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A STUDY OF TEACHING REALITY THERAPY TO ADOLESCENTS FOR SELF-MANAGEMENT

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A STUDY OF TEACHING REALITY THERAPY TO ADOLESCENTS FOR SELF-MANAGEMENT

by

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APPROVAL PAGE

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The purpose of this study was to investigate whether teaching the principles and skills of Reality Therapy as a self-management strategy to disruptive pupils would significantly increase their time-on-task behavior as measured by direct observation in the classroom, their positive perceptions of themselves as measured by the Self Observation Scales and their positive ratings by teachers as measured by the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales.

Seventh grade teachers identified six male students as the most disruptive students in their grade level, and a multiple baseline across subjects research design was used to evaluate the treatment. The six students were randomly assigned to their respective baselines and experimental or placebo condition. The four experimental pupils were taught the steps of Reality Therapy and to practice those steps in their classrooms. The two placebo students participated in unstructured discussions of current events.

Two observers independently measured time on task by direct observation in the classroom during the 25-day course of the study. Each student was observed 15 minutes a day in five different classes across the school day according to a predetermined schedule of observation. The overall inter-observer reliability coefficient was $\underline{r} = .93$.

The Self Observation Scales were administered to the six pupils once prior to treatment and four other times during the course of the study. After the first administration, subsequent administrations occurred three days after each intervention point in the study.

The two teacher rating scales were completed by the teachers before treatment and again at the end of the study. A total of five teachers completed both instruments for each of the six students.

The results of this study indicated that for two of the dependent measures, perception of self and teacher ratings, the treatment procedure was not significantly different to the placebo control procedures. There were significant changes in the percentage of time-on-task measures, however. Visual analysis, the Rn analysis, and the tests for significance of differences in the means all supported the research hypothesis that percentage of time on task would significantly increase as a result of the treatment.

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CHAPTER I

INTRODUCTION

The purpose of this research project was to examine the feasibility of teaching self-management skills to seventh-grade pupils who were identified as disruptive in their classrooms. Pupils were trained, according to the methods and theory of Reality Therapy, to recognize current behavior, evaluate their behavior, and demonstrate responsible decision-making in choosing to move toward more responsible behaviors in the classroom.

William Glasser (1969), the designer of Reality Therapy, charges educators to run the type of school where people want to obey the rules because they care about each other and because obeying rules improves the school environment. Glasser (1965) also indicates that the techniques of Reality Therapy help pupils learn to meet their basic needs of involvement and self-worth and that his methods will produce behavior change; therefore, Reality Therapy may provide an effective means of dealing with problems of discipline and disruption in the schools.

Discipline in the schools is a major problem in society today. Koch and Koch (1980) referred to a late Gallup poll which questioned 1,012 teen-agers who comprised a cross-section of the nation. The teen-agers were asked for their opinion on what American teen-agers want from school, and the number one response was discipline. Sewall (1980) cited a Gallup poll last year in which Americans rated lack of discipline as the

most important problem facing schools, and Horacek (1979) wrote, "Polls of parents and educators alike list discipline among the top issues confronting the schools" (p. 20). Ciminillo stated:

> Seven times during the last eight years the Gallup poll has shown that the public regards discipline as the primary problem in schools today. . . . These responses imply that . . . schools are considered to be lax in their control over student behavior and ineffective in providing the most constructive learning environment. (1980, p. 1)

Shirley M. Hufstedler, the first Secretary of Education, was quoted by Koch and Koch (1980) as saying that she would be seeking successful models of school discipline all over the country and publicizing those programs.

Mallory (1979) commented on the need for a new approach:

> There was a time when teachers were told that a 'good lesson plan' was the key to effective management. Now, when even experienced teachers watch the classes disintegrate in the face of child-induced chaos, they suspect that something more is needed. (p. 23)

A U.S. National Institute of Education survey (Wellborn, 1981) identified discipline as one of the five factors that must be present in a school in order for its students to learn well, and Terrel H. Bell, Secretary of Education, stated that discipline is the single most important priority in schools. Mr. Bell was asked if private schools provide better education than public schools and his response was affirmative. He said:

> Nonpublic schools work under difference rules. They ought to be providing a better quality education; I'd be surprised if they didn't. They can be discriminating and discerning as to whom they

> accept. If they have disruptive youngsters, it's easier to kick them out. (Wellborn, 1981, p. 62)

Since public schools cannot be discriminating in the students who attend and since suspending or expelling disruptive youngsters is not the easiest or the best choice, new methods of dealing with disruption must be found.

The controversy over how to achieve discipline is demonstrated by the recent furor in Los Angeles when corporal punishment was reinstated (Sewall, 1980). The controversy over corporal punishment has opposing philosophies. At one extreme are those who advocate a back-to-basics movement with the fourth R (realistic punishment). They are likely to support the decision of the United States Supreme Court in Ingraham vs. Wright, permitting corporal punishment of children in schools. On the other end of the continuum, corporal punishment is thought to be an undesirable and ineffective means of controlling behavior in schools. The group opposed to corporal punishment views it as psychologically harmful, and they believe that the results are only temporary (Horacek, 1979). Sewall (1980) stated that a Temple University psychologist, Irwin Hyman, has said that corporal punishment leads to further violence and aggression. Bellack and Hersen (1977) wrote that punishment in the home and schools often serves less to alter the child's behavior than to gain retribution and express anger. Physically punishing a child may be symbolic of authority to some people, but the basic question of whether punishment is an effective means of control must still be answered.

Learning theorists generally agree that punishment teaches avoidance behaviors which are generally specific to the situation in which they are administered.

> The individual learns to suppress rather than change certain ways of expressing himself (sic) and also to seek alternative situations in which punishment can direct a person along a course of increasingly deviant behavior, making it more and more impossible for him (sic) to conform to the rules that the punishment was intended to enforce. (Ciminillo, 1980, p. 6)

Glasser (1969) does not advocate physical punishment but instead stresses logical thinking, enrichment, creativity, and cooperation. Defining misbehaviors as mistakes and not sins, he believes that individuals can learn to evaluate those mistakes and thus change behavior.

Changing behavior involves finding the pathway to identity, and Glasser called love and self-worth the two pathways to identity. In the context of schools he called love involvement and stated that involvement leads to social responsibility. "Education for social responsibility should be part of every school program" (Glasser, 1965, p. 16). Social responsibility is developed by placing major emphasis on how an individual behaves in her/his environment, and the locus of responsibility rests within the individual. This is in direct contrast to placing the locus of control external to the individual, where the individual's behavior is primarily shaped and determined by the school. Glasser (1965) stated that improved self-concept will result when an individual develops social responsibility. Combs, Alvila and Purkey (1971) cited the value of a

positive self-concept as leading to a better efficiency in dealing with one's environment, freedom to confront new experiences, independence, and the ability to cooperate with others. "Persons with positive views of self tend to behave in ways that result in experiences of success with the world and with the people in it" (Combs et al., 1971, p. 147).

Supporting the view that self-concept is demonstrated by behavior, Glasser (1972) stated that people tend to behave the way they look at themselves and that they obtain this view by interacting with the people around them. During childhood and adolescence a major portion of time is spent at home and in school, and these situations play a vital role in satisfying the needs of the individual. An assumption which is intrinsic to Reality Therapy philosophy is that the school should assume an important role in the development of a person's identity by assuring that the basic needs of individuals are satisfied. According to Glasser (1969), schools have not been successful in this endeavor and as a result, many students display acting-out and disruptive behavior in order to gain recognition. When this behavior fails to gain the recognition which satisfies their basic needs, individuals intensify their unsuccessful struggles.

Reality Therapy is a technique which attempts to address this basic lack for those who are unsuccessful in fulfilling their basic needs (Glasser, 1965). Glasser (1969) stated that the theoretical framework of Reality Therapy has been

derived from careful observation of people who are essentially successful in satisfying their basic needs.

Using the theoretical framework of Reality Therapy, this investigation included working directly with students by providing a well-defined program of Reality Therapy training in self-management to improve social responsibility in the school. Placing responsibility with students themselves has often proved to be an effective method of discipline. Self-application of behavior modification techniques, for example, has proven to be successful (Bandura, 1969; Goldfried & Merbaum, 1973; Kanfer, 1970). Leitenberg remarked:

> Research on self-control is proliferating and results are exciting. . . . The roles of choice, self-evaluation, self-determination of standards, self-reinforcement and general cognitive strategies for self-control are being systematically evaluated. (1976, p. 507)

A behavioral model of self-management as described by Kanfer (1975) involves self-monitoring, self-evaluation and self-reinforcement. Self-monitoring is analogous to Glasser's (1972) "What are you doing?" step. During this phase of Reality Therapy an individual is asked to take a look at present behavior in terms of the problem and state those behaviors. The self-evaluation is similar to the "Is it helping?" or value judgment step. The behavioral model has demonstrated very promising results and "research indicates that self-monitoring can modify behaviors on a short-term basis but that self-reinforcement interventions are more powerful and durable" (Bellack & Hersen,1977, p. 136). Glasser (1972) believes

that reinforcement for improved behavior in school will occur in the form of improved relations with friends and teachers and as pleasure from increasing success experiences, whereas the behavioral model typically uses explicit and contingent self-rewards.

A major contribution of behavioral approaches to therapy has been the emphasis on teaching and learning where the client is assisted in learning more appropriate behaviors (Thoresen & Hosford, 1973). The counselor or therapist plays a major role in carrying out the behavioral assessment, diagnosis and treatment. Kanfer (1975) signaled the need to shift the control from the counselor or therapist to the client. Thoresen and Mahoney (1974) commented on how to accomplish this shift:

> One way to accomplish this shift is to increase the preventive and social thrust of self-control efforts. This increase can be accomplished by teaching behavioral self-control to social groups, such as school classes and parent organizations. (p. 143)

Thoresen and Mahoney (1974) cited the works of Suinn and Richardson (1971) and Meichenbaum and Cameron (1974) as promising beginnings in this direction.

Bandura (1969), after an extensive literature review, suggested three major components of behavioral self-regulation: stimulus control, symbolic covert control and outcome control. Stimulus control or environmental planning is arranging certain environmental conditions to control specific behaviors (Goldiamond, 1965). Symbolic covert control involves the use of cognitive processes, and Mahoney, Thoresen, and Daneher (1972) viewed these responses as being similar to external

behaviors in their results. Outcome control is teaching the individual to administer consequences after the behavior to be controlled is performed.

On the other hand, Glasser's (1972) key principles are involvement, behavior assessment and evaluation, making plans and commitments. These principles, although different from the components of behavioral self-control, have certain elements which are similar to many humanistic and behavioral concepts which have been empirically supported.

Involvement is theoretically very similar to Rogers' (1961) warmth, empathy, and genuineness. Truax (1966) analyzed the therapist-client transactions in a tape recording made by Carl Rogers and found the presence of significant differential reinforcement effects embedded in the transactions. Therefore, it is very possible that teaching a student to increase involvement with teachers, for example, may indeed be teaching her/him to increase social reinforcement frequency for appropriate behaviors. Social reinforcers, such as attention, affection and approval, have powerful reinforcing value (Lovaas & Newsom, 1976).

Behavior assessment (What are you doing?) and behavior evaluation (Is it helping?) on their own constitute powerful ingredients for self-control. Behavioral researchers have recently recognized the singular importance of self-observation as performance in its own right for behavior change (McFall & Hammen, 1972; McFall, 1970), and self-evaluation,

too, has been found to lead to change. Kanfer (1971) stated that self-evaluation can lead to self-reinforcement which in turn increases behavior frequency.

What Glasser (1972) terms making a plan is quite similar to goal-setting which has been demonstrated to contribute significantly to the performance of a wide range of social, academic, and cognitive behaviors (Bandura, 1971; Kanfer, 1971; Locke, Cartledge, & Koeppel, 1968). Commitment to fulfill the plan, according to Glasser (1972), may be either verbal or written. The experimental students in this study signed written commitments to complete the plans, in essence making commitments for change. Goldfried and Merbaum (1973) stated that commitment to change is absolutely necessary for self-control.

Therefore, although Glasser's principles were not designed to be used as tools for self-management, the components individually have enough theoretical and empirical support to hypothesize that teaching students the Reality Therapy principles will lead to improved classroom behavior. Previous research on Reality Therapy has involved teaching those principles or components to either teachers or counselors who in turn work toward helping the students learn to assume responsibility and improve behavior through the practice of the principles by the teacher or counselor. For example, Glasser (1972) encouraged the helping person to become involved with the client and stated that the involvement is an essential

ingredient for change. If, in fact, involvement is an essential ingredient for change then teaching disruptive youngsters to take the responsibility of becoming involved with their teachers would accomplish the same goal but would place even more of the locus of responsibility with the student. The student would be learning to control her/his environment through the initiation of the involvement process and through learning techniques of behavioral assessment and evaluation. If Kanfer's (1971) assumption that self-evaluation leads to self-reinforcement which in turn increases behavior frequency is true, then the student's behavior in school would improve.

Statement of the Problem

Educators, parents and students have expressed concern about discipline in the schools and often vary in their suggestions for dealing with this critical issue. William Glasser (1969) stated that counselors and teachers using his methods have an effective means of dealing with the problems of disruption and discipline in the school. Proponents of self-management, however, have encouraged the shifting of control from the counselor or teacher to the student (Kanfer, 1975; Thoresen & Mahoney, 1974).

The purpose of this study was to determine if teaching the steps of Reality Therapy as a self-management strategy to individual pupils identified as disruptive by their teachers would elicit improved on-task behavior, improved perception of self, and improved ratings by their teachers. On-task behavior was measured by two independent observers in the

classroom. The pupils' perceptions of themselves were measured by the Self Observation Scales (SOS) and the teacher ratings were measured by the Burks' Behavior Rating Scales (BBRS) and the Haring and Phillips Rating Schedules.

Hypotheses of the Study

The purpose of this study was to determine if seventh grade pupils who were identified by their teachers as demonstrating disruptive behavior in the classroom, when taught to practice the principles of Reality Therapy for self-management, would demonstrate improvement in percentage of time on-task, improved scores on the Self Observation Scales (SOS) and improved ratings by teachers on the Burks' Behavior Rating Scales (BBRS) and the Haring and Phillips Rating Schedules. The major null hypotheses examined are given below:

1. Pupils who are taught skills of Reality Therapy for self-management will demonstrate no treatment effect as measured by percentage of time on task.

2. Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean difference in on-task behavior.

3. Pupils who are taught skills of Reality Therapy for self-management will demonstrate no treatment effects as measured by their scores on the Self Observation Scales.

4. Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured

study of current events will demonstrate no mean difference in scores on the Self Observation Scales.

5. Pupils who are taught skills of Reality Therapy for self-management will demonstrate no differences in pre- and post-treatment scores on the teacher ratings as measured by the Burks' Behavior Rating Scales and the Haring and Phillips Rating Schedules.

6. Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean differences in scores as rated by teachers on the Burks' Behavior Rating Scales and the Haring and Phillips Rating Schedules.

Summary

This chapter has presented a statement of the problem of discipline in the schools and the importance of finding better techniques for dealing with disruptive students. A rationale for using the principles of Reality Therapy as a self-management procedure with disruptive students was also presented and the major research hypotheses were presented.

The next chapter provides a review of the basic philosophy of Reality Therapy, the theoretical framework of Reality Therapy as it relates to other theories, and research which has previously investigated Reality Therapy. Chapter II also includes a review of related research on self-management procedures.

CHAPTER II

REVIEW OF RELATED LITERATURE

A review of the literature was undertaken to investigate (a) the concepts of Reality Therapy, (b) the relationship of Reality Therapy to other theories, (c) research investigating Reality Therapy, and (d) research investigating the components of self-management and self-management techniques.

Concepts of Reality Therapy

The Reality Therapy approach to counseling from a theoretical perspective is rather simplistic since Glasser spends little time discussing personality development (Hansen, Stevic, & Warner, 1977). Glasser sees personality development as being a function of how well individuals learn to meet their needs. Beyond basic physiological needs, Glasser (1965) stated that there are two basic psychological needs: "the need to love and be loved and the need to feel that we are worthwhile to ourselves and to others" (p. 9). He defined responsible behavior as behavior that leads to the satisfaction of personal needs without depriving others of the ability to fulfill their needs. This ability to satisfy needs is a learned behavior and the learning process begins early in life. In the proper growth environment children will be able to satisfy their needs and govern their lives using the three basic R's of Reality Therapy: Right, Responsibility, and Reality (Glasser, 1965).

Right refers to Glasser's belief that there is an accepted standard against which behavior can be compared. Responsibility is the ability to satisfy personal needs without interfering with other individuals' desires to meet their needs. Reality refers to the real world which Glasser described as one composed of hard facts. "This is quite different from phenomenologists who place emphasis on the 'perceived' world of the individual" (Hansen et al., 1977, p. 197).

Glasser, in his book Schools Without Failure (1969), pointed out that peers and school environment play an important role in the development of a failure identity. Describing a child with a failure identity as one who lacks a concept of oneself as a loved and worthwhile individual, Glasser (1972) concluded that maladaptive behavior is the result of this failure identity which in turn is a result of children never learning to meet their needs through involvement with others. Glasser (1972) suggested that if students feel the work they do is not good, they think that they are not worth much. Their self-concept is one of failure and consequently, they become unmotivated students. In order to improve their self-concept, Glasser stated that teachers and counselors should get involved with their students and create warmth and interaction in the schools. Also, activities should be provided which generate success experiences for the student. Glasser's approach to helping or counseling is condensing what a person should have learned through living in a counseling situation.

The counselor, using the steps of Reality Therapy, is teaching or training the individual to learn ways to perform responsibly.

Principles of Reality Therapy

The eight principles of Reality Therapy which were developed into steps of self-management are as follows:

Involvement. In order for Reality Therapy to work, teachers, counselors or individuals must be involved with the person they are trying to help. Communication of warmth and caring are essential. Ingredients of involvement are kindness, courteousness, laughter, casual give-and-take, friendliness, and a nonclinical atmosphere (Hawes, 1970).

Glasser (1972) emphatically stated that without involvement there is no possibility of success in working with a failing child. He wrote:

> Involvement is necessary for everyone; it is a prerequisite for a successful person to maintain his success identity, for a student to learn, for an employee to do well and earn a promotion. Whether you seek help for failure or for becoming more successful, if you do not feel that you are warmly and personally accepted by the person who is helping you, your chance of becoming successful is small. (p. 108)

Glasser (1972) went on to state that involvement is the foundation of therapy on which all other principles build. He suggested that it is unwise to talk at length about the client's problems but rather the discussions should be interesting, nonproblem discussions because they serve to build involvement. "Talking enjoyably about worthwhile subjects is the best way to help oneself get involved" (1972, p. 113).

Focus on present. The second principle of Reality Therapy is that individuals must be aware of their current behavior if they are to gain a successful identity. Past failures should be ignored and present attempts to succeed should be encouraged and reinforced. People often avoid facing their present behavior by discussing how they feel rather than what they are doing. According to concepts of Reality Therapy, feelings are only important as they manifest themselves in present behavior. If behaviors are changed, feelings and emotions will subsequently change or be altered accordingly (Gang, 1974).

> Neither in doing Reality Therapy, nor in raising children, nor in relating husband to wife, nor in any other relationship are feelings unimportant. Nevertheless, for a relationship to be successful, how we behave toward others is crucial. (Glasser, 1972, p. 114)

In dealing with present behavior, the purpose is not to search for why an individual is behaving a certain way nor how the individual feels about it. The purpose, however, is to help individuals become aware of what they are doing that is contributing to success or failure and what they can do to significantly increase the chances of success. To help an individual see her/his behavior and choose new behaviors, Glasser (1972) suggested that the helping person continually ask, "What are you doing?".

