on your own
   d. none of the above solutions is very good

36. When you get a high score on a test, you:
   a. are a smart person
   b. know the subject well
   c. you will do well in the future
   d. were very lucky

37. A person who thinks rationally (sensibly):
   a. will sometimes feel ashamed
   b. will always be happy
   c. will be liked by everyone
   d. will always be successful in solving his problems
38. If you think you can't stand being frustrated, that means you:
   a. won't have any friends
   b. really don't like yourself
   c. will never get to do things your way
   d. will probably get less work done
THE IAR SCALE

1. If a teacher passes you to the next grade, would it probably be
   a. Because she liked you, or
   I+ b. because of the work you did?
2. When you do well on a test at school, is it more likely to be
   I+ a. because you studied for it, or
   b. because the test was especially easy?
3. When you have trouble understanding something at school, is it usually
   a. because the teacher didn't explain it clearly, or
   I- b. because you didn't listen carefully?
4. When you read a story and can't remember much of it, is it usually
   a. because the story wasn't well written, or
   I- b. because you weren't interested in the story?
5. Suppose your parents say you are doing well in school. Is this likely to happen
   I+ a. because your school work is good, or
   b. because they are in a good mood?
6. Suppose you did better than usual in a subject at school. Would it probably happen
   I+ a. because you tried harder, or
   b. because someone helped you?
7. When you lose at a game of cards or checkers, does it usually happen
   a. because the other player is good at the game, or
   I- b. because you don't play well?
8. Suppose a person doesn't think you are very bright or clever
   I- a. can you make him change his mind if you try to, or
   b. are there some people who will think you're not very bright no matter what you do?
9. If you solve a puzzle quickly, is it
   a. because it wasn't a very hard puzzle, or
   I+ b. because you worked on it carefully?
10. If a boy or girl tells you that you are dumb, is it more likely that they say that
    a. because they are mad at you, or
    I- b. because what you did really wasn't very bright?
11. Suppose you study to become a teacher, scientist, or doctor and you fail. Do you think this would happen
I-_____a. because you didn't work hard enough, or
_____b. because you needed some help, and other people didn't give it to you?

12. When you learn something quickly in school, is it usually
I+_____a. because you paid attention, or
_____b. because the teacher explained it clearly?

13. If a teacher says to you, "Your work is fine," is it
_____a. something teachers usually say to encourage pupils, or
I+_____b. because you did a good job?

14. When you find it hard to work arithmetic or math problems at school, is it
I-_____a. because you didn't study well enough before you tried them, or
_____b. because the teacher gave problems that were too hard?

15. When you forget something you heard in class, is it
_____a. because the teacher didn't explain it very well, or
I-_____b. because you didn't try very hard to remember?

16. Suppose you weren't sure about the answer to a question your teacher asked you, but your answers turned out to be right, is it likely to happen
_____a. because she wasn't as particular as usual, or
I+_____b. because you gave the best answer you could think of?

17. When you read a story and remember most of it, is it usually
I+_____a. because you were interested in the story, or
_____b. because the story was well written?

18. If your parents tell you you're acting silly and not thinking clearly, is it more likely to be
I-_____a. because of something you did, or
_____b. because they happen to be feeling cranky?

19. When you don't do well on a test at school, is it
_____a. because the test was especially hard, or
I-_____b. because you didn't study for it?

20. When you win at a game of cards or checkers, does it happen
I+_____a. because you play real well, or
_____b. because the other person doesn't play well?

21. If people think you're bright or clever, is it
_____a. because they happen to like you, or
I+_____b. because you usually act that way?
22. If a teacher didn't pass you to the next grade, would it probably be
   I-_____a. because she "had it in for you," or
   I-_____b. because your school work wasn't good enough?

23. Suppose you don't do as well as usual in a subject at school. Would this probably happen?
   I-_____a. because you weren't as careful as usual, or
   I-_____b. because somebody bothered you and kept you from working?

