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AN INVESTIGATION OF A COGNITIVE EXPERIENTIAL THERAPY WITH DRAWINGS AMONG DEINSTITUTIONALIZED SOCIALLY MALADAPTIVE ADULTS WITH MILD AND MODERATE MENTAL RETARDATION

The Ohio State University

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AN INVESTIGATION OF A COGNITIVE EXPERIENTIAL THERAPY WITH DRAWINGS AMONG DEINSTITUTIONALIZED SOCALLY MALADAPTIVE ADULTS WITH MILD AND MODERATE MENTAL RETARDATION

DISSertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Sandra Schwartz Phalen, B.A., M.A.

* * * * *

The Ohio State University
1983

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INTRODUCTION

Recently, there has been documented a need to increase the supply of psychotherapeutic services addressing the emotional problems of persons with mental retardation, Reiss, Levitan, and McNally, (1982). Lower intelligence in combination with recent deinstitutionalization may create special coping problems that increase the risk of emotional disturbance and social maladaptation.

The purpose of this investigation is to examine the effects of a cognitive experiential therapy using an adaptation of Tosi's (1981) A-B-C-D-E cognitive restructuring paradigm with drawings, a control group and a no-treatment control group on the reduction of socially maladaptive behavior and the enhancement of adaptive behavior among deinstitutionalized mentally retarded adults with mild and moderate retardation.

Coping refers to the manner in which an individual responds to the environment and to the interactive behaviors which are produced by this response (Leland, 1978). The individual thus develops coping strategies that are related to the kinds of behavior that enable the individual to survive psychologically in a given situation. Effective coping refers to the manner in which individuals are able to respond properly to behavior-producing cues in their environment and the effectiveness with which they are able to adapt their behavior to
the situation for the purpose of social-psychological survival (Leland, 1978). Effective coping results when an individual successfully reads the available environmental cues and responds appropriately. Appropriate reading of these cues leads to successful social and psychological survival. Maladaptive patterns of behavior result when an individual fails to read these cues. The individual attracts social disapproval and becomes increasingly visible in the community. His social and psychological survival become vulnerable. Traditionally, the alternative to this survival has been institutionalization or some other form of removal from the community (Shellhaase and Nihira, 1969).

When examining the effectiveness of coping one also needs to look at the natural and social needs of the environment (Leland, 1978). While an individual may have learned or been trained to cope successfully under certain situational conditions, that person may have difficulty applying this learning to new situations and conditions. A relevant example would be the individual who had adjusted to institutional living having difficulty when placed out into the community to work and live. Part of the question of effective coping is very closely tied to the flexibility of the individual, i.e., his ability to modify his behaviors in terms of changing environmental needs (Leland, 1978).

There are several factors that suggest that persons with retardation fail to benefit from ordinary observational learning situations.
This consequently leads to a variety of often maladaptive behavioral responses. Retarded persons are deficient in the ability to detect or interpret social cues (Edmondson, deJung, & Leland, 1965). They also often experience difficulty in their ability to pay attention to relevances in a learning situation (Zeaman & House, 1969).

The concept of coping is not a static term, it implies movement. It presumes that an individual's adaptive behavior will change either through their own devices or through treatment or training procedures (Leland, 1978). Here the assumption is that if the person is able to learn from previous experiences, he will change in a positive direction.

Maslano, Sarason and Gladwin (1958) discuss the possibility that personality factors rather than intellectual difficulties may be the source of social and behavioral maladaptation. Furthermore, Cushna, Szymanski and Tanguay, 1980; Rowitz, 1980) express the view that moderately and mildly retarded individuals are often vulnerable to a wide range of emotional and personality problems which may go unidentified and are often not responded to with appropriate clinical services.

Throughout their life time, many retarded persons are faced with the task of coping with numerous and increasingly complex social situations. Their limited ability to handle these situations can lead to emotional problems (Reiss, Levitan and McNally, 1982).
Eisenberg (1958) states that there are a number of reasons for suspecting that retarded persons are especially vulnerable to emotional problems. Common parental reactions to having a retarded child, include: guilt, overprotection, and rejection (Foale, 1965; Hagaman, 1980). These reactions may not only create a considerable amount of stress for a child, but also increase the possibility of maladaptation (Reiss, Levitan and McNally, 1982). It seems reasonable that these and other reactions may also leave scars that can possibly increase the chances for maladaptation in adulthood. Retarded children often must cope with peer rejection and the inability to play with peers of the same ages (Foale, 1956; Szymanski, and Rosefsky 1980). Increasing awareness of their limitation may lead to self-concept problems and depressive reactions (Edgerton, 1967; Foale, 1956; Stephens, 1953). These problems may also carry over into adulthood.

Retarded adults are faced with other kinds of coping difficulties. The adult with mild and moderate retardation is expected to functioning in a society which places a high value on the independence and initiative of the individual. This requires the ability to adapt to progressively more complex work and life styles (Glaser, 1978). According to Chinn, Logan and Drew (1979), retarded adults exist as a paradox, while they have lived long enough to deserve the distinction of achieving the status of adulthood, they are seldom able to attain total independence. Often they display a lack of behavioral characteristics considered as essential, by some, for adequate adult functioning.
Adulthood for mentally retarded individuals is often an exchange of the ego-damaging frustrations of earlier life for the newer and sometimes harsher ones of adulthood. In our society, adults work, earn money, buy the necessities of life and as many luxuries as they can afford. An adult socializes, marries and has children. For the retarded adult, jobs in competitive employment are often scarce. Even when a person finds a job he may have difficulty holding a job, finding persons to socialize with, to love and be loved by.

In sheltered workshops, professionals are involved in preparing individuals for competitive employment. A number of studies have been conducted related to vocational success and failure. Chinn, Logan and Drew (1979) summarize the reasons for occupational failure. They state that few individuals lose their jobs because of their actual inability to perform specific tasks, rather failure has been more related to personality factors and the ability to adjust.

The deinstitutionalization movement may increase the need for more clinical services with current trends toward greater reliance upon community-based living facilities. Macey (1980) found that a period of transitional adjustment appeared to take place for recently deinstitutionalized mentally retarded individuals. While these persons had successfully adapted to institutional living, they demonstrated a significant decrease in adaptive behavior in the domains of Physical Development, Vocational Activity, Self-Direction, and Socialization, and a significant increase in socially maladaptive
behavior (Antisocial, Rebellious, Untrustworthy, Withdrawal and Psychological Disturbances). This period of adjustment appeared to take place between the second and seventh year of community placement (Macey, 1977). According to Heller, (1982) relocation from the institution to a community based living facility can be a stressful experience, involving dissolving of old social relationships and daily routines. Community living may provide challenges which some retarded people are psychologically unprepared to meet (Reiss, Levitan, and McNally, 1982). These authors hold that clinical psychologists are needed to help them with the challenges of community living and to provide therapy for those having greater difficulty making the adjustment.

A problem in increasing the supply of clinical services to persons with mental retardation is the presumption that psychotherapy is ineffective with this population. This partially stems from the development of contradictory attitudes regarding the use of psychotherapy with the mentally retarded. Freud and Fenichel ruled out the use of psychoanalysis stating that normal intelligence was a prerequisite for the acceptance of interpretation. Neo-Freudians required an intelligent mind in order that their patients experience insight into their behavior patterns. Rogers (1951) was one of the most articulate theoreticians discouraging any form of psychotherapy with the retarded.
Despite these arguments there have been a number of excellent reviews (Jakab, 1970; Lott, 1970, Stacey and Demartino, 1957; Leland and Smith, 1962; Cowen and Trippe, 1963) demonstrating the effectiveness of psychotherapy and counseling with mentally retarded population. These reviews unanimously conclude that the mentally retarded are capable of improved adjustment according to many criteria (Gunzburg, 1958; Sarason, 1949; Sternlicht, 1966). There have been many techniques used in performing counseling and psychotherapy. Case study data available appears optimistic. Nevertheless, all reviewers agree that there is a need for experimental outcome research to evaluate the effectiveness of psychotherapeutic techniques with various subpopulations of the mentally retarded or in aiding in the understanding of the critical parameters of psychotherapeutic success or failure (Rosen, Clark, and Kivitz, 1977).

Robinson and Robinson (1976) in a review of psychotherapy with the mentally retarded indicate that many of the contemporary approaches to psychotherapy are quite suitable to mentally retarded clients despite their limitations. They suggest that techniques used with normal adults and adolescents when used in a more flexible manner can be adapted to the mentally retarded.

Limited research has been conducted utilizing a cognitive approach with the mentally retarded; however, Bott (1979) implemented a cognitive approach controlling aggression with a modeling or observational learning framework with mildly and moderately retarded adults. Pinkerton (1978) developed a cognitively-oriented problem-solving program for maladaptive mentally retarded adults.
Recently, case studies have been reported utilizing cognitive therapy approaches with persons of borderline intellectual functioning. Tosi, Howard and Gwynne (1981) reported that Rational Stage Directed Hypnotherapy (RSDH) seemed to be effective in treating anxiety neurosis. Howard and Tosi (1978) found that RSDH and behavioral rehearsal were effective in treating nonassertiveness in a young man with a measured I.Q. of 85.

In utilizing a cognitive approach to therapy with retarded adults it is important to consider the individual's developmental level in relation to his life experiences. Based on the work of Piaget, Indhelder (1967) has proposed a scheme by which to order retarded adults according to stage. She views mildly retarded adults as incapable of progressing beyond a level of concrete operations and the moderately retarded as incapable of surpassing the pre-operational intuitive period.

Not only do retarded individuals tend to be concrete but also limited in verbal ability. Verbal ability is one of the central aspects of intelligence commonly impaired in retarded people (Robinson and Robinson, 1976). While for some individuals there is a constitutional basis for poor verbal ability, others have been punished for talking inappropriately and may avoid talking and listening. Whatever the source, the difficulty formulating and understanding ideas through words requires that psychotherapy include a substantial nonverbal component (Robinson and Robinson, 1976).
Drawing as opposed to imagery can be viewed as a concrete representation of mental pictures. Imagery as used in Rational Stage Directed Imagery (RSDI) has been defined as an ability to cognitively imagine, to picture mentally and to vicariously experience oneself thinking, acting and feeling in real or hypothetical situations (Tosi and Reardon, 1976). This form of imagery relies heavily upon the client's verbal ability to report mental pictures. In Bruner's (1966) theoretical assessment of cognitive development, he examined the growth of three systems of representing information. The first two are through imagery and the third through the symbolism of language. Similarly, Hammer (1958) points out that pictorial thought precedes verbal expression. Children draw before they can write. Objectified picturization acts as an immediate symbolic communication which overcomes the difficulties of verbal speech (Naumberg, 1966).

Machover (1949) states that it is safe to assume that all creative activity bears the stamp of the conflict and needs of the individual who is creating. The process of art therapy has its origins in the psychoanalytic approach and is based on the recognition that man's most fundamental thoughts and feelings, derived from the unconscious, reach expression in images rather than words (Naumberg, 1966). As persons draw their inner experiences, they often become more verbally articulate. They frequently begin to verbalize in order to explain their art productions. The production of pictured projections has the advantage of the unconscious being less likely to
escape repression by the censor than by verbalization. In art therapy, the projecting of interior images in exterior designs "crystalizes and fixes in lasting form the recollections of dream or fantasy which would otherwise remain evanescent and might quickly be forgotten" (Naumberg, 1966). A pictured record of inner unconscious experiences, assists the client in observing, grasping what has occurred in therapy.

While in art therapy, the drawings produced by subjects are entirely spontaneous, the projective drawings obtained in psychological testing and cognitive therapy with drawing are prompted and more structured. Certain diagnostic aspects of projective drawing techniques and the techniques of art therapy are comparable. Psychiatrists, analysts, and psychologists increasingly share an awareness of the manner in which art therapy, whether used as a primary or auxiliary technique, tends to release deep unconscious material more quickly and facilitates the therapeutic process. Naumberg explains that this is due to the immediate translation of inner experiences into pictures rather than words.

In this researcher's experience as a clinician at ARC Industries, a sheltered workshop in Franklin County Board of Mental Retardation and Developmental Disabilities, she found the use of client-produced drawings very useful in teaching mentally retarded adults an adaptation of Ellis' ABC Theory of emotional disturbance (Ellis, 1957, 1958, 1962, 1975) and Tosi's A-B-C-D-E model (1973, 1974, 1980).
NEED FOR STUDY

Comprehensive reviews of the literature reveal research supporting the effectiveness of psychotherapy with the mentally retarded (Bialer, 1967; Gunzburg, 1958; Hayes, 1977; Stacey and DeMartino, 1957; Sternlicht, 1966). While these approaches agree with the concept that personalization, socialization, and normalization should be the goals of any habilitation program for the retarded (Gunzburg and Gunzburg, 1973), the majority of treatment approaches for socially maladaptive behavior include behavior modification, chemotherapy, seclusion and restraint which are externally rather than internally oriented. These approaches tend to reinforce the maintenance of an external locus of control (Bialer, 1961) and learned helplessness (Floor and Rosen, 1975) characteristics found in greater proportions among retarded persons of all ages than the nonretarded. These traits reduce the effectiveness with which an individual copes with the environment.

Very little work until recently has been done with the retarded in teaching them to think for themselves (Edmondson, 1974). Recently, investigators (Pinkerton, 1978, Bott, 1979) have begun to explore the efficacy of cognitively-oriented training programs aimed at improving coping strategies and developing internal controls necessary for responsible behavior.

This study should add to a growing body of theory and research regarding psychotherapy and the mentally retarded. It is an attempt to modify a cognitive experiential approach, using an A-B-C-D cognitive
restructuring paradigm in the treatment of socially maladaptive behaviors. By concretizing procedures and taping into the client's non-verbal symbolic language with the use of drawings, the therapist assists the client in exploring the events, self-messages, emotional, and behavioral responses leading to maladaptive behavior. The use of drawings serves to focus attention on cognitive, affective, and behavioral responses to problematic social situations. Within the framework of a series of drawings, the client can actively participate in his own therapy process, assist in generating alternative thoughts and serve as his own model for behavior change. The drawings also serve as a concrete record of the client's experience in therapy.

PURPOSE

The purpose of this study is to examine the effects of a cognitive experiential therapy, an adaptation of an A-B-C-D-E cognitive restructuring paradigm with drawings, a control group, and waiting list group, on the reduction of socially maladaptive behavior among adults with mild and moderate retardation. The major research question posed here is whether the application of this adaptation of cognitive experiential therapy with drawings, the effects of a control group, or a non-treatment control group, can reduce significantly socially maladaptive behavior among mildly retarded adults as measured by the AAMD Adaptive Behavior Scale (ABS), (Nihira, K., Foster, R., Shellhaas, M., Leland, H., 1974).
HYPOTHESES

1 a) There will be no significant treatment group by time interaction effect for A.B.S. Part II maladaptive behavior percentile scores.

b) For each treatment group, there will be no difference in A.B.S. Part II social maladaptive behavior scores across time. At each treatment period there will be no differences among groups on A.B.S. Part II scores.

2 a) There will be no significant treatment by time interaction effect for the A.B.S. Part I percentile scores measuring the behavioral factors of independent functioning and personal responsibility.

b) For each treatment group, there will be no difference in A.B.S. Part I percentile scores across time. At each treatment period, there will be no differences among groups on A.B.S. Part I scores.

3 a) Pre-testing, Post-testing I, and Post-testing II scores from Part I of the A.B.S. will not be significantly different.

b) Pret-test, Post-test I, and Post-test II scores from Part II of the A.B.S. will not be significantly different.
4 a) Cognitive Therapy with Drawings, the Conversation and the Waiting List treatment groups scores on Part I of the A.B.S. will not differ significantly when averaged across time.

b) Cognitive Therapy with Drawings, the Conversation, and Waiting List treatment group's scores on Part II of the A.B.S. will not differ significantly when averaged across time.

LIMITATIONS OF THE STUDY

This study contains the following limitations:

1) This study is limited to a sample of twenty deinstitutionalized mentally retarded adults with mild and moderate retardation and socially maladaptive behavior, employed in ARC Industries, Franklin County Board of Mental Retardation and Developmental Disabilities, Ohio. This sample should not be considered as representative of regional or national populations of deinstitutionalized mentally retarded adults.

2) Due to the fact that the study included only twenty subjects, there may be statistical limitations to the findings of this study.
3) Due to factors beyond the researcher's control (see Chapter III), certain problems with total randomization of treatment group assignment were encountered, present further possible problems to statistical analysis.

**DEFINITIONS OF TERMS**

**Mental Retardation:** Refers to significant subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifesting during the developmental period (Grossman, 1973).

**Adaptive Behavior:** Refers to the effectiveness or degree with which an individual meets the standards of personal independence and social responsibility expected of one's age and cultural group (Grossman, 1973).

**Social Maladaptation:** An inability to comply with the socially accepted standards for one's age and cultural group; as indicated on the Adaptive Behavior Scale (Nihira, Foster, Shellhaas and Le-land, 1975). Scores above the 80th percentile on the Part II domains of Violent & Destructive Behavior, Antisocial Behavior, Rebellious Behavior, Untrustworthy Behavior, and/or Psychological Disturbances.

**Drawings:** Subjects will be guided in producing seven drawings in relation to each problem presented. Each will be asked to draw: 1) the precipitating event, the problematic situation; 2) the resulting feelings; 3) themselves expressing self-messages; 4) behavioral response. The subjects will then be asked to draw, 5) themselves
expressing more adaptive self-messages; 6) the resulting more adaptive emotional response; 7) the more adaptive behavioral response.

**Rational:** Rationality is a non-static concept based upon logically correct thinking relative to a given set of data or facts. Sperry (1974) suggests that rationality is a method to deal with subjective and objective reality as one pursues his life goals. The following criteria may be used in determining whether or not one's thinking and acting are "rational" (Maultsby, 1971). Thinking and acting are rational when:

a) these behavioral processes consider objective and subjective reality - the facts - be they environmental, cognitive, affective, physiological, and/or behavioral motoric;
b) these behavioral processes contribute to the achievement of one's immediate and long-term life goals (self-knowledge, self-acceptance, self-affirmation);
d) these behavioral processes minimize personal and environmental stress.

**Psychotherapy:** An organized procedure which has the goals of facilitating adaptive behavior and/or personality change, and which places emphasis on attempting to establish a close personal relationship between the client and the therapist. The procedure may include verbal and nonverbal techniques, and the client may or may not be aware of the dynamics of the therapy process (Bialer, 1976).
Cognitive Therapy: In the broad sense, cognitive therapy consists of all approaches that alleviate psychological distress through the medium of correcting faulty conceptions and self-signs (Beck, 1976). While the emphasis is on thinking, the importance of emotional reactions must not be ignored since they are generally the immediate source of distress. By correcting erroneous beliefs, it is possible to alter excessive, inappropriate emotional responses and related maladaptive behavior.