Value judgment. The first two principles, involvement and accentuating present behavior, set the stage for the third principle of Reality Therapy. It is in this stage that a

person can come to grips with a very important learning opportunity. Through value judgment a person can examine the effectiveness of a particular life pattern, determine which behaviors are not helping, and recognize those behaviors which have a potential of making life better. The helping person helps accomplish this principle by asking a nonevaluative question instead of making statements. Does it help you to fight in school? Is it worthwhile to learn to read? The individual must look at her/his behavior critically and judge it on the basis of whether or not it is the best choice. The behavior should be evaluated on the basis of whether it is good for the individual, whether it is good for the people the person cares about or would like to care about, and whether it is socially acceptable in the individual's community (Glasser, 1972). The therapist does not judge the behavior for the individual; however, the client is led to evaluate her/his own behavior through involvement and by bringing behavior out in the open.

> Just as a therapist asks a patient to evaluate his behavior, so a parent must ask a child or a teacher a pupil. I believe all of us should continually evaluate ourselves, but doing so is difficult; it is easier if someone helps. Self-evaluation usually cannot be made unless the person feels that the therapist, or someone else he respects, cares about him. Lonely people involved with failure find it almost impossible to make an honest self-judgment. (Glasser, 1972, p. 120)

When the individual decides that it is worthwhile to change some aspect of behavior, that leads to the next principle of Reality Therapy.

Planning. Once an individual makes a value judgment, the person who is helping must assist the individual in developing realistic plans for action to follow the value judgment. This involves making specific plans for change. The plan should not attempt too much because it will usually fail and reinforce the already present failure. "A failing person needs success, and he needs small individually successful steps to gain it" (Glasser, 1972, p. 123). Hawes wrote:

> The initial operational objectives of the pupil's plan should be such that its successful completion is guaranteed quickly. It is these frequent successful experiences that we are after, and upon which more difficult plans requiring greater delay of gratification can be made. (1970, p. 96)

Plans are not absolute nor final. Usually many different plans can solve a problem and if one plan does not work, successive plans can be made until one is found that does work. An individual should not be locked into a single plan, but on the other hand, neither should a person jump from plan to plan as soon as difficulty occurs. "The therapist or helping person must develop skill in assisting the patient to evaluate the plan's feasibility" (Glasser, 1972, p. 124).

Commitment. A commitment is considered necessary for greater incentive toward fulfilling the plan. Glasser (1972) stated that a characteristic of people with failure identities is their unwillingness to make commitments because they fear failure. In the helping relationship, however, the client learns the art of trying something else in an involved relationship. Commitment not only binds the involvement, but

it gives the client an opportunity to try a new behavior to some extent for someone else. "Nothing is wrong with trying new behavior partly for someone else; we cannot live our lives alone successfully" (Glasser, 1972, p. 125).

The commitment may be verbal or written, but it is often stronger if it is written. Glasser (1972) stated that it is easier to escape from a verbal commitment than from a written commitment. He also said that a written commitment helps to avoid confusion over the content of the plan. Glasser wrote the following statement about a commitment:

> It can be made between husband and wife, parent and child, teacher and student, therapist and patient. Commitment intensifies and accelerates the trying of new behavior. (Glasser, 1972, p. 125)

No excuses. When a person does not fulfill the commitment, excuses are not accepted. The value judgment that preceded the plan must be rechecked. If it is still valid, the plan must be rechecked and the individual can either recommit herself or himself to the plan or devise a new plan.

Because no excuses are accepted in Reality Therapy, the question, "Why?" is rarely asked. Glasser (1972) stated that everyone involved knows the answer to "Why?" and that the answer is usually an excuse. "An excuse is an easy way off the hook . . . an excuse reduces the pain of failure but it does not lead to success" (Glasser, 1972, p. 127).

When an individual does not fulfill the commitment, the failure to do so is not emphasized. If involvement is there in the relationship, if plans and commitments are continually

being made, eventually the person will begin to fulfill them. When an individual does succeed, Glasser (1972) stated that the therapist should give praise which in turn leads to more responsible behavior.

Eliminate punishment. Glasser remarked:

> Punishment is any treatment of another person that causes him pain, physical or mental. Praise, always involving, leads to more responsible behavior. The purpose of punishment is to change someone's behavior through fear, pain or loneliness. If it were an effective means of getting people to change, we would have few failures in our society. Many incompetent and irresponsible people have been punished over and over again throughout their lives with little beneficial effect. (1972, p. 129)

It should be mentioned that Glasser (1972) does not consider reasonably agreed-upon consequences of behavior as punishment. A teacher who makes a plan with pupils to allow certain privileges if they can accept certain responsibilities is no longer bound to the plan if the pupils fail in their accepted responsibilities.

> Reasonably agreed-upon consequences of irresponsible behavior are not punishment. A parent who makes a plan with his son to allow him certain privileges if he accepts certain responsibilities is no longer bound to the plan if his son fails in his accepted responsibilities. (Glasser, 1972, p. 131)

Never give up. The eighth principle of Reality Therapy emphasizes that parents, teachers, counselors or friends who are helping troubled people need resiliency. A characteristic of irresponsible people is that they will give up and cease trying to find avenues through which their lives can be improved. The ability of a helper to last longer in the

relationship could be a vital key to communication and involvement. The persistence to keep trying to find new behaviors and reinforcing success experiences will keep the individual moving in a positive direction.

Reality Therapy and Other Theories

Many of the theoretical components of Reality Therapy are not new nor are they unique. There are strong similarities to the theories of Adler (1954), Ellis (1962), Rogers (1961), Fromm (1956), Perls (1951), and Maslow (1954), as well as others.

Glasser's (1972) statement that all individuals have the two basic needs of love and self-worth can be related to the theories of many writers concerned with human behavior and motivation. For example, Maslow (1954) assumed a hierarchy of needs, ascending from the basic biological needs present at birth to the more complex psychological needs that become important only after the more basic needs have been satisfied. The needs at one level must be at least partially satisfied before those at the next level become important. Beyond basic physiological needs and the need for safety, Maslow's hierarchy includes the needs for love, self-esteem, knowledge, aesthetics and self-actualization. Glasser (1972) recognized the basic biological needs, but beyond those needs, stated that if an individual can satisfy the needs for love and self-worth, she or he will be able to lead a responsible life and have a positive identity.

Glasser's (1972) involvement principle is similar to Fromm (1956) who stressed the importance of establishing meaningful relationships to combat loneliness and isolation. Erikson (1950), in describing developmental processes and stages, also stressed the importance of intimate relationships in healthy development. Carl Rogers (1961), well known for his strong emphasis on warmth, empathy and genuineness, also stressed the importance of a caring relationship as an ingredient for change.

Glasser's (1972) "What are you doing?" step which only deals with present behavior can be related to the works of Fritz Perls (1951) who only considered the "here and now," the present, as the point of attention in therapy. This focus on present behavior rejects the theories of Freud (1965) and his followers, and ties into the behaviorist movement which also ignores the past and deals with present behavior. Both Glasser and the social learning theorists (e.g., Kanfer and Phillips, 1970; Lazarus, 1972; Bandura, 1969) reject the disease model of psychotherapy which places great emphasis on an individual's past.

One can find some relationship between the plan and commitment steps of Reality Therapy and behavioral contracts (e.g., Homme, Csanyi, Gonzales and Rechs, 1969; Eisler & Hersen, 1973; Stuart, 1971). It should be noted, however, that a critical ingredient in behavioral contracting is contingent reinforcement (Eisler & Hersen, 1973). Glasser (1972) does not stress contingent reinforcement but he does talk about using the reinforcing qualities of praise and comments on the successful completion of a plan. "When he does

succeed, we give praise . . . Praise, always involving, leads to more responsible behavior" (1972, p. 129).

There are similar concepts in the works of Ellis (1962) and Glasser. Glasser (1972) placed emphasis on the individual's ability to evaluate and assume responsibility for her or his own behavior. Ellis (1962) also wrote that change will occur when a person admits that thoughts and behavior are irrational and takes the initiative or responsibility to change them. Jane Rozsnafszky (1974) presented an interesting theoretical viewpoint related to the individual's assumption of responsibility for behavior. She argued that Adler is the unrecognized father of two important trends in current therapeutic thinking: the emphasis on realistic behavior rather than insight and the belief in the client's responsibility for her/his own actions. She compared Rational-Emotive Therapy (RET), Transactional Analysis (TA) and Reality Therapy to illustrate that each contains components emphasizing patient responsibility, free will, and appropriate social behaviors as criteria for mental health. She concluded that proponents for TA, RET, and Reality Therapy should identify themselves as Adlerian and stated that they should be unified under the Adlerian banner to bring the issues in therapeutic practice into historical perspective.

Werner (1974) classified Glasser as a contributor to the development of cognitive theory which proposes that people can think, plan, and make decisions on the basis of remembered information and selectively choose among those environmental

stimuli that require attention. Behaviorism rejected the subjective study of mental life in order to make psychology a science and provided a valuable service by making psychologists aware of the need for objectivity and measurement. Cognitive psychologists recognize the importance of behavior and go further to recognize thoughts and expectations as important in determining behavior. Glasser's (1976) emphasis on cognitions is reflected in the following statement: "To find the happiness we all desire we have to figure out (1) what to do, (2) how to do it, and (3) where to get the strength to get it done" (1972, p. 4).

To summarize, although Glasser's theory seems to fit more into cognitive theory, it does share similar concepts with components of humanism, existentialism, rational emotive theory, Gestalt theory, transactional analysis, Adlerian theory, and social learning theory.

Research on Reality Therapy

A large percentage of the journal articles on Reality Therapy are descriptive of theory, method, and case studies rather than based on empirical research (e.g., Patterson & Sikler, 1974; McElroen & Faltico, 1977; Glasser, 1977; Bruzzese, 1979; Schuster, 1979; Barr, 1974; Meyer, Odom, & Wax, 1973; Rachin, 1974; Bassin, 1974; Nelson, 1974; Krueger, 1974; Bratter, 1973, 1974, 1974a; Muro, 1978). The lack of empirical data is conspicuous when compared with other counseling theories. An examination of the Comprehensive Dissertation

Index (1979), covering the years from 1973 through 1977, revealed only four dissertations related to Reality Therapy (Crowley, 1973; Dakoske, 1977; Gang, 1974; German, 1975). A few promising results, however, have been reported in classroom studies and in the area of correction.

Lee (1977), working with 48 chronic offenders, developed a program which afforded the client an opportunity to focus on one specific problem area within a time-delimited situation. Lee based his counseling model on Reality Therapy, emphasizing the plan and commitment principles. Each session lasted one hour and the group met one time a week for five weeks. The offenders answered questionnaires over a one-year period at the end of every fifth session. Eighty-six percent stated that they favored the emphasis on a single problem, 76 percent agreed that their problems were defined, and 72 percent continued contracting for additional five-week sessions. This study does have serious limitations of no control group and no behavioral dependent variables, but the fact that 72 percent continued for the one-year period suggests that the clients perceived some benefit from the program.

In a similar setting Williams (1976) used a Reality Therapy program with 43 male inmates. She stressed the active role individuals must take to change their style of living. Five groups engaged in three successive five-week contracts which were negotiated between the inmate and the therapist. Each contract required a greater behavioral effort (enlarged plan) than the previous contract. At the end of the program

the inmates anonymously completed a questionnaire evaluating the program and over 80 percent rated the program as being very helpful. None of the inmates received a disciplinary report during the program's 15 weeks. Only 18 of the inmates had participated in any previous group therapy and 16 of those rated the Reality Therapy as the better program. Williams suggested that Reality Therapy worked for the inmates because it focuses on realistic future goals rather than past failures.

Using group interaction based on Glasser's principles, Brown and Kingsley (1975) worked with 25 male and five female adolescents who had been referred to a youth center by either the juvenile court, school, or parents. Using pre- and post-treatment measures, they attempted to determine the effects of the group sessions on self-concept. The comparison of the scores showed significant improvement in the perception of the ideal self, while there was no significant change in the real self score. The congruence between the real and ideal self were closer after the intervention. Given the limitations of this research design, Brown and Kingsley concluded that the results tend to indicate that their program promoted a more realistic and mature self-orientation.

The research which has been done in a school setting is not only limited, but the results are somewhat ambiguous (see Table 1). Hawes (1970) found that a Reality Therapy program for culturally deprived black students was a significant factor in increasing individual responsibility and for decreasing

Table 1

Summary Table of Selected Research on Reality Therapy

Authors	N	Age and Grade Level	Sex F	Sex M	Control Group	Treatment	Dependent Variables Criterion	Results
Brown & Kingsley (1975)	30	13-18 years old	5	25	none	group sessions based on RT	self-concept (real & ideal self)	perception of ideal self significantly changed
Browning (1978)	668	8th grade	*		regular class	training teachers	teacher attitude, student attitude, student achievement, student behavior	significant improvement, positive change, significant improvement, lower rate of misbehavior
Burkley (1974)	10	junior & senior high	5	5	none	1-hour counseling sessions once a week for 8 weeks	questionnaire	concluded that they had rationalized the use of RT
Cherry (1975)	16	high school	*		none	RT counseling	appropriate behavior	no change
Crowley (1973)	60	junior & senior high		60	client centered therapy; no contact control	2 sessions per treatment per week for 10 weeks	teacher behavior rating grade point average, personality, social maturity	no significant main effects
Dakoske (1977)	30	5th grade	*		language arts 1 session per week	counseling in RT (1 group session per week)	self-concept behavior	significant differences between groups
Gang (1974)	6	4th & 5th grades		6	none multiple baseline	training teachers in RT	desirable behavior	desirable behavior increased
Hawes (1970)	340	3rd & 6th grades (culturally deprived black)	*		no treatment	training teachers in RT	locus of control, self-concept, classroom behavior	significantly improved, no change, significantly improved

Table 1 (cont'd.)

Authors	N	Age and Grade Level	Sex F	Sex M	Control Group	Treatment	Dependent Variables Criterion	Results
Lee (1977)	48	adult penal institution		48	none	plan & commitment	satisfaction questionnaire	72% wanted to continue
Matthews (1972)	221	4th & 5th grades (2 each)	116	105	2 grades language arts program	training teachers to implement RT in classroom	self-concept social adjustment, reading, behavior	no change no change no change significant difference
Poppen et al. (1976)	6	2nd-4th grades		6	multiple baseline design	training teachers in RT	appropriate behavior inapproriate behavior	significant improvement significant decrease
Shea (1973)	84	8th grade		84	guidance program (3 counselors)	group counseling using RT (3 counselors trained in RT)	self-concept, attitude, behavior, court referrals, grades	significant improvement in all 5 dependent variables
Shern & Randolph (1978)	108	4th grade (4 classes)		*	2 classes career education	training teachers in RT	self-concept, on-task behavior	no change no change
Welch & Dolly (1979)		16 classrooms		*	8 classrooms	training teachers in RT	on-task behavior, absences, disciplinary referrals	no change no change no change
Williams (1976)	43	adult		43	none	RT counseling	questionnaire on how helpful	80% rated very helpful no disciplinary reports during treatment

*not described

disruptive behavior although there were no significant changes in self-concept. Three hundred forty pupils in the third and sixth grades participated in this study, and the teachers who participated in the experimental groups received training in Reality Therapy.

Welch and Dolly (1979) trained eight teachers in Glasser's techniques and eight other teachers served as control. All subjects were observed for on-task behavior, absences and disciplinary referrals three weeks prior to the implementation of Reality Therapy techniques and three weeks following the study. They found no significant differences between the two groups.

Using what he called an irreversible design, Cherry (1975) conducted a study with 16 high school students to examine the effects of Reality Therapy on classroom behavior. This dissertation study was conducted in three weeks with observers recording appropriate or inappropriate behavior daily during the three-week period. There was no baseline measurement in this study. Cherry reported no significant differences in behavior from the onset of treatment to the end.

Shern and Randolph (1978) addressed the issue of lack of research in Reality Therapy and claimed that previous studies are inconclusive. They asserted that the majority of the studies which were reported prior to their study lacked a true placebo control. They conducted a study which was designed to assess the effects of Reality Therapy in the classroom,

controlling for placebo effects and pretesting effects. They randomly assigned four intact classrooms to one of four groups: (a) pretested Reality Therapy; (b) unpretested Reality Therapy; (c) pretested placebo; and (d) unpretested placebo. The two classroom teachers of the experimental classes were trained in Reality Therapy techniques and the training consisted of two three-hour sessions. The two placebo groups participated in career education activities. The dependent variables were self-concept and on-task behavior. On-task behavior was measured by trained observers who observed during the first and last week of the experiment. The time of observation was once in the morning and once in the afternoon for three ten-second intervals (one minute a day or a total of five minutes a week). No significant differences were found, but the validity of this study is questionable in spite of the worthwhile rationale for conducting it. Using intact classrooms, the short training time for the experimental group teachers, and the measurement of behavior for only one minute per day are serious limitations to the study.

Browning (1978) trained eighth-grade teachers in Reality Therapy classroom techniques. Those teachers and their respective students were compared with other teachers who were not trained and their students. He found significant improvement in teacher attitude and student achievement in the Reality Therapy group. He also found that students' attitudes improved, and a lower rate of misbehaviors were recorded in those classes.

A very efficient four-week study was described by Poppen, Thompson, Cates and Gang (1976) which was conducted by Thompson and Cates. Six teachers selected the most disruptive child in their respective classrooms, and these same teachers were trained to use Reality Therapy techniques. Trained observers monitored the following behaviors: task-relevant, off-task, socially appropriate and disruptive. These categories were grouped for data analysis into appropriate and inappropriate behaviors. The observers used an on-the-count, time-interval observation procedure consisting of a 30-minute period of ten-second intervals. The students were observed three times a week. A multiple baseline across subjects research design was used and all six students exhibited significant increases in appropriate behavior.

Thirty randomly selected fifth-grade students were randomly assigned to one of two groups by Dakoske (1977). The groups were either (a) Reality Therapy sessions conducted by a trained teacher and the school counselor or (b) the Open Language Arts Program. A total of 15 sessions were held weekly for one hour each week. The dependent variables measured were self-concept as measured by the Piers-Harris Children's Self Concept Scale and behavior as measured by the Walker Problem Behavior Identification Checklist. These instruments were completed for all 30 subjects before and after the treatment. Significant differences were found between the two groups immediately after treatment, which suggested that Reality

Therapy would have a positive impact on self-concept and problem behavior. After a one-year delay, however, with no treatment, there were no significant differences between groups on self-concept. Dakoske reported that a significant interaction effect was obtained which indicated that self-concept change was a function of when the students were reporting their self-concept and concluded that self-concept must be reinforced over time in order to maintain positive treatment effects.

In his dissertation study, Gang (1974) implemented an extensive training program for the teachers and the specific practices employed were clearly defined. The teachers attended a weekly seminar on Reality Therapy for a semester, and in addition, they were trained two times a week during the study. A modified multiple baseline design was used with six pupils who had been identified by teachers as demonstrating the most disruptive behavior in the classroom. Gang reported:

> There is little satisfactory empirical evidence in the literature to support the claims of Reality Therapy as outlined in Schools Without Failure and none which examine the relative effectiveness of RT with problem students in the elementary school classroom. This study has demonstrated that distinct increases in 'desirable' and decreases in 'undesirable' behaviors were found after the Reality Therapy Intervention Process (RTIP) was employed with six target students by two teachers trained and monitored in the RT process. (1974, p. 45)

The literature search on Reality Therapy has revealed limited, somewhat ambiguous but promising results. The studies

are summarized in Table 1. Several studies lend support to Glasser's (1972) claim that the techniques will result in better discipline in the schools (Browning, 1978; Dakoske, 1977; Gang, 1974; Hawes, 1970; Matthews, 1972; Poppen et al., 1976; Shea, 1973).