24. If a boy or girl tells you that you are bright, is it usually
   I+_____a. because you thought up a good idea, or
   I+_____b. because they like you?

25. Suppose you became a famous teacher, scientist or doctor. Do you think this would happen
   I+_____a. because other people helped you when you needed it, or
   I+_____b. because you worked very hard?

26. Suppose your parents say you aren't doing well in your school work. Is this likely to happen more
   I-_____a. because your work isn't very good, or
   I-_____b. because they are feeling cranky?

27. Suppose you are showing a friend how to play a game and he has trouble with it. Would that happen
   I-_____a. because he wasn't able to understand how to play, or
   I-_____b. because you couldn't explain it well?

28. When you find it easy to work arithmetic or math problems at school, is it usually
   I+_____a. because the teacher gave you especially easy problems, or
   I+_____b. because you studied your book well before you tried them?

29. When you remember something you heard in class, is it usually
   I+_____a. because you tried hard to remember, or
   I+_____b. because the teacher explained it well?

30. If you can't work a puzzle, is it more likely to happen
   I-_____a. because you are not especially good at working puzzles, or
   I-_____b. because the instructions weren't written clearly enough?

31. If your parents tell you that you are bright or clever, is it more likely
   I+_____a. because they are feeling good, or
   I+_____b. because of something you did?
32. Suppose you are explaining how to play a game to a friend and he learns quickly. Would that happen more often
   I+ _____ a. because you explained it well, or
   _____ b. because he was able to understand it?

33. Suppose you're not sure about the answer to a question your teacher asks you and the answer you give turns out to be wrong. Is it likely to happen
   _____ a. because she was more particular than usual, or
   I- _____ b. because you answered too quickly?

34. If a teacher says to you, "Try to do better," would it be
   _____ a. because this is something she might say to get pupils to try harder, or
   I- _____ b. because your work wasn't as good as usual?
RATHUS ASSERTIVENESS SCHEDULE

Directions: Indicate how characteristic or descriptive each of the following statements is of you using the code given below.

+3 Very much like me
+2 Rather like me
+1 Somewhat like me
-1 Somewhat unlike me
-2 Rather unlike me
-3 Very much unlike me

____ 1. Most people seem to be more aggressive and assertive than I am.
____ 2. I have hesitated to make or accept invitations because of "shyness."
____ 3. When the food served at a restaurant is not done the way I like it, I complain about it to the waiter or waitress.
____ 4. I am careful to avoid hurting other people's feelings, even when I feel that I have been hurt.
____ 5. If a salesperson has gone to a lot of trouble to show me things for sale which are not quite what I want, I have a difficult time in saying "NO."
____ 6. When I am asked to do something, I insist upon knowing why.
____ 7. There are times when I look for a good argument.
____ 8. I try to get ahead as well as most people in my class.
____ 9. To be honest, people often take advantage of me.
____10. I enjoy starting conversations with new acquaintances and strangers.
____11. I often don't know what to say to attractive persons of the opposite sex.
____12. I will hesitate to make phone calls to place of business institutions.
____13. I would rather apply for a job or for membership to a club by writing letters than by going through with personal interviews.
14. I find it embarrassing to return things I have bought.
15. If a close and respected relative were annoying me, I would keep my feelings to myself rather than express my annoyance.
16. I have avoided asking questions for fear of sounding stupid.
17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.
18. If a famous and respected speech maker makes a statement which I think is incorrect, I will have the audience hear my point of view too.
19. I avoid arguing over prices with people who wait on me in stores.
20. When I have done something important or worthwhile, I manage to let others know about it.
21. I am open and frank about my feelings.
22. If someone has been spreading false and bad stories about me, I see that person as soon as possible to "have a talk" about it.
23. I often have a hard time saying "no."
24. I tend to keep my emotions in rather than make a scene.
25. I complain about poor service in a restaurant and elsewhere.
26. When I am given a compliment, I sometimes just don't know what to say.
27. If people near me in a theatre or at a concert were talking rather loudly, I would ask them to be quiet or to take their conversation elsewhere.
QUESTIONS USED IN SURVEY OF STUDENTS