The A-B-C-D Methods of Cognitive Restructuring: Based on Tosi's (1973, 1980) Cognitive Experiential Model utilizing an A-B-C-D-E adaptation of Ellis' (1957, 1958, 1962) A-B-C cognitive restructuring paradigm, an A-B-C-D model will be used in this study whereby:

A will represent the problematic situation or event;
B will represent the self-messages;
C will represent the emotional response;
D will represent the behavioral response.
CHAPTER II

REVIEW OF THE LITERATURE

This chapter will present a review of the literature containing the following sections: 1) a discussion of psychotherapeutic approaches used in treating maladaptive behavior among mentally retarded persons; 2) individual psychotherapeutic approaches used with maladaptive adults; 3) other treatment approaches used with socially maladaptive mentally retarded adults; 4) cognitive therapy; 5) a conceptual model for a cognitive experiential therapy; 6) cognitive therapy and maladaptive behavior; and 7) cognitive approaches with the mentally retarded.

APPROACHES TO PSYCHOTHERAPY WITH MENTALLY RETARDED INDIVIDUALS

A review of the literature reveals a scarcity of theory-based approaches to psychotherapy with the mentally retarded. Theory-based approaches to psychotherapy with mentally retarded individuals or any population involve the systematic use of a group of techniques by a qualified therapist. Theory-based procedures can give structure and direction to the therapy process providing a framework for predicting and evaluating the outcome of research (Bialer, 1967). While theory-based approaches have been characteristically associated with certain personality theories, there are several modes that have been found to have evolved independently of a particular conception of the

Sternlicht's (1964) prognostic etiological model of psychotherapeutic treatment of mental retardation is an attempt to relate psychotherapeutic outcome with predetermined goals. This model acknowledges that the primary causes of mental retardation may be neurological, cultural or emotional. According to Sternlicht, psychotherapy offers a favorable prognosis for the goal of elevating I.Q. score only when the primary etiology is emotional. His position holds that if the goal is raising I.Q., thus "curing" the condition, then mental retardation is not due to a neurological deficit or cultural deprivation. If the goal of psychotherapy is personality adjustment and improved adaptive behavior the cause is primary emotional disturbance or the emotional reaction to or result from the intellectual deficit, whatever the cause.

Rosen, Clark and Kivitz (1977), in a critique of Sternlicht's model, point out the many limitations of a model based on etiology. They hold that etiology is a relevant concern if one accepts "cure" as a legitimate purpose of psychotherapy and that "curing" mental retardation should not be a goal of psychotherapy. Today, clinicians generally recognize the multiplicity of determining factors involved in the diagnosis of mental retardation as well as in the difficulty in distinguishing primary and secondary emotional factors. The above authors further state, that while Sternlicht's model suggests psychotherapy
for secondary emotional problems, it provides no assistance for making
decisions or stating prognoses for specific types of emotional problems.
They conclude that a better model for psychotherapy with mentally re-
tarded individuals should be stated in terms of present behaviors, spe-
cific objective behavioral goals, and other client and situational vari-
ables.

Leland and Smith (1962, 1965, 1972) have developed a theoretical
framework to a systematic approach to play psychotherapy designed for
use in the habilitation of the mentally retarded child displaying per-
sonal and/or social maladaptation. Their approach uses a combination
of learning theory and behavior modification principles "to force the
child to think." This approach adapts the degree of structure in play
materials and in therapeutic method to the characteristics of retarded
children and the goals of therapy. According to Leland and Smith, "The
theory ..... is based on the premise that all behavior is lawful, that
behavior tends to be tension-relieving, and that aberrations of behav-
ior tend to be self-reinforcing, that the way to deal with these aberra-
tion is through a process of building and/or unblocking cognitive func-
tions, that this may be done through a ..... situation where reward be-
comes the permission to carry out behavior of the patient's choice, and
punishment become intrusion in this sphere" (Leland and Smith, 1965,
p. 38). The cognitive stimulation (talking about what the child is
doing, questioning the child, modeling, and imitating) along with the
other concepts and techniques involved in forcing the child to think
and gain cognitive control of behavior are similar to Meichenbaum's (1977) cognitive behavior therapy.

The emotionally disturbed mentally retarded child's cognitive blocking is felt to be the result of organic, sociological or psychological interferences (Leand and Smith, 1965). Within the context of an interpersonal relationship, the play psychotherapy approach, the therapist assists the child in gaining cognitive and behavioral control and to generalize these to situations in everyday life in order to reduce the child's level of visibility in the community.

Progression in therapy, according to the Leland and Smith approach is determined by the manipulation and control of the structure of play materials and therapist's style. They hold that different degrees of structure are necessary for different coping problems and that a single approach is not applicable to all children. Depending on the child's developmental level and degree of maladaptation, one of four different play therapy procedures is utilized based on the structure of the play material and therapist's style. These four approaches, according to Leland and Smith (1965, 1972) are: Unstructured materials-Unstructured therapist approach (U-U), Unstructured materials-Structured therapist approach (U-S), Structured materials-unstructured therapist approach (S-U), and Structured materials-Structured therapist approach (S-S).

A third approach to psychotherapy with mentally retarded individuals has been the "motivator therapy" approach of Haywood (1964). This approach is based on the motivation-hygiene concept which was originally developed by Herzberg and Hamlin (1961, 1963).
Haywood (1964) dichotomizes two types of individuals. The motivator person seeks his personal satisfaction through factors inherent in the task itself (achievement, responsibility, recognition, meaningfulness of work). The hygiene person on the other hand seeks his personal satisfaction in the comforts and reassurances of the environment being motivated to seek such things as personal comfort, low effort tasks and high material reward.

The "choice-motivation scale" was developed to measure the extent of these orientations (Hamlin and Nemo, 1962). Research findings by these investigators support the assumption that a motivator orientation is more associated with mental health while hygiene orientation is more characteristic of mental illness.

In applying these concepts to the personality dynamics with mentally retarded individuals, Haywood (1964) suggests that since successful accomplishment of interesting tasks is relatively uncommon among the retarded, "such a .... person may easily learn to .... avoid engaging in tasks in which he is likely to fail" (Haywood, pp. 6-7), with the consequent avoidance behaviors resulting in a primary hygiene orientation. His treatment is similar to an activity therapy paradigm. It involves arranging a series of rewards in the form of opportunities to participate in a series of tasks of increasing complexity and intrinsic interest. Thus, one should theoretically be able to foster a motivator orientation more consistent with mental health even in a nonverbal person. This approach to personality change lends itself to group manipulation and does not require a richness of verbal interchange. It is similar to the application of behavior shaping techniques.
Finally, the "alternative guidance" approach (Wander and Sternlich, 1964) holds that one reason for the persistence of maladaptive behavior among retarded individuals is that few alternatives for obtaining the same objectives occur to them. With this approach, the therapist provides a "source of data, a library of alternatives" for the client's consideration, so that he can choose rather than being trapped into his habitual pattern. By allowing the client to make his own decisions, the "negative aspects of directive counseling [fostering dependency and destruction of the patient's self-image (can) be eliminated" (Sternlicht, 1966, p. 328).

A number of authors have discussed various aspects of the therapy process with mentally retarded individuals. Robinson and Robinson (1976) state that although the retarded individual may be relatively inarticulate, verbal ability is seldom so limited that it cannot be a powerful avenue of contact and growth. They list several less abstract kinds of verbal interchange utilized in counseling normal persons that are equally suitable for communication with the mentally retarded. These include: 1) catharsis, simple ventilation of feelings, descriptions of fantasies and memories; 2) reassurance - helping the person recognize his areas of competence; 3) support - helping with simple tasks as a means of paving the way for him to take action for himself; 4) advice - the client learns to ask for it when needed, to evaluate it and utilize it; 5) directed discussion - the therapist gives direction to the topic of conversation and keeps the client from floundering; 6) clarification and reflection of feelings - helping the client to
recognize and understand his feelings; 7) interpretation - helping the client to become aware and understand his behavior.

Procedures requiring the client to determine the direction of conversation must be modified with retarded individuals (Moody, 1972, Thorne, 1948). While many retarded persons may appear to respond to the immediate situation, they often neglect to talk about important events taking place in their lives (Robinson and Robinson, 1976). These authors suggest that once a topic is introduced by the therapist, clients may quite easily participate in an active and genuine discussion.

Directiveness in therapy with retarded persons refers to setting structure and limits as necessary and to maintaining the focus of therapeutic interaction on relevant issues (Szymanski, 1980). The therapist, however has to be sure to give the client an opportunity and encouragement for spontaneous productions and expressions of feelings. He should not force an issue nor give leading questions, but should lead the client in the direction desired.

Reflection and clarification of feeling (Rogers, 1951) have been recommended by some authors (Thorne, 1948, Robinson and Robinson, 1976) to help retarded individuals recognize and understand what they have just said and felt. These techniques according to Robinson and Robinson (1976) do not require abstract interpretations but can be closely attuned to their own frames of reference.

While some workers have viewed the retarded as having little capacity for developing insight, others view understanding as ranging from very concrete to very abstract formulation. Mildly retarded
children and adults are usually quite capable of recognizing simple patterns of behavior and grasping some notion of how they might have developed, provided that interpretation is founded on a number of concrete examples (Robinson and Robinson, 1976).

Language as a verbal technique in psychotherapy with the mentally retarded according to Szymanski (1980), should be brief, concrete, clear, and adapted to their level of understanding. Furthermore, he states that the therapist should be sure of the patient's comprehension, since in order to please the therapist (and deny their own inadequacy) the patients tend to state that they understand even if they do not. Difficulty formulating and understanding ideas through words requires psychotherapy with the mentally retarded to include a substantial nonverbal component (Robinson and Robinson, 1976).

Szymanski (1980) talks about a time dimension in therapy. He states that much verbal therapy has a "here and now" focus. Concrete examples relevant to the patient's problems can be very useful. While some clients may lack conceptual skills to talk about past experiences, other higher functioning clients may be able to talk meaningfully about past experiences relevant to therapy issues currently being discussed.

The therapeutic process as viewed by Szymanski is teaching-learning experience. He views a retarded person's acting-out of an emotion to be due to ignorance to a certain degree. While he may have to be taught that the emotion he experiences is appropriate, its expression is not. Appropriate ways of handling emotions need to be taught concretely. Suggested means included by Szymanski are verbal explanation, play acting, doll or puppet play - or identification with the therapist.
INDIVIDUAL VERBAL THERAPY

A review of the literature on individual psychotherapy, with mentally retarded persons paradoxically reveal that more studies have been published in earlier years than in recent ones. As far back as 1934, Chidester published an early report of three different cases with various therapeutic treatments accorded to each and their effects upon IQ scores. IQ score increases were recorded after treatment for all three patients. The author offers these cases as examples of mental retardation which are subject to treatment and cure.

Another case study was reported by Chidester and Menninger (1936) of an 11-year-old boy who was tested as mentally retarded but revealed little organic pathology upon clinical examination. Fixated emotional development was suspected and psychoanalytic methods were applied for over a four-year period. Authors concluded that treatment resulted in the breaking down of defenses which inhibited intellectual growth. An IQ score increase of twenty-eight points as well as behavioral gains were indicated.

Thorne (1948) designed a systematic program of individual and group psychotherapy using psychoanalytic and non-directive approaches with 68 institutionalized mentally retarded individuals (age 1-29) with serious conduct disorders. Following two years of intensive treatment, gains were measured in terms of conduct, school records and clinical judgements. Thorne reported that 66% improved, 23% were unchanged, and 10% were worse than when they began treatment. An analysis of results indicated marked improvement in the morale of the entire institution as well as individual client behavior.
Cooley (1945) presents case records of 25 "children" (age not specified) with IQ scores below 85 with a matched group of children with an equal number of records of children with IQ scores of 115 or above. Therapy with the duller children was at least as effective as that with more intelligent children. The duller children required fewer hours of treatment. The author accounts for this due to the possibility that their problems were of a simpler nature. He observed that the dull children presented problems that were more externalized. Another case study was presented by Sion (1955) utilizing a client-centered approach with an adolescent male.

Glass (1957) reported a case study in which individual psychotherapy was employed with a mildly retarded 12-year-old boy living in a residential treatment facility. Fifty-eight sessions were conducted over an eight-month period. Progress was revealed in the elimination of the original present problems of truancy and destruction of public property. When the boy's parents terminated therapy due to financial reasons, the aggressive acts returned two weeks later.

Heiser (1954) describes fourteen cases where fourteen institutionalized moderately to mildly retarded "children" (ages 8-32 years) with emotional, behavioral, and organic problems were involved in individual psychotherapy. Eleven of the fourteen children showed improvements in behavior relative to personal and social adjustment as measured by judgement of cottage parents, teachers and nontherapist psychologists. Ten of the fourteen were returned to their homes to live.
Friedman (1961) reports a case study of individual psychotherapy with a 24-year-old mildly retarded male delinquent. Therapy consisted of developing a therapeutic relationship within a permissive atmosphere. Behavior gains were seen over a one year period, resulting in release from the institution as well as IQ gains from 57 to 70 were reported.

Craft (1965) reported two cases applying psychotherapeutic methods based learning theory to the treatment "dull" adolescent sex offenders (IQ not given). Emphasis was on out-patient psychotherapy and adjustment within the home and the community.

Lott (1966) presents six cases where individual psychotherapy was applied with emotionally disturbed but socially adequate slow learners. Emphasis was placed upon the need for an individualized approach to different types of emotional problems. The various types of therapy included exploratory, educative, supportive therapy and analytic therapy.

Hayes (1977) compared the gains in individual psychoanalytically-oriented psychotherapy between twenty familial retarded children (fifteen mild, two moderate, two borderline) and twenty nonretarded children, matched for diagnostic category (neurosis, personality disorder, borderline state psychosis), age (six to sixteen) and socio-economic status. A quasi-experimental design was used. Length of treatment ranged from eight to forty-eight months and was conducted in an out-patient setting. Therapist ratings indicated that approximately 75% of the clients in each group improved, revealing to the author that mentally retarded children can benefit from psychoanalytic psychotherapy to the same extent as nonretarded children.
Individual psychotherapeutic approaches have not been studied extensively with the mentally retarded individuals. When it has been studied, it has been with the mildly retarded or functionally retarded child. Of the eleven studies reviewed, utilizing individual psychotherapeutic approaches only, two studies and possibly three (due to unspecified ages) involved adults, but also included children (Thorne, 1948; Cooley, 1945; Freeman, 1961) The remaining studies focused upon child and adolescent populations. Only two studies used samples of socially maladaptive adults (Heiser, 1954, and Freeman, 1961). Often it was not clearly stated whether treatment involved institutionalized or non-institutionalized or de-institutionalized subjects.

Seven studies involved case reports. While results indicated successful therapy outcomes, there was a general absence of the use of objective measures as a criterion for success. Clinical judgements and the use of IQ change as a measure is questionable. Only three studies (Thorne, 1948; Cooley, 1945; and Hayes, 1977) employed experimental methods. These studies lack the use of objective dependent measures. Two studies (Cooley, 1945, and Hayes 1977) used nonretarded subjects in their studies. None of the studies used a placebo or a non-treatment control group.

Often the process of therapy is only vaguely described. Three studies (Chidester and Menninger, 1936, Hayes, 1977) utilized a psychoanalytic approach. Client-center or nondirected approaches were utilized by Sion, 1945, and Thorne, 1948. Case studies mention use of supportive, exploratory, educative, and analytic therapy. Often the
therapeutic approach and the length of treatment were unspecified. Often it was unclear if the sample displayed socially maladaptive behavior.

In summary, those studies basing the effectiveness of individual psychotherapeutic approaches upon anecdotal observations, have found that these approaches are generally effective in increasing the intellectual functioning and/or adaptive behavior in socially maladaptive mentally retarded individuals (Chidester, 1934; Chidester and Menninger; Cooley, 1945; Sion, 1953; Glass, 1957; Heiser, 1954; Freedman, 1961; Craft, 1965; Lott, 1966). The more tightly designed studies (Thorne, 1948; Hayes, 1957) indicate that mentally retarded individuals can benefit from nondirective psychoanalytic and analytic individual psychotherapy.

A review of the literature examining the use of individual psychotherapeutic techniques with mentally retarded individuals reveals that there is an absence of studies comparing the relative effectiveness of two or more different therapeutic approaches, studies focusing attention on variables within the therapy process related to specific outcomes. Descriptions of the therapy processes were often so brief that it was difficult to determine which elements of the therapeutic process have been responsible for which results. In addition, there has been an absence of appropriately designed studies, a failure to fully report methodological parameters, and an absence of the use of objective measures of therapeutic success. Thus, it is difficult to decide upon the effectiveness of individual psychotherapy with mentally retarded individuals.
Role Playing

Role playing has been one of the most widely used techniques in working with mentally retarded adults in groups. The effectiveness of role playing lies in the opportunity it provides for testing out or rehearsing new or alternative patterns of behavior in a sheltered or guided situation. Role playing with the mentally retarded has appeared in the literature with enthusiastic results. Taylor, 1969; Seeley, 1971; Tawadoros, 1956, have found that role playing enhanced social problem-solving skills in retarded adolescents.

Buchan (1974) describes several ways that role playing can be used with mildly retarded students. These methods include role-reversal, the mirror technique, and modeling.

Zisfein and Rosen (1973) used role playing with institutionalized mentally retarded adults between the ages of eighteen and fifty in their Personal Adjustment Training Program.

Group Therapy Approaches with Mentally Retarded Adults

There are a few studies in the literature describing group treatment for the mentally retarded adult. Gorlow, Butler, Einig, and Smith, (1963) studied the effects of group psychotherapy upon self attitudes and behavior of institutionalized mentally retarded females, ages fifteen to twenty-three. IQ scores ranged from fifty to eighty. Sessions were held three times weekly for twelve weeks. No differences were observed between the experimental and control group. The data
offered suggestions for assessment of motivation for treatment. Erratic attendance in group therapy is associated with less conforming behavior and more extreme positive and negative attitudes toward the self.

Rosen and Rosen (1969) discuss a group treatment approach designed to assess retarded adults and adolescents in their efforts to learn to cope with community life. The group therapy was part of a larger program where "trainees" learn about the world of work in a workshop and receive training for more independent community living. Moderately and mildly retarded trainees were described as making excellent use of group process and appeared to use it successfully in their effort to grow and manage. Wilcox and Guthrie (1957) divided ninety-seven institutionalized mentally retarded females (ages fifteen to forty-three) into twelve therapy groups whose members had been previously classified as aggressive, as passive, and a mixed passive and aggressive group. Changes after therapy were measured by a behavioral rating form which was filled out by matrons and attendants who were continually with the subjects for the duration of the study. The same rating form was filled out before and after therapy. There was a significant difference in the 'girls' showing improvement in the combined experimental as compared to the combined control groups. No significant differences were found between groups of different types or between therapists.