The studies by Poppen et al. (1976) and Gang (1974) are very similar to the present study in that (a) the subjects were students identified as disruptive, (b) a multiple baseline research design was used, and (c) the dependent variables measured were classroom behavior defined as appropriate behavior and desirable behavior, respectively. A major difference in these two studies and in the present study lies in the treatment. The Poppen et al. (1976) and Gang (1974) studies both involved training teachers to implement Reality Therapy techniques in the classroom; the present study involves teaching the students to implement the principles.

Research on Self-Management

Components of Self-Management

Goldfried and Merbaum (1973) cited Dollard and Miller (1950) as the foundation builders for subsequent work in the area of self-management. They viewed Bandura's (1969) work as an outgrowth of the Dollard and Miller belief that people have a potential for the creative use of higher mental faculties. Bandura (1969) stressed the importance of mediating variables in self-control and sees thoughts and language as very vital parts of the process. He stated, however, that

reinforcement contingencies can influence behavior without cognitive awareness, whereas self-control is a blending of the two through self-monitoring.

Self-observation or self-monitoring has been recognized as an important agent of behavior change (Kanfer, 1970). McFall (1970), for example, reported that recording urges to smoke disrupts the behavior chain enough to prevent smoking. Further support for the reactive effects of self-observation was reported by Mahoney, Moore, Wade and Moura (1973).

Self-observation is not unique to behavioristic psychology. Eastern philosophies such as Zen and Yoga have striven to reduce automatic behavior by generating awareness of the present. Rogers (1961) stressed that one should be aware of current behavior and Perls (1969) emphasized awareness of behavior in the here and now. Self-monitoring of behavior (What are you doing?) and evaluation (Is it helping?) are the heart of Reality Therapy (Glasser, 1972), but the differences lie in the fact that the behaviorists emphasize systematic gathering of data on specific actions, whereas Glasser (1965) stressed verbalization of what the individual is doing today, perhaps yesterday, and generally going not further back than last week. Once the behaviors are identified, then Glasser (1972) stated that they must be evaluated in terms of whether they are helping the individual or not.

Kanfer (1975) wrote that under normal circumstances the flow of behavior is smooth and uneventful. An interruption

causes the individual to self-monitor and self-evaluate. He also stated that this sequence is followed by a regulatory control, self-reinforcement, which follows the change. Glasser (1972), however, emphasized that, after one self-evaluates and changes behavior, the individual will experience covert reinforcement because improved behavior will bring better feelings about herself/himself and that is reinforcing. Further, Glasser (1972) said that external reinforcement from others usually follows positive behavior change. Glasser does not vary reinforcers directly; he believes that if a person changes irresponsible behaviors, those changes will be reinforced automatically by either the individuals or by others in their environment.

The mechanisms of self-control from another behaviorist point of view are environmental planning and behavior programming (Thoresen & Mahoney, 1974). Environmental planning is when an individual plans and implements change in relevant situational factors prior to the change of behavior. Ferster, Nurnberger, and Levitt (1962) introduced this technique as a means of working with obesity. The subjects were asked to decrease many of their previous environmental cues for eating and only eat in one specific place. They were also asked not to engage in such activities as television, reading or studying while eating. This technique resulted in weight loss for the subjects, and further replications and expansions of this technique have led to impressive results (Harris, 1969; Stuart, 1971; Jeffrey, Christensen, & Pappas, 1972). The application

of environmental planning strategies has resulted in considerable success in other areas: Fox (1962) and Beneke and Harris (1972) report successful development of study skills; Goldiamond (1965) reported successful use of environmental planning in the resolution of marital problems; Bergin (1969) reported successful treatment of sexual deviation; and Nolan (1968), by using a smoking chair as the only place to smoke, reduced excessive smoking.

Environmental planning, as described by behavior therapists, has not been incorporated into the principles of Reality Therapy. There may be times, however, when environmental planning might be a part of a Reality Therapy plan, but it is not a consistent and integral part of the package.

Behavior programming, as described by Thoresen and Mahoney (1974), represents the changes in an individual's environment following a behavior. These changes are self-imposed contingencies delivered by the individual. According to Thoresen and Mahoney (1974), behavior programming contingencies are self-observation, positive self-reward, negative self-reward, positive self-punishment, and negative self-punishment. The contingencies of behavioral programming are not consistent components of Reality Therapy; self-observation is, however, analogous to Glasser's (1972) focus on present behavior or the "What are you doing?" principle. Glasser (1972) stated that rewards and reinforcement are built into his techniques and therefore, self-imposed reinforcement contingencies would

be unnecessary. Punishment contingencies, according to Glasser (1972) are not effective means of changing behavior.

Research on Self-Management in Academic Settings

Research on self-management includes highly varied strategies and applications to many different settings and problems. This section, however, focuses on those studies which are related to academic or behavior problems in school settings.

Malamuth (1979) identified 23 black fifth graders as poor readers and randomly assigned those pupils to either a self-management or a modeling control condition. The self-management procedure consisted of sequential steps of self-instruction which were gradually faded from overt speech to covert speech. The control condition was a tutorial session with the instructor modeling task-approach behaviors without prompting the pupils to perform them. All the pupils were exposed to the same materials, tasks, and trainers. The trainers were not informed about the purpose of the study. The results indicated that the pupils who received the self-management training performed better than the control group on a reading task, committed fewer errors, and manifested greater inhibitory control over their behavior on a measure of sustained attention.

In another study involving three groups, 113 low-achieving junior high school students were assigned to either a self-management group, a group discussion group, or to a no-treatment control group (Harris & Trujillo, 1975). The

self-management and group discussion groups led to improvements in grade point averages as compared with the no-treatment control, and pupils in both treatment groups reported improvement in their academic abilities when compared with other junior high school students. The self-management group reported that they were more likely to have a specific time and place to study, and that the program had increased their time and efficiency in studying.

Self-management procedures have been demonstrated to be effective treatment maintenance strategies. Richards and Perri (1978) evaluated two strategies for enhancing treatment maintenance with 69 volunteer college students who were seriously concerned about their academic underachievement. The subjects were randomly assigned to a no-treatment control group, a study skills advice group, and one of four self-control plus study skills advice groups. The design also included a no-contact control group of 11 nonvolunteers. The major dependent variables were examination scores and semester grade point averages with follow-ups conducted six weeks, 12 weeks and one year post-treatment. Their results indicated that training in self-management is an effective treatment maintenance strategy, while a brief fading strategy was not. The study skills advice group showed rapid post-treatment deterioration.

Using the self-monitoring component of self-management as compared with goal-setting, Sagotsky, Patterson and Lepper (1978) worked with 67 fifth and sixth graders in an individualized

mathematics program. In the self-monitoring conditions the pupils were shown a system for observing and maintaining daily records of their own study behavior during their math classes. In the goal-setting conditions the pupils were shown a method of setting and recording daily performance goals during their math classes. The self-monitoring groups produced significant increases in both appropriate study behavior and in actual achievement in the mathematics program, while the goal-setting procedures had no effects on study behavior nor on academic achievement.

Impulsive second-grade children were taught self-management by an individual training procedure which required them to talk to themselves, initially overtly and then covertly in order to increase self-control (Meichenbaum & Goodman, 1971). The results indicated that the students improved significantly relative to attentional and assessment control groups on the porteus maze test, performance IQ on the WISC and on a measure of cognitive impulsivity. Meichenbaum and Goodman followed this study with another with eight kindergarten and seven first-grade children to examine the efficacy of this cognitive self-management on altering the impulsive child's performance. The results indicated that the self-management procedures led to a significant decrease in errors.

In addition to school or academically related concerns, self-management techniques have been used with a variety of problems: headaches (Mitchell & White, 1976; 1977b); insomnia

(Mitchell & White, 1977a); spastic colitis (Mitchell, 1978); pain control (Auta & Kanfer, 1980); obesity (Murray, Davidoff & Harrington, 1975); anxiety of various types (Sherman & Plummer, 1973; Chang & Denney, 1976; Harris & Johnson, 1980); and deviant behaviors (Denicola & Sandler, 1980; Wells, Grist, & Forehand, 1980). In general these studies show decreases in the problems and the effectiveness of self-management techniques in a variety of settings.

Summary

This literature review has presented the principles of Reality Therapy, the relationship of Reality Therapy to other theories, and research which has investigated Reality Therapy. A selective review of self-management research has also been summarized.

The present research involves a counselor working with students outside the classroom using the Reality Therapy principles. Although the results of previous research on this type of Reality Therapy are somewhat ambiguous, a few studies lend support to this type of therapy (Brown & Kingsley, 1975; Burkley, 1974; Lee, 1977; Shea, 1973; Williams, 1976; Dakoske, 1977). This research goes one step further however; the Reality Therapy principles are taught directly to the experimental students as a tool for managing their own behavior. This application is based on research on self-management that has demonstrated very successful results in school settings (Malamuth, 1979; Harris & Trujillo, 1975; Sagotsby et al., 1978;

Meichenbaum & Goodman, 1971; Harris & Johnson, 1980; Bolstad & Johnson, 1972).

The need for massive self-control training has been stressed by R. Glaser (1972). He stated that children can be taught self-management with a variety of techniques to improve their behavior and learning. One advantage of using the techniques of Reality Therapy lies in the practical, workable and easy to understand method of using the principles (Gang, 1974). When those principles are examined separately, they are adequately supported in other counseling theories. It is only fair to say, however, that the research on Reality Therapy at present is inconclusive, but there is enough support to justify additional research. By combining the principles of Reality Therapy with the principle of self-management, that is, training students directly, it is logical to hypothesize that one would have a more powerful tool for behavior change. The next chapter will describe a pilot study which was conducted to prepare for this research.

CHAPTER III

PILOT STUDY

The chapter describes a pilot study which was undertaken to prepare for this research investigation. The setting and sample, instrumentation, observation technique, experimental procedures, results and discussion are presented below.

Setting and Sample

A city school system, serving a population of around 170,000 people, was used for the pilot study. There are 30 elementary schools, seven junior high schools, four senior high schools and four special schools in this system. The Director of Psychological Services in the school system presented the study plan to the principals of the elementary schools, and the principal of the school selected for the study volunteered to participate.

Consisting of grades four, five and six, the school is a middle elementary school which has ten regular classroom teachers serving a pupil population of 252 and one counselor who serves the school two and one-half days a week. Fifty-four percent of the pupils are black and 46 percent are white. The attendance area served by this school is generally upper middle and middle class as compared with the other schools in the system.

There are four sixth-grade teachers in the school selected for this study and each teacher completed the School Behavior

Profile for all the sixth-grade pupils. The students' scores were ranked from lowest to highest, and the 30 lowest ranked pupils were selected for the study. These 30 pupils were grouped into three strata of ten based on the scores from high to low on the School Behavior Profile. From each of these three groups, the pupils were randomly assigned to the two treatment groups.

The Reality Therapy group was composed of eight black males, five black females, and two white males. The group guidance group was composed of eight black males, three black females, three white males and one white female.

Instrumentation

The School Behavior Profile

The School Behavior Profile (Johnson, 1976), which was used to identify the sample, is an instrument on which classroom teachers rate students' behavior as observed in routine school activities. The variables measured by the instrument are problem behavior and personal adjustment. Johnson (1976) reported a split-half reliability with Spearman-Brown adjustment of .96 obtained on nearly 1,200 students. Stability over time for 932 subjects was .50. This lower score could be due to actual changes in behavior of specific subjects, to differences in teachers making judgments, or to errors of measurement. Predictive validity was reported by Balow & Rubin (1974) to center around .40.

School Sentiment Index

The School Sentiment Index (SSI) (Johnson, 1976) measures student attitude toward school. The internal consistency reliability index reported by the Instructional Objectives Exchange (1972) was .80 for the intermediate grades. A test-retest reliability coefficient of .83 was reported. The Instructional Objectives Exchange (1972) commented on the validity of the scale:

> The accuracy with which the scores on these measures would yield valid estimates of one's attitude toward school was subjected to considerable scrutiny throughout the various phases of development. Not only were measures tried out in learners, but the validity of the general rationale, and the scoring of particular items, were constantly checked with members of the IOX staff as well as external consultants. (p. 7)

This statement on validity is inadequate. Further investigation or evidence should be reported by the developers of the instrument to confirm whether or not it is a valid measure of attitude toward school. It was selected, however, because of the extensive amount of research which has been done on the items. Attitude toward school is a subjective and transitive attitude which presents problems of measurement and validation in all of the instruments examined for this study.

The Intermediate Level Form of the SSI was used. Students responded to this inventory by marking either true or untrue to a series of 81 statements regarding school. Scores were obtained by counting one point for each positive response; thus the higher the score, the more favorable the attitude toward school. An example of the SSI is included in Appendix A.

Nowicki-Strickland Locus of Control Scale for Children

The Nowicki-Strickland Locus of Control Scale for Children (1973) measures generalized expectancies for internal versus external control of reinforcement. Internal consistency was measured by the split-half method and adjusted using the Spearman-Brown prophecy formula. The collective coefficient reported for grades six, seven and eight was .68. Thomas (1973) reported significant test-retest reliability for the instrument. Construct validity was investigated by measuring the relation to other measures of locus of control. Nowicki and Strickland (1973, p. 153) reported a correlation coefficient of .61 with the Rotter Locus of Control scale. A number of studies have supported the utility and validity of the Nowicki-Strickland scale. Nowicki (1971) and Nowicki and Roundtree (1971) found significant relationships between internal locus of control and high grade-point averages but not intelligence. Nowicki (1971) found significant correlations between internal locus of control and reading achievement. The Nowicki-Strickland Locus of Control scale for Children consists of 40 items to which the students respond by marking either yes or no. The score is the total number of items answered in an externally controlled direction. An example of the Nowicki-Strickland Locus of Control Scale for Children is included in Appendix B.

Behavioral Observation

One of the dependent variables in the study was on-task behavior. During a five-day baseline period and five days at the end of the treatment, on-task behavior was recorded by two independent observers. The 30 pupils were observed in three-minute intervals for a total of 15 minutes of observation each day, and the two observers observed the same pupil in the same time interval to allow for a continuous reliability check (Reid, 1970; Romanczyk, Kent, Diament, & O'Leary, 1973; Kazdin, 1975). An interobserver reliability coefficient of $r = .81$ was computed for the pre-treatment observation of on-task behavior, and an interobserver reliability coefficient of $r = .86$ was computed for the post-treatment observation. The observational data are included in Appendix C.

Procedures

The School Sentiment Index and the Nowicki-Strickland Locus of Control Scale were administered to each of the 30 pupils at the beginning of the study and at the end of the study. The two groups, Reality Therapy and Group Guidance, began meeting at the end of the first observation period. Each of the two groups met for 50 minutes, one time a week for six weeks. The same person met with both groups. It was planned that the Reality Therapy group would participate in activities which were designed to teach self-management according to the principles of Reality Therapy which focus on behavior. Focusing on behavior has had promising results in the

past (Landreth, 1974; Gumaer & Myrick, 1974). The treatment was designed to teach the students to generate involvement with their teachers, to focus on present behavior, to evaluate their behavior, to plan for better behavior, and to make written commitments to keep the plans.

The Group Guidance group activities were arbitrarily selected from various sources and were designed to focus on attitudes and feelings.

Results

The following null hypotheses were tested:

1. Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in Group Guidance will demonstrate no mean difference in on-task behavior.

2. Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in Group Guidance will demonstrate no mean difference in scores on the Nowicki-Strickland Locus of Control Scale.

3. Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in Group Guidance will demonstrate no mean difference in scores on the School Sentiment Index.

In order to determine whether there was a difference between the groups prior to treatment, a t-test was performed on the means of the School Behavior Profile, and the null hypothesis that there was no difference in the means of the two groups was retained, $t(13) = 1.38$, $p < .05$.

T-tests were performed on the means of the three dependent variables (see Table 2 for the means and standard deviations of the scores) and the results are reported in Table 3. Significant differences in pre- and post-attitude toward school and in pre- and post-on-task behavior were found for the Reality Therapy group. For the group guidance group, significant differences were found in pre- and post-locus of control and pre- and post-on-task behavior.

Table 2

Pre- and Post-Means and Standard Deviations on On-Task Behavior, Scores on the Nowicki-Strickland Locus of Control Scale, and the School Sentiment Index

	Reality Therapy		Group Guidance	
Groups	$\bar{X}$	SD	$\bar{X}$	SD
Pre-locus of control	16.62	(4.41)	17.36	(4.40)
Post-locus of control	17.39	(2.96)	14.79	(4.14)
Pre-SSI	49.70	(11.72)	45.57	(10.35)
Post-SSI	54.85	(11.56)	46.14	(13.97)
Pre-on-task (%)	64.23	(23.06)	64.29	(23.10)
Post-on-task (%)	83.31	(25.42)	88.07	(12.49)

Table 3

Results of t-tests on On-Task Behavior, Nowicki-Strickland Locus of Control Scale Scores, and School Sentiment Index Scores

	Reality Therapy			Group Guidance		
Groups	t value	df	2-tail Prob	t value	df	2-tail Prob
Locus of control	- .72	12	0.48	3.20*	13	.007
Attitude (SSI)	-2.31*	12	.04	- .19	13	.85
On-task (%)	-2.62*	12	.02	-4.55*	13	.001

*$p < .05$

An analysis of covariance was performed for each of the three post-treatment dependent measures. For on-task behavior the pre-treatment scores on the School Behavior Profile, SSI and on-task behavior were selected as covariates. Pre-treatment scores on the School Behavior Profile, Nowicki-Strickland and Locus of Control Scale and on-task behavior were used as covariates for post-locus of control. For the post-treatment attitude toward school, the pre-treatment scores on the School Behavior Profile and SSI were selected as covariates.

The only significant treatment effect was a main effect for locus of control, F (1,22) = 7.72, $p < .05$, indicating that the group guidance group benefited more from the treatment

in terms of moving from external to internal locus of control (see Table 2 for means).

Discussion

The pilot study showed that there were treatment and design problems. The contrasting group design was a poor selection in that it was impossible to define the dimensions of group guidance. The descriptive term group guidance is used in the literature to describe everything from a strict behaviorist approach to a very loosely defined group meeting. The activities selected for the group guidance in this study fall into a group guidance category, but because they were arbitrarily selected, generalization is almost impossible.

The other problems were group size and implementing the treatment. Fifteen pupils with the most severe behavior problems in a particular grade comprise a group much too large for effective group activities. A substantial portion of the group time was spent trying to control disruptive behavior, and the outlined procedures could not be followed. The plan was for the groups to be interactive with pupils participating in discussion and planning. Because of the nature of the pupils, however, discussion usually ended in arguments and/or fights among pupils. Although considerable effort was made to adhere to the designed activities, disruptive behavior made it almost impossible. The researcher, who conducted both groups, found herself using the Reality Therapy methods for controlling disruptive behavior with both groups which raises

the question as to whether the treatment was different for the two groups.

Changes did occur in both groups and the informal verbal reports from the teachers of the pupils indicate that the classroom behavior of many pupils improved. However, since it would be impossible to state that two distinctly different methods of treatment were used, this study has little value for anyone other than the researcher. The problems encountered, however, led to the selection of another design for this dissertation study.

Summary

A multisubject contrast-group research design was selected to evaluate the results of teaching disruptive pupils the principles of Reality Therapy for self-management. Thirty sixth-grade students, identified by their teachers as disruptive, were randomly assigned to either the experimental group or to a control group which was designed to participate in selected group guidance activities. The size of the group presented problems in administering the treatment as planned, and it was concluded that the two groups did not receive different treatments. Both groups, however, demonstrated significant improvement in time on-task behavior. The Reality Therapy group significantly improved in scores on an attitude toward school measure, and the control group significantly improved on a locus of control measure. The next chapter presents the methodology which was selected as an outgrowth of this pilot study.