1. Do you think you have changed in any way since your guidance lessons with \(\text{name of counselor}\)?

2. Is there any particular time in which you used or applied something you learned from your lessons?

3. Can you tell about some of the things that were taught which stand out in your mind as important to you?

4. Can you tell me how you handle your emotions and your thinking now that the lessons are over?

5. Have you noticed a change in any of your classmates that had rational emotive education with \(\text{name of counselor}\)?)

QUESTIONS USED IN SURVEY OF TEACHERS

You are aware of the Rational Emotive Education that \(\text{name of counselor}\) has been using with some of your students. I would like to talk with you about the guidance activity. Your name and your school will not be mentioned in my report so please answer without concern for these matters.

1. Are there any differences in attitudes of class members.

2. Have you noticed a difference in assertive behaviors of class members?

3. Have any of the students demonstrated a change in terms of responsibility for their actions or their work?

4. Have there been students who have reacted differently in test or stress situations?

5. Have you heard any unfamiliar phrases in students' verbal responses to you, to others, or about themselves?

6. Is there a particular student that stands out as having changed during this ten week period?
VITA

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THE EFFECT OF RATIONAL EMOTIVE EDUCATION ON IRRATIONAL BELIEFS, ASSERTIVENESS, AND/OR LOCUS OF CONTROL IN FIFTH GRADE STUDENTS

by

Barbara C. Ritchie

(ABSTRACT)

The present study pursued the effect of Rational Emotive Education on irrational beliefs, assertiveness, and/or locus of control in fifth grade students. A random sample of two hundred students were pre- and post-tested in accordance with the Solomon Four Group Design. The Children's Survey of Rational Concepts From C, Revised Rathus Assertiveness Schedule, and the Intellectual Achievement Questionnaire were selected as instruments to measure irrational beliefs, assertiveness, and locus of control respectively.

A ten week guidance program was presented to the Experimental Groups by twelve elementary school counselors using lessons from Rational Emotive Education: A Manual for Elementary Teachers. Pre-test and post-test scores were subjected to statistical analyses using ANCOVA and ANOVA. The results of both the ANCOVA and ANOVA revealed that a significant difference at the .05 level was evident only on the Children's Survey of Rational Concepts which tested the rational beliefs of the students.

One week after post-testing, fifteen students and five teachers were randomly selected from the Experimental Groups to be interviewed using questions that focused on the three variables: irrational beliefs, assertiveness, and locus of control. Their anecdotal remarks were collected to provide additional information on subtle changes in students.
that may not have been evidenced by quantitative data. The following is a summary of the results concluded from the study:

1. There was a statistically significant difference between experimental and control groups in irrational beliefs after Rational Emotive Education as measured by the Children's Survey of Rational Concepts. Anecdotal remarks lent support to the statistical evidence.

2. There was no statistically significant difference between experimental and control groups in assertiveness as measured on the Revised Rathus Assertiveness Schedule after Rational Emotive Education. However, assertive behavioral changes were evidenced in anecdotal data as reported by teachers and students.

3. There was no statistically significant difference between experimental and control groups in locus of control as measured on the Intellectual Achievement Responsibility Questionnaire after Rational Emotive Education. However, students did demonstrate very subtle change in locus of control as evidenced in anecdotal data, with teachers more explicit in reporting internality changes in locus of control than students.

There are implications from these findings in the area of elementary counselor education and elementary guidance program selections. Also, alternative measures of assessing assertiveness in young students might be attempted which are more qualitative than quantitative. Future studies may attempt to modify rational emotive education to include lessons and activities designed to increase knowledge of internality and externality which may influence locus of control in upper elementary school age students.