Ricker and Pinkark (1964) utilized a novel group approach with mentally retarded young adults. Audiovisual feedback was used to improve self-perception and social skills. Subjects were divided into
three carefully matched groups. In one group counseling on improving social skills was conducted in conjunction with sound movies of the subjects themselves in varied social situations within the sheltered workshop in which the experiment took place. In the second group, counseling was combined with movies of retarded persons (not themselves) and in a third group, counseling took place without such stimuli. Results favored the first group, although the second group showed some improvement.

Snyder and Sechrest (1959) studied experimentally, the efficacy of directive, structured, verbal (didactic) group therapy with forty-five delinquent mentally retarded individuals ranging in age from nineteen to twenty-two and IQ scores ranging from below fifty to seventy-nine for thirteen weeks. Subjects were divided into two directive treatments, two placebo groups, and one non-treatment control group. The criterion of change was a "housing report" filled out by ward staff every four months. Results indicated a significant difference between the experimental group and the control and placebo group in the number of positive comments on routine housing reports and fewer appearances in behavior courts for more serious violations.

Behavioral Approaches

Behavior approaches involving the application of operant learning principles includes a group of psychological techniques that have been widely used in clinical work to modify social maladaptation in mentally retarded persons. The terms behavior and modification, behavior therapy, contingency management, and applied behavior analysis are terms
included in this area which are often used interchangeably. Behavior therapies involve the systematic principles and procedures derived from the experimental study of learning in clinical practice. Behavior therapists feel that most maladaptive behavior is generated and maintained by environmental events and that treatment consists of the measurement and control of consequences surrounding the target maladaptive behavior.

Forehand and Baumeister (1976) describe three behavior modification approaches used to modify maladaptive behavior. These included: 1) differential positive reinforcement of behavior; 2) withdrawal of positive reinforcement following target behavior (time-out, ignoring and response cost procedures); and 3) punishment (aversive auditory punishment, overcorrection, shock).

In reviewing the literature on modifying maladaptive behavior among mentally retarded individuals, most of the work has focused upon modifying disruptive classroom behavior among school-aged children. Disruptive behavior has been most successfully altered by the uses of tokens and praise for the reinforcement of appropriate behavior (Drabman, 1976; Kazdin, 1975) or the withdrawal of reinforcement when a target behavior occurs (Forehand and Baumeister, 1976). In studies involving antisocial behavior, Forehand and Baumeister note that a combination of these two is more effective than using either one of the above approaches alone.

Recently, Murlick and Schroeder (1980) found that time-out procedures were most frequently used in treating antisocial behavior in
the mentally retarded. Rarely is "time-in" discussed in terms of the quality or rate of reinforcement available. These authors suggest that more attention be given to delineating antecedent events and ecological variables such as crowding, social organization and availability of staff and materials. They also advocate the importance of building repertoires of prosocial behavior in behavior management of social maladaptation. Behavioral management techniques seem most useful for diminishing high frequency behavior which are harmful to the client or others in the environment.

In a functional sense, a behavior therapy program with mentally retarded clients can be viewed as a prosthetic device. The extinction process has been extensively studied and it is known to lead to a psychological state of frustration (Jansen, 1980). This author concludes that extinction causes marked variability in ongoing client behavior leading to eventual regression including acting-out episodes. Most behavioral approaches are mainly external in control, or placing little emphasis on the development of the individual's cognitive control over behavior or on the development of a close interpersonal relationship.

While behavior therapists have developed techniques for dealing with a wide variety of problems such as fear, anxiety, stress, non-assertiveness, pain, insomnia, and inappropriate cognitions, these have not been generally applied to the mentally retarded.

Rosen, Zisfein, and Hady (1972) describe in a case study the use of "in vivo desensitization" to deal with a variety of community and
separation fears in a mildly retarded adult being trained for discharge from the institution.

**Psychopharmacological Approaches**

Although medical misuse has been associated with psychotropic medication for the retarded patient, the same rules that apply to the use of psychotropic medication in adults and children of normal intelligence apply to psychopharmacological approaches in treating of socially maladaptive behavior among mentally retarded individuals. The most commonly used drugs with aggressive and assaultive behavior in retarded adults is the phenothiazines (Thorazine, Mellaril, Stelazine, and Prolxin) Rivenus (1980). Butyrophenone Haloperidol (Haldol) is a nonphenothiazine which is also commonly used in producing improvements in measures of impulsiveness, aggressiveness and hostility, while Lithium Carbonates, an antimanic drug has been shown to be useful in the prophylaxis of manic episodes of recurrent depression disorders. It has also been shown effective in controlling hyperactive, aggressive, and self-injurious behavior in retarded subjects.

Most of the studies on the effects of psychotropic agents on functioning of mentally retarded persons has been on institutionalized populations. There is great need for more studies on the effects of psychotropic drugs on the functioning of noninstitutionalized retarded persons.

Intellectual and cognitive performance of retarded individuals is rarely improved by any of the major groups of psychotropic agents (Rivenus, 1980). Neuroleptics, while sometimes helpful in the thought
behavior disordered person with mental retardations, can themselves decrease learning and cognitive performance (Freeman, 1970; Spague and Werry, 1971).

Use of Drawing and Artistic Media in Psychotherapy

Because retarded persons are often deficient in their use of language, a number of nonverbal techniques which minimize the emphasis on verbal ability have been developed. The use of artistic techniques as an adjunct to psychotherapy resembles play in their symbolism, their intrinsic attraction, and the opportunity to provide for expression of feelings and ideas without direct verbalization (Robinson and Robinson, 1976). Likewise, talking in adult psychotherapy serves a purpose similar to playing, drawing and painting (Singh, 1972).

Kadis (1957) reported success in utilizing finger paints where a mentally retarded child expressed his problems along with his productions. Kadis points out that activities such as drawing and painting allow the patient to express his feelings about the world and himself in his own set of symbols at a level appropriate to his conceptual abilities. Kadis further emphasizes that these symbols become the patient's means of establishing contact and communication.

King (1954) discussed the use of drawing as an adjunct in psychotherapy with mentally retarded individuals. He particularly notes the importance and use of human figure drawings in psychotherapy. He discusses a case study in which he introduced the Draw-A-Person in the
second year of therapy with a 20-year-old male. The drawings, he reports, helped to bring out the patient's basic confusion regarding his sexual identity.

Projective techniques have been used to facilitate therapeutic communication. Abel (1953) elicited early traumata by repetitive use of figure drawing over a long period of time with a 16-year-old boy of borderline intellectual functioning. Abel (1953) presents examples of the use of T.A.T. pictures to evoke stories from three restless and destructive young adolescences with mild retardation.

Gordon and Levbarg (1958), in a study dealing with mentally retarded children, mention the use of art in gaining an understanding of feelings and problematic emotions. The drawings often pinpoint his confusion and difficulties, thus assisting the therapist in better understanding. Furthermore, the therapist by means of pictorial explanation can assist the client in his adjustment via graphic expression.

Stamatelo's and Mott (1982) present several case studies demonstrating the successful use of Habilitative Arts Therapy (H.A.T.) as a client centered approach which utilizes various art modalities to facilitate growth and development with mentally retarded individuals and to alleviate learned helplessness. According to these authors, while H.A.T. stimulates emotional material, as well as projection, it is not psychoanalytically oriented and hence differs significantly from traditional art therapy. Critical aspects of H.A.T. involve emphasis on a holistic approach with particular attention paid to social,
emotional, cognitive, psychological, behavioral, and environmental factors. A positive nurturing relationship with the therapist is also of great importance. Another critical aspect is the emphasis on decision-making and control by the clients. Of final importance is emphasis on the process which occurs rather than the product.

Five primary modalities are utilized within H.A.T., including: graphic arts (printing, sculpting, etc.); music, drama, creative writing (usually done through dictation), and movement/dance.

They discuss the value of art as the expression of significant and universal emotions through symbolic process. Furthermore, they suggest that because mentally retarded people may be limited in their ability to engage in such expression through other means, art modalities take on an increased significance as therapeutic endeavors.

Other Techniques

Sternlicht (1977) has described several novel techniques he has utilized in psychotherapy with mentally retarded clients. The techniques include the use of balloons as a tranquilizing agent, mirrors for self awareness, magic tricks for building ego support and confidence. He has also used audio-visual feedback using cameras, photograph and tape recorder to produce behavior change in mentally retarded individuals.
COGNITIVE THERAPY

Historically, cognitive therapy has a very rich background. This section will discuss this background as well as the current trends, research, and applications of cognitive therapy to the mentally retarded, and the treatment of maladaptive behavior.

Historically, philosophers, as well as psychologists, have warned against the danger of ascribing meaning to precepts without a rational data base. The writings of the Greek philosophers Aristotle, Socrates and Plato laid the ground work for the creative emergence of the rational concepts of cognitive psychological theory. According to Aristotle, man's natural perfection is more than exercising his animal and vegetative functions. It involves the exercise of those capacities and powers that are distinctly human. That is, intelligence, rationality, and understanding. Roman philosopher, Epictetus and his follower Marcus Arélius, also stressed the central importance of rational thought in achieving ultimate human satisfaction. Epictetus (Watson, 1978) stated over two-thousand years ago: "Men are disturbed not by things, but the views they take of them". In the seventeenth century, Decarte (Watson, 1976) argued philosophically with the famous quote "cognito sum est" (I think therefore I am). Cognitive philosophy can be found in the voices of Shakespear in Hamlet where he wrote: "Things are neither good nor bad but thinking makes it so." Spinoza (Watson, 1976) recalls a cognitive philosophy in his statement that things do not disturb him, save the effect they have on his mind.
The influence of cognitive philosophy can be seen in modern psychological history. As early as 1900, Freud referred to psychic structures as causal factors in human behavior. Alfred Adler (1933) stated "It is very obvious that we are influenced not by 'facts' but our interpretation of facts." Other therapists in this century have incorporated cognitive philosophies into their approaches, Dubois (1905), Coue' (1922), Low (1950), Kelly (1955), Phillips (1957), Frank (1961), Ellis (1962) Beck (1976), Meichenbaum (1977) Maulctsby (1971), and Lazarus (1972).

Rational Emotive Therapy is currently the most popular form of cognitive therapy (Ellis, 1977). Albert Ellis (1962, 1967) is the originator and founder of Rational Emotive Therapy (RET). The basic premise of rational emotive therapy is that most, if not all, emotional suffering and behavioral disturbances are due to early learning of irrational, non-objective and magical beliefs. These beliefs lead to self defeating internal dialogues or self-statements that exert an adverse effect on behavior. In Ellis' model, there are three basic components which he believes are essential in the development of emotions: A) the person's awareness of an event or situation in his environment; B) the person's specific thoughts, beliefs, or attitudes about the situation or event (A); C) the resulting emotional or affective response which the person experiences. In this model an event at A does not cause emotions at point C, but cognitions at point B do. Underlying every emotional state that interferes with normal life for more than a few moments is some irrational thought, attitude, or belief.
According to Ellis (1977) there exists certain irrational beliefs that are typical of most human beings in our culture. Included among them are the following: 1) I must be loved and approved by practically every significant person in my life and if I'm not it's awful; 2) I must not make errors or do poorly, and if I do it's terrible; 3) people and events should always be the way I want them to be; 4) my emotional unhappiness almost completely comes from pressures outside myself that I have little ability to change or control; and unless these pressures change, I can not help making myself feel anxious, depressed, self-depreciating or hostile; 5) my past life influences me tremendously and remains all important, because if something strongly affected me, it has to keep determining my feelings and behavior today; and 6) I desperately need others to rely and depend upon, because I shall always remain so weak.

Cognitive control over emotional states has been explored in several studies. An investigation by Velton (1968) studied the effect on mood change of self-statements read to subjects which were positive ("This is great ..... I really feel good"), neutral ("Ohio is the Buckeye State"), or negative ("I have too many bad things in my life"). A direct linear relationship between change in content of self-statement and the alteration of mood state was found. Newmark (1973) found that neurotics held more irrational beliefs than do normals. Goldfried and Sobocinski (1975) found that persons experiencing heightened anxiety also held more irrational thought content than individuals not experiencing such anxiety.
A number of studies have revealed that therapeutic cognitive training procedures which therapeutically attend to the client's self-verbalizations, as well as overt maladaptive behavior, has led to greater behavioral change, greater generalization and greater persistence of treatment effects. Behavior modification techniques have been applied to alter the self-verbalizations of such patients as phobics, schizophrenics, smokers, speech and test anxious S's as well as impulsive children (Meichenbaum, 1969, 1971; Meichenbaum, Gilmore and Fedoravicius, 1971; Steffy, Meichenbaum, and Best, 1970). In each of these therapy studies the goal has been to bring the subject's emotion and behavior under his own control by developing or altering the subject's self-statements.

While Ellis does not claim that RET is effective with all kinds of clients, specifically those lacking in intelligence, he does not specifically set exact limits. A number of studies have been conducted utilizing a cognitive therapy approach with children. Most therapists and practitioners recognize that psychotherapy as it is usually practiced must be modified to be effective with children. This is especially true of RET since its format is highly verbal and requires some degree of abstract conceptualization. DeVogue, 1977, informally compared one group of emotionally disturbed children who were systematically reinforced for rational thinking with a second group who were not reinforced and found that those receiving the rational emotive, operant treatment improved significantly whereas the other did not. Meichenbaum and Goodman (1971) demonstrated that they could change the "impulse" behavior of second graders by using behavioral principles of modeling, fading and reinforcement to establish appropriate self-statements. A
second study by Meichenbaum and Goodman (1971) utilizing cognitively impulsive kindergarten and first graders examined the different effects of self-instructional training and modeling procedures. It was found that cognitive modeling plus self-instruction was most effective in altering decision-time and reducing errors on several measures. Di-Giuseppe, 1977, describes a therapeutic program to alter the irrational thinking of emotionally disturbed children. He utilizes rational emotive therapy, behavior modification, role play, and social modeling.

A number of studies comparing results of cognitive therapy to other therapeutic approaches has shown that cognitive approaches are extremely effective and often superior to such alternative techniques.

An investigation by Ellis (1977) examined the effectiveness of cognitive therapy. In this study he compared the therapeutic results of a group with 78 individuals who received psychoanalysis against 78 individuals who received Rational Emotive Therapy (RET). Results indicated that the psychoanalytic group showed 63% improvement with a mean of 35 sessions, while the RET group showed 93% improvement with a mean of 26 sessions. Both groups were matched on significant variables. However, results may be confounded by researcher bias.

Maes and Heiman (1970) in another study compared the effectiveness of RET, client-centered therapy and Systematic Desensitization in the treatment of anxiety in high school students. Results indicated that systematic desensitization and RET significantly reduced emotional reactivity (as measured by heart rate and galvanic skin response) in a
testing situation. No such results were found for the client-centered or the control situation.

Tosi and Moleski (1976) investigated the efficacy of RET and Systematic Desensitization. They found that RET was more effective than Systematic Desensitization in reducing stuttering, anxiety, and negative attitudes toward stuttering. Systematic Desensitization was shown to be more effective in reducing stuttering than was the control group.

Smith and Glass (1977) conducted a meta-analysis of psychotherapy outcome studies. Their results concerning therapy effectiveness revealed the following:

1. Systematic Desensitization - the typical client was "better off" than 82% of untreated individuals.
2. Rational-Emotove Therapy - the typical client was "better off" than 78% of untreated individuals.
3) Adlerian Therapy - the typical client was "better off" than 76% of untreated individuals.
4) Client-Centered Therapy - the typical client was "better off" than 74% of untreated individuals.
5) Psychodynamic Therapy - the typical client was "better off" than 72% of untreated individuals.
6) Eclectic Therapy - the typical client was "better off" than 68% of untreated individuals.
7) Gestalt Therapy - the typical therapy client was "better off" than 60% of untreated individuals.
In a more recent meta-analysis of psychotherapy outcome studies, Smith and Glass (1980) found the following results of relative effectiveness between various psychotherapies:

1) Cognitive Therapies (other than Rational-Emotive)  
the typical client was "better off" than 99% of untreated individuals.

2) Hypnotherapy - the typical client was "better off"  
than 97% of untreated individuals.

3) Cognitive - Behavior Therapy - the typical client was  
"better off" than 87% of untreated individuals.

4) Systematic Desensitization - the typical therapy client  
was "better off" than 85% of untreated individuals.

5) Dynamic-Eclectic Therapy, Eclectic-Behavioral Therapy -  
the typical client was "better off" than 81% of the controls.

6) Behavior Modification - the typical client was "better off" than 77% of the controls.

7) Psychodynamic Therapy - the typical therapy client  
was "better off" than 75% of the controls.

Although cognitive therapies and hypnotherapy demonstrate better outcomes than all other therapeutic approaches, Smith and Glass, report that when confounding effects (i.e., the researcher's allegiance toward a therapeutic technique, internal validity, client solicitation, methods of outcome measurement, etc.) were controlled or corrected, meta-analysis results yielded no reliable differences. Essentially, Glass and
Smith tend to see all therapies as equal. Nevertheless, this does not rule out the possibility that cognitive therapies may still demonstrate overall superiority when using research procedures and instrumentations that are considered more appropriate by Glass and Smith.

**CONCEPTUAL MODEL FOR A COGNITIVE EXPERIENTIAL THERAPY**

Cognitive Experiential Therapy grew out of Rational Stage Directed Therapy which included cognitive restructuring. Rational Stage Directed Therapy (RSDT) is a psychotherapeutic technique developed by Tosi (1974) and Tosi and Marzella (1975) which emphasizes cognitive control over affective, physiological and behavioral processes. In this psychotherapeutic approach, Tosi expanded Ellis' ("ABC") model to include ("D and E") whereby "D" represents (physiological concomitants); and "E" (behavioral responses). In addition to the above expansion, Tosi's (1981) model includes various levels within each of the "A", "B", "C", "D", and "E", component. A second major feature of the Tosi (1981) model is the inclusion of developmental growth stages through which the cognitive restructure procedures proceed. The following section presents a detailed description and review of the literature concerning the cognitive experiential model.

The person and environmental model developed by Mooney (1963) is depicted in Figure 1. This model served as a basis for a similar model adapted by Tosi (1974, 1981) for use in explaining the cognitive experiential psychotherapeutic approach. In this model the person is represented by the broken circle as functioning within an open system.
FIGURE 1
PERSON AND ENVIRONMENT INTERACTION

A = SITUATIONAL CONDITIONS \( (a_1, a_2, a_3, a_4) \)

B = COGNITIVE FUNCTIONS \( (b_1, b_2, b_3, b_4) \)

C = AFFECTIVE RESPONSES \( (c_1, c_2, c_3, c_4) \)

D = PHYSIOLOGICAL RESPONSES \( (d_1, d_2, d_3, d_4) \)

E = BEHAVIORAL RESPONSES \( (e_1, e_2, e_3, e_4) \)
relative to the environment (labelled 'A'). The self consists of an elaborate set of operations including the following: (B) cognitive, (C) affective, (D) physiological, and (E) behavioral, which are relative to the social environment. People do, however, interact also with internal conditions relative to themselves (bodily reactions, sensations, and images). The person-environment interaction is a dynamic one.