CHAPTER IV

METHODOLOGY AND PROCEDURES

This study employed a multiple baseline across subjects design in order to determine if teaching disruptive students the principles of Reality Therapy for self-management would improve their classroom behavior, their perceptions of themselves, and ratings of behavior by their teachers. This chapter describes the research design, the setting and sample, the instrumentation, the observational technique, the experimental procedures, and the statistical treatment of the data.

Research Design

The difficulties which were encountered by using a group design in the pilot study led to the selection of a single-subject research design for this study. In this particular study which deals with disruptive pupils, the single-subject design has the advantage of better control over pupil behavior. The multisubject pilot study demonstrated that working with disruptive pupils in a group can lead to discipline problems within the group sessions. The single-subject design allowed the researcher to work with each student individually, thus eliminating this particular problem, and providing for teaching the Reality Therapy principles directly, as in self-management research.

A multiple baseline across subjects design as described by Hersen and Barlow (1976) was used for this study. The multiple baseline design has also been called a time-lagged

control design (Hersen & Barlow, 1976) and a time-series experiment (Glass, Wellson & Gottman, 1975). The rationale for the multiple baseline design first appeared in the behavioral literature in 1968 (Baer, Wolf, & Risley, 1968), and Hersen and Barlow (1976) provide an excellent historical perspective on the origin and development of single-subject research design.

Traditionally, psychological and educational research has conformed to a multisubject design such as the control group design used in the pilot study. With the publication of Sidman's (1960) book and the proliferation of research in behavior therapy, single-subject experimentation has come into its own (Christensen, 1977). Perhaps the most frequently cited advantage of single-subject research over multisubject research is that it bypasses variability due to intersubject differences. Kazdin (1973) stated that this is a desirable feature because intersubject variability is a function of the research design and not a feature of the behavior of the individual. Dealing with group averages frequently misrepresents individual behavior. The pilot study data on the percentage of time on task, presented in Appendix C, demonstrate the variability of the students in that study.

Neither the multisubject nor single-subject design, however, fits all situations and circumstances. "There are advantages and disadvantages to both multisubject and single-subject research, and it is impossible to state that one is the preferred mode" (Christensen, 1977, p. 234). Some

individuals have suggested that single-subject research may be the best means because of the economy of time and cost (Paul, 1969; Leitenburg, 1973; Kazdin, 1973).

The six pupils in this study were randomly assigned either to the experimental or the placebo control treatment. Four experimental students were used (therefore, four baselines) to establish confidence in the controlling effects of the treatment. Although theoretically only a minimum of two baselines is needed, Wolf and Risley (1971) stated that, "while a study involving two baselines can be very suggestive, a set of replications across three or four baselines may be completely convincing" (p. 316). The two additional students participated in a nonstructured study of current events to control for placebo effects. The research design is presented in Table 4.

Setting and Sample

This study was conducted in the same school system described in the last chapter on the Pilot Study. A request to conduct the research was submitted to the Director of Psychological Services, and she submitted the request to the principals in the school system. The principal of a junior high school in the system volunteered to participate. He submitted the request to the seventh-grade teachers in the school, and they also agreed to participate. The school serves a district which ranges from upper-middle-class families to a low-income housing development. The school enrollment for the 1980-81 academic year was 883 of which 298 were seventh

Table 4

Multiple Baseline Design

	Days																								
Pupil	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X

Note. 0 = baseline

X = treatment

P = placebo treatment

graders. Sixty-four percent of the students are white and 61 percent of the seventh-grade pupils are white. The school is served by a principal, two assistant principals, two guidance counselors and 65 teachers. The 1980-81 mean achievement test scores on the California Achievement Test in the seventh grade was 8.5 (norm 7.5) and the eighth-grade mean score was 9.9 (norm 8.5). The ninth-grade students were not tested during the same academic year. During the previous academic year, six ninth-grade students and 14 eighth-grade pupils had been retained.

The three English teachers, who teach all the pupils in the seventh grade, completed the School Behavior Profile for each of the pupils in the seventh grade. From the pupils with the 20 lowest scores, all seventh grade teachers were asked to select the six students who were the most disruptive. There is clinical evidence that the classroom teachers are capable of making valid judgments about classroom behavior (Beilin, 1959; Quay & Quay, 1965).

The six pupils were assigned the same reference number in all the tables in this study. The numbers are introduced in Table 4 which shows the research design, the experimental treatment, and the placebo treatment to which the pupils were randomly assigned. Students with numbers one, two, four, and six participated in the experimental treatment, and students three and five participated in the placebo treatment. Student number one had the shortest baseline measurement (five days),

and was the first to begin treatment. The other students were introduced to their respective treatments as they are numbered in Table 4.

Instrumentation

The School Behavior Profile

The School Behavior Profile (Johnson, 1976), which was described in the last chapter on the Pilot Study, was used to identify the 20 students in the seventh grade from which the sample of six was selected by the teachers. The variables measured by the instrument are problem behavior and personal adjustment, and classroom teachers rate students' behavior as observed in routine school activities.

Self Observation Scales

The Self Observation Scales (SOS), Junior High Level, Form C (Stenner & Katzenmeyer, 1979) was used to measure pupils' self-perception. The SOS is a direct, self-report instrument with empirically determined scales which measure the way students perceive themselves and their relationship to peers, teacher, and school. The Junior High Level of the SOS is designed for use in grades seven to nine. It has 72 items which measure seven dimensions: (1) Self Acceptance, (2) Self Security, (3) Social Confidence, (4) Self Assertion, (5) Peer Affiliation, (6) Teacher Affiliation, and (7) School Affiliation.

The Junior High Level was normed on 4,800 students from 42 cities across the nation. Stenner and Katzenmeyer (1975) report test-retest reliability coefficients for each of the scales as follows:

Self Acceptance, $\underline{r}$ = .81

Self Security, $\underline{r}$ = .91

Social Confidence, $\underline{r}$ = .75

Self Assertion, $\underline{r}$ = .84

Peer Affiliation, $\underline{r}$ = .87

Teacher Affiliation, $\underline{r}$ = .74

School Affiliation, $\underline{r}$ = .83

Thus, test-retest reliability coefficients range from .74 to .91 with a mean value of .82.

The authors stated that two types of information have impact on the validity of the SOS: (1) information on the structural integrity and (2) information on the capacity of the scales to predict other behaviors. They argue that questions about structural integrity must be answered prior to using an instrument in comparative research. They called structural integrity intrinsic validity and report on two concepts to support the intrinsic validity of the SOS: (1) replicability which is the extent to which a pattern or regularity appears in essentially the same form in random samples and (2) invariance which is the similarity of the configuration across selected groups (race, sex, age, etc.). They reported coefficients of replicability above .95 for all factors and coefficients of invariance above .90 in all cases. They called

extrinsic validity the ways the scores on the SOS relate to other characteristics and behaviors. They examined the relationship of the SOS with background, social status, gross motor, fine motor, stature, achievement and ability, and report a total validity coefficient of .65.

The publisher (Stenner & Katzenmeyer, 1979) provided a standard scoring service and the scores are based on national norms. For each scale a student receives a standard score (T-score) representing a distribution with a mean of 50 and a standard deviation of 10. National percentile and stanine equivalents are also provided.

Burks' Behavior Rating Scales

The Burks' Behavior Rating Scales (BBRS) (Burks, 1977), completed by the classroom teacher, are designed to identify patterns of pathological behavior shown by children who have behavior problems in home or school. The scales are designed for children in grades one through nine. There are 110 items which by factor analysis have been found to cluster in 19 subscales or categories of behavior. These groupings are:

1. Excessive Self-Blame
2. Excessive Anxiety
3. Excessive Withdrawal
4. Excessive Dependency
5. Poor Ego Strength
6. Poor Physical Strength
7. Poor Coordination
8. Poor Intellectuality

9. Poor Academics
10. Poor Attention
11. Poor Impulse Control
12. Poor Reality Contact
13. Poor Sense of Identity
14. Excessive Suffering
15. Poor Anger Control
16. Excessive Sense of Persecution
17. Excessive Aggressiveness
18. Excessive Resistance
19. Poor Social Conformity

Burks (1977) reported that item reliability was established by having 95 disturbed children from grades one through six rated and rerated within a period of 10 days by their teachers. All items demonstrated coefficients ranging between .60 to .83. The average item/item retest correlation coefficient was .71 (Burks, 1977).

The case for construct validity, according to Burks, rests on five sources of investigation over a period of four years. The first investigation dealt with the ability of the instrument to distinguish between normally behaved children and children who showed evidence of minimal brain dysfunction and Burks (1977) reported that the instrument has demonstrated such a function. He stated that a contrasted-group method examined the ability of the instrument to distinguish between two independent groups that were defined in relation to the construct being measured. The individuals in his second study

were 153 children who had been referred by classroom teachers to resources above and beyond the regular classroom (referred) as contrasted with a cross sample of 494 regular children. Burks concluded:

> Thus, the claim for contrasted group validity seems reasonably supportable since children referred for guidance service are given significantly higher category ratings in the BBRS than are cross sample children from regular classrooms. (1977, p. 34)

Factorial structure was the third area of investigation of the instrument, and Burks (1977, pp. 34-37) provided extensive data on his studies. He stated that the factors which emerged from his studies were similar to factors found by other investigators, e.g., Quay (1966) and Patterson (1964), which help establish the validity of the BBRS.

To further establish construct validity, Burks used 176 children who had been given the School Attitude Survey. From that sample he selected the 25 pupils who reported the most inner disturbance and the 25 who reported the least and asked the teachers of those pupils to rate them on the BBRC. Burks reported a highly significant relationship between those children and their scores of the BBRC in that the majority of the children were correctly assessed by the BBRC.

The final investigation of the BBRC involved the investigation of the instrument and the nonbehavioral variables of sex differences, exceptional children and differences in ratings of teachers and parents. The BBRC proved to be efficient throughout the studies (Burks, 1977, pp. 38-43).

The BBRS Manual (Burks, 1977) provides instruction for hand-scoring the instrument. The instrument is designed to provide individual scores for each of the scales and higher scores represent more severe problems.

Haring and Phillips Behavior Rating Schedules

The Behavior Rating Scale Schedule, developed by Haring and Phillips (1962), measures change in overt behavior. The instrument is a seven-point Likert-type scale consisting of 26 items. The judge rates a child from one to seven on an item of descriptive behavior. The values of the items are averaged to yield a single score (Vacc, 1968; Vacc & Siegal, 1980), and higher scores indicate less problem behavior. As reported by Vacc (1972) the internal consistency reliability index was .95. "Internal consistency of each item to the single score provided data that 23 of the 26 items were consistent at the .01 level" (Vacc, 1972, p. 199). An example of the Haring and Phillips Rating Schedules is included in Appendix D.

Evaluation of Instruments

In order to assess whether the three instruments (SOS, BBRS and the Haring and Phillips Rating Schedules) were instruments capable of measuring change which might occur as a result of Reality Therapy, five individuals (judges) rated each item on the three scales. The judges were working toward certification in Reality Therapy, and each judge had had two weeks of intensive training by the Institute of Reality Therapy and a six-month supervised practicum. The judges were asked

to check each item on the three scales which they perceived to be behaviors which would be changed by using the techniques of Reality Therapy. Three or more judges rated 58 (or 81 percent) of the 72 items on the SOS as potential items to be changed by Reality Therapy. One hundred percent of the items on the Haring and Phillips Rating Schedules were checked by at least three of the raters, and 96 (87 percent) of the 110 items on the BBRS were checked by at least three of the judges.

Observational Technique

Method of Observation

On-task behavior was observed using the model developed by Irwin and Bushnell (1980) in which they stated that the first task in behavior observation is to define the behavior to be observed. They defined on- and off-task behavior as follows:

> On-task behavior is defined as attention to teacher or materials associated with assigned activities. Off-task behavior is defined as inattention, disruptive actions, or activities that are irrelevant to the task at hand. (Irwin & Bushnell, 1980, p. 165)

This definition was presented to the observers in this study during the training period and further, they were instructed to count all questionable behavior as off-task in order to help maintain consistency in the observations. The classrooms in this study were traditional in nature and on-task behavior is relatively easy to measure in this type of setting (Irwin & Bushnell, 1980).

Two graduate students at the University of North Carolina at Greensboro served as the observers. They were paid an

hourly salary plus travel expenses to and from the school. Prior to the beginning of the study, the observers were trained to measure time on task in role-play situations. Dr. D. Michelle Irwin worked with the researcher to prepare for this training which was the model described by Irwin and Bushnell (1980). The observation instructions are included in Appendix E.

Prior to the beginning of the study all seventh-grade teachers informed their respective classes that two observers would be in the school observing classroom techniques on an unstructured schedule for around six to eight weeks. Every effort was made to keep the students from thinking that they were the objects of the observation. Attempting to keep the students from realizing that there was a relationship between the observation and the sessions they attended with the researcher, the observers and the researcher did not meet in the school. The observers were not informed as to which students were experimental and which were control.

There were eight periods during the school day which included lunch, physical education, and the academic subjects in which the students were enrolled. Each individual was observed in five different academic classes across the day during the study. The observation schedule which was presented to the observers to follow is included in Appendix E. The total length of time per observation period was 15 minutes. Kazdin (1975) stated that the decision concerning the amount of time for each given observation period is determined by the demands

of the setting, observer availability, difficulty in recording behavior and the frequency of behavior. A 15-minute observation period was chosen for this study based on observer availability and classroom demands. Kazdin went on to say:

> Large periods of observation are not always required to reflect behavior change. For example, in studies in classroom settings, students may be observed for as little as 15 minutes each per observation period. (1975, p. 77)

Reliability of Observers

The observers recorded data on the same child in the same time interval to allow for a continuous weekly reliability check. Reid (1970) found that observers obtained median reliabilities of .75 when they were aware that reliability was being assessed. However, reliabilities dropped to a median of .51 when the observers were told that their reliabilities would not be assessed further. Romanczyk, Kent, Diament, and O'Leary (1973) found that reliability assessment affected the rate of behavior reported. Only 80 percent as much behavior was recorded when reliability was not assessed as when reliability was assessed. Therefore, in an attempt to reduce classroom interruption and minimize the time for observers, research seems to support the concept of checking the reliability of observers simultaneously with recording of behavior. Irwin and Bushnell wrote:

> It is important that reliability be high (preferably .80 or above) in time and event sampling. If it is not, the observer must find the reason and remedy the problem. (1980, p. 184)

The interobserver reliabilities were checked five times during the study and at the end of the study as follows:

(1) after each student had been observed five times; (2) observations six through ten for all students; (3) observations 11 through 15 for all students; (4) observations 16 through 20 for all students; (5) observations 21 through 25 for all students; and (6) overall reliability. The inter-observer reliability coefficients were:

1. Observation 1-5 $r = .89$
2. Observations 6-10 $r = .88$
3. Observations 11-15 $r = .95$
4. Observations 16-20 $r = .95$
5. Observations 21-25 $r = .97$
6. Overall reliability $r = .93$

Experimental Procedures

Prior to the beginning of the study and at the end of the study, five teachers of each respective student were asked to complete the Burks' Behavior Rating Scales and the Haring and Phillips Rating Schedules for each of the six students, thus providing a pre- and post-treatment evaluation. In order to eliminate a bias which might result from this information, the teachers were not informed about which students were experimental or control.

During the baseline observation period, each pupil was administered the Self Observation Scales, and the SOS was administered again to each student on the third day after each subsequent intervention point. This delay for administration of the SOS to the third day after each intervention point was

incorporated to allow time for the treatment effects to emerge (Hersen & Barlow, 1976).

After the baseline observation period of five days, the pupils were subjected to the intervention one at a time in random order as demonstrated in Table 4 on page 55. The researcher worked individually with each pupil during their respective treatment days with each treatment session being one class period (40 minutes). The experimental procedure combining Reality Therapy and self-management is presented in Appendix F. The two placebo control students met for an equal amount of time, but the sessions were devoted to a nonstructured discussion of current events, television and movies. The researcher took current newspapers and magazines to those sessions to facilitate those discussions.

The researcher's qualifications for conducting this study are based upon her training and subsequent certification by the Institute for Reality Therapy in Los Angeles, California, and also by Dr. Marian Franklin, Professor at the University of North Carolina at Greensboro, who supervised the practicum component of the training which led to certification.

Independent and Dependent Variables

The independent variable in this study was teaching pupils the principles of Reality Therapy to use for self-management. Placebo effects were controlled by randomly assigning two pupils to an unstructured study of current events.

The dependent variables measured in this study were these: (1) percentage of time-on-task behavior in the classroom as

measured by trained observers. Time on task has been used as a measure of classroom behavior in many studies (e.g., Epstein & Goss, 1978; Hay, Hay, & Nelson, 1977; Kazdin & Greesey, 1977; Marholin & Steinman, 1977; Marlowe, Madsen, Bowen, Reardon, & Logue, 1978); (2) pupils' perception of self as measured by the Self Observation Scales administered five times during the study; and (3) teacher ratings of behavior as measured by the Burks' Behavior Rating Scales and the Haring and Phillips Rating Schedule administered prior to the beginning of the study and at the end of the study.

Statistical Treatment of Data

To evaluate data obtained in a multiple baseline design, Revusky (1967) proposed a statistical test (Rn) which can be used when data are collected across behaviors, situations, or persons. The Rn statistic was suggested by Revusky (1967) specifically for the analysis of data from multiple baseline designs. There are two prerequisites to the use of this analysis procedure: the order of treatment of the individuals must be determined randomly and a minimum of four individuals must receive treatment. These prerequisites were met.

The procedure entails viewing the total experiment as a series of subexperiments with one experimental and several control individuals. The individual receiving the experimental manipulation during each phase of the multiple baseline procedure is considered to be the experimental person. Following each phase of the study, the individuals are rank ordered with respect to the rate of occurrence of the target behavior. If

the manipulation has been effective, then the experimental person in each subexperiment should rank number one. If the intervention has been effective, the rank order should be determined by chance. Following all the subexperiments, the ranks of the experimental individuals from each subexperiment are added and the sum represents the Rn statistic. Each subexperiment has a probability-generating function of its own which gives the probability that the rank outcome will equal one. The Rn probability-generating function is determined by multiplying the probability-generating functions of the subexperiments together. Thus, the probability that the Rn statistic was obtained by chance can be determined. A table of values for significance of Rn is available for determining critical values (Hersen & Barlow, 1976).

On-Task Behavior

Null hypothesis (1): Pupils who are taught skills of Reality Therapy for self-management will demonstrate no treatment effects as measured by percentage of time on task.

Null hypothesis (2): Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean difference in on-task behavior.

The Revusby Rn statistic was used to evaluate the percentage of time on task. The absolute levels of raw scores differed across students and therefore, treatment was evaluated on the mean performance for the five days after treatment

was introduced for the first ranking, and for subsequent rankings the means were cumulative. "Using means across days is likely to provide a more stable estimate of actual performance" (Kazdin, 1976, p. 303).

The means of on-task behavior for the first five and last five days of the study were used to evaluate the differences in the experimental students and the placebo students. During the first five days no students were subject to intervention, and during the last five days all students were subjected to their respective treatments. In order to compare the mean scores of the experimental and placebo control students, independent two-tailed t-tests at the .05 level of significance were used. Dependent two-tailed t-tests at the .05 level of significance were used to compare the pre- and post-treatment means of on-task behavior for the four experimental students. Tables and figures are presented for visual analysis and evaluation.

Self Observation Scales

Null hypothesis (1): Pupils who are taught skills of Reality Therapy for self-management will demonstrate no treatment effect as measured by their scores on the Self Observation Scales (SOS).

Null hypothesis (2): Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean difference in scores on the Self Observation Scales.