According to Tosi's (1981) model, situational conditions (events within the person's environment) are designated as "A" with various sub-designations: "a", "a₂", "a₃", etc. A variety of related events or circumstances that contribute to an individual's psychological state at any given point in time make up these situational conditions.

A second set of operations functioning in this model are the cognitive set of operations designated by "B", and represent the individual's interpretations, appraisals or beliefs about situational conditions. "B" cognitions can include the following four sub-classifications: "b₁" (a judgement or belief about the situation); "b₂" (an appraisal of the individual response to a situation such as a thought, image, cognitive operation, emotion, physiological response,
or behavioral response); "b₃" (a personal self-evaluation within the context of this subsequence) and "b₄" (a set of learned and well integrated coping strategies displayed by the individual. Included among such coping strategies are: dissociation/association, denial, repression, distortion avoidance, etc. Table 1 explains this cognitive set "B" of operations.

A third set of operations within the model are the emotional reactions that occur within the individual as a result. These emotional conditions are represented by the classification "C" and sub-classifications of "c₁", "c₂", "c₃", etc. The various emotional responses occurring within the individual stimulus event ("A") and the person's cognitive evaluation. People rarely display a single emotion when they become emotionally upset. Generally, a full range of emotions such as anxiety, hostility, guilt, depression, and frustration may be experienced (Tosi, 1981).

During emotional arousal, (Tosi, 1981) there are physiological concomitants and resultants. These are classified as "D" in the cognitive experiential model. Examples of such physiological responses include increased heart rate, vasoconstriction, muscle tension, gastric secretions, elevated blood pressure, etc. The various physiological responses are represented in the model by the sub-classifications of "d₁", "d₂", "d₃", etc. According to Tosi (1981) the presence of such physiological responses may result in such medical complication as viral and infectious diseases and/or psychosomatic disorders.

Behavioral responses are operations represented by the classification "E" and the sub-classifications "e₁", "e₂", "e₃", etc. In the
TABLE 1

COGNITIVE SYMBOLIC OPERATIONS

B₁—Appraisal of Events
B₂—Appraisal of Response to Event
B₃—Generalized Appraisal of Self System
B₄—Cognitive-Symbolic Coping Strategies

1. Disassociation—Association
2. Appraisal of Response to Event
3. Denial—Regression—Suppression—Projection
4. Logical—Critical—Divergent Thinking
5. Imagining
6. Distortion
   a. Mislabelling
   b. Overgeneralizing
   c. Arbitrary Inference
   d. Magnification/Minimization
   e. Selective Abstraction
   f. Cognitive Polarization (Either-Or)
   g. Projection
7. Destructive/Constructive Behavioral Approach—Avoidance Options
8. Proliferation

(Tosi, 1981)
model at point "E", the cognitive affective physiological activities of the individual are translated into overt behavioral responses (Tosi, 1981). These actions impact the environment in some way or avoid the environment. The positive or negative consequences of this behavioral activity has implications for similar behavior reoccurring or not occurring in the future. Table 2 represents a summary of Tosi's (1981) experiential themes relative to the A, B, C, D, E operation of the model. Table 3 demonstrates an example of this model as it would be applied to a typical problem that might be encountered by an individual in a sheltered workshop environment.

**Table 2**

**EXPERIENTIAL THEMES**

A—Refers to an event or set of events \((a_1, a_2, a_3, a_4)\) occurring in the internal or external world of a person related to a present, past, or future time occurring along an awareness continuum.

B—Refers to a set of cognitive responses \((b_1, b_2, b_3, b_4)\) to an event or set of events \((a_1, a_2, a_3, a_4)\), internal or external, along an awareness and time continuum.

C—Refers to a related set of affective responses \((c_1, c_2, c_3, c_4)\) to B about A along an awareness and time continuum.

D—Refers to a set of physiological concomitants \((d_1, d_2, d_3, d_4)\) or resultants of C occurring along an awareness and time continuum.

E—Refers to a set of overt or covert actions or behavioral possibilities \((e_1, e_2, e_3, e_4)\) toward A occurring along an awareness and time continuum.

*(Tosi, 1981)*
### TABLE 3

**EXAMPLE OF THE ELABORATED ABCDE MODEL**

<table>
<thead>
<tr>
<th>A - Event</th>
<th>&quot;downtime&quot; - no work</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - Cognitive Responses</td>
<td></td>
</tr>
<tr>
<td>b₁ Betsy evaluates the situation with the thought: &quot;I can't stand to not have work and no money.&quot;</td>
<td></td>
</tr>
<tr>
<td>b₂ Betsy evaluates her responses to the situation of no work. &quot;There's nothing I can do about being here with no work.&quot;</td>
<td></td>
</tr>
<tr>
<td>b₃ Betsy evaluates herself with the thought: &quot;I am worthless - with noting to do and no money.&quot;</td>
<td></td>
</tr>
<tr>
<td>b₄ Betsy operationalizes her coping strategy with the thought: &quot;I wish I had something to do.&quot;</td>
<td></td>
</tr>
<tr>
<td>C - Affective Responses</td>
<td></td>
</tr>
<tr>
<td>c₁ Sad</td>
<td></td>
</tr>
<tr>
<td>c₂ Angry</td>
<td></td>
</tr>
<tr>
<td>c₃ Feeling of loss - a wasted day.</td>
<td></td>
</tr>
<tr>
<td>c₄ Anxiety</td>
<td></td>
</tr>
<tr>
<td>D - Physiological Responses</td>
<td></td>
</tr>
<tr>
<td>d₁ Complains about imaginary physical illness.</td>
<td></td>
</tr>
<tr>
<td>d₂ Pretends to be sick</td>
<td></td>
</tr>
<tr>
<td>E - Behavior Responses</td>
<td></td>
</tr>
<tr>
<td>e₁ Uses other's property without permission to.</td>
<td></td>
</tr>
<tr>
<td>e₂ Does not return things borrowed.</td>
<td></td>
</tr>
<tr>
<td>e₃ Turns radio up too loud.</td>
<td></td>
</tr>
<tr>
<td>e₄ Leaves place of required activity without permission.</td>
<td></td>
</tr>
<tr>
<td>e₅ Goes off by self to sleep.</td>
<td></td>
</tr>
<tr>
<td>e₆ Is absent from routine activities</td>
<td></td>
</tr>
</tbody>
</table>
According to the Cognitive experiential model, cognitive restructuring skills are developed, implemented, reinforced while the client is in a state of hypnotic relaxation. An imagery-hypnotic modality serves to amplify the cognitive-restructuring process, permitting intensification of a person's experience in psychotherapy (Tosi, 1981). While in a hypnotic state the individual employs imagery to focus upon negative cognitive, emotional, physiological sequences and subjectively upon more positive sequences relative to more rational or realistic cognitions associated with more adaptive behavior.

Cognitive-experiential therapy is structured within the framework of developmental growth stage. These stages of experience originated in the works of Mooney (1963) and Quaranta (1971). Quaranta identified the following six stages in career development: awareness, exploration, commitment, skill development and refinement, and redirection of career change. Tosi (1974), Tosi and Marzella (1975), and Tosi (1981), modified and redefined these stages for use in their Rational Stage Directed Therapy (RSDT) approach. Tosi (1981) maintained the first three stages and substituted three different stages for the last three. These stages provide a means by which the client and therapist mark progress in therapy as well as balancing it by similar experience in the concrete work outside of therapy. Whatever growth experiences occur within the therapeutic content, need to be translated via concrete action to meaningful situations outside of therapy (Tosi, 1974). A paraphrased discussion of the stages, according to Tosi (1981) follows:
Awareness

During this first stage of the psychotherapeutic process, the individual becomes aware of new possibilities for growth. The person learns to discriminate between adaptive and maladaptive patterns of thinking, feeling, and behaving. This awareness involves witnessing, observing and discriminating (Passive Reflective Awareness) as well as actively participating in one's innermost thoughts, feelings, psychological behavior, and interpersonal functioning (Active-Subjective Awareness). The therapist assists the client in redirecting the focus of attention to new facts and information about the self and the behavior change process; in examining the relationship among the cognitive, affective, physiological, behavioral and social processes, and in considering new goals and directions.

Exploration

During this stage of experience the individual experimentally tests out the new ideas learned through therapy in real life situations through employing both cognitive and behavioral operations. The therapist guides the client through the cognitive restructuring process relative to the individual's subjective experiencing of a variety of emotional, physiological, behavioral, and social outcomes. Hypnosis and imagery facilitate this exploration process. However, exploration is eventually utilized in relationship to real life situations. Resistance to therapy may occur during this stage of
therapy as evidenced by missed appointments, premature flights into health, exaggerated symptoms, denial, failure to comply with homework, and premature termination. Continued self-exploration can lead to a realization that therapy can be an opportunity for personal development and meaningful change, although hard work is involved.

**Commitment**

The third stage of the therapeutic experience involved the individual's decision to implement more reasonable thinking and behaving against the cost and rewards of conformity and irrationality. Commitment evolves out of a growing self-awareness and self exploration. As the individual commits himself to the process of constructive and rational modes of thinking and acting with full consideration of feelings, values, and behavior, his decisions are empirically validated through actions in the real world. This leads to realizing higher levels of motivation that are realized in the next stage via the implementation of responsible action in the environment.

**Implementation**

During this fourth stage, the client displays the behavioral manifestation of commitment through the deliberate and constructive use of the cognitive/behavioral skills developed in earlier stages. The client utilizes behaviors which they have already learned in therapy on a more consistent basis. Desirable social and self-reinforcing consequences tend to increase further participation
in therapeutic learning both within the therapeutic relationship and in real life situations. The therapist must take an active and encouraging role to overcome any resistance to assure that the same behaviors occurring in the imagination are occurring in real life situations.

**Internalization**

An integration of more constructive thoughts, feelings, bodily responses and behaviors into the self-system characterizes this fifth stage. As the individual internalizes more rational thinking about the self and the environment, they become an integrated part of the self-system. The processes of more constructive thinking, feeling and behaving begin to operate together in a synchronized manner as they become natural to the organism. With each new experience, the self evolves and expands deriving a sense of well-being from the new realistic appraisals and evaluations of concrete and creative actions and experiences associated with greater mastery of the self and the environment.

**Behavioral Stabilization**

Behavioral changes realized through the preceding stages become evidenced as more frequent, resistive to extinction and more permanent in this final stage. Meaningful learning has been achieved and integrated by the individual. Behavioral changes are more easily observed by the person and significant others as well. Therapy may terminate at this point or the client may wish to work through other
personal and unsolved issues by redirecting themselves through the six stages.

Three different types of stage directed therapies have been developed and empirically investigated (Howard, 1979). These include the following:

1) **Rational Stage Directed Therapy** - Cognitive skills are developed within the stage directed framework, but all therapy is conducted during the normal waking state.

2) **Rational Stage Directed Imagery** - The development of cognitive skills, within the stage directed framework, is enhanced by imagery and rational procedures (progressive muscle relaxation, medication, or simple imagining a scene, with eyes closed, within a non-distracting atmosphere.

3) **Rational Stage Directed Hypnotherapy** - Hypnosis and hypnotic imagery is used to facilitate the cognitive behavioral restructuring process. Furthermore, during hypnosis the individual is directed through stages, thus increasing the experiential quality of the therapy.

Several research studies have been conducted supporting the results of the effectiveness of Rational Stage Directed approaches with a variety of emotional disturbances. In a well-controlled study, Marzella (1975) found that conditional support for Rational Stage Directed Hypnotherapy (RSDH), Rational Stage Directed Imagery (RSDI), and hypnosis
groups in the reduction of psychological stress.

A study examining the effectiveness of RSDH on the reduction of test anxiety in nursing students was conducted by Reardon and Tosi (1981). RSDH was compared with a hypnosis only group, in a placebo group and a control condition. It was found that RSDH proved to be the most effective treatment in the reduction of test anxiety. Hypnosis only, also demonstrated significant results, although not as great as for RSDH. A two month follow-up revealed that the RSDH group had experienced still further decreases in test anxiety, while levels of anxiety in the hypnosis only group, the placebo group and the control group remained the same as they did at the time of post-test I. This finding suggests that clients who receive RSDH were able to further integrate the treatment procedure and continue to utilize the information they had learned.

Reardon and Tosi (1981) investigated the effectiveness of Rational Stage Directed Imagery (RSDI) and Rational Stage Directed Therapy (RSDT) on the modification of self-concept and physiological stress with delinquent adolescent females. In this study, RSDT utilized imagery techniques similar to those discussed by Maultsby (1971). The RSDI treatment incorporated an elaborate cognitive relaxation procedure in addition to the imagery. An intercomparison of RSDI, RSDT, a placebo group and a control group revealed that RSDI demonstrated significant positive changes in overall levels of anxiety. The RSDI treatment group demonstrated further improvement at the two-month follow-up, while the other groups showed minimal directional changes.
The results of this study tend to support the findings of Boutin (1976), and Boutin and Tosi (1981) that the client integrates the treatment procedure and information while continuing to employ learned techniques for continued improvement after therapy.

Howard (1979) conducted a study on the effectiveness of Rational Stage Directed Hypnotherapy (RSDH) on the modification of neuro-muscular performance, the facilitation of muscular growth, the reduction of anxiety, and the enhancement of self-concept with 32 male volunteers who were members of the Ohio State Barbell Club. In addition to RSDH, Howard also employed a cognitive restructuring (CR) and a hypnosis (HO) treatment group. Results showed that RSDH was significantly effective on all dependent measures. RSDH subjects continued to show significant improvement on two of the dependent measures.

In another study, Tosi and Eshbaugh (1981) report success using RSDT crisis intervention with a client displaying symptoms of depression, maladaptive hyperactivity, and interpersonal hostility.

A study was conducted by Fuller (1982) on the effects of Rational Stage Directed Hypnotherapy (RSDH) in the treatment of self-concept and depression in a geriatric nursing home population. Results indicated RSDH and hypnosis showed significant changes in the enhancement of self-concept and the reduction of depression in a geriatric population.

A number of case studies have further demonstrated the effectiveness of RSDH and the treatment of various disorders. These case studies are as follows:
A case study was compiled by Tosi, Fuller and Gwynne (1980) employing RSDH in the treatment of learning anxiety in a child diagnosed as hyperactive and learning disabled. RSDH was successful in this study in helping the child reduce anxiety in the learning situation and focus attention on the learning task. These results indicated that RSDH appeared to have a positive effect in helping the child increase academic achievement in the area of reading.

Tosi, Howard and Gwynne, (1981) reported that RSDH appeared to be effective in treating anxiety neurosis with an individual of borderline intellectual functioning. They further stated that RSDH appeared to positively effect symptoms at all levels (cognitive, emotional, physiological, and behavioral). This showed a cognitively based therapy to be effective with an individual of a somewhat lower intellectual capacity (measured IQ of 88).

Tosi and Howard (1982) report the use of Rational Stage Directed Techniques in the treatment of assertiveness with borderline intellectual abilities. They found RSDI and behavior rehearsal effective in the treatment of assertiveness with a 19-year-old male having a measured intelligence of 85. This case study again demonstrated the success of a cognitively based psychotherapeutic approach with a client of borderline intellectual abilities.

Gwynne, Tosi and Howard (1978) reported the effectiveness of RSDH in the treatment of psychological non-assertiveness with a 22-year-old female client enrolled in a work rehabilitation program administered by Goodwill Industries. The investigators state in discussing their
results that many non-assertive individuals cognitively doubt their abilities to perform. This self-doubting leads to poor performance and reinforcement of the individual's low self opinion.

Reardon, Tosi and Gwynne (1977) report a final case study reviewed in the literature. They found positive results in the treatment of depression with an individual who demonstrated schizophrenic ideation and an affective disturbance. The investigators reported that RSDH considerably diminished the client's anxiety and enhanced his awareness and perhaps got past the intensity of his disturbance. This client further utilized RSDH techniques to modify both his behavior and self-perception.

Smith and Glass (1980) offer further but qualified support concerning the effectiveness of RSDH. From a meta-analysis of therapy approaches, prior to controlling or correcting for confounded effects, the higher than average effect size was produced by the cognitive therapies, other than, but similar to, Ellis' Rational-Emotive Psychotherapy. Therapies falling into this highly effective group include: Systematic Rational Restructuring, Rational Stage Directed Therapy, Cognitive Rehearsal and Fixed Role Therapy.

An examination of the above literature suggests the possibility that the use of a cognitive therapy similar to RSDH might prove effective in the treatment of socially maladaptive behavior with deinstitutionalized adults with mild and moderate mental retardation.
COGNITIVE THERAPY AND MALADAPTIVE BEHAVIOR

When using behavior or cognitive therapy to deal with maladaptive behavior the assumption is made that the individual has acquired the inappropriate behavior patterns that can be changed. Insight into the original symptom is not a necessary pre-condition for this change to occur (Beck, 1970). Where behavior therapy focuses primarily upon overt behavior change, cognitive therapy concentrates on ideational content involved in maladaptive behavior (Beck, 1970; Meichenbaum, 1974). Meichenbaum criticizes traditional behavior therapies for over-emphasizing the importance of environmental consequences and often overlooking the way in which the individual perceives and evaluates those consequences. Meichenbaum holds that a number of behavior therapy techniques can incorporate the individual's self-statements which precede, accompany, and follow environmental events, thus broaden the response. Meichenbaum, like Ellis, hold that the individual's cognitions or self-statements which are part of the maladaptive response chain are of primary importance in the effort to modify behavior.

The cognitive behavioral approach has been used with a wide variety of socially maladaptive behavior patterns. The cognitive behavioral paradigm has been used successfully to establish inner speech control over the disruptive behavior of hyperactive children (Douglas, Parry, Marton and Garson, 1976) and disruptive preschoolers (Bornstein and Quevillon, 1976). Williams and Singh (1976) used hypnosis with children with a variety of problems including behavior disorders. Hypnotic relaxations were used to increase self-control in a manner similar to procedures used by cognitively oriented behavior therapists.
Kneedler (1980) has reviewed several studies in which cognitive behavioral interventions have been used to modify socially maladaptive behavior in nonretarded children.

Camp Bloom, Herber and VanDoorninek (1977) developed a "think aloud" training program to improve self-control in twelve 8-9 year-old aggressive boys. For six weeks, daily thirty minute sessions were conducted involving modeling and verbalization of a cognitive activity in order to promote the use of verbal mediation skills in dealing with both cognitive tasks and interpersonal problems. Control groups of normal and aggressive children received no treatment. Analysis of results that teachers rated both groups of aggressive boys as decreasing in aggressive behavior, but they rated the treatment group as showing improvement on a significantly greater number of prosocial behaviors as measured by Miller's School Behavior Checklist. It is noteworthy that prior to treatment, the treatment group's cognitive test performance resembled that of the aggressive control group, but differed from that of the normal control group. Following treatment, however, the treatment group's pattern resembled the normal control group and differed from the aggressive control group.

The research in early 1970's on children having self-control problems suggested that mediational deficits play a central role in their disturbances (Meichenbaum, 1980). Children with self-control problems rather than being viewed as intrinsically impulsive were viewed as impulsive because "they do not know how to or do not have the tendency to deal effectively with task demands (Meichenbaum, 1980). Their disruptiveness was seen primarily as a result of deficits in cognitive strategies. Virginia Douglas (1972) concluded that impulsive children
fail to "stop, look and listen." More recent research by Douglas and Peters (in press) further support the role of mediational (or in contemporary terminology, a meta-cognitive deficit) in such impulsive children. The investigators of various child populations have suggested that defective meta-processes or deficits in executive cognitive skills contribute to poor performance in learning disability children (McLeaskey, Reith, Polsgove, 1980; Torgesen, 1977) and mentally retarded children (Borkowski and Cavanaugh, 1978).

COGNITIVE APPROACHES WITH THE MENTALLY RETARDED

The development of cognitively-oriented training programs or therapeutic approaches with mentally retarded adults and/or children has been very limited. The following section will provide a review of cognitively-oriented approaches used with persons with mental retardation. In the area of Problem Solving Therapies, Ross and Ross (1973) developed a problem solving program for primary level EMR children. The researchers felt that it was important for the EMR child to have opportunities for active participation in a group as well as for observation to facilitate verbal mediational processes necessary for generalization (Ross, 1971; Ross and Ross, 1971).

A similar program was carried further in a more recent study by Ross and Ross (1978) where young EMR students were trained to evaluate several alternatives and decide upon the best one. Training consisted of small group discussions of familiar social problems. The Yeshiva Social Learning Curriculum (Goldstein, 1969) focuses upon developing problem solving skills in social situations. It was developed for use
with EMR children and has been used with TMR children and adolescents in the Franklin County Board of Mental Retardation and Developmental Disabilities training programs.

Recognition of problems when they occur has special implications for the mentally retarded regarding their problems in social perception as measured by the Test of Social Inferences (Edmonson, deJung, Leland and Leach, 1974). Although the retarded individual may be able to label elements in a situation, he may have difficulty seeing the implication of the situation which constitutes a problem.

Guralnick (1971) used methods developed for "impulsive" children by Meichenbaum and Goodman (1971) with EMR children to solve complex perceptual discriminating problems. This method involved developing cognitive self-guiding private speech in the individual. The children told themselves to "stop" and "think" and then go through the problem solving techniques. The training involved having them do it overtly and later covertly. Guralnick found the procedure to be both feasible and effective with EMR children and suggested its application to both learning and behavioral problems.

Because the persons with mental retardation often have poor social perceptual skills, the inductive method presented in the Yeshiva Social Learning Curriculum (Goldstein, 1969) as well as the Social Perceptual Training (Edmonson, Leach, Leland, 1970) seem to be important tools in helping the persons with mental retardation identify and define a problematic situation.
Pinkerton (1978) conducted a study evaluating the effectiveness of a personal problem solving training program for 38 moderately and mildly retarded adults on their self-esteem, adapting behavior, and ability to generate alternative solutions. Her work was based upon the work of D'Zurilla and Goldfried. Results indicated that the treatment group was able to generate significantly more alternative solutions to problematic situations than the control group. Significant gains were made in Vocational Activity on Part I of the Adaptive Behavior Scales in comparison to the control group. Both the control and treatment groups show a significant decrease on Anti-social, Rebellious, and Untrustworthy Behavior as well as Psychological Disturbances. In addition to the decrease in socially maladaptive behavior made by all groups, there was a significant decrease in psychological disturbances for the treatment group.

Bott (1979) conducted a study investigating the Use of Verbal Discussion, Relaxation and combined treatment techniques on the expression of aggression with 30 mildly and moderately retarded adults. Her study was based upon Meichenbaum's cognitive behavioral approach. Aggressive behavior was measured by the Adaptive Behavior Scale, Part II Domains of Violent and Destructive Behavior, Antisocial Behavior, and Rebellious Behavior. Results indicated that although there was reduction in aggressive behavior for all treatment groups, the combined treatment (relaxation, discussion) group achieved the most significant reductions in maladaptive behavior scores.
CHAPTER III

METHODOLOGY

This chapter addresses the research methodology used. To facilitate this process, this chapter is organized in the following manner:
1) selection of subjects, 2) description of the sample, 3) selection of instruments, 4) research design, 5) statistical analysis techniques, and 6) procedures including: a) pretreatment procedure, b) treatment therapists, c) treatment, and d) post-treatment procedures.

SELECTION OF SUBJECTS

Subjects were selected from all employees in the Franklin County Board of Mental Retardation and Developmental Disabilities, Ohio, ARC Industries, who were both male and female, mildly and moderately retarded (measured intelligence (MI) Level I, IQ range 55-69 or Level II, IQ range 40-54, eighteen years of age or older, with a history of previous institutionalization, without gross visual, hearing or speech impairment, currently living within a group home, community based residential facility or with family for at least one year, with scores at or above the 80th percentile on at least two of the Part II A.B.S. Domains of: I. Violent & Destructive Behavior II. Antisocial Behavior, III. Rebellious Behavior, IV. Untrustworthy Behavior, XIII. Psychological Disturbance

A total of 35 individuals was found fitting the above description. However, some individuals had to be excluded from the study.
Eleven individuals were already known to be involved in individual psychotherapy. Two individuals were placed in jail and were awaiting court hearings at the time of pre-testing. Two individuals were excluded because of extremely poor attendance records. Consequently, out of a total population of thirty-five possible subjects, twenty persons were available to participate in the study. All twenty agreed to participate in the study.

Although twenty persons originally participated in the study, sixteen completed the actual study. Four persons dropped out of the study. It was found that one person was already being seen privately in individual psychotherapy. One person moved suddenly and withdrew from the workshop. Another person was placed on a new medication and was experiencing extreme adjustment problems. The fourth person refused to come to therapy after the third session, stating that he wanted to work instead.

For the final analysis there was a total of sixteen subjects, six with moderate mental retardation and ten with mild mental retardation. Nine subjects were male and seven were female. Six subjects were involved in treatment A (Cognitive Therapy with Drawings), seven in treatment B (Conversation) and three in the no treatment Waiting List Condition. Table 4 presents a demographic description of all subjects participating in the study by age, sex, level of intellectual functioning, number of years institutionalized, mean maladaptive score, medication, and assignment to treatment.
TABLE 4

SUMMARY OF DEMOGRAPHIC DATA FOR SUBJECTS IN THE ORIGINAL SAMPLE, FINAL STUDY, AND THOSE WHO DROPPED OUT, BY LEVEL OF INTELLECTUAL FUNCTION, MEAN AGE, SEX, MEDICATION, MEAN NUMBER OF YEARS INSTITUTIONALIZED AND DEINSTITUTIONALIZED AND MEAN MALADAPTIVE SCORES.

<table>
<thead>
<tr>
<th></th>
<th>Original Sample</th>
<th>Final Study</th>
<th>Subjects Drop-out</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N)</td>
<td>20</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Level of Intellectual Functioning:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild (Level I)</td>
<td>11</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Moderate (Level II)</td>
<td>9</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>X Age</td>
<td>41.62</td>
<td>45.63</td>
<td>21.57</td>
</tr>
<tr>
<td>Sex:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Medication:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>X No. Years Institutionalized:</td>
<td>25.18</td>
<td>28.52</td>
<td>8.51</td>
</tr>
<tr>
<td>X No. Years Deinstitutionalized:</td>
<td>4.33</td>
<td>3.99</td>
<td>4.01</td>
</tr>
<tr>
<td>X Maladaptive Score</td>
<td>3.16</td>
<td>3.12</td>
<td>3.25</td>
</tr>
</tbody>
</table>

Because it was not possible for therapists to travel to the various shops to see individuals, or for subjects to be transported to other shops, assignment to treatment groups had to be done within the four ARC Industries locations. Subjects were assigned to treatment as much as possible without bias. Four therapists at four different locations saw subjects within their respective shops. Consequently, the proportions of males and females, and mild and moderately retarded individuals seen by each therapist was not consistent.
DESCRIPTION OF SUBJECTS

One-way analyses of variance test were performed on pre-test data to examine possible differences between group means. Significant (i.e., $P < .05$) differences are reported in Tables 4-7.

Analyses were performed to examine the following variables: age, sex, level of intellectual functioning, assignment to treatment group, assignment to therapist, and medication. In order to reduce the number of significant tests performed in the nine domains of Part I of the Adaptive Behavior Scale (ABS) were combined into four categories as described by Leland, Shoae, Vayda, 1975. Specifically, Personal Independence includes the domains of Independent Functioning and Domestic Activity; the Cognitive Triad includes the domains of Economic Activity, Language Development, and Numbers and Time; Personal Motivation includes the Self-Direction and Vocational Activity domains; and finally the Social Motivation measure comprises the domains of Socialization and Responsibility. Five domains related to social maladaptation were analyzed on Part II of the ABS. These include: Violent and Destructive Behavior, Antosocial Behavior, Rebellious Behavior, Untrustworthy Behavior, and Psychological Disturbance.

Relationships between age and several other variables were examined. It was found that there were no significant relationships except with years institutionalized. The subjects over 50 years old ($\bar{X} = 37.13$) were institutionalized for a significantly longer period of time than subjects age 30-49 years old ($\bar{X} = 21.00$) and subjects 19-29 years old ($\bar{X} = 8.60$). Table 5 summarizes these differences.
TABLE 5
SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN GROUPS BY AGE

<table>
<thead>
<tr>
<th></th>
<th>18-29 Yrs.</th>
<th>30-49 Yrs.</th>
<th>50+ Yrs.</th>
<th>ANOVA F Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \bar{X} ) Years</td>
<td>8.60</td>
<td>21.00</td>
<td>37.00</td>
<td>17.25, ( p &lt; .001 )</td>
</tr>
<tr>
<td>Institutionalized</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The only variable which was significantly related to sex was mean psychological disturbance. It was found that females (\( \bar{X} = 89.50 \)) were significantly more disturbed than males (\( \bar{X} = 65.42 \)). Table 6 summarizes these differences.

TABLE 6
SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN GROUPS BY SEX

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
<th>ANOVA F-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Disturbance</td>
<td>65.41</td>
<td>89.50</td>
<td>4.66, ( p &lt; .05 )</td>
</tr>
</tbody>
</table>

When relationships between groups were analyzed regarding level of intellectual functioning, two areas of adaptive behavior revealed significant differences (functional independence, and social responsibility). Mildly retarded (Level I) subjects had significantly higher mean scores in functional independence (\( \bar{X} = 151.03 \)) than did moderately retarded (Level II) subjects (\( \bar{X} = 11.89 \)). Similarly social motivation scores were significantly higher for the mildly retarded (Level I) subjects (\( \bar{X} = 110.67 \)). Table 7 summarizes these differences.
TABLE 7
SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN GROUPS BY LEVEL OF INTELLECTUAL FUNCTIONING

<table>
<thead>
<tr>
<th></th>
<th>Mild Retardation (Level I)</th>
<th>Moderate Retardation (Level II)</th>
<th>ANOVA F-Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Independence $\bar{X}$</td>
<td>151.03</td>
<td>111.88</td>
<td>6.73 p &lt; .02</td>
</tr>
<tr>
<td>Social Motivation $\bar{X}$</td>
<td>145.82</td>
<td>110.67</td>
<td>4.36 p &lt; .05</td>
</tr>
</tbody>
</table>

Analysis of differences between groups regarding assignment to therapists revealed that there were no significant differences, except in the domain of functional independence. It was found that subjects assigned to the third therapist had significantly lower functional independence scores ($\bar{X} = 79.00$) than subjects assigned to Therapist (1), ($\bar{X} = 161.20$); Therapist (2), ($\bar{X} = 146.30$); therapist (4), ($\bar{X} = 136.75$); or in the Waiting List group, ($\bar{X} = 140.00$). Table 8 summarizes these differences.
When differences between groups were examined regarding the use of medication, no significant differences were found except in the areas of Social Motivation and Rebellious Behavior. Subjects not taking medication had significantly higher scores for Social Motivation ($\overline{X} = 155.00$) than subjects taking medication ($\overline{X} = 116.54$). Subjects not taking medication had significantly higher score on the Rebellious Behavior domain ($\overline{X} = 86.76$) than subjects not taking medication ($\overline{X} = 50.57$). Table 9 presents these differences.

<table>
<thead>
<tr>
<th>Social Motivation</th>
<th>Medication</th>
<th>No Medication</th>
<th>ANOVA F-Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\overline{X}$</td>
<td>116.54</td>
<td>155.0</td>
<td>4.92 $p &lt; .05$</td>
</tr>
<tr>
<td>Rebellious Behavior</td>
<td>86.76</td>
<td>50.57</td>
<td>7.35 $p &lt; .05$</td>
</tr>
</tbody>
</table>

Analysis of differences between subjects by assignment to treatment group revealed that there were no significant difference.
SUMMARY AND DISCUSSION OF DEMOGRAPHIC DATA

Analyses of variance were performed on pre-test data to examine between group means which were assumed to be equal. The following significant differences were revealed.

First, subjects in the age group 50+ years old had been institutionalized significantly longer than younger subjects in the age group 30-49 and 18-29. This would reflect current deinstitutionalization practices, which did not occur to any extent until recently. Second, females were found to have significantly higher psychological disturbance scores than males. Third, mildly retarded (Level I) subjects had significantly higher scores than moderately retarded (Level II) subjects in the categories of functional independence and social motivation. Fourth, subjects assigned to Therapist 3 were significantly lower in functional independence than subjects assigned to the other therapists or the Waiting List Group. There were no other differences between subjects regarding assignment to treatment groups. Fifth, subjects not taking medication had significantly higher scores in the area of social motivation than subjects taking medication. Subjects taking medication had higher scores in the domain of Rebellious Behavior than did subjects not taking medication. Finally, no significant differences were found between subjects by assignment to treatment group.
SELECTION OF INSTRUMENTS

The American Association of Mental Deficiency Adaptive Behavior Scale (ABS): Nihira, Foster, Shellhaas, 1975

Part I of the ABS contains ten domains organized developmentally as important to the behavioral factors of independent functioning and personal responsibility (Leland, Shoae, and Vayda, 1975b). The following Part I domains are used in the present study: Independent Functioning, Economic Activity, Language Development, Numbers & Time, Domestic Activity, Vocational Activity, Self-Direction, Responsibility, and Socialization.

Part II comprises thirteen domains related to personality and behavior disorders that are personally and socially maladaptive (Nihira, 1969). Social maladaptation is demonstrated by extra-punitive, aggressive, or conduct-deviant behaviors. The five Part II domains and related subdomains used to measure social maladaptation in this study are as follows:

Domain I: Violent & Destructive Behavior
1. Threatens or Does Physical Violence
2. Damages Personal Property
3. Damages Others' Property
4. Damages Public Property
5. Has Violent Temper, or Temper Tantrums

Domain II: Antisocial Behavior
1. Teases or Gossips About Others
2. Bosses and Manipulates Others
3. Disrupts Others' Activities
4. Is Inconsiderate of Others
5. Shows Disrespect for Others' Property
6. Uses Angry Language

Domain III: Rebellious Behavior
1. Ignores Regulations & Regular Routines
2. Resists Following Instructions, Requests or Orders
3. Has an Impudent Rebellious Attitude Towards Authority
4. Is absent or Late for the Proper Assignments or Places
5. Runs Away or Attempts to Run Away
6. Misbehaves in Group Settings

Domain IV: Untrustworthy Behavior
1. Takes Others' Property Without Permission
2. Lies or Cheats

Domain XIII: Psychological Disturbance
1. Tends to Overestimate Own Abilities
2. Reacts Poorly to Criticism
3. Reacts Poorly to Frustration
4. Demands Excessive Attention or Praise
5. Seems to Feel Persecuted
6. Has Hypochondriacal Tendencies
7. Has Other Signs of Emotional Instabilities

Studies reported in the ABS Manual (Nihira, et. al., 1975) indicate the inter-rater reliabilities for Part I ranged from .93 to
.71 ($\bar{X} = .86$). The reliabilities for Part II domains ranged from .77 to .37 ($\bar{X} = .57$).

**RESEARCH DESIGN**

A $3 \times 3$ factorial design was employed with one between-subjects factor and one within-subject factor. This model is shown in Figure 8. All subjects were assigned to one of three treatments. An attempt at random assignment was completed with the previously mentioned limitations. By meeting individually with the therapists, subjects were treated according to guidelines presented in Manual for Therapists, Treatment A and Treatment B (see Appendices B and C). Subjects in the Waiting List group received no treatment. All subjects and therapists were unaware of the hypotheses posed for the study.

All subjects were evaluated at pre-test, post-test I, and post-test II. The pre-test was given two weeks before the beginning of treatment and post-test I was given upon completion of treatment. One month following the last therapy session, Post-test II was administered. Waiting List subjects were evaluated two weeks prior to the beginning of the study. Post-test I was given six weeks after the study began, and post-test II was given one month later.
STATISTICAL ANALYSIS TECHNIQUES

A two-way analysis of variance with one repeated measure was performed on each of the nine dependent measures in order to determine whether the three treatments were different in their effect on adaptive behavior and social maladaptation.

Post hoc comparisons using the Waller-Duncan Bayes Exact Test were performed among the appropriate means when the F's from the analyses of variance were significant at the .05 level.

Pretreatment

Data regarding history of institutionalization and deinstitutionalization, level of intellectual functioning, age and sex, was gathered from the files. Interviews with prospective subjects by the researcher and review of Individual Habilitation Plans (IHP's) revealed the absence of gross speech, hearing or visual impairments or current involvement in ongoing psychotherapy which would eliminate them from the study. Permission was obtained from prospective subjects to interview their instructors in order to obtain ABS data.
Two individuals familiar with the Adaptive Behavior Scale were trained by the researcher to interview the Instructors and/or significant others in the subjects' environment to obtain ABS data on pre- and post-test data. These trained interviewers were individuals not otherwise involved with the subjects. Inter-rater reliability was established by training the interviewers to a criterion level of .99.

Within each of the four ARC Industry locations, subjects participating in the study were to be randomly assigned to one of the three treatments: Treatment A, Cognitive Therapy with Drawings, or Treatment B, Conversation, or a Waiting List. At three of the four locations there were only enough subjects available who met the requirements of the study to fill the treatment groups. At the fourth location there were enough subjects to assign subjects to the two treatments as well as a Waiting List group receiving no treatment at all.