The SOS was administered to each student prior to any treatment, and subsequently each third day after each intervention point. The five T-scores on each individual were used in the analysis for each of the seven scales on the SOS. Rn statistics (Revusby, 1967) were computed in order to determine whether the treatment effected changes in the scores on the SOS for the four experimental students.

In order to compare the mean scores of the experimental and placebo control students of measures of the seven scales of the SOS, independent two-tailed t-tests at the .05 level of significance were used on the initial administration scores and on the scores on the final administration. Dependent two-tailed t-tests at the .05 level of significance were used to compare the pre- and post-treatment means of SOS scores for the four experimental students and for the two placebo students.

An analysis of variance across repeated measures was computed for each of the seven scales of the SOS to investigate whether there were differences across administrations or within the group at each administration point. SOS scores are presented in tables for visual analysis and evaluation.

Teacher Ratings

Two null hypotheses were tested on the scores of the two instruments used to measure teacher ratings of behavior:

Null hypothesis (1): Pupils who are taught the skills of Reality Therapy for self-management will demonstrate no

differences in pre- and post-treatment scores on teacher ratings as measured by the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales.

Null hypothesis (2): Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean differences in scores as rated by teachers on the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales.

Burks' Behavior Rating Scales. All of the 19 scales on the Burks' Behavior Rating Scales were not expected to be affected by the treatment. In order to select the scales to be used for the evaluation, the five judges (Reality Therapists described earlier) rated each item as it would or would not be affected by the treatment. The items which had at least four negative ratings were eliminated and the scales which had 50 percent or more of the items marked as "would not change" were eliminated. Five scales were removed: Poor Physical Strength, Poor Coordination, Poor Intellectuality, Poor Academics and Poor Reality Contact. The remaining scales were used in the analysis.

In order to compare the pre- and post-scores of both the experimental students and the placebo students, dependent two-tailed *t*-tests at the .05 level of significance were used on each of the scales. Independent two-tailed *t*-tests at the .05 level of significance were used to compare the pre- and post-treatment scores on the experimental and control students.

Haring and Phillips Rating Schedules. At least four of the five judges rated all 26 items on the Haring and Phillips Rating Schedule as items which could be affected by this study. Dependent two-tailed *t*-tests at the .05 level of significance were used to compare the pre- and post-treatment scores of both the experimental students and the placebo students. Independent two-tailed *t*-tests at the .05 level of significance were used to compare both the pre- and post-treatment scores of the experimental and control students.

Summary

This chapter has described the research design, the setting and sample used in this study, the instrumentation, the observation technique, the experimental procedures, and the statistical analysis of the data. The next chapter will describe the results of the data analysis.

CHAPTER V

ANALYSIS OF RESULTS

The primary purpose of this chapter is to present the results of the statistical analysis of the data and to interpret these results. This chapter is divided into four sections. In Section I the description of the sample is presented. Section II presents the percentage of time-on-task results. Section III deals with the results of the Self Observation Scales, and Section IV presents the results of the teacher ratings as measured by the Haring and Phillips Rating Schedule and the Burks' Behavior Rating Scales.

Description of Sample

The six students selected by the teachers for this study were male. Five of the six pupils were black and the other pupil was white. Pupils, one, two, and six live with both parents. Pupils three and five live their mothers, and pupil four resides with his grandmother. The six students were not involved in any special classes and only one of the students had not repeated a grade in school. All students had scored below the grade-level mean (8.5) on the California Achievement Test. The IQ range on the California Test of Mental Maturity administered in February of 1980 was from 82 to 113. Descriptive data on the pupils are presented in Table 5.

Table 5

Descriptive Data on Sample

Pupil	Age (Months)	Race	1980-81 Absences	Number Siblings	Grades Repeated	IQ Score (CTMM)	Achievement Test Score (CAT)	Percentile Rank On CAT
1	159	W	3	1	0	113	8.1	66
2	173	B	2	4	6th	99	6.1	31
3 (Control)	176	B	6	2	6th	93	6.2	32
4	164	B	0	3	6th	96	6.4	36
5 (Control)	177	B	3	3	7th	82	4.5	05
6	171	B	6	4	7th	82	4.9	08

Percentage of Time On Task

Two null hypotheses were tested for the dependent variable, percentage of time on task.

Null hypothesis (1): Pupils who are taught skills of Reality Therapy for self-management will demonstrate no treatment effects as measured by percentage of time on task.

Null hypothesis (2): Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean difference in on-task behavior.

In the present study, Rn statistics (Revusky, 1967) were computed for percentage of time on task for each of the four experimental students using the data recorded by the observers. The raw data are presented in Appendix G. The mean percentage of time on task for the two observers was employed in the analysis. These data are presented for all six students in Table 6 with the intervention points underlined. For the first ranking the treatment was evaluated on the mean performance of student one for the five days after treatment was introduced. The cumulative mean scores of the other students were used in the first ranking. On the second ranking the cumulative mean was used on student one from the point of the initial intervention; for students two and three the means of the five days after intervention were used; and for students four, five, and six the cumulative means from day one were used. For the third ranking, the cumulative means from the point of intervention were employed for students one, two, and three. The means for

Table 6

Percentage of Time On Task

Days	Students					
	1	2	3 (Placebo)	4	5 (Placebo)	6
1	17	47	75	58	33	44
2	31	36	77	0	55	2
3	21	58	65	60	25	15
4	39	60	30	32	48	8
5	23	47	99	51	8	0
6	31	62	32	14	87	41
7	40	33	33	26	90	49
8	50	44	83	27	67	100
9	43	57	41	10	77	47
10	44	35	83	0	9	28
11	58	63	51	8	74	21
12	57	66	81	3	85	25
13	58	73	82	17	15	0
14	53	64	52	0	40	37
15	23	64	76	45	2	10
16	56	76	0	78	62	6
17	55	71	76	74	99	5
18	70	82	79	72	5	20
19	75	83	26	87	64	3
20	92	88	35	76	88	21
21	74	78	0	73	9	59
22	95	98	77	75	99	93
23	89	85	99	75	2	95
24	59	98	78	87	21	81
25	81	93	45	85	23	83

the five days after intervention were used for students four and five, and the total cumulative mean was used for student six. The fourth ranking was obtained by using the means of the scores from the intervention points on students one through five, and the mean of the five days after intervention was employed for student six. Table 7 presents the mean scores for the six students and the rankings which were employed in the Rn analysis.

Table 7

Mean Percentage of Time-On-Task Behavior and Rn Rankings

	Student						
Rankings	1	2	3	4	5	6	Rn
1	41.60	47.90	66.80	27.80	49.90	33.40	4
2	45.70	66.00	68.40	23.40	47.67	28.47	2
3	53.67	73.00	55.20	77.40	63.60	24.10	1
4	60.15	78.80	56.73	78.20	47.20	82.20	1

Summing the rankings for each student for whom the experimental manipulation was employed in each experimental phase yields Rn = 8, significant at the $p < .05$ level. Figure 1 graphically depicts the changes in percentage of time on task for each of the six students from the baseline phases of the experiment to the treatment phases of the study.

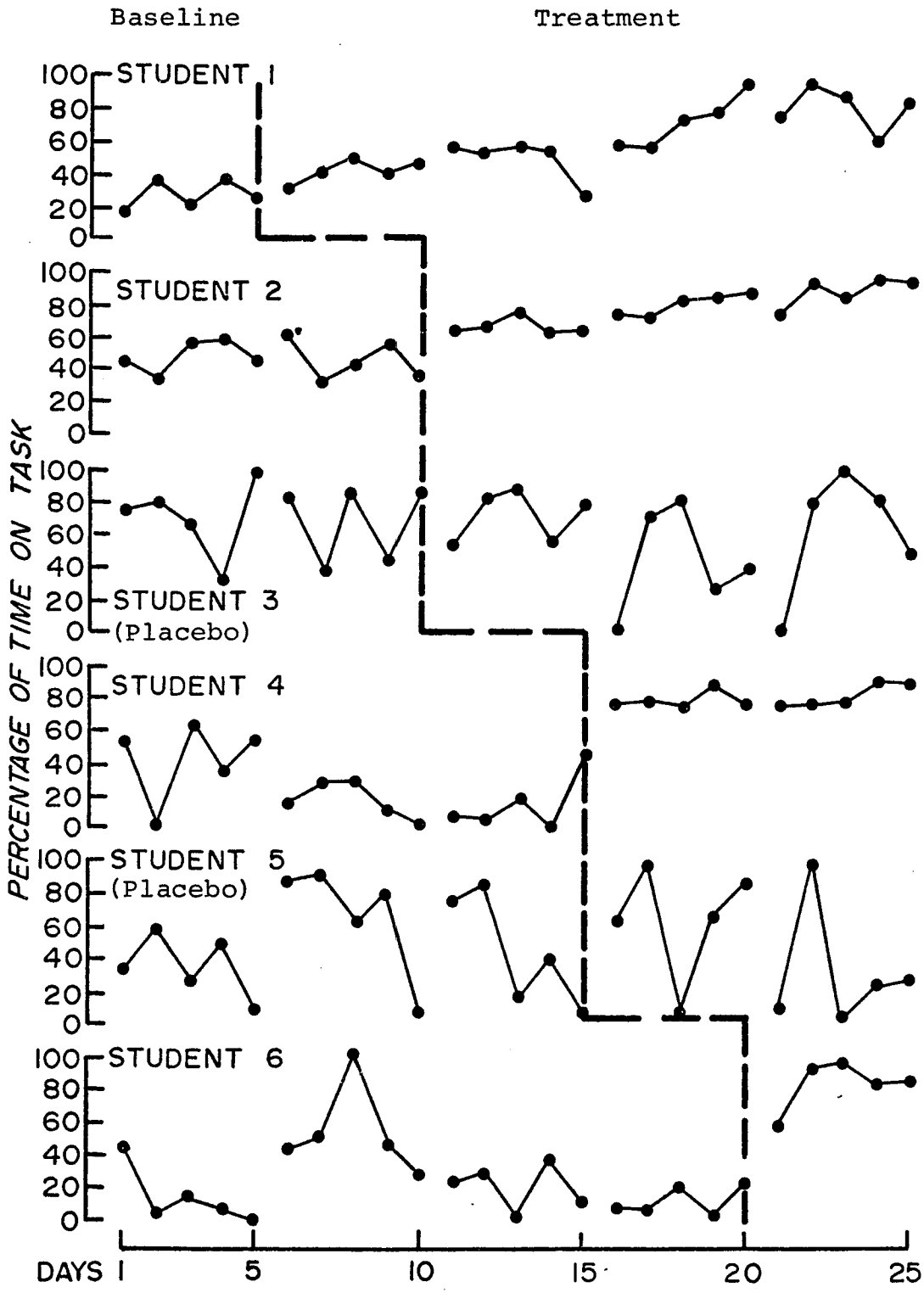

Figure 1. Percentage of time on task exhibited by each student during baseline and treatment conditions.

T-tests were performed on the means of the scores on the first five days of the study when no treatment was administered and on the means of the last five days of treatment when all students were involved in treatment. The means and standard deviations of those scores are presented in Table 8.

Table 8

Means and Standard Deviations of Pre- and Post-treatment Percentage of Time-On-Task Measures

	N	$\bar{X}$	S.D.
Pre-treatment (experimental)	4	32.45	15.72
Post-treatment (experimental)	4	82.80	5.25
Pre-treatment (placebo)	2	51.50	25.03
Post-treatment (placebo)	2	45.30	20.51

In order to determine whether there was a difference between the experimental and placebo students prior to treatment, a t-test for independent means was performed on the means of the percentage of time-on-task scores prior to treatment, and the results demonstrated that there were no signficant differences.

A t-test for independent means was performed on the means of the post-treatment percentage of time-on-task scores to determine if there were differences in the two groups after treatment, and the null hypothesis that there were no differences

in the two groups was rejected, $t(4) = 3.86$, $p < .05$. The mean scores in Table 8 demonstrate that the experimental students had a substantial increase and significantly higher percentage of time on task after intervention.

In order to test the null hypothesis that the experimental students would demonstrate no treatment effect as measured by percentage of time on task, a t-test for dependent means was performed on the means of the pre- and post-treatment scores of the experimental students. The null hypothesis was rejected, $t(3) = 7.37$, $p < .01$.

The final t-test for dependent means was performed on the means of the pre- and post-treatment scores on the placebo students and the results demonstrated no significant differences. A summary of the results of the t-tests performed on percentage of time-on-task behavior is presented in Table 9.

Self Observation Scales

Two null hypotheses were tested on the scores on Self Observation Scales:

Null hypothesis (1): Pupils who are taught skills of Reality Therapy for self-management will demonstrate no treatment effect as measured by their scores on the Self Observation Scales (SOS).

Null hypothesis (2): Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean difference in scores on the Self Observation Scales.

Table 9

Results of t-tests on Percentage of Time-On-Task Behavior

	df	t-value
Pre-treatment (Experimental & Placebo)	4	1.51
Post-treatment (Experimental & Placebo)	4	3.86*
Pre- and Post-treatment (Experimental)	3	7.37**
Pre- and Post-treatment (Placebo)	1	1.94

*$p < .05$
**$p < .01$

Rn Rankings

The SOS was administered to each student prior to any treatment, and subsequently each third day after each intervention point. The five scores on each individual were used in the analysis for each of the seven scales on the SOS. Rn statistics (Revusky, 1967) were computed in order to determine whether the treatment effected changes in the scores on the SOS for the four experimental students. Significant differences were found on Scale Four, Self Assertion and Scale Six, Teacher Affilitation, Rn = 7 and Rn = 8, respectively. Table 10 presents the SOS scores and the rankings which were used in the Rn analysis for each of the scales.

Table 10

Scores on Self Observation Scales and Rn Rankings

Scale	Student 1	2	3	4	5	6	Rn
(1) Self Acceptance	58	57	52	57	29	45	
	58	61	48	62	33	43	3
	57	57	59	61	38	48	3
	53	61	59	65	33	55	1
	53	64	57	62	32	56	4
(2) Self Security	58	43	61	49	67	33	
	62	46	58	63	62	32	2
	62	57	62	52	69	36	4
	62	54	67	49	58	37	5
	59	53	70	57	51	36	6
(3) Social Confidence	52	56	39	48	46	28	
	55	57	52	40	45	28	2
	60	58	51	30	43	42	2
	50	58	37	39	40	51	5
	54	53	36	34	45	55	1
(4) Self Assertion	49	63	51	66	44	54	
	67	69	57	69	49	60	3
	54	65	58	70	49	58	2
	48	69	55	69	48	61	1
	44	69	55	70	48	71	1
(5) Peer Affiliation	59	59	51	58	51	55	
	57	56	57	56	50	45	1
	57	56	58	53	58	53	4
	58	59	55	53	58	55	6
	56	55	55	55	55	58	1
(6) Teacher Affiliation	51	57	21	33	53	40	
	52	59	35	52	44	40	2
	51	60	31	50	54	38	1
	41	60	26	50	55	60	4
	42	57	26	55	54	61	1
(7) School Affiliation	52	62	24	36	30	53	
	52	65	45	57	28	51	3
	52	66	37	45	29	53	1
	41	65	28	46	36	58	3
	42	63	27	56	31	62	2

T-tests on SOS Scale

For the scores on the SOS, t-tests for dependent means were computed on each of the seven scales to determine if there were differences in the experimental students before and after treatment and in the placebo students before and after treatment. No significant differences were found between either of the groups, respectively.

In order to determine whether there were differences between the experimental and placebo students prior to treatment, t-tests for independent means were performed on the pre-treatment SOS scores for each of the seven scales. Significant differences were found in Scale Five, Peer Affiliation, and Scale Seven, School Affiliation. The t values were $t(4) = 4.75$, $p < .01$ and $t(4) = 2.86$, $p < .05$, respectively. To determine whether there were differences between the experimental and placebo students after treatment, t-tests for independent means were computed on the post-treatment SOS scores for each of the seven scales. Significant differences were found for Scale Seven, School Affiliation, $t(4) = 3.64$, $p < .05$. The means and standard deviations of the seven scales of the SOS are presented in Table 11, and the results of the t-tests are presented in Table 12.

Analyses of Variance

It was hypothesized that at least one score on the SOS for the experimental students would increase at each intervention point. Therefore, the scores would increase gradually across the five administrations of the instrument, with the

Table 11

Means and Standard Deviations of the Self Observation Scales

	Experimental Students						Placebo Students					
	Pre-treatment			Post-treatment			Pre-treatment			Post-treatment		
Scale	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.
1.	4	54.25	6.19	4	58.75	5.12	2	40.50	16.25	2	44.50	17.68
2.	4	45.75	10.50	4	51.25	10.47	2	64.00	4.24	2	60.50	13.44
3.	4	46.00	12.44	4	49.00	10.03	2	42.50	4.95	2	40.50	6.36
4.	4	58.75	7.50	4	63.50	13.01	2	47.50	3.50	2	51.50	3.50
5.	4	57.75	1.89	4	56.00	1.42	2	51.00	0.00	2	55.00	0.00
6.	4	45.25	10.78	4	53.75	8.22	2	37.00	22.63	2	40.00	19.80
7.	4	50.75	10.81	4	55.75	9.67	2	27.00	4.24	2	29.00	2.83

Table 12

Results of t-tests on SOS Scores

	Pre-treatment (Experimental and Placebo)		Post-treatment (Experimental and Placebo)		Pre- and Post-treatment (Placebo)		Pre- and Post-treatment (Experimental)	
Scales	df	t-value	df	t-value	df	t-value	df	t-value
1	4	1.63	4	1.66	1	4.00	3	1.32
2	4	2.26	4	0.95	1	0.20	3	2.62
3	4	0.37	4	1.06	1	2.00	3	0.35
4	4	1.67	4	1.20	1	0.00	3	1.22
5	4	4.75*	4	0.94	1	0.00	3	1.09
6	4	0.65	4	0.83	1	1.50	3	1.10
7	4	2.86*	4	3.64*	1	2.00	3	0.79

*$p < .05$

final administration showing the highest scores when all four students were involved in treatment. An analysis of variance across repeated measures was computed to investigate whether there were differences across administrations for each of the seven scales. The results of the analysis (Table 13) revealed no significant main effects or interactions for each of the seven scales. Therefore, the scores on the SOS did not significantly increase in magnitude across the intervention points. The T-scores, percentiles and stanine scores on the SOS are presented in Appendix H.

Teacher Ratings

Two null hypotheses were tested for the scores on teacher ratings:

Null hypothesis (1): Pupils who are taught the skills of Reality Therapy for self-management will demonstrate no differences in pre- and post-treatment scores on teacher ratings as measured by the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales.

Null hypothesis (2): Pupils who are taught skills of Reality Therapy for self-management and pupils who participate in unstructured study of current events will demonstrate no mean differences in scores as rated by teachers on the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales.

Haring and Phillips Rating Schedules (HPRS)

Five teachers completed the Haring and Phillips Rating Schedules for each of the six students in the study both prior

Table 13

Summary Table of Repeated Measures Analysis of Variance for the Seven Scales of the SOS

Scale	Source	SS	df	MS	F
1	Between	435.34	3	14.82	1.02
	Within	233.21	16	14.49	
	Total	668.55	19		
2	Between	1798.80	3	23.50	1.28
	Within	315.22	16	18.43	
	Total	2114.02	19		
3	Between	1277.18	3	14.70	0.21
	Within	892.82	16	69.57	
	Total	2170.00	19		
4	Between	822.99	3	36.13	1.16
	Within	518.76	16	81.19	
	Total	1341.75	19		
5	Between	56.52	3	10.31	1.33
	Within	134.01	16	7.73	
	Total	190.53	19		
6	Between	443.77	3	43.81	0.67
	Within	965.20	16	65.83	
	Total	1408.97	19		
7	Between	901.75	3	20.82	0.56
	Within	536.82	16	36.96	
	Total	1428.57	19		

to treatment and after the treatment. The five scores for each individual are presented in Appendix I. The means and standard deviations of the scores as they were used in the analysis are presented in Table 14.