**TREATMENT**

**Therapists**

Four psychology staff members from the Franklin County Board of Mental Retardation and Developmental Disabilities with at least one year of supervised experience in individual psychotherapy and counseling with persons with mental retardation and developmental disabilities served as therapists for treatment groups A and B. In addition, they had to have knowledge and experience in the interpretation of projective drawings and
Cognitive and Rational Emotive Therapies. These therapists were given an inservice to explain procedures outlined in Appendices B and C, "Manual for Cognitive Therapy with Drawings," and "Manual for Conversation."

All therapists met with subjects from both treatment groups. The study ran for a six-week period. During the six weeks, each therapist saw subjects in both treatment groups A and B. Each therapist met with subjects twice weekly for 40-50 minutes per session during the six-week period. The therapists were told that subjects had been referred for socially maladaptive behavior. If a subject were absent, the treatment session was rescheduled. The sessions were conducted in designated "therapy rooms" separate from the work areas. Therapists were asked to tape record the conversation treatment for the first, fifth, and eleventh session. They were also asked to tape and make copies of the drawings for the cognitive therapy with drawing treatment for the same sessions. These were reviewed by the therapist and a licensed psychologist with feedback given to each therapist.

Treatment

Cognitive therapy with drawings, Treatment A, consisted of bi-weekly individual sessions. After establishing initial rapport with the subjects, the therapist elicited from him a discussion of problematic situations presented by the subject himself. The client was oriented to the basic concepts of Rational Emotive Therapy using client drawings and an A-B-C-D cognitive restructuring paradigm. This was ac-
complished by giving the client a 5½" x 8½" sheet of paper and asking him to draw the previously identified problematic situation (A) associated with emotional upset or socially maladaptive behavior. Giving the subject another sheet of paper, the subject was asked to draw: How he felt, (C); What he did, (D); and What he was saying to himself, (B). Each of these responses was discussed with the subject bringing them into the subject's awareness. They are arranged in a picture arrangement fashion according to the A-B-C-D paradigm. Alternative self-messages (B₂) and behavioral (D₂) responses were explored in relation to the problematic situation. Each time new self-messages were explored, the subject was instructed to draw on a 5½" x 8½" sheet of paper: himself talking (B₂), how this would make him feel (C₂), and what he would do or how he would act (D₂). The therapist reinforced the more adaptive rational sequence. The series of drawings were saved for review as a record of the session. Subjects were assigned in-vivo behavioral tasks at the end of some sessions and instructed to practice more adaptive self-messages and behaviors in problematic situations as homework. The techniques of modeling and role play were used to expand the subject's repertoire of behavior responses. Each session followed a similar format. (See Appendix B, "Manual for Cognitive Therapy with Drawings.").

Group B: The discussion groups are held bi-weekly. They consist of non-directive or free-flowing conversations about anything a subject wanted to talk about except problems of a personal or social nature. Although a problem might be acknowledged, no further exploration
or problem-solving would be pursued. Subjects could also select or bring in materials for conversation (See Appendix C "Manual for Conversation").

The Waiting List group, Group C, consisted of a list of clients from the randomly selected sample that were not assigned to Group A or B and who would not be given any treatment until the conclusion of the study, at which time treatment and/or programming would be made available.

Post-treatment

Within one week after the completion of the last session, the two trained interviewers conducted post-treatment I interviews with each subject's Instructor and/or significant other using the Adaptive Behavior Scale. Four weeks after the Post-treatment I interview was conducted, a Post-treatment II interview was conducted using the Adaptive Behavior Scale. Interviewing was scheduled in such a manner that a subject's Instructor and/or significant other in his environment was never interviewed twice consecutively by the same interviewer. Rather an Instructor who was interviewed once by one interviewer was interviewed the next time by the other interviewer. Each therapist submitted a brief one-page treatment report. A licensed psychologist reviewed and signed reports, and they were forwarded to the appropriate Rehabilitation Supervisor at each of the participating workshops along with the final ABS profiles. Staff psychologists who had served as therapists and desired to continue therapy services were requested not to resume sessions until after the Post II Treatment interviews were completed.
CHAPTER IV

RESULTS

In order to investigate changes in adaptive behavior over time (pre-testing, post-testing I, and post-testing II) and treatment (waiting list, cognitive therapy with drawing, and conversation), two-way analysis of variance with one repeated measure were performed. Pre-testing, Post-testing I, and Post-testing II scores obtained on the Adaptive Behavior Scale (ABS) were used as dependent measures. There were four dependent measures from Part I (percentiles) and five from Part II (percentiles) of the ABS. In order to reduce the number of significance in tests, Part I domains were combined into categories as described by Leland, Shoae, and Vada, 1975. These categories were: Personal Independence (including the Independent Functioning and Domestic Activity domains); the Cognitive Traid (including the three domains of Economic Activity, Language Development, Numbers & Time); Personal Motivation (including the Self-Direction and Vocational Activity domains), and finally the category of Social Motivation (including the socialization and responsibility domains). To arrive at a mean score for each of the above categories, percentile scores for the domains comprising each category were added together and then divided by the number of domains in that category. Five domains related to social maladaptation were analyzed on Part II of the ABS.
These included: Violent & Destructive Behavior, Antisocial Behavior, Rebellious Behavior, Untrustworthy Behavior, and Psychological Disturbance. In addition a mean maladaptive score was analyzed.

Table 10 shows the F ratios obtained from the two-way analyses of variance. Individual percentile scores can be found in Appendix D. Table 10 indicates that there were six significant main effects.

There were two significant treatment group main effects in the following areas: Untrustworthy Behavior and Mean Maladaptive scores. Significant time main effects were found for four dependent variables: Antisocial Behavior, Mean Maladaptive scores, Rebellious Behavior and Personal Motivation. The last two of these time effects, Rebellious Behavior and Personal Motivation, were also demonstrated in a significant interaction between treatment group and time. There was also significant interaction between treatment and time for Social Motivation. Each of the above significant main effects and interactions are discussed in detail below. Post hoc pairwise comparisons will be performed using the Waller-Duncan Bayes Exact Test to further examine the nature and the direction of significant differences.

A significant treatment main effect was found in the Part II domain of Untrustworthy Behavior \( F(2, 13) = 5.88, p < .02 \). Figure 3 depicts these differences between groups. Three post hoc comparisons did not yield further significance \( p > .10 \). These results indicate that the differences between groups were global in nature.
TABLE 10
ANOVA F-SCORES FOR ADAPTIVE BEHAVIOR SCALE DOMAINS AND MEAN MALADAPTIVE SCORE

<table>
<thead>
<tr>
<th>Source</th>
<th>Part I</th>
<th></th>
<th>Part II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment (T)</td>
<td>.32</td>
<td>1.13</td>
<td>.97</td>
<td>3.04*</td>
</tr>
<tr>
<td>Time (p)</td>
<td>1.72</td>
<td>.75</td>
<td>7.90***</td>
<td>.87</td>
</tr>
<tr>
<td>Treatment X</td>
<td>1.39</td>
<td>.48</td>
<td>4.10**</td>
<td>3.03**</td>
</tr>
</tbody>
</table>

* p < .10  
** p < .05  
*** p < .01
A significant treatment main effect was found for Mean Maladaptive scores \( F (2, 13) = 5.47, p < .05 \). No further significant differences were found when post hoc tests were performed. This indicates that there were differences between treatment groups for Mean Maladaptive scores, but these differences were global. Figure 4 depicts these differences.

In addition, a significant time effect was found for the Mean Maladaptive scores \( F (2, 26) = 6.60, p < .05 \) indicating differences
between time periods. Three post hoc pairwise comparisons were performed indicating that Mean Maladaptive scores decreased significantly between pre-testing and post-testing II \( t_{B} (2, 26, 6.36) = 2.51, p < .05 \). No significant difference was found between pre-testing and post-testing I or post-testing I and post-testing II (\( p > .10 \)). Figure 4 also presents these differences.

![Graph](image)

**Figure 4.** Mean Maladaptive scores from the Adaptive Behavior Scale as a function of treatment and time.
A significant time main effect was found for the Part II, Antisocial Behavior domain \( F (2, 26) = 4.27, p < .03 \), indicating differences occurring among time periods. Three post hoc pairwise comparisons using the Waller-Duncan Bayes Exact Test revealed that there was a significant decrease in Antisocial Behavior Scale score between pre-testing and post-testing II \( t_B (2, 26, 4.72) = 3.00, p < .05 \). There was also a decrease in Antisocial Behavior scores between post-testing I and post-testing II, \( t_B (2, 26, 4.26) = 1.91, p < .10 \). No significant differences were found between pre-testing and post-testing I. Figure 5 depicts these differences.

![Figure 5. Mean Adaptive Behavior Scale scores for the Antisocial Behavior domain as a function of time.](image-url)
The treatment group by time interaction was significant for the Personal Motivation category \[ F(4, 26) = 4.10, p < .02 \]. Table 11 displays the means for time by treatment group. Eighteen post hoc pairwise comparisons were performed to determine the nature and the direction of this interaction. Significant differences were found for eight of the comparisons. Significant increases in Personal Motivation were found for the Waiting List group (Wait.) between pre-test and post-test II \( [t_B(4, 26, 4.10) = 3.99, p < .01] \). Wait. also demonstrated a significant increase in personal motivation scores between post-testing I and post-testing II \( [t_B(4, 26, 4.10) = 3.26, p < .01] \). Significant increases in personal motivation were also found for the cognitive therapy with drawing group (Cog. D.) between pre-testing and post-testing II \( [t_B(4, 26, 4.10) = 2.58, p < .05] \), and between post-testing I and post-testing II \( [t_B(4, 26, 4.10) = 2.69, p < .05] \). No significant differences among time periods were noted for the Conversation group (Con.).

**TABLE 11**

MEAN ADAPTIVE BEHAVIOR SCALE SCORES FOR PERSONAL MOTIVATION AND INTERACTION BY TIME AND TREATMENT GROUP

<table>
<thead>
<tr>
<th>Time</th>
<th>Pre-testing</th>
<th>Post-testing I</th>
<th>Post-testing II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait.</td>
<td>33.17</td>
<td>36.34</td>
<td>67.17</td>
</tr>
<tr>
<td>Cog. D.</td>
<td>49.00</td>
<td>48.25</td>
<td>71.45</td>
</tr>
<tr>
<td>Con.</td>
<td>44.57</td>
<td>54.00</td>
<td>44.29</td>
</tr>
</tbody>
</table>
These results indicate that there was a similar pattern of significant increases in Personal Motivation scores found between pre-testing and post-testing II, and between post-testing I and post-testing II for both Wait. and Cog. D.

Post hoc comparisons also indicate that during the pre-testing time, there was one significant difference between treatment groups. Cog. D. yielded significantly higher scores for Personal Motivation that the Wait. \[t_B (4, 26, 4.10) = 3.99, p < .01\]. There was no significant difference between Cog. D. and Con., or between Con. and Wait. \(p < .10\).

At the time of post-testing I, there was one significant difference between treatment groups. Con. had significantly higher Personal Motivation scores than Wait. \[t_B (4, 26, 4.10) = 2.07, p < .10\]. There were no significant differences in Personal Motivation scores between Cog. D. and Wait., or between Con. and Cog. D. \(p < .10\).

There were two significant differences between treatment groups found at the time of post-testing II. Wait. had higher Personal Motivation scores than did Con. \[t_B (2, 26, 4.10) = 2.68, p < .05\]. Also Cog. D. had significantly higher Personal Motivation scores than Con. \[t_B (4, 26, 4.10) = 3.13, p < .05\]. Figure 6 depicts the above interactions of time by treatment group for Personal Motivation.
Figure 6. Mean Adaptive Behavior Scale Scores for the Personal Motivation Category as a Function of Time and Treatment
The treatment group by time interaction was also significant for the Rebellious Behavior domain \([F (4, 26) = 3.32, p < .05]\). The means for time by treatment group and treatment group by time are presented in Table 12.

<table>
<thead>
<tr>
<th></th>
<th>Pre-testing</th>
<th>Post-testing I</th>
<th>Post-Testing II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait.</td>
<td>44.00</td>
<td>40.84</td>
<td>0.00</td>
</tr>
<tr>
<td>Cog. D.</td>
<td>35.75</td>
<td>35.83</td>
<td>11.67</td>
</tr>
<tr>
<td>Con.</td>
<td>37.57</td>
<td>32.72</td>
<td>37.29</td>
</tr>
</tbody>
</table>

Eighteen post hoc pairwise comparisons were computed to further examine the nature and direction of the differences. Eight of the comparisons yielded significant differences. Wait. revealed significant decreases in Rebellious Behavior scores between pre-testing and post-testing II \([t_B (4, 26, 3.32) = 2.35, p < .05]\). Wait. also revealed significant decreases in Rebellious Behavior between post-test I and post-test II \([t_B (4, 26, 3.32) = 2.35, p < .05]\). Similarly, Cog. D. yielded a significant decrease in Rebellious Behavior scores between pre-testing and post-testing II \([t_B (4, 26, 3.32) = 4.31, p < .05]\). Cog. D. also revealed a significant decrease
between post-testing I and post-testing II \([t_B (4, 26, 3.32) = 4.31, p < .05]\). These comparisons reveal that there was a similar pattern of decreases in rebellious behavior for the Wait. and Cog. D. treatment group between pre-testing and post-testing II and between post-testing I and post-testing II. There were no significant differences for either group between pre-testing and post-testing II. The decreases in rebellious behavior over time were not significant for Con. \((p > .10)\).

At the time of post-testing II, two significant differences were found between treatment groups. Wait. exhibited a greater decrease in Rebellious Behavior scores than Con. \([t_B (4, 26, 3.32) = 3.65, p < .01]\). Similarly, Cog. D. yielded a greater decrease in Rebellious Behavior score than Con. \([t_B (4, 26, 3.32) = 2.51, p < .05]\). There was no significant difference between Cog. D. and Wait. \((p > .10)\).

It is interesting to note, however, that decreases in Rebellious Behavior for Wait. were to 0.0 at the time of post-testing II, indicating an absence of rebellious behavior.

No significant differences were found between treatment groups at the time of pre-testing and post-testing I. Figure 7 depicts the mean scores on the ABS domain of Rebellious Behavior as a function of time and treatment group.
The treatment group by time interaction was significant for the ABS Part I category of Social Motivation \( [F (4, 26) = 3.03, p < .04] \). Table 13 depicts the means for time by treatment group. Eighteen post hoc pairwise comparisons were performed. Significant differences were found in eight of the comparisons. Wait yielded a significant increase
in Social Motivation scores between pre-testing and post-testing I \[t_B (4, 26, 3.03) = 2.84, p < .05\]. Cog. D. yielded a significant increase in Social Motivation scores between post-testing I and post-testing II \[t_B (4, 26, 3.03) = 2.67, p < .05\]. No further significant differences were noted between periods for Wait, or Cog. D. (p > .10). No significant differences between time periods were noted for Con.

TABLE 13

MEAN ADAPTIVE BEHAVIOR SCALE SCORES FOR THE SOCIAL MOTIVATION CATEGORY AND INTERACTION BY TIME AND TREATMENT GROUP

<table>
<thead>
<tr>
<th>Time</th>
<th>Pre-testing</th>
<th>Post-Testing I</th>
<th>Post-testing II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait.</td>
<td>54.17</td>
<td>83.00</td>
<td>65.17</td>
</tr>
<tr>
<td>Cog. D.</td>
<td>79.59</td>
<td>62.25</td>
<td>89.34</td>
</tr>
<tr>
<td>Con.</td>
<td>57.15</td>
<td>50.43</td>
<td>58.50</td>
</tr>
</tbody>
</table>

During the pre-testing period, there were two significant differences between treatment groups. Cog. D. had significantly higher Social Motivation scores than Wait. \[t_B (4, 26, 3.03) = 2.50, p < .05\]. Cog. D. had significantly higher Social Motivation scores than Con. \[t_B (4, 26, 3.03) = 2.21, p < .10\]. No significant difference was revealed between Con. and Wait.

During the Post-test I period, two significant differences were found between group. Wait. yielded significantly greater Social
Motivation scores than Cog. D. \[t_B (4, 26, 3.03) = 2.04, p < .10].\] Wait. also yielded significantly higher Social Motivation scores than Con. \[t_B (4, 26, 3.03) = 3.21, p < .05]\). No significant differences was found between Cog. D. and Con. \(p < .10\).

The post-test II period revealed two significant differences between groups. Cog. D. revealed significantly higher Social Motivation scores than Wait. \[t_B (4, 26, 3.03) = 2.38, p < .05]\). Cog. D. also revealed significantly higher Social Motivation scores than Con. \[t_B (4, 26, 3.03) = 3.03, p < .05]\). No significant difference was found between Con. and Wait.

The pre-testing showed that Cog. D. had greater Social Motivation scores than Con. or Wait. Post-testing I showed that Wait. had had significant greater scores than Cog. D. or Con. By the post-test II period, Cog. D. had higher Social Motivation scores than Con. or Wait. Figure 8 depicts the interaction between treatment group and time for the ABS category of Social Motivation.
Figure 8. Mean Adaptive Behavior Scale Scores for the Social Motivation Category as a Function of Time and Treatment.
CHAPTER V

SUMMARY AND CONCLUSION

The present study was conducted in response to critical community mental health need to develop and empirically investigate psychotherapeutic treatment approaches for use in assisting deinstitutionalized mentally retarded adults with socially maladaptive behavior and to develop more adaptive behavior patterns in order to avoid re-institutionalization. This study evaluated the effects of Cognitive Therapy with Drawings (Cog. D.), a Conversation Treatment (Con.), and a Waiting List (Wait.) group on adaptive behavior scores and social maladaptive behavior scores. The above dependent variables were measured by means of the Adaptive Behavior Scale Part I and Part II domains.

Twenty subjects from a population of employees at the Franklin County Board of Mental Retardation and Developmental Disabilities, Ohio, ARC Industries served as subjects for this study. There were twelve males and eight females. Eleven were mildly retarded and nine were moderately retarded. The mean age for subjects was 41.62 years. Subjects had been institutionalized for a mean number of 25.18 years. The mean number of years deinstitutionalized was 4.33 years. Although there were some problems with random assignment to groups (due to agency requirements and small sample size), the
Analysis of Variance on pre-testing scores indicated that subjects across groups performed similarly on dependent measures.

Some differences between groups were found by the ANOVA performed on pre-testing data (see analysis of demographic data in Chapter III). It is logical that older subjects would have been institutionalized longer, since the practice of deinstitutionalization is a recent practice. Differences between mildly and moderately retarded subjects would be expected and were reflected by mildly retarded subjects demonstrating higher scores in functional independence. Mildly retarded subjects also demonstrated higher scores for Social Motivation reflecting that the higher functioning subjects were taking more responsibility during their interactions with others.

Subjects assigned to therapist #3 were significantly lower in functional independence than other subjects. Females demonstrated more psychological disturbance than males did. Subjects not taking medication demonstrated greater social motivation than those on medication. Subjects taking medication had higher Rebellious Behavior scores. Finally, and most importantly, there were no significant differences between subjects by assignment to treatment group.

The experimental design was a 3 x 3 model with one between subjects factor (group: Wait., Cog. D., and Con.) and one within subjects factor (temporal measurements: pre-testing, post-testing I, post-testing II) factor. The statistical analysis involved a two-way analysis of variance with one repeated measure performed on each of the nine dependent measures from Part I, and Part II of the Adaptive
Behavior Scale in order to determine whether the three treatments were different in their effect on adaptive behavior and social maladaptation. The findings of this study will now be discussed as they relate to the hypothetical research question presented in Chapter I.

Hypothesis #1 involved the investigation of significant differences in socially maladaptive behavior as a function of treatment and time for mentally retarded adults with socially maladaptive behavior, analysis of pre-testing and post-testing I and II Adaptive Behavior Scale (Nihira, et. al., 1975). Socially Maladaptive behavior scores from Part II of the ABS revealed some interesting findings. A significant two-way interaction involving the Rebellious Behavior domain revealed a significant difference between treatment groups at the time of post-testing II. Both the Cog. D. and the Wait. treatment groups demonstrated a significant decrease in Rebellious Behavior while Con. did not. While not statistically significant, it is interesting to note that upon closer examination of individual percentile scores, that while Wait. decreased in Rebellious Behavior scores to 0.0, all scores for Cog. D. were also below the 80th percentile. Three of the six scores were at zero. Scores below the 80th percentile are not interpreted as clinically significant and fall into an acceptable range of behavior. No significant differences were noted between treatment groups at pre-testing or post-testing I.

There were also significant decreases in Rebellious Behavior for both Wait. and Cog. D. between pre-testing and post-testing II and between post-testing I and post-testing II. There were no significant differences for Con. among any time periods.
Both Cog. D. and Wait. were effective in significantly reducing Rebellious Behavior over time while Con. was not. Significant decreases occurred for both Cog. D. and Wait. between pre-testing and post-testing II, and post-testing I and post-testing II.

Null hypothesis No. 1 can be partially rejected regarding the Rebellious Behavior domain; however, it can not be rejected regarding the other A.B.S. Part II domains measuring Socially Maladaptive Behavior.

Hypothesis #2 involved the investigation of significant differences measuring the behavioral factors of independent functioning and personal responsibility as measured by the A.B.S. Part I domains as a function of treatment and time for mentally retarded adults with socially maladaptive behavior. Analysis of pre-testing and post-testing I and II Adaptive Behavior scores revealed several interesting findings. A significant two-way interaction involving Personal Motivation revealed significant differences between treatment groups at the times of pre-testing, post-testing I and post-testing II. At pre-testing, Cog. D. yielded significantly higher scores than Wait. did. At post-testing I, Con. had significantly higher scores than Wait. Finally, at post-testing II, both Wait. and Cog. D. had significantly higher scores than Con.

It was also revealed that at the time of pre-testing, Cog. D. had significantly higher Social Motivation scores than Con. At post-testing I, Wait. had significantly higher Social Motivation scores than Con. or Cog. D. At post-testing II, Cog. D. revealed significantly
higher Social Motivation scores than either Con. or Wait. Significant increases in Personal Motivation were found for both Wait. or Cog. D. between pre-testing and post-testing II and between post-testing I and II. Significant increases in Social Motivation were found for Wait. between pre-testing and post-testing I and for Cog. D. between post-testing I and post-testing II.

Thus, Null hypothesis No. 2 can be partially rejected regarding Personal Motivation and Social Motivation on Part I of the A.B.S. It would not be rejected, however, for the Part I areas of Personal Independence and the Cognitive Triad.

Hypothesis #3 involved the investigation of overall pre-testing, post-testing I and post-testing II Adaptive Behavior scores from Part I and Part II of the A.B.S. Analysis of pre-testing, post-testing I and post-testing II scores revealed no significant findings for A.B.S. Part I scores, but revealed an interesting finding relative to Antisocial Behavior on Part II of the A.B.S. There was an overall significant decrease in Antisocial Behavior scores between pre-testing and post-testing II and between post-testing I and post-testing II. Thus, there were overall decreases in Antisocial Behavior over time, that is, across all groups. The Null hypothesis for hypothesis Question No. 3 regarding A.B.S. Part II scores can be partially rejected. There were significant differences regarding Antisocial Behavior between pre-testing and post-testing II and between post-testing I and post-testing II.
Hypothesis Question #4 involved the investigation of overall significant differences between treatment groups when averaged across time on Part I and Part II Adaptive Behavior scores. It was found that there were no overall differences between Wait., Cog. D., and Con. on A.B.S. Part I domains. There was, however, a significant difference between groups on the A.B.S. Part II domain of Untrustworthy Behavior. It was found that there was significant global differences between Wait., Cog. D., and Con. treatment groups over time. It is interesting to note that while not statistically significant, Untrustworthy Behavior scores were reduced to 0.0 at post-testing I and post-testing II for Cog. D. Closer examination of individual scores revealed that in Cog. D. two of the three subjects who at pre-testing demonstrated Untrustworthy Behavior above the 80th percentile, dropped out of the study leaving one subject whose score was reduced to zero.

In addition it was found that there were significant differences between Wait., Cog. D., and Con. in Mean Maladaptive scores across time. These differences were also global in nature. There was also an interesting finding regarding Mean Maladaptive scores. Also, there was a significant overall decrease in Mean Maladaptive scores between pre-testing and post-testing II.

Null hypothesis No. 4 cannot be rejected for Part I of the A.B.S. The Null hypothesis for Part II of the A.B.S. can partially be rejected. There were significant differences Wait., Cog. D., and Con. regarding Untrustworthy Behavior. There were no significant differences regarding the other Part II domains measuring Socially Maladaptive Behavior.
DISCUSSION

Cognitive Experiential Therapy with Drawings is shown to be a treatment of significant effect in facilitating a reduction in Rebellious Behavior and an enhancement of Personal Motivation and Social Motivation as it applies to the population of deinstitutionalized adults with mild and moderate retardation and socially maladaptive behavior in this study. There was a decrease in the Rebellious Behavior dependent measure between pre-testing and post-testing II and between post-testing I and post-testing II. There were also increases in Personal Motivation between pre-testing and post-testing II and between post-testing I and post-testing II. There was a significant increase in Social Motivation between post-testing I and post-testing II.

The findings for this study as demonstrated by the Waiting List (nontreatment) group also suggest that change naturally occurs over time with the effect of reducing Rebellious Behavior and enhancing Personal Motivation and Social Motivation. Where the pattern of change was identical for Cog. D. and Wait in the reduction of Rebellious Behavior and the increase in Personal Motivation, the pattern for increasing Social Motivation differed between Cog. D. and Wait. in that significant results for Wait. were found between pre-testing and post-testing I and for Cog. D. were found between post-testing I and post-testing II.

The fact that these were differences in time periods during which the increases in Social Motivation occurred, suggests the
possibility that more time was needed in Cog. D. to integrate the newly learned skills. Change occurred immediately under Wait. conditions. This delay in time period necessary for change to occur for Cog. D. may reflect that different cognitive processes are occurring under Cog. D. conditions (treatment) than under Wait. (no treatment).

A qualitatively different cognitive process can be viewed as occurring in the Cog. D. treatment that did not occur in Wait. or Con. Theoretically, the representational systems of verbal and visual codes have been viewed as separate modes of thought. Recent neurological observations are consistent with the conceptualization that verbally and visually coded information is discriminated along hemispheric lines in the brain. Bruner (1966) suggests that the development of an imagery representational system precludes that of the language system. It has also been argued that childhood experiences are frequently unretrievable because childhood memory skemata are incompatible with those of an adult. It is well documented that persons with mental retardation are deficient in language. Paivio and Yarmey (1966) found that words produce a less salient mediational image than pictures do and are probably less effective mediators.

Changes occurring among subjects in Cog. D. may be qualitatively different from those occurring in Wait. or Con. Cog. D. involved a transcortical process of cognitive stimulation within the brain. The drawings (visually coded information) provided direct stimulation
of the right hemisphere of the brain which facilitated verbal expression in the left hemisphere of the brain. Subjects were able to verbalize with some degree of depth about emotionally charged experiences occurring in their past and present. They were also able to partake in the cognitive restructuring of their thoughts. More time may be needed for this kind of integration to occur.

Changes occurring for Wait can be viewed as a right-brain process. Subjects were trained to attend to and perform various jobs or work activities. Expectations were in terms of performance rather than verbal expression or abstract reasoning. Because a transcortical process was not involved in this training process, less time was needed for change to occur.

During Con. subjects were free to talk about anything they wished. Verbal skills were the chief vehicle for communication. This treatment was shown to be ineffective in bringing about positive change. It can even be viewed as detrimental in that it prevented normal change from occurring. Con. relied heavily on left-brain language functions in which persons with mental retardation are deficient. These results support the view that psychotherapy with the mentally retarded should involve a substantial nonverbal component.

Feedback provided by therapists suggests that in Cog. D. all subjects were able to respond to the cognitive restructuring paradigm using drawing to varying degrees but none were able to generate it on their own. Drawings were thought to help subjects focus attention on
a specific problem. Moderately retarded persons were felt to have more difficulty grasping the causal relationship between events, thoughts, feelings, and behaviors.

Subjects in the Con. treatment were felt to demonstrate difficulties relative to poor conversation skills, perseveration or a tendency to fabricate. Some subjects brought up personal and social problems which could be acknowledged but not explored.

LIMITATIONS OF THE PRESENT RESEARCH AND FUTURE RESEARCH

The conclusions and implications of the present study are limited by the small sample size. The sample for the present study was, however, selected from the four ARC Industries locations in the Franklin County Board of Mental Retardation and Developmental Disabilities. These findings would not be representative or generalizable of regional or national populations deinstitutionalized mildly and moderately retarded adults. Another problem with the sampling was that at three of the workshops, because of lack of numbers, it was not possible to randomly assign subjects to all three treatment groups. Subjects for the Waiting List group all came from the fourth shop where random assignment could be fully employed. More conclusive evidence could be made from a study using a larger sample size.

It was not possible to control for race, sex, socioeconomic level or surrounding life events, as this would require extensive sample selection criteria and would further limit the sample size.

Because of limited population, treatment groups could not be matched on the basis of sex, intellectual level or type of behavior problem.
Two therapists were females and two were males; further research is needed to determine whether there are sex related influences on the efficacy of treatment.

Further research is needed to determine the effects of therapist variables on outcome.

Measured intelligence levels of all the subjects in the present study fell into the mild and moderate ranges of retardation. Further research should be conducted with separate groups of mildly and moderately retarded subjects before any generalizations can be made regarding the efficacy of treatment with any particular levels of retardations.

A short-term therapy period of twelve sessions over a six-week period was used in the present study. Further research might utilize a longer treatment period to determine if more time is necessary to see more conclusive therapeutic change among socially maladaptive results.

Compared with other instruments used in other individual psychotherapy outcome studies with retarded individuals, the A.B.S. appears to be the most objective, practical, and sensitive instrument for measuring therapeutic change. It may not, however, be sensitive enough to detect various clinically significant changes. A problem with Part II of the A.B.S. is that problem behaviors are not weighed with regards to seriousness. The behavior of attempting to choke another person was weighed the same as the behavior of crying and screaming.
The present study found that Cognitive Therapy with Drawings has been shown to produce statistically significant outcomes regarding Rebellious Behavior, Personal Motivation, and Social Motivation as measured by the A.B.S. Its effectiveness may result from the synergistic interaction of its basic components (cognitive restructuring and drawing). In order to determine the effectiveness contributed by each of these components future researchers might consider the following:

1) The exploration of the effects of drawing alone, as a means for subjects to express their thoughts and feelings regarding difficult situations.

2) The use of cognitive restructuring alone without the use of drawings to facilitate understanding problemmatic situations, cognitions, and the exploration of more adaptive behaviors.

3) The use of measurements to determine whether the cognitive component does result in a change in cognitions for the mentally retarded adults when cognitive restructuring is used in a cognitive experiential model.

4) An exploration of Cog. D. and its effect on adaptive behavior and socially maladaptive behavior on deinstitutionalized mentally retarded adults with socially maladaptive behaviors not currently enrolled in a habilitation program.
5) The use of measurement to evaluate whether the drawing component results in an effective change for the mentally retarded adult when cognitive restructuring is used in a cognitive experiential model.

6) An evaluation of the roles played by drawing and cognitive restructuring in enhancing Cog. D. over time.


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APPENDIX A

CONSENT FORM (1)

The reason for this study has been explained to me. I have been told what I might expect from being in this study and how it might affect me. I know that I will be meeting with someone twice a week. The person I will be meeting with will have been trained by Sandra S. Phalen.

I understand that I will be asked to do some drawings and talking, or just talking during the sessions. A trained observer will fill out an Adaptive Behavior Scale about me. Information from my files may be used. I understand that all this information will be kept secret by Sandra Phalen and nobody else will now this information about myself. After all the sessions are over, I will have a chance to ask any questions about the study. Some sessions will be videotaped or tape recorded and will be erased at the end of the study.

I understand that if I have any more questions about the study, these questions will be answered. After the last session, the therapist will write a progress report which will be put in my records. I can talk about this report at the end of the study and have the results explained to me. I know that being in this study is up to me and I do not have to be in this study. I may stop being in this study at anytime if I wish.

________________________________ Signed: ___________________________
Witness

________________________________ Signed: ___________________________
Investigator

________________________________ Date: ___________________________
Donald J. Tosi, Ph.D.
Principal Investigator

Signed: Subject

Signed: Legal Guardian

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APPENDIX A

CONSENT FORM (2)

The reason for this study has been explained to me. I have been told what I might expect from being in this study and how it might affect me.

I understand that someone trained by Sandra S. Phalen will be talking with my instructor and filling out an Adaptive Behavior Scale on me. Also information from my files will be used. I understand that all this information will be kept secret by Sandra Phalen and nobody else will know this information about myself. After all the sessions are over, I will have a chance to ask any questions about the study.

I understand that if I have any more questions about the study, these questions will be answered. I know that being in this study is up to me and I do not have to be in this study. I may stop being in this study at anytime if I wish.

___________________________  Signed: _____________________________
Witness  Subject

___________________________  Signed: _____________________________
Investigator  Legal Guardian

Donald J. Tosi, Ph.D.
Principal Investigator

Date: ________________________________
APPENDIX B

MANUAL FOR CONVERSATION FOR ADULTS
WITH MILD MENTAL RETARDATION

Sandra Schwartz Phalen
INSTRUCTIONS FOR USING MANUAL

Introduction

This manual is a guide for developing conversation with adults with mild mental retardation and is based on a manual developed by C. Pinkerton, Ph.D., 1978. Retarded adults frequently do not have the opportunity to practice talking with others due to their limited mobility in the community. They have often been punished for talking inappropriately and feel that they have nothing important to say and that nobody will listen to them.

Feeling comfortable talking to other adults— including peers, instructors, strangers, and family is important to adults working in a sheltered workshop. It could lead to greater job success, improved ability to deal with others, and a decrease in social maladaptation.

Guidelines

1. Use a normal voice tone and expression during your sessions avoiding overly harsh or too sweet voices.

2. Converse as one adult talking to another adult.

3. Maintain an active interest in the topic of conversation.

4. Verbal and nonverbal praise can be used as an effective tool to build confidence and reinforce efforts to respond. Nonverbal praise can take the form of a smile, a nod or a touch of the hand or shoulder. Praise should be immediate and descriptive. It is
important to let your subject know what he is doing or saying that is appropriate, i.e. "John, that is interesting what you just said." "Thank you for telling about how that works." "You've made some interesting drawings."

5. You can encourage talking by using some of the following comments:
   a. "Oh?" "So?" "Then?" and "And?"
   b. The repetition of key words.
   c. "Tell me more about that?"
   d. "How did you feel about that?"
   e. "Give me an example."
   f. "What does that mean to you?"
   g. "Ummm – hummmm."

6. As a participant in the conversation, you can give a personal example in order to encourage conversation. Try to make the example one that your subject can relate to.

7. Since the kind of questions you ask affects the way your subject responds, try to avoid a question that asks for a "yes" or "no" answer. i.e., "Do you have a favorite TV show?" Alternatives: a) Tell me about your favorite TV shows, b) what is it about, c) how do you feel about that?.

Your subject may give responses to questions that are partially correct, totally unrelated to the question, give insufficient information, or give a "yes" or "no" response. There are several reasons explaining why a response was less than satisfactory:
a) a question may not be understood; b) the subject may not know how to answer the question; or c) he may lack the confidence that he has anything important to say.

In these cases try to rephrase the question in simpler terms. You can also prompt his responses by suggesting possible responses.

8. At the beginning of a session you can "break the ice" by discussing some neutral subject briefly like the weather or what happened over the weekend.

9. Some of the sessions may seem repetitious and tedious. This is a reality. It is more important for subjects to walk away with some useful skills than to have extraordinarily exciting or "peak" experience.

10. If a person is struggling with what he's trying to say, avoid jumping in too soon to rescue him. This could lead to increasing dependency on you and others to do his thinking and talking.

11. Be relaxed as possible. You don't have to be perfect.

12. You are a model for appropriate action and talk.
SPECIFIC POINTS FOR USING THIS MANUAL

1. There will be twelve sessions - twice a week for six weeks. The first session has been written out for you. You can change the language slightly to suit your own style of conversation. It is important to cover all material.

Because sessions 2-12 are improvisational on your part, they cannot be fully written out.

2. Tape record each session. Because tapes are thirty-minutes on each side, you will have to turn the tape over halfway through each session.

3. Therapists and clients will not discuss problems of a personal or social nature. Problems may be acknowledged but not discussed.

4. Below is a list of "Supplemental Materials." You can bring in any of the materials listed below to stimulate conversation if your client does not bring in anything.

<table>
<thead>
<tr>
<th>Supplemental Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent Newspaper</td>
</tr>
<tr>
<td>Sports magazine</td>
</tr>
<tr>
<td>Maps</td>
</tr>
<tr>
<td>A hobby</td>
</tr>
<tr>
<td>Interesting pictures</td>
</tr>
<tr>
<td>Recent workshop newsletter</td>
</tr>
<tr>
<td>TV Guide</td>
</tr>
<tr>
<td>TV magazines</td>
</tr>
<tr>
<td>Movie star magazine</td>
</tr>
<tr>
<td>Recent news magazines</td>
</tr>
</tbody>
</table>
DISCUSSION SESSIONS

Session 1

1. Make introductions:
   My name is ______________. I live here in Columbus and work at ______________, and like _______________. Tell me about yourself.

2. Explain the purpose of meetings. "We will be meeting to do some talking and sharing. We will meet two times a week for six weeks. We will be getting to know each other and will be talking about many different things. Sometimes you might like to bring in things to show me or to do. Sometimes I might bring in some things to look at." What are some things that you would like to talk about when we meet?