Table 14

Means and Standard Deviations of Scores on the Haring and Phillips Rating Schedules

	N	$\bar{X}$	S.D.
Pre-treatment (experimental)	4	3.65	0.45
Post-treatment (experimental)	4	3.62	1.01
Pre-treatment (placebo)	2	3.25	0.38
Post-treatment (placebo)	2	3.03	0.25

For the scores on the HPRS, t-tests for dependent means were computed to determine if there were differences in the experimental students before and after treatment and in the placebo students before and after treatment. No significant differences were found in either of the two groups.

In order to determine whether there were differences between the experimental and placebo students before treatment and after treatment, t-tests for independent means were performed on the means of the HPRS scores. No significant differences were found. The results of the t-tests performed on the scores of the HPRS are presented in Table 15.

Table 15

Results of t-tests on the Mean Scores of the Haring and Phillips Rating Schedules

	df	t-value
Pre-treatment (Experimental & Placebo)	4	1.09
Post-treatment (Experimental & Placebo)	4	0.78
Pre- and Post-treatment (Experimental)	3	0.13
Pre- and Post-treatment (Placebo)	1	2.37

Burks' Behavior Rating Scales (BBRS)

Five teachers completed the BBRS for each of the six students in the study both prior to treatment and after the treatment part of the experiment was terminated. Individual teacher scores are presented in Appendix J. Fourteen of the scales were used in the analysis, and the scales and their numbers as they are reported in the analyses and tables are:

1. Excessive Self Blame
2. Excessive Anxiety
3. Excessive Withdrawal
4. Excessive Dependency
5. Poor Ego Strength
6. Poor Attention

7. Poor Impulse Control
8. Poor Sense of Identity
9. Excessive Suffering
10. Poor Anger Control
11. Excessive Sense of Persecution
12. Excessive Aggressiveness
13. Excessive Resistance
14. Poor Social Conformity

The mean scores of the five teacher ratings were used in the analysis for each of the scales. These data are presented in Table 16.

T-tests for dependent means were computed for the pre- and post-treatment means on each of the 14 scales for both the experimental students and the placebo students to determine if there were significant differences in the means before and after treatment. A significant t-value was found on the pre- and post-treatment scores on the Excessive Resistance Scale of the placebo students, $t(1) = 18.33$, $p < .05$. This t-value is misleading and probably does not represent a significant difference. In the computation of the t-value the standard error of the mean was .10, and the standard error of the difference $(sd/\sqrt{n}) = .075$. The mean of the differences was 1.375 which obviously is not very large; when divided by the very small standard error of the difference, however, a very large t-value results. Furthermore, the difference of 1.38 in the pre-treatment mean of 15 and the post-treatment mean of 16.38 indicates that the students did not improve as a result of

Table 16

Mean Student Scores on the Burks' Behavior Rating Scales

	Student 1		Student 2		(Placebo) Student 3		Student 4		(Placebo) Student 5		Student 6	
Scales	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	7.8	7.0	14.0	12.8	8.6	7.6	10.2	12.0	6.8	7.8	9.6	10.5
2	7.2	8.8	9.6	13.0	6.8	7.0	9.8	9.2	7.4	7.0	7.6	8.0
3	8.8	8.5	11.0	14.6	12.8	13.8	13.8	14.0	16.0	12.4	11.0	11.8
4	7.4	8.8	11.0	13.2	9.0	8.6	9.6	10.0	8.8	9.0	9.4	9.8
5	15.0	11.2	16.6	19.2	15.6	12.0	14.4	17.0	24.0	21.8	18.2	17.8
6	11.2	9.2	15.0	17.0	14.0	13.4	13.8	18.0	20.0	19.6	15.6	17.2
7	10.0	9.0	17.0	18.6	15.2	12.4	15.8	16.5	20.2	18.0	19.2	19.5
8	9.2	7.0	10.6	13.6	10.6	13.6	11.8	13.0	10.4	8.6	10.2	9.5
9	10.8	10.2	14.6	15.0	13.8	11.6	16.8	18.5	12.6	14.8	14.6	15.0
10	10.8	8.7	16.0	16.0	16.6	15.8	17.0	19.2	13.0	13.8	18.0	17.4
11	11.2	8.0	12.0	13.2	11.6	9.2	13.2	15.0	9.8	11.0	8.6	14.0
12	14.8	11.2	17.2	20.0	20.6	16.8	18.6	21.0	18.4	20.0	18.0	23.0
13	10.0	7.0	13.8	15.2	16.2	17.6	15.4	16.5	13.8	15.2	16.2	17.5
14	11.2	11.2	21.6	26.8	19.4	20.0	18.6	24.2	23.6	22.0	22.6	24.2

treatment since higher scores represent more problem behavior.

T-tests were computed to determine whether there were pre-treatment differences in the experimental and placebo scores. No significant differences were found. Finally, t-tests were performed on the post-treatment scores of the experimental and placebo students to determine whether there were differences in the means of the two groups after treatment; again no significant differences were found. The means employed in these analyses are presented in Table 17 and the results of the t-test are presented in Table 18.

Summary

In this chapter a description of the sample was presented, and the results of the statistical analyses of the data have been presented for each of the three dependent variables investigated. There were significant treatment effects on the percentage of time-on-task behavior as shown in two analyses, a Rn analysis and tests of the significance of the differences in the means. The Rn analysis demonstrated significant treatment effects for the experimental students, and t-tests substantiated that analysis by indicating that there are significant differences in the pre- and post-treatment means of the percentage of time on task for the experimental students. Significant differences were also found in the means of the experimental and placebo students after treatment.

Three different analyses were used on the SOS scores: (1) a Rn analysis which suggests that there are significant treatment effects for the four experimental students on two

Table 17

Means and Standard Deviations of the Scores on the Scales of the Burks' Behavior Rating Scales

	Experimental Students						Placebo Students					
	Pre-treatment			Post-treatment			Pre-treatment			Post-treatment		
Scale	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.
1	4	10.41	2.60	4	10.56	2.55	2	7.70	1.27	2	7.63	.18
2	4	8.55	1.34	4	9.75	2.23	2	7.10	.42	2	7.00	.00
3	4	11.15	2.05	4	12.19	2.73	2	14.40	2.26	2	13.13	.88
4	4	9.35	1.48	4	10.44	1.95	2	8.90	.14	2	8.75	.35
5	4	16.05	1.71	4	16.31	3.50	2	19.80	5.94	2	16.88	6.89
6	4	13.90	1.95	4	15.38	4.11	2	17.00	9.96	2	16.50	4.24
7	4	15.50	3.93	4	15.88	4.75	2	17.70	3.54	2	15.75	3.18
8	4	10.45	1.08	4	10.75	3.07	2	10.50	.14	2	11.00	3.54
9	4	14.20	2.49	4	14.69	3.39	2	13.20	.82	2	13.13	2.30
10	4	15.45	3.21	4	15.13	4.59	2	14.80	2.55	2	14.75	1.41
11	4	11.25	1.95	4	12.63	3.15	2	10.70	1.27	2	10.13	1.24
12	4	17.15	1.67	4	18.81	5.19	2	19.50	1.56	2	17.88	3.01
13	4	13.85	2.75	4	14.06	4.80	2	15.00	1.70	2	16.38	1.59
14	4	18.50	5.16	4	21.63	7.02	2	21.50	2.97	2	21.00	1.41

Table 18

Results of t-tests on the Mean Scores on the Scales of the BBRS

	Pre-treatment (Experimental and Placebo)		Post-treatment (Experimental and Placebo)		Pre- and Post-treatment (Placebo)		Pre- and Post-treatment (Experimental)	
Scale	df	t-value	df	t-value	df	t-value	df	t-value
1	4	1.33	4	1.52	1	.07	3	.22
2	4	1.42	4	1.67	1	.33	3	1.41
3	4	1.78	4	.46	1	.57	3	1.22
4	4	.04	4	1.17	1	.43	3	2.41
5	4	1.34	4	.14	1	4.33	3	.17
6	4	1.32	4	.31	1	2.50	3	1.16
7	4	.66	4	.03	1	7.80	3	.72
8	4	.06	4	.09	1	.21	3	.27
9	4	.52	4	.57	1	.03	3	1.06
10	4	.25	4	.18	1	.06	3	.35
11	4	.35	4	1.01	1	.32	3	.78
12	4	1.65	4	.11	1	.50	3	.91
13	4	.52	4	.63	1	18.33*	3	.20
14	4	.74	4	.12	1	.45	3	2.30

*$p < .05$

treatment effects for the four experimental students on two of the seven scales; Scale Four, Self Assertion and Scale Six, Teacher Affiliation; (2) t-tests which resulted in no significant treatment effects for the experimental and for the placebo students, but which resulted in significant differences in the means of the experimental and placebo students both before and after treatment on Scale Seven, School Affiliation; an analysis of variance across repeated measures was computed for each of the seven scales and no significant main effects or interactions were found.

The pre- and post-treatment scores on the Haring and Phillips Rating Schedule were analyzed by the employment of t-tests for independent means in order to determine whether there were differences between the experimental and placebo subjects before treatment and after treatment. No significant differences were found for either group. T-tests for dependent means were used to investigate differences in the experimental and placebo students both prior to treatment and after treatment and no significant differences were found. The same analyses were used for the Burks' Behavior Rating Scales scores on each of the 14 scales, and the results demonstrated that there was only one significant difference which was in the pre- and post-treatment means of the placebo students on Scale 13, Excessive Resistance.

An examination of the computation process, however, revealed that the differences on Scale 13 were not large enough to be significant and the computed t-value was a result of

the organization of the data and the small number involved in the analysis. Chapter VI will present a discussion of the results, a summary, and recommendations for future research.

CHAPTER VI

DISCUSSION, SUMMARY, AND RECOMMENDATIONS

The present study focused on teaching disruptive pupils the principles of Reality Therapy as a self-management strategy for improving their behavior in school. The research literature is unclear and limited on the use of Reality Therapy, but there are enough studies supporting the techniques to warrant additional research. The research which has been reported involved the training of teachers and/or counselors to use the principles for behavior change, whereas the present study involved teaching the principles to the students as a means of managing their own behavior. The research literature on self-management suggests that self-management is a powerful means of behavior change, and many varied techniques have been successful. Three major dependent measures were considered in this study, and six null hypotheses were specified and tested. This chapter presents a discussion of the results for each of the six null hypotheses which were presented in Chapter I. A summary of the study and recommendations for future research conclude this chapter.

Discussion of the Results

Hypothesis 1

In testing the first null hypothesis, significant differences were found in the pre- and post-treatment percentage of time

on task for the experimental students. The data and subsequent tests are powerful enough to suggest that overt behavior change occurred as a result of the experimental procedures. An examination of the data shows that the four experimental pupils ranged from an average of 32.45 percent of time on-task prior to the introduction of the treatment to 82.80 percent after the treatment. Further, both the Rn analysis and the tests of the significance of the differences in the means yielded significant differences in the pre- and post-treatment measures. Additional credibility of the results lies in the fact that this dependent measure was a result of direct observation by two independent observers with a high inter-observer reliability coefficient (r = .93).

Hypothesis 2

The results of testing the second null hypothesis indicated that although there were no significant differences in the percentage of time on task between the experimental and placebo students prior to treatment, there were significant differences after treatment. The placebo students ranged from a mean of 51.50 percent of time on task prior to the introduction of treatment to 45.30 percent after treatment. The experimental pupils ranged from 32.45 percent before treatment to 82.50 percent of time on task after treatment. The results of the analyses of the data indicate that teaching students the principles and techniques of Reality Therapy for self-management results in significant improvement in

classroom behavior, whereas an unstructured discussion of current events does not.

Hypothesis 3

The third null hypothesis was tested to investigate differences in self-report as measured by the Self Observation Scales. Separate tests of significance were used for each of the seven scales of the instrument. The results initially appear to be somewhat ambiguous. The Rn analyses yielded significant treatment effect on two of the scales, Self Assertion and Teacher Affiliation. Neither the analyses of variance nor the tests for significance on the means supported this finding.

The Rn statistic is a nonparametric statistic. As compared with parametric procedures, nonparametric statistics are relatively low powered: there is a higher probability of a Type II error or failure to reject H_o when in fact it is false. Furthermore, the hypothesis actually tested by the Rn statistic differs from the hypothesis tested with parametric procedures. The Rn statistic tests the hypothesis that all possible rank orderings of the data are equally likely to occur. A significant effect ($p < .05$), therefore, is likely to occur five percent of the time by chance. Parametric procedures test the hypothesis that the means of the experimental conditions (populations) are equal. A significant effect ($p < .05$) indicates that the obtained difference between the means is likely to be a chance occurrence five

percent of the time. Thus, unlike parametric procedures, the Rn test does not take the absolute amount of change between experimental conditions into account in determining significance.

On Scale Four, Self Assertion, the experimental mean prior to treatment was 58.75 and after treatment was 63.50 which is a change of only 4.75 points in the T-score means. Further examination of the data shows that Student Six had a range of 54 to 71 which was the largest increase for Scale Four during the course of the study. The increases in scores for this student, however, began prior to the intervention which would indicate that those increases were due to some other events rather than the treatment. This score increased seven points prior to intervention and an additional 10 points after intervention. The scores on the other experimental students demonstrated very small changes and the rankings remained relatively stable at each administration of the SOS. Therefore, it is reasonable to infer that there were no significant treatment effects on Scale Four, and the significant treatment effects results on the Rn analysis were a result of the particular scores of one student.

Scale Six, Teacher Affiliation, had a range in means from 45.25 to 53.75 for the experimental students which is an increase of 8.50 on the T-score means. An examination of the individual scores shows that the Experimental Student Four scored 33 on the first administration and had subsequent scores of 52, 50, 50, 55. This increase in scores occurred prior to

the intervention point. Student Six also demonstrated the major increase prior the the time he began treatment. Experimental Student One had a decrease in scores (range 51 to 42) and Student Two remained stable with a score of 57 at the beginning and the end of the study. Thus, the data again support the findings on the analyses of variance results which indicated that there were no significant differences in the self-reported assertion and teacher affiliation scores of the experimental students as a result of the treatment.

Hypothesis 4

In testing hypothesis four, the analyses of variance across repeated measures indicated that there were no differences in the experimental and placebo students as a result of the treatment when scores on the scales of the SOS were the dependent measure. The t-test for independent means results support this finding. A significant t-value was found in Scale Seven, School Affiliation, but the scores were significantly different prior to treatment also. The placebo students had a mean score of 27 before intervention and 29 after treatment; the pre- and post-treatment experimental means were 50.75 and 55.75 respectively. The differences in the means of the two groups remained relatively stable both before treatment and after treatment which would indicate no significant treatment effects.

Hypothesis 5

In testing the fifth null hypothesis two instruments were used to evaluate the teacher ratings of the experimental

students, the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales. The results indicated that there were no significant differences in the pre- and post-treatment mean scores of the experimental students on either of the instruments. The pre- and post-treatment mean scores on the Haring and Phillips Rating Schedules were 3.65 and 3.62, respectively, which reflect virtually no change. Of the 14 scales on the BBRS used in the analysis, 13 of the scales showed an increase in the mean scores at the end of the study which indicates an increase in teacher perception of problem behavior although none of the changes were significant. These results may be questionable due to the nature and timing of the study. The teachers who had agreed to participate by completing the two instruments prior to treatment and again at the end of the study, did so quite willingly the first time. However, the end of the treatment occurred at the closing of the academic school year, and the teachers expressed reluctance and some unwillingness to complete the instruments because of the heavy work load which accompanies the closing of a school year. They did not meet the prearranged schedule of completing the instruments and several reminders had to be issued. The teachers were not informed about the placebo treatment, and one teacher reflected her dissatisfaction by writing a note on the top of a placebo student's instrument: "This student has not improved--he has actually gotten worse since you started working with him!" The principal of the

school also reported that many of the teachers complained about completing the rather lengthy instruments at one of the busiest times of the school year. Their understandable disgruntlement may be reflected in the scores.

Hypothesis 6

In testing the sixth hypothesis no significant differences were found in the mean pre-treatment scores nor in the mean post-treatment scores of the placebo and experimental students on either of the instruments measuring teacher ratings of the students' behavior. Not only could the results be a reflection of the negative attitude of the teachers when they scored the instruments at the end of the study; the sensitivity of the instruments themselves could be a factor. Many instruments were investigated in order to try to find teacher rating scales which focused on classroom behavior of students who do not demonstrate severe pathology problems. The two instruments selected have been used as diagnostic tools for exceptional children, and the judges were used to attempt to establish more validity as the instruments were used in this investigation. Five of the scales on the BBRS were thus eliminated from this evaluation which would raise some questions about the results.

Summary

Students, parents, and educators alike have expressed a need for more effective ways of dealing with discipline in the schools. The purpose of this study was to investigate

whether teaching the principles and skills of Reality Therapy as a self-management strategy to disruptive pupils would significantly increase their time-on-task behavior as measured by direct observation in the classroom, their positive perceptions of themselves as measured by the Self Observation Scales, and their positive ratings by teachers as measured by the Haring and Phillips Rating Schedules and the Burks' Behavior Rating Scales.

Varied self-management strategies with many problem behaviors have proven to be successful. The principles of Reality Therapy as used by teachers and/or counselors have enough research support to indicate a need for further investigation. By using the steps of Reality Therapy in a self-management context, and teaching the steps to students, it was hypothesized that the combination would lend itself to an effective treatment for disruptive youngsters.

A pilot study was undertaken to examine the feasibility of a multisubject contrast-group design, and problems related to design and treatment were immediately encountered. Thirty students were selected by their respective sixth-grade teachers as the most disruptive students in their classes, and they were randomly assigned to either the experimental or the placebo control condition. Because of the disruptive nature of the pupils, groups of 15 were too large. The specified treatment procedures could not be followed in any systematic fashion and maintaining order in the groups took most of the

time. As a result of these problems, a single-subject research design was selected for this study.

In this study seventh-grade teachers identified six male students as the most disruptive students in their grade level, and a multiple baseline across subjects research design was used to evaluate the treatment. The six students were randomly assigned to their respective baselines and experimental or placebo condition. The four experimental pupils were taught the steps of Reality Therapy and to practice those steps in their classrooms. The two placebo students participated in unstructured discussions of current events.

Two observers were hired and trained to measure time on task by direct observation in the classroom during the 25-day course of the study. Each student was observed 15 minutes in five different classes across the school day according to a predetermined schedule of observation.

The Self Observation Scales were administered to the six pupils, once prior to treatment and four other times during the course of the study. After the first administration subsequent administrations occurred three days after each intervention point in the study.

The two teacher rating scales, Haring and Phillips Rating Schedules and Burks' Behavior Rating Scales, were completed by the teachers before treatment and again at the end of the study. A total of five teachers completed both instruments for each of the six students.

The results of this study indicated that for two of the dependent measures, perception of self and teacher ratings, the treatment procedure was not significantly different from the placebo control procedures. Further, on these two dependent measures, no significant differences were found between the pre- and post-treatment scores of the experimental students.

There were significant changes in independently observed classroom behavior, the percentage of time-on-task measures, however. Visual analysis, the Rn analysis, and the tests for significance of differences in the means all supported the research hypothesis that percentage of time on task would significantly increase as a result of the treatment.

An examination of Figure 1 above also demonstrates the variability of the individual student's on-task behavior. The two placebo students have the most highly variable behavior throughout the course of the study. The conclusions would be more powerful if those individuals had demonstrated more stable behavior or if at least one of those students had been assigned to the experimental procedures. However, since random assignment was necessary for the use of the Rn analysis there was no way to control for baseline variability.

The concern with the individual student's variability of on-task behavior also rises in another context. In order to use parametric statistics certain assumptions should be met: (a) normality; (b) homogeneity of variance; and (c) continuous and equal intervals of measures. Table 8 above demonstrates a wide range in standard deviations which raises a

question about the homogeneity of variance assumption. The hypotheses of no differences between the variances of the experimental and placebo students were tested on the pre- and post-treatment scores, and the null hypotheses were retained, $F(3,1) = 2.54$, $p < .05$ and $F(3,1) = 15.24$, $p < .05$, respectively. Nevertheless the conclusions should be reviewed with caution because of the small numbers involved. Future studies could solve these problems by identifying additional disruptive students, increasing baseline measures, and selecting the students with the most stable behavior to randomly assign to their respective treatments, thus ensuring greater homogeneity of variance.

The six students in the study participated with interest and enthusiasm. No discipline problems were encountered, and they expressed enjoyment in being excused for class to attend the sessions. One student reported that he wished that the sessions did not have to end because he thought they were helping him do better in school. The assistant principal of the school commented that she did not have as many disciplinary encounters with two of the students after they started treatment.

Recommendations

The results of the present study lead to a number of implications for future research on Reality Therapy as a self-management technique. The dramatic increase in observable on-task classroom behavior indicates that the treatment may be

a worthwhile strategy to use in the schools even though these behavioral changes are not self-reported by students or, apparently, by teachers. This section reviews four different issues which have implications for future investigations: more behavioral precision and clarification in the independent variable; refinement and follow-up of dependent measures; generalization; and practical considerations for conducting the study.

The first issue is the need for a continued refinement and clarification of the method of teaching Reality Therapy for self-management purposes. Important questions for future research arise: what variables in the treatment strategy produce the change? Could the same results be found by teaching only one or two of the steps? Are there ways to enhance the principles to increase the perceptions of the students and teachers?

The length of the treatment time should also be examined. Would a longer treatment time produce significant change in students' perceptions of themselves or in the ratings by their teachers?

The second issue for future research involves the refinement and follow-up of the dependent measures. First, the Self Observation Scales had very adequate research supporting the reliability and validity of the instrument. One limitation in the instrument, however, is that scores from each of the seven scales have to be treated independently, and there is no total or average score. The short scales (10 to 12 items

per scale) may not be sensitive enough to determine change. The development of a method of computing a composite score would be helpful to educators and researchers in that it would provide a comparative score on the total self-perception of the individual in her or his environment.

The search for a teacher rating scale which would focus on classroom behaviors which do not involve serious pathology was arduous and not as successful as initially planned. The three instruments used in this study all have limitations. The School Behavior Profile does not have an adequate statement on the research on the validity of the instrument; the Haring and Phillips Rating Schedule is supported by a limited number of studies; and the Burks' Behavior Rating Schedules, although the most highly researched of the three, had scales which did not apply to the purposes of this study. Research has supported the fact that teachers can adequately rate students (Beilin, 1959; Quay, 1966), but a more precise, reliable, and valid instrument for use by teachers to evaluate students' classroom behaviors would be a worthy research task.

No follow-up was possible within the scope of this study. Therefore, it was not possible to know if the effects of the treatment on time-on-task behavior were permanent. A study designed to investigate the permanence of the effects of the treatment would contribute significantly to the field of counseling.

The third issue to address as an important issue for future research is generalization. The most obvious limitation of

single-subject research design lies in the fact that one does not know if the results would be relevant to other cases (Hersen & Barlow, 1976). Generalization from this study could be accomplished in one of two ways: repeated replications of the experiment or evaluation of the treatment by using a group design. Paul (1967, 1969) cited two major experimental designs which are capable of establishing functional relationships between treatments and clients. The first is the comparison of a treatment group with a no-treatment control group and the second is the factorial design. The single case replication strategy paralleling the contrast-group design is direct replication or the A-B-A which is a series of single case designs in which the original experiment is replicated several times. The replication strategy paralleling the factorial design is systematic replication which involves exploring the effects of different settings, therapists, or clients on a treatment which has been successful in a direct replication series. The use of these designs, according to Paul (1967) would increase the generalization of the results. Further, systematic replication would provide information on the results of the treatments with female students which was not provided in this study. In order to replicate the study with female students, however, the issue of sex-role expectations restricted to disruptive behavior would have to be addressed.

The final issue to be addressed is related to practical considerations. One major problem encountered in this study was timing. The study ended concurrently with the closing of the school year, and the teachers were very unhappy with the extra work of completing the two rating scales. This should be avoided in future studies because their anger could certainly have an impact on how they scored the instruments. Many future research projects depend on the cooperation and goodwill of educators in the public schools and every effort should be made to be as considerate and as nondisruptive as possible.

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APPENDIX A

SCHOOL SENTIMENT INDEX (SSI)

APPENDIX B

NOWICKI-STRICKLAND LOCUS OF CONTROL SCALE FOR CHILDREN

APPENDIX C

PERCENTAGE OF TIME ON TASK (PILOT STUDY)

Percentage of Time On Task (Pilot Study)

	Reality Therapy Group		Group Guidance Group	
Subjects	Pre	Post	Pre	Post
1	51	97	92	99
2	49	100	51	98
3	61	90	61	91
4	92	96	60	91
5	61	100	7	54
6	72	83	99	96
7	66	98	83	92
8	89	88	45	94
9	88	68	66	92
10	9	9	72	83
11	65	92	70	99
12	87	62	59	81
13	45	100	50	92
14			85	71
$\bar{X}$	57.5	83.3	64.3	88.1

APPENDIX D

HARING AND PHILLIPS RATING SCHEDULE

APPENDIX E

DIRECTIONS TO OBSERVERS

DIRECTIONS TO OBSERVERS

In this packet you will find:

1. A list of the six students to be observed and their respective schedules.

2. An observation schedule.

3. An observation record sheet for each student.

1. You will be recording the time on-task. On-task behavior is defined as:
   Attention to teacher or materials associated with assigned activities.
   Off-task behavior is defined as:
   Inattention, disruptive activities, or activities that are irrelevant to the task at hand.

2. Each observation period will last 15 minutes for each student. You will use a stop watch and record the intervals of on-task behavior on the Observation Record Sheet of the student which you are observing. For example, if the student stays on task three minutes and forty seconds and then stops to engage in off-task behavior, record the time on the sheet in this manner--3'40"/. Start your stop watch when the student returns to on-task behavior and record the next interval in the same manner. Continue until fifteen minutes have been completed. All questionable behavior should be recorded as off-task behavior.

3. During the first few observations, the teachers have agreed to stop class and help you identify the target student. This should be done either in the back of the room or just outside the door. Please be discrete! I do not want the students to know that they are the only targets of observation. After you learn to identify the students, enter each classroom very quietly and the teacher will not stop the proceedings. Observe the appearance of each student very carefully during the first one or two observations so that you will be able to identify them.

4. Do not sit or stand close together in the classroom. It will be better if you sit on opposite sides of the room. Be sure that you have both identified the same target student before you start and arrange a signal to start the fifteen minute observation period at the same time. Be sure you terminate recording at the same time.

5. I will need weekly reports from each of you in order to do on-going checks of reliability. We will arrange a time which will be convenient for me to call you.

6. Arrange a time to go to the school on Monday, March 16, 1981. Introduce yourselves to the school secretary, who will be in the Main Office. I will inform her that you are coming. She is an excellent person to know at the school and is very helpful. Walk through the school and learn where the classrooms are located.

7. Observations will start on Tuesday, March 17, 1981 and they will continue until the study is completed. We may have to add a few days to adjust the schedules for students who are absent.

8. We will not meet at the school because we hope that the students will not realize that my work and your observation are related. However, I will be available to meet with you anytime to answer questions or discuss problems.

OBSERVATION SCHEDULE

Day	1st period	2nd period	3rd period	4th period	5th period	6th period	7th period	8th period
1	A-1 B-1	C-1 E-1						
2	C-2 D-1	B-2 F-1						
3	F-2		A-2 B-3	C-4				
4			C-3		A-3 B-4	B-5 C-5		
5					D-2 E-2	D-3 E-3		
6						F-3	A-4 D-4	E-4 F-4
7							E-5 F-5	A-5 D-5
8	A-6 B-6	C-6 E-6						
9	C-7 D-7	B-7 F-6						
10	F-7		A-7 B-8					
11			C-9		A-8 B-9	B-10 C-10		
12					D-7 E-7	D-8 E-8		
13						F-8	A-9 D-9	E-9 F-9
14							E-10 F-10	A-10 D-10
15	A-11 B-11	C-11 E-11						
16	C-12 D-11	B-12 F-11						
17	F-12		A-12 B-13	C-13				
18			C-14		A-13 B-14	B-15 C-15		
19					D-12 E-12	D-13 E-13		
20						F-13	A-14 D-14	E-14 F-14
21							E-15 F-15	A-15 D-15
22	A-16 B-16	C-16 E-16						
23	C-17 D-16	B-17 F-16						
24	F-17		A-17 B-18	C-18				
25			C-19		A-18 B-19	B-20 C-20		
26					D-17 E-17	D-18 E-18		
27						F-18	A-19 D-19	E-19 F-19
28							E-20 F-20	A-20 D-20
29	A-21 B-21	C-21 E-21						
30	C-22 D-21	B-22 F-21						
31	F-22		A-22 B-23	C-23				
32			C-24		A-23 B-24	B-25 C-25		
33					D-22 E-22	D-23 E-23		
34						F-23	A-24 D 24	E-24 F-24
35							E-25 F-25	A-25 D-25
36								

The letters, A,B,C,D,E,F, represent the six students in the study.
The number following each letter represents the observation.

There are eight periods during the school day. Physical Education, art and lunch will be eliminated as observation periods for each student.
Student A will be observed during periods 1,3,5,7,8.
Student B will be observed during periods 1,2,3,5,6.
Student C will be observed during periods 1,2,3,4,6.
Student D will be observed during periods 1,5,6,7,8.
Student E will be observed during periods 1,2,6,7,8.
Student F will be observed during periods 1,2,6,7,8.

SAMPLE OBSERVATION RECORD

STUDENT 1

NUMBER	DATE	CLASS	PERIOD	ROOM	TEACHER	TIME ON TASK
1		Reading	1	307		
2		Science	3	200		
3		English	5	219		
4		Math	7	101		
5		Soc. Stud.	8	105		
6		Reading	1	307		
7		Science	3	200		
8		English	5	219		
9		Math	7	101		
10		Soc Stud	8	105		
11		Reading	1	307		
12		Science	3	200		
13		English	5	219		
14		Math	7	101		
15		Soc Stud	8	105		
16		Reading	1	307		
17		Science	3	200		
18		English	5	219		
19		Math	7	101		
20		Soc Stud	8	105		
21		Reading	1	307		
22		Science	3	200		
23		English	5	101		
24		Math	7	105		
25		Soc Stud	8	307		

APPENDIX F

REALITY THERAPY FOR SELF-MANAGEMENT TRAINING PROCEDURE

Reality Therapy for Self-Management Training Procedure

Counselor behaviors which must be demonstrated throughout the entire course of treatment/training are:

1. Friendliness (warmth, smiles, laughter, strokes, reinforcement, encouragement)

2. Teaching Behaviors (explanation of principles to students, using examples)

3. Employing techniques to generate discussion (open-ended questions, verbal and nonverbal reinforcement when student participates, summarization, clarification)

4. Employing techniques to generate commitments (requesting student to sign initial contract to participate in study, willingness to revise, discard or recommit to a plan, eliminating punishment and criticism from all sessions)

5. Providing reinforcement and feedback (verbal and nonverbal reinforcement for plan completion, feedback when student need help in reevaluating noncompleted plans and also feedback in increasing behaviors to revise a successful plan)

Outline of First Meeting with Student

Goals: To begin the process of making friends with the student. To introduce the student to the principles of Reality Therapy.

I. Introductions

   A. Counselor introduces herself.
      1. Tell student about background and present activities. Include some things which might be relevant to the interests of the student. For example, "I love to listen to the music of Willie Nelson or Bruce Springsteen" or "My favorite television show is Twelve O'Clock High."
      2. Demonstrate smiles, warmth and friendly behavior.

   B. Counselor invites student to introduce himself/herself.

1. May have to employ specific questions to encourage the student to talk.
   Which school did you attend before this one?
   Which do you like better? What things made you like that school better?
   Which sports are your favorites?
   What kind of music do you like?
   Tell me about your favorite television show?

II. Explanation of Training Procedure

A. Counselor explains to the student that she will be trying to teach the student techniques of self-management according to the principles of Reality Therapy. Tells the student that this procedure should be beneficial to both the counselor and the student in several ways and lists some possible results for the student:
   1. New friends (counselor and student)
   2. Improved relationships with teachers
   3. Better ways of dealing with other relationships
   4. Improved behavior in classroom

   Explains to students that these results are not absolute and also that other unexpected benefits might result. Also explains that there may be no results.

B. Counselor invites student to participate and explains that he/she has the right to refuse.

C. If student agrees, counselor and student sign the first item on a plan sheet (example on last page of this outline). When this agreement is signed, proceed to next step.

III. Introduce Reality Therapy

A. Show student copies of Glasser's Books (Reality Therapy, Schools without Failure, Identity Society or Positive Addiction)

B. Tell student about personal interest in Reality Therapy. In this particular case, I will show the student pictures of Glasser that I took in California, a couple of newspaper articles which I have kept and also tell him/her something about the trip to California when I went to study with Glasser.

C. Tell the student that Glasser states that we all have two basic needs (love and self-worth) and explain. Ask the following questions and discuss answers:
   Do you believe that we all have a need for love?
   Do you think that we all need to feel worthwhile?
   Can you think of an example of a time when you felt good about something you did?

D. Counselor explains the steps of Reality Therapy to student and uses either a personal or hypothetical example to explain each step.
   1. Make friends
   2. What are you doing?
   3. Is it helping?
   4. Make a plan
   5. Commitment
   6. Don't punish; don't criticize
   7. Never give up

E. Counselor repeats steps and asks questions. Discuss responses.
   1. Make friends. Can you think of some ways to make friends? What happens when we are nice to others?
   2. What are you doing? Can we change what happened yesterday? What behaviors can we change?
   3. Is it helping? Do we always do the things which will make our lives better? Do we always think about whether or not what we are doing is helping us?
   4. Make a plan. What is a plan? Have you ever made a plan? If so tell me about it. If not, can you imagine a plan you might make.
   5. Commitment. Are you more likely to do something if you merely think about it or if you promise a friend?
   6. No excuses. What are excuses? Why do we use them?
   7. Don't punish, don't criticize. Do you think punishment helps? If the response is yes, spend some time discussing this point. Can you think of a better way of dealing with the behaviors which cause one to be punished?
   8. Never give up. What happens when we give up?

IV. Summary of First Meeting

A. During the first meeting the counselor behaviors should include:
   1. Smiles and laughter.
   2. Casual nonverbal behavior. Avoid sitting behind desk and be relaxed.
   3. Give positive feedback whenever possible. Start with superficial comments at first but be sincere, "Hey, I like your bracelet." Reinforce positive statements of student.
   4. Keep good conversation going. Use self-disclosure when necessary.

B. End session with friendly statement. Example: "I hope we can be friends and I am looking forward to our sessions together; let's try to have fun."

Teaching the Steps

Involvement

Making Friends

Goals: To help the student understand the concept of involvement or making friends. To continue the process of counselor and student making friends. To teach the student classroom attending behaviors. To sign commitment for student to increase involvement with at least one teacher.

I. Read the following statements to student and ask student what he/she thinks about that statement.

A. Making friends may take longer with some people than with others.

B. Certain behaviors can increase our chances of making friends with someone. What are some of the behaviors which help us make friends?
Examples: smiling, sincerity, saying nice things, being warm and friendly, being willing to spend time with that person.

C. There are certain behaviors in a classroom which would increase involvement with teachers. What are some of those behaviors? Counselor lists those behaviors which the students mention and may add others to list to include:
1. Being attentive--listening
2. Smiling
3. Eye-contact during time teacher is talking
4. Nodding/body language

II. Counselor models the behaviors which were listed in the previous exercise for the student.

III. Role Play--Counselor asks student to role play a teacher and a counselor plays a student with good attending behaviors and a student with poor attending behaviors. Ask student to discuss which student would be more likely to make friends with the teacher.

IV. Assignment and Contract

A. Counselor asks student to start involvement process with the teacher with whom he or she has greatest difficulty.
If the student resists, employ persuasion skills:
We only have to contract from this session to the next.
Remind student that he/she signed contract to participate.
In a fun manner, advise student that changing behaviors for a few days will not be an instant cause of death.

Remind student that he or she will not be punished or criticized if a plan does not work.
What have you got to lose?
If student continues to refuse, ask about trying with another teacher.
If student still refuses, move along to teaching the next step but keep coming back and asking if he/she is willing to try making friends with teachers.

B. Counselor and student sign contract sheet

IV. Follow-up and Feedback

Counselor should give positive reinforcement for successful fulfillment of plan.
If student does not report success, counselor and student should evaluate the plan.
Decide either to try the plan again, revise the plan or write a new plan.
Suppose the student says, "I can't make friends with that teacher. He is so bad, I hate him; I don't want to be his friend."
Counselor responds: "This contract only involves trying new behaviors which we have discussed. We only want to see if your trying new behaviors in the classroom will change the way the teacher responds to you. If that should happen, you may change the way you feel about that teacher. You and I have agreed to try Dr. Glasser's techniques together to see if they have positive results. Do you think that you could try again?" If the response is yes, initial contract again with student. If response is no, try to incorporate the plan with another teacher and if the student continues to resist, move to the next teaching step.

V. Evaluation

At the end of each session the student will be asked to complete the Involvement Rating Scale (sample copy included).

Counselor should encourage the student to be very honest. If the responses are in the negative zone, additional time should be spent talking with the student about his/her interests, activities, etc. before proceeding. Allow the involvement to move into Maybe and Yes areas before proceeding.

What are you doing? Is it helping?

Goals: To help the student understand Glasser's focus on current behavior
To help the student become aware of his/her own behavior in school
To focus on living within rules

I. Read the following statements to student. Ask for her/his opinion. Discuss.

A. In order to change the things we don't like at home, in school or in relationships, we must first change our own behavior.

B. In order to increase our chances of success, we must be aware of our current behavior and what it is doing for us.

C. There are some places which have rules which conflict with what we want to do. (Counselor gives personal examples of rules within which she functions, but which are not pleasant such as income tax)

II. Focus on Student's Behavior

Counselor, in a friendly, nonjudgmental manner, says: "You were selected to work with me because some of your teachers think that your classroom behavior is interfering with your school work. What are you doing in class? As student mentions specific behaviors, list them on a sheet of paper. If student responds with the statement that she/he is not doing anything in class, counselor asks the following questions:
Do you always complete your assignments?
Do you obey all the rules in class?
Do you ever talk when you are supposed to be quiet?
Do you demonstrate friendly behavior to your teacher?
If student is totally resistant to talking about his/her current classroom behavior, ask student if he/she would be willing to ask one of his/her teachers to name a behavior which, if changed, might lead to improvement in the class work. If so, incorporate that into contract. It is important for the counselor to maintain a friendly, casual, honest and nonjudgmental manner with the student during this exercise. Total resistance from the student is unlikely, but should that happen, continue to become involved with student. As involvement increases, resistance should decrease.

III. Evaluating Current Behavior

A. Go over each behavior listed in previous step and ask the student if that behavior is helping them.

B. Ask: What behavior would you select as the first to change. List that behavior on contract sheet. Select two others to list on sheet.

C. Ask: How many of these three can you try between now and the next session? Sign contract on the ones selected.

IV. Continue Involvement

Using the involvement procedures described earlier, ask student to think about making friends with one additional teacher. If student agrees, sign contract.

V. Follow-up and Feedback

Counselor gives positive statements for all successes on contract. Allows student to put the check on the sheet. For the plans which were not completed, go back through the steps to evaluate the plans.

No Excuses No Punishment No Criticism

Never Give Up

Goals: To teach the student Glasser's concepts of excuses, punishment and criticism.
To help the student understand what never giving up means in the context of Reality Therapy.

I. Read the following statements to student and discuss each one. These points are usually very interesting to students and should generate good discussion.

A. An excuse is an easy way off the hook.

B. If one keeps making plans and commitments, he or she will eventually start keeping them.

C. To do Reality Therapy well requires the ability not to accept excuses, not to probe for fault, not to be a detective to find out why.

D. Never give up.

E. The purpose of punishment is to change someone's behavior through fear, pain or loneliness. If it were an effective means of getting people to change, we would have few failures in our society.

F. For many delinquents, punishment serves as a source of involvement. The punishment is painful, but it is better than being alone with no attention.

Note: All of the students who participated in the pilot study, when asked about their views on punishment, thought that punishment is an excellent way of dealing with behavior problems in school. When I asked does it work for you and talked about it in terms of their personal behavior, they began to discuss that the effects of punishment are short-term. Then they discussed how it often makes them feel rebellious and want to misbehave. This note is included because all thirty students had never questioned the value of punishment before and accepted it as one of better ways to discipline, and I found that surprising.

G. Punishment and reasonable consequences are not the same. An example of reasonable consequences is knowing that if you are tardy to class, you may have to stay after school if that is one of the rules.

II. Review All Plans

Counselor and student review the contract sheet. Counselor reinforces the student for successes. Using the techniques which have been described in this outline, counselor encourages student to expand each plan.

Continued Sessions and Termination

Goals: To continue making student aware of his/her current behavior.
To continue evaluating current behavior.
To continue making plans to increase involvement with teachers.
To continue making plans to improve classroom behaviors.

I. Focus on Current Behavior

Counselor should ask student what she or he is doing now in each class. Undesirable behaviors should be listed, evaluated by student and incorporated into the plan for change. The methodology of doing this is the same as described in the previous steps.

II. Termination

The termination of the sessions is determined by the nature of the research design in this study.
If a counselor were to replicate this study in a school setting, the time of termination should be included in the initial contract when the students agree to participate.

Session Number ____

Involvement Rating Scale

Directions: Circle one answer for each statement on this sheet. Do not write your name on the sheet.

	1	2	3	4	5
I like the counselor.	No	I don't know	Maybe	Maybe not	Yes
I would like to be friends with the counselor	No	I don't know	Maybe	Maybe not	Yes
I think that I am friends with the counselor	No	I don't know	Maybe	Maybe not	Yes
I think that the counselor likes me	No	I don't know	Maybe	Maybe not	Yes
I think that the counselor wants to be my friend	No	I don't know	Maybe	Maybe not	Yes

Plan Sheet

Plan	Student Signature	Counselor Signature	Check
1. I agree to work with Bobbie Atwell for around weeks. She will teach me the steps of Reality Therapy and I will try some new behaviors.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

APPENDIX G

PERCENTAGE OF TIME ON TASK

Percentage of Time On Task

Observation	Student 1		Student 2		Student 3		Student 4		Student 5		Student 6	
	Ob.1	Ob.2	Ob.1	Ob.2	Ob.1	Ob.2	Ob.1	Ob.2	Ob.1	Ob.2	Ob.1	Ob.2
1	00	34	46	49	81	69	59	58	25	42	44	44
2	26	37	34	37	86	69	00	00	57	52	00	03
3	18	23	61	55	73	57	52	67	20	29	13	17
4	41	37	63	57	39	21	32	31	46	49	09	06
5	05	40	49	45	99	100	56	45	11	04	00	00
6	23	39	67	56	98	65	02	27	86	89	38	44
7	38	42	28	39	43	23	30	23	86	95	52	46
8	55	44	33	55	79	88	23	31	70	63	100	100
9	46	40	45	68	37	44	16	04	79	94	49	44
10	38	49	24	46	85	81	00	00	12	06	33	23
11	62	53	60	66	58	45	01	15	72	77	16	26
12	40	60	62	71	85	77	01	04	79	92	17	33
13	64	52	77	70	82	83	16	18	17	14	00	00
14	52	53	59	69	50	54	00	00	38	43	26	49
15	24	22	66	62	81	71	48	42	02	02	12	09
16	49	63	84	69	00	00	78	78	64	60	06	06
17	48	61	57	85	75	65	73	75	100	97	00	09
18	69	72	75	89	87	71	76	68	01	09	07	34
19	77	72	79	86	27	25	89	86	61	67	01	05
20	94	90	90	86	30	39	72	80	89	87	16	26
21	76	72	82	74	00	00	70	75	12	05	57	61
22	99	92	100	97	80	75	74	76	100	99	100	87
23	98	80	85	86	99	100	71	80	02	01	92	98
24	67	51	98	98	82	74	87	87	17	25	82	81
25	74	88	93	94	43	46	79	91	23	23	85	81

APPENDIX H

T-SCORES, PERCENTILES AND STANINE SCORES ON SOS

T-Scores, Percentile and Stanine Scores on SOS

Pupil	Self Acceptance			Self Security			Social Confidence			Self Assertion			Peer Affiliation			Teacher Affiliation			Social Affiliation		
	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine
1. (1)	58	79	7	58	79	7	52	58	5	49	46	5	59	82	7	51	54	5	52	58	5
(2)	58	79	7	62	88	7	55	69	6	67	96	8	57	76	6	52	58	5	52	58	5
(3)	57	76	6	62	88	7	60	84	7	54	66	6	57	76	6	51	54	5	52	58	5
(4)	53	62	6	62	88	7	50	50	6	48	42	5	58	79	7	41	18	3	41	18	3
(5)	53	62	6	59	82	7	54	66	5	44	27	4	56	73	6	42	21	3	42	21	3
2. (1)	57	76	6	43	24	4	56	73	6	63	90	8	59	82	7	57	76	6	62	88	7
(2)	61	86	7	46	34	4	57	76	6	69	97	9	56	73	6	59	82	7	65	93	8
(3)	57	76	6	57	76	6	58	79	7	65	93	8	56	73	6	60	84	7	66	95	8
(4)	61	86	7	54	66	6	58	79	7	69	97	9	59	82	7	60	84	7	65	93	8
(5)	64	92	8	53	62	6	53	62	6	69	97	9	55	69	6	57	76	6	63	90	8
3. (1)	52	58	5	61	86	7	39	14	3	58	79	7	51	54	5	21	1	1	24	1	1
(2)	48	42	5	58	79	7	52	58	5	57	76	6	57	76	6	35	7	2	45	31	4
(3)	59	82	7	62	88	7	51	54	5	63	90	8	58	79	7	31	3	1	37	10	2
(4)	59	82	7	67	96	8	37	10	2	67	96	8	55	69	6	26	1	1	28	1	1
(5)	57	76	6	70	98	9	36	8	2	67	96	8	55	69	6	26	1	1	27	1	1

T-Score, Percentile and Stanine Scores on SOS (cont'd.)

Pupil	Self Acceptance			Self Security			Social Confidence			Self Assertion			Peer Affiliation			Teacher Affiliation			Social Affiliation		
	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine	T Score	% ile	Stanine
4. (1)	57	76	6	49	46	5	48	42	5	66	95	8	58	79	7	33	4	2	36	8	2
(2)	62	88	7	63	90	8	40	16	3	69	97	9	56	73	6	52	58	5	57	76	6
(3)	61	86	7	52	58	5	30	2	1	70	98	9	53	62	6	50	50	5	45	31	4
(4)	65	93	8	49	46	5	39	14	3	69	97	9	53	62	6	50	50	5	46	34	4
(5)	62	88	7	57	76	6	34	5	2	70	98	9	55	69	6	55	69	6	56	73	6
5. (1)	29	2	1	67	96	8	46	34	4	44	27	4	51	54	5	53	62	6	30	2	1
(2)	33	4	2	62	88	7	45	31	4	49	46	5	50	50	5	44	27	4	28	1	1
(3)	38	12	3	69	97	9	43	24	4	49	46	5	58	79	7	54	66	6	29	2	1
(4)	33	4	2	58	79	7	40	16	3	48	42	5	58	79	7	55	69	6	36	8	2
(5)	32	4	1	51	54	5	45	31	4	48	42	5	55	69	6	54	66	6	31	3	1
6. (1)	45	31	4	33	4	2	28	1	1	54	66	6	55	69	6	40	16	3	51	54	5
(2)	43	24	4	32	4	1	28	1	1	60	84	7	45	31	4	40	16	3	53	62	6
(3)	48	42	5	36	8	2	42	21	3	58	79	7	53	62	6	38	12	3	53	62	6
(4)	55	69	6	37	10	2	51	54	5	61	86	7	55	69	6	60	84	7	58	79	7
(5)	56	73	6	36	8	2	55	69	6	71	98	9	58	99	7	61	86	7	62	88	7

APPENDIX I

SCORES ON HARING AND PHILLIPS RATING SCHEDULES

Scores on the Haring and Phillips Rating Schedules

Teacher	Student 1	Student 2	(Placebo) Student 3	Student 4	(Placebo) Student 5	Student 6
	Pre-treatment Measures					
1	3.40	5.80	1.63	4.27	3.35	2.88
2	4.96	1.92	3.79	2.88	4.15	3.27
3	4.76	3.56	3.58	4.50	3.00	3.77
4	5.30	4.54	2.60	1.83	3.46	3.39
5	2.73	2.92	3.30	3.80	2.65	2.62
$\overline{X}$	4.23	3.75	2.98	3.46	3.32	3.19
	Post-treatment Measures					
1	3.19	3.12	2.85	2.88	3.96	3.85
2	5.03	3.46	2.65	3.54	2.92	2.19
3	6.55	3.64	2.35	3.27	3.35	3.19
4	5.69	3.12	3.04	2.25	2.58	2.42
5	4.69	4.89	3.35	2.46	3.20	2.90
$\overline{X}$	5.03	3.65	2.85	2.88	3.20	2.91

APPENDIX J

SCORES ON BURKS' BEHAVIOR RATING SCALES

Scores on Burks' Behavior Rating Scales

for Student 1 (Experimental)

Scales	Pre-treatment Scores						Post-treatment Scores					
	Teachers						Teachers					
	1	2	3	4	5	$\bar{X}$	1	2	3	4	5	$\bar{X}$
Excessive Self Blame	5	7	16	6	5	7.8	5	6	12	7	5	7.0
Excessive Anxiety	5	8	12	6	5	7.2	5	7	15	8	9	8.8
Excessive Withdrawal	6	7	15	8	8	8.8	6	6	15	8	7	8.5
Excessive Dependency	6	11	7	6	7	7.4	6	6	17	6	9	8.8
Poor Ego Strength	8	19	20	16	12	15.0	7	11	17	10	11	11.2
Poor Attention	5	9	18	14	10	11.2	5	7	11	15	8	9.2
Poor Impulse Control	5	14	17	6	8	10.0	5	12	13	7	8	9.0
Poor Sense of Identity	6	8	13	5	14	9.2	5	5	13	6	6	7.0
Excessive Suffering	7	11	17	8	11	10.8	7	7	20	7	10	10.2
Poor Anger Control	5	13	20	5	11	10.8	5	7	16	7	9	8.8
Excessive Sense of Persecution	5	11	20	5	15	11.2	5	9	13	6	7	8.0
Excessive Aggressiveness	10	14	22	9	19	14.8	12	10	12	11	11	11.2
Excessive Resistance	7	8	18	5	12	10.0	5	6	12	5	7	7.0
Poor Social Conformity	8	13	17	9	9	11.2	8	8	21	9	10	11.2

Scores on Burks' Behavior Rating Scales

for Student 2 (Experimental)

Scales	Pre-treatment Scores						Post-treatment Scores					
	Teachers						Teachers					
	1	2	3	4	5	$\bar{X}$	1	2	3	4	5	$\bar{X}$
Excessive Self Blame	17	13	13	10	17	14.0	11	12	18	10	13	12.8
Excessive Anxiety	12	12	10	9	5	9.6	14	15	8	15	13	13.0
Excessive Withdrawal	14	12	14	7	8	11.0	16	19	13	10	15	14.6
Excessive Dependency	14	8	14	12	7	11.0	13	15	16	9	13	13.2
Poor Ego Strength	19	19	22	12	11	16.6	19	20	19	19	19	19.2
Poor Attention	22	14	17	7	15	15.0	22	16	17	13	17	17.0
Poor Inpulse Control	25	19	18	15	8	17.0	25	13	17	19	19	18.6
Poor Sense of Identity	14	13	12	7	7	10.6	21	13	11	9	14	13.6
Excessive Suffering	24	16	17	9	7	14.6	15	20	15	10	15	15.0
Poor Anger Control	25	19	17	11	8	16.0	23	17	14	10	16	16.0
Excessive Sense of Persecution	19	12	18	5	6	12.0	15	15	16	7	13	13.2
Excessive Aggressiveness	27	18	18	12	11	17.2	30	20	23	7	20	20.0
Excessive Resistance	24	14	12	7	12	13.8	25	13	13	11	14	15.2
Poor Social Conformity	29	22	25	17	15	21.6	35	23	25	24	27	26.8

Scores on Burks' Behavior Rating Scales

for Student 3 (Placebo)

Scales	Pre-treatment Scores						Post-treatment Scores					
	Teachers						Teachers					
	1	2	3	4	5	$\bar{X}$	1	2	3	4	5	$\bar{X}$
Excessive Self Blame	9	7	13	7	7	8.6	5	7	13	5	8	7.6
Excessive Anxiety	5	5	9	6	9	6.8	5	6	13	5	6	7.0
Excessive Withdrawal	9	10	14	10	21	12.8	9	17	16	15	12	13.8
Excessive Dependency	8	6	14	7	10	9.0	7	6	15	6	9	8.6
Poor Ego Strength	10	11	14	15	28	15.6	9	14	13	16	12	12.0
Poor Attention	19	7	7	12	25	14.0	16	10	11	16	14	13.4
Poor Impulse Control	12	8	21	10	25	15.2	14	6	20	10	12	12.4
Poor Sense of Identity	6	9	13	8	17	10.6	9	12	20	13	14	13.6
Excessive Suffering	7	8	18	11	25	13.8	7	13	18	8	12	11.6
Poor Anger Control	18	9	24	9	23	16.6	14	15	23	11	16	15.8
Excessive Sense of Persecution	8	7	14	9	20	11.6	12	8	11	6	9	9.2
Excessive Aggressiveness	23	14	25	13	28	20.6	18	16	23	10	17	16.8
Excessive Resistance	16	8	21	13	23	16.2	16	19	24	11	18	17.6
Poor Social Conformity	20	9	23	15	30	19.4	27	19	19	15	20	20.0

Scores on Burks' Behavior Rating Scales

for Student 4 (Experimental)

Scales	Pre-treatment Scores						Post-treatment Scores					
	Teachers						Teachers					
	1	2	3	4	5	$\bar{X}$	1	2	3	4	5	$\bar{X}$
Excessive Self Blame	6	7	6	15	17	10.2	16	12	9	11	12	12.0
Excessive Anxiety	5	7	8	12	17	9.8	13	9	5	12	7	9.2
Excessive Withdrawal	14	12	14	15	14	13.8	15	14	7	15	19	14.0
Excessive Dependency	9	8	10	8	13	9.6	12	10	6	15	7	10.0
Poor Ego Strength	11	12	12	19	18	14.4	18	17	9	17	24	17.0
Poor Attention	11	14	8	14	22	13.8	16	23	15	13	23	18.0
Poor Impulse Control	13	16	6	23	21	15.8	21	16	9	11	25	16.5
Poor Sense of Identity	10	10	6	14	19	11.8	16	12	9	12	16	13.0
Excessive Suffering	19	9	8	19	29	16.8	28	17	10	15	22	18.5
Poor Anger Control	21	14	5	20	25	17.0	24	18	16	13	25	19.2
Excessive Sense of Persecution	11	10	5	19	21	13.2	16	14	10	11	24	15.0
Excessive Aggressiveness	22	17	6	23	25	18.6	28	20	12	16	29	21.0
Excessive Resistance	16	13	5	19	24	15.4	18	16	10	13	25	16.5
Poor Social Conformity	19	10	8	27	29	18.6	22	23	16	20	40	24.2

Scores on Burks' Behavior Rating Scales

for Student 5 (Placebo)

Scales	Pre-treatment Scores						Post-treatment Scores					
	Teachers						Teachers					
	1	2	3	4	5	$\bar{X}$	1	2	3	4	5	$\bar{X}$
Excessive Self Blame	5	6	13	5	5	6.8	8	5	12	6	8	7.8
Excessive Anxiety	8	9	10	5	5	7.4	6	9	8	5	7	7.0
Excessive Withdrawal	12	13	17	13	25	16.0	10	14	14	12	12	12.4
Excessive Dependency	8	6	14	6	10	8.8	11	6	13	7	8	9.0
Poor Ego Strength	22	26	22	17	33	24.0	17	28	21	21	22	21.8
Poor Attention	16	24	20	15	25	20.0	12	22	19	25	20	19.6
Poor Impulse Control	23	19	19	17	23	20.2	17	22	14	20	17	18.0
Poor Sense of Identity	10	5	12	9	16	10.4	8	11	8	7	9	8.6
Excessive Suffering	11	10	16	9	17	12.6	13	24	14	8	15	14.8
Poor Anger Control	11	10	17	9	18	13.0	14	15	11	15	14	13.8
Excessive Sense of Persecution	6	10	19	5	9	9.8	12	6	13	14	10	11.0
Excessive Aggressiveness	19	20	21	11	21	18.4	16	20	23	21	20	20.0
Excessive Resistance	13	10	12	12	22	13.8	16	15	12	18	15	15.2
Poor Social Conformity	31	19	26	16	26	23.6	26	22	20	20	22	22.0

Scores on Burks' Behavior Rating Scales

for Student 6 (Experimental)

Scales	Pre-treatment Scores						Post-treatment Scores					
	Teachers						Teachers					
	1	2	3	4	5	$\bar{X}$	1	2	3	4	5	$\bar{X}$
Excessive Self Blame	9	8	11	15	5	9.6	12	5	9	16	10	10.5
Excessive Anxiety	5	7	10	11	5	7.6	6	7	8	12	7	8.0
Excessive Withdrawal	7	11	13	10	14	11.0	8	13	9	17	12	11.8
Excessive Dependency	7	8	13	7	12	9.4	9	9	14	8	9	9.8
Poor Ego Strength	11	19	23	18	20	18.2	15	18	19	19	18	17.8
Poor Arrention	17	12	17	21	11	15.6	20	11	17	21	18	17.2
Poor Impulse Control	17	23	19	22	15	19.2	21	15	18	24	19	19.5
Poor Sense of Identity	7	12	10	7	15	10.2	10	9	9	10	9	9.5
Excessive Suffering	10	11	15	16	21	14.6	15	8	15	22	15	15.0
Poor Anger Control	20	20	12	18	20	18.0	21	15	12	22	17	17.4
Excessive Sense of Persecution	11	7	8	12	5	8.6	20	6	12	19	13	14.0
Excessive Aggressiveness	11	25	20	24	10	18.0	20	23	21	28	23	23.0
Excessive Resistance	17	21	12	15	16	16.2	21	15	13	22	16	17.5
Poor Social Conformity	26	29	17	24	17	22.6	30	24	18	25	24	24.2