3. Discuss client's ideas and record for future use.
   Discuss whether your client might like to talk about any of the following: family, pets, jobs, hobbies, recreation, sports, if music, foods, TV shows, movies, movie and TV stars, friends, homes, shopping for clothes, chores, etc. Record client's expressed interest.

4. "You can also bring things in to talk about or do. You can bring in a hobby, a favorite game, pictures, maps, musical instruments, books. Can you think of something you'd like to bring in?"
Record responses.

5. "It sounds like we'll have a lot to talk about and do in the weeks to come."

"We will meet every _______ and _______ from ____ to _____. That's forty minutes, a little more than a half an hour. It's real important to be on time, so I'll give you a card to help remind you of the days and the time. If you have trouble reading, you can show your card to your instructor or someone else who can help you remember. Do you have any questions that you would like to ask? It's important to ask questions if there is anything that you want to know about."

6. "We have time to talk more today and get to know each other. What kind of jobs have you done? What do you like to do best? What do you like about doing that? If the conversation comes to an end after a while, pick another topic, ask the subject what else he'd like to talk about or use some of the supplementary materials to stimulate conversation. This will most likely help to keep the conversation flowing.

Session 2-11

Review the purpose of meeting. "Last time we talked about what we would be doing here. Do you remember what we talked about?"

Discuss any topic of interest that your client chooses. Use any supplementary materials to stimulate conversation.

Towards the end of the session, remind client that the time is almost up. Discuss that your client is welcome to bring in something
to share, a hobbie, a magazine or picture, etc. Suggest that he bring in just one or two things each time if he has a lot of things. Also suggest that he not bring in something that could break or anything that is too valuable.

Discuss the possibilities.

When the time is up, remind your subject of the date and time of the next session.

**Sessions 3-11**

Start each session by asking if your subject has brought anything or has anything he'd like to talk about. If not, you can begin with a topic that you think will be interesting. You can bring in something from the list of Supplemental Materials or something else to stimulate discussion.

At the end of each session, summarize what you have been talking about and remind him of the date and time of the next session. At the end of session 11 remind him that the next session will be the last.

**Session 12**

At the beginning of this session remind the subject that this will be the last time you will meet together. Ask if there is anything he would like to say about meeting; did he like coming?, did he like the topics we talked about?.

Again, at the end of the session, again remind the subject that this is the last session. You might want to express your feelings about the meetings and thank your subject for coming.
APPENDIX C

COGNITIVE THERAPY WITH DRAWINGS

MANUAL FOR THERAPISTS

Sandra Schwartz Phalen
GUIDELINES FOR USING THIS MANUAL

Guidelines

1. Use a normal voice tone and expression during your sessions avoiding overly harsh or too sweet voices.

2. Converse as one adult talking to another adult.

3. Maintain an active interest in the topic of conversation.

4. Verbal and nonverbal praise can be used as an effective tool to build confidence and reinforce efforts to respond. Nonverbal praise can take the form of a smile, a nod or a touch of the hand or shoulder. Praise should be immediate and descriptive. It is important to let your subject know what he is doing or saying that is appropriate, i.e. "John, that is interesting what you just said." "Thank you for telling about how that works." "You've made some interesting drawings."

5. You can encourage talking by using some of the following comments:
   a. "Oh?" "So?" "Then?" and "And?"
   b. The repetition of key words.
   c. "Tell me more about that?"
   d. "How did you feel about that?"
   e. "Give me an example."
   f. "What does that mean to you?"
   g. "Ummm - hummmm."

6. As a participant in the conversation, you can give a personal example in order to encourage conversation. Try to make the example one that your subject can relate to.
7. Since the kind of questions you ask affects the way your subject responds, try to avoid a question that asks for a "yes" or "no" answer. I.e., "Do you have a favorite TV show?" Alternatives: a) Tell me about your favorite TV shows, b) what is it about, c) how do you feel about that?. 

Your subject may give responses to questions that are partially correct, totally unrelated to the question, give insufficient information, or give a "yes" or "no" response. There are several reasons explaining why a response was less than satisfactory: a) a question may not be understood; b) the subject may not know how to answer the question; or c) he may lack the confidence that he has anything important to say. 

In these cases try to rephrase the question in simpler terms. You can also prompt his responses by suggesting possible responses.

8. At the beginning of a session you can "break the ice" by discussing some neutral subject briefly like the weather or what happened over the weekend.

9. Some of the sessions may seem repetitious and tedious. This is a reality. It is more important for subjects to walk away with some useful skills than to have extraordinarily exciting or "peak" experience.

10. If a person is struggling with what he's trying to say, avoid jumping in too soon to rescue him. This could lead to increasing dependency on you and others to do his thinking and talking.

11. Be relaxed as possible. You don't have to be perfect.

12. You are a model for appropriate action and talk.
SPECIFIC POINTS FOR USING THE MANUAL

1. Individual sessions will meet for twelve sessions, twice a week, for six weeks. The format for the sessions has been outlined for you. You may change the language slightly to fit your own conversational style, but it is important to cover all material outlined.

2. For each session you will need between seven and nine 5½" x 8½" sheets of paper which will be provided for you and two pencils.

3. Record the date on each sheet of paper and place a paper clip around each set of drawings produced during a therapy session.

4. Place in client's folder as a record of the therapy session.

5. When presenting client with the individual sheets of paper, be sure to mark each sheet A, B, C, D and B₂, C₂, D₂ relative to the component of the A-B-C-D- cognitive restructuring paradigm being discussed. Letter should appear in the upper left-hand corners.

6. Always present sheets of paper directly in front of your client facing him in a picture arrangement fashion on the surface of a table.

7. Client responses should be printed across the upper portion of each page.

a) John is calling me stupid.
   b) I can't study. I must be a nothing.
   c) I feel bad.
   d) I hit John.

b) Record the client's responses using his own words and language. Print his responses so that he can see them.
c) If a client indicates ability and desire to write his own responses, allow him to do so.
d) Sometimes the client and therapist can share in the recording process. Allowing the client to write some responses especially self-messages and the therapist write others.

8. Tape record each session, since tapes are thirty-minutes on each side, you will have to turn the tape over.

9. Allow client to verbally review what is happening in his pictures by presenting them to him a picture arrangement fashion in front of him on a table.

10. After the initial A-B-C-D analysis of each problematic situation, remove the B, C, D, pictures and focus on the B₂, C₂, D₂ responses.

11. You may find that you do not have enough time within a fifty-minute session to complete the entire AB₁C₁D₁ and AB₂C₂D₂ series. In that case, review the material that you have covered and tell the client that you will be talking some more about it during the next session. At the next session begin by reviewing what happened during the previous session and continue where you left off.

12. If you find that you have a lot of time left after going through a problematic situation, you may review problematic situations previously presented.

13. Frequent review of previously problematic situations can be used to review and reinforce the process of A-B-C-D analysis and cognitive structuring.

15. The cognitive experiential model of awareness, exploration commitment, implementation, integration, and change are to be used as guidelines. It's your subjective judgement as to when they occur and the degree to which they occur. They are also a natural part of the therapy process. They re-occur over and over again as the sessions proceed. Commitment increases as the client implements action and sees that he has more control over himself and his environment.

16. The emphasis is not on how many problematic situations are presented or focused upon during the course of therapy. Some clients may wish to focus on several problematic situations while others may just present one problem which keeps repeating itself. While the techniques of role play, modeling, homework assignments may be used to facilitate behavior change, it is of equal, if not of greater importance to assist a client in changing his thinking about the problematic situation.
Listed here are some of the techniques that are frequently utilized in Rational Emotive Therapy and other cognitive therapies. They have been adapted to meet the needs of the mentally retarded.

The A-B-C-D Method

Tosi (1973) expanded Ellis' A-B-C model to an A-B-C-D model of emotional disturbance and problem analysis:

(A) represents the existence of a fact, event, or behavior of another person; (B) represents self verbalizations of the individual about (A), his definition or interpretation of (A) as awful, terrible, horrible, etc.; (C) represents the emotional reaction of unhappiness, upset, and disturbance, presumed to follow directly from (A); (D) - the behaviors toward or away from (A). (A) does not cause (C) and (D), but (B) does.

Cognitive Modeling with Drawings

Rational-emotive modeling is a form of acquiring behavior which is based on learning theory. Imitative learning has been examined extensively in laboratory animals. It is well known that much of children's behavior is a direct imitation of adult models. Learning takes place even though no outward visible performance may occur immediately. This latent learning is extremely important to note in therapy for it may be largely unmeasurable but real.

The therapist serves as a model for the client to emulate. Transference of learning, however, is facilitated when the client has the opportunity to observe others who are similarly demonstrating rational
thoughts and behaviors (Tosi, 1974). The client is encouraged to observe "live models" in the real world and to take note of behaviors which he perceives to be "good" or more desirable. Later he will be asked to discuss what the "good" behaviors were and then integrate them into his own style.

All learning is not based on live modeling, the client is often exposed to various media to increase his sensitivity to symbolic models. Here, the client is asked to draw himself enacting specific desirable behaviors. He himself can serve as his own model.

Premack Principle of Reinforcement

The Premack Principle states that a high probability behavior such as buying a can of pop on break, can serve as a reinforcer for low probability behavior such as staying at one's work station. This is based on some ideas from time-motion studies in which the client is taught to reinforce himself after the completion of certain tasks within a time period. The time period and the task are gradually increased until desired behavior characteristics are increased.

Cognitive Role Play with Drawings

Based on Rational emotive assertiveness training, this technique is a combination of all the above techniques and includes role playing as well. After the A-B-C-D of a problematic situation are explored, the therapist employs both live and symbolic modeling (using drawings) after which behavioral rehearsal or role play is practiced. When the desired behavior is accomplished, the therapist reinforces the client. Again, the problematic situation is reviewed using the A-B-C-D method.
and the client is given a homework assignment. The emphasis here is more than helping the client realize what his self-defeating behaviors are, and learning some more socially adaptive behaviors. The importance is to change the client's negative thinking and to eliminate the original emotional disturbance.

Here it is extremely important that the client understand the rationale in concrete terms for his newly acquired behavior. Social assertiveness can lead to problems in another direction, for example, the client thinks that because he has discovered that he can be accepted, he thinks he must be accepted. The client here needs to learn the proper context of his new behavior. According to Ellis (1962), it makes little sense for a person to overcome one irrational idea only to fall victim to another.

**Homework Assignments**

Systematic written homework (SWH) was developed by Dr. Maxie Maultsby and is structured after the A-B-C-D paradigm. The SWH enables the client to overcome periods between counseling sessions in giving him an opportunity to try out his newly acquired cognitive, affective, and behavioral responses in the real work, unless the client can learn to transfer his thoughts, feelings, and behaviors to potentially problematic situations outside the therapy session; therapy is useless.

Rather than assigning the client written homework for self-analysis outside of therapy, problematic situations are reviewed using the A-B-C-D paradigm and drawings before they are practiced outside the session. After a sentence by sentence challenge to illogical thinking,
new more enhancing self-messages are modeled and role played as well as more adaptive emotional and behavioral responses. This is repeated until the client reaches a level of competence within the therapy session whereby he can independently generate more self-enhancing thoughts, feelings, and behaviors. At this time, the client is encouraged to use his new thinking and behaving in problem situations outside the session. A list of more self-enhancing messages can be made for the client to take with him and review daily so that he will be ready to use them when a problem occurs. Homework assignments are reviewed, reinforced and discussed to assist the client if any difficulties occur.
OBJECTIVES FOR SESSIONS

Sessions 1 - 2: Awareness-Exploration

1. Introduce self and establish rapport.
2. Explain what a problem is.
3. Explain that everyone has problems.
4. Recognize what some problem situations might be.
5. Explain what we will be talking about in our sessions.
6. Assist client in identifying a specific problematic situation, feelings, actions, and thoughts using drawings and discussion.
7. Introduce B_{2C_{2D_{2}}} using drawings and discussion.
8. Review the above or any part not yet covered in the next session.

Sessions 3 - 6: Awareness and Exploration

1. Develop awareness of A-B-C-D components of problematic situations through drawing and discussion.
2. Develop awareness of possibilities for change by exploring alternative thoughts and feelings and more socially adaptive behavior through discussion and drawings.

Sessions 6 - 8: Commitment and Implementation

1. Encourage the client to try out new thoughts, feelings, and behaviors in role play with therapist.
2. Encourage client to try out the above in problematic situations.
3. Reinforce client's efforts.
4. Discuss problems.

**Sessions 8 - 12: Integration and Stabilized Behavior**

1. Continue to explore new problematic situations and review.
2. Role play alternative self-messages, emotional responses and more adaptive behavior.
3. Continue to encourage and reinforce use of new thinking, feeling, and behaving in previously problematic situations.
An A-B-C-D cognitive restructuring paradigm will be used while guiding the client through the stages of Awareness, Exploration, Commitment to rational action, Implementation, Internalization and Behavior Stabilization. During the initial session this will be explained to the client after defining what a problem is.

"Everyone has problems or situations that give them problems. I have problems, people you work with have problems, so do people who work in factories, restaurants and other places. Even the President has problems. Just because a person has problems does not mean he is bad. It's okay to have a problem. People do different things when they have problems. Some problems are harder than others. Sometimes it's easy to know what to do when you have a problem, sometimes it's not so easy. Let's say that something happens at work, a person may feel upset, he may then do things that make things even worse for himself. When people find someone who they can talk their problems over with, they can sometimes learn new ways of handling their problems which helps them to get along better."

"We are going to be talking about some problems. We are going to talk about thinking, feeling, and acting. You will be making some drawings. We will look at some old ways and some new ways of thinking, feeling, and acting when you have a problem. We will be learning
to use some of these new ways."

"Here are some situations or things that often happen to people that can lead to problems." (Show subject Stimulus Drawings.)

"Can you think of any other kinds of situations that can give people problems? What kinds of things cause you problems? Can you think of something that happened that was a problem for you?"

After the client describes a specific event or presenting problem (i.e., a co-worker calls him a name), tell him that now we are going to do some drawings.

1. The therapist first assists the client in focusing attention and awareness on the problematic situation.
   a. Give client a sheet of paper and ask him what happened first, and then ask him to draw it.
   b. Mark this sheet A (Event or Problematic situation)
   c. Have the subject discuss what is happening in the picture starting with an open-ended question like, "Tell me about your drawing."
      (You want to get the client to label the people — who they are, what they are doing and saying in the picture. Probe only if you don’t get the information from the initial open-ended question.)
d. Record and label his responses.

2. Next the therapist assists the client in focusing his attention and awareness on his emotional responses.
   b. Mark this sheet C (Emotional Response).
      i.e. Felt upset, mad, felt I was no good.
   c. Ask him to tell you about his drawing - how he felt.
   c. Record his responses.

3. The therapist then assists the client in focusing his attention and awareness on his behavioral responses to the problematic situation.
   a. Ask client to draw what he does when he feels that way.
   b. Mark this sheet D (Behaviors)
   c. Have client describe what he is doing in the picture.
   d. Record his responses.
   e. Ask him if anything happened. If so, give him a sheet of paper. Have him draw, and describe. Record his responses. Mark sheet $D_2$
4. After eliciting the client's emotional and behavioral responses to a problematic situation, the therapist assists the client in focusing his awareness on his cognitive responses.

a. Say: "Many times people say things to themselves, things they are thinking about but not saying out loud. They talk to themselves. I'm wondering if you might have said some things to yourself just before you . . . . , i.e., got mad and hit your co-worker."

b. Try to elicit from the client some cognitive responses.

c. Mark this sheet B1 (Thoughts)

d. You might have to give some examples of the kinds of irrational thoughts a person might have to get the client to respond. For example: Sometimes people say to themselves "That's terrible that Bill is calling me a creep." "I can't stand it." "I must be a creep." "I'll get him for this."

e. Ask the client to draw himself talking to himself.

f. Record self-messages.
1) If he can write, have him write his own self-messages.

2) If he cannot write, write or print them for him.

5. By reconstructing the problematic situation according to the A-B-C-D cognitive restructuring paradigm, the therapist assists the client in further examining what makes this situation a problem.

a. Arrange the client's drawings facing him on the table in a picture arrangement fashion from left to right in the order of A-B-C-D.

b. Have the client review what is happening in each picture.

c. Explain that it's not A that is causing C and D, but B. Use specific terms from the client's problematic situation to explain this.

d. Reinforce how badly the self-messages make the client feel and how these lead to his behaviors.

*6. By exploring some more self-enhancing self-messages, the client can become aware of the possibility of feeling and behaving in a more adaptive manner.

* Indicates where a session may end.
a. Let's see what would happen if you said some other things to yourself when A i.e., (Bill calls you a creep).

b. Discuss and debate with the client some alternative self-messages. You may have to give some examples or do some modeling. i.e., "Suppose you called me a creep." Would that make me one? I would probably say to myself, I don't like to be called a creep, but that does not make me one." "I don't like it when he calls me a name but I can stand it."

c. Encourage the client to try or practice saying some more self-enhancing messages.

1) Have him draw himself saying these things.

2) Have him write or you write these more self-enhancing messages.

3) Mark this sheet B2 New (Self Enhancing) Thoughts.

7. Discuss with the client how he feels when he talks in this new (more self-enhancing) manner.

a) Have the client draw how he would feel.

b) Discuss the intensity of his feeling. Does this make you feel better or worse
than when you said I can't stand it?

c. Mark this sheet $C_2$ (Emotions)

d. Reinforce how what we tell ourselves has a lot to do with how we feel.

8. The therapist and client explore the possibilities of more socially adaptive behavioral responses.

a. Review the sequence $A-B_2-C_2$ and then ask the client what he would do next time with this new kind of thinking and feeling.

b. Would he still feel like hitting.

c. Explore alternate behaviors when the problem comes up, i.e., A, this co-worker calls him a name.

d. Because retarded individuals often lack a large repertoire of behaviors, more adaptive behavioral responses may have to be introduced or taught. If the client does not come up with adaptive alternatives, the therapist can suggest possibilities. Role-play and modeling may be used to demonstrate alternatives (i.e., ignore him or walk away).

e. Have client draw himself engaging in the more socially adaptive behavioral response.
f. Record his responses.

g. Mark sheet $D_2$ (Socially Adaptive Behavior)

h. Discuss the social consequences of this kind of behavior and how this would make him feel.

9. The therapist assists the client in reviewing and reinforcing the $A-B_2-C_2-D_2$ sequence in contrast to the $A-B-C-D$ sequence.

a. Arrange the $A-B-C-D$ sequence in front of the client in a picture arrangement fashion.

b. Have client tell what is happening in each picture.

c. Discuss if this thinking leads him to making things better or worse for himself.

d. Repeat the above steps a, b, c, for the $A-B_2-C_2-D_2$ sequence.

e. Reinforce that a person can learn new ways of thinking, feeling, and behaving in problem situations that can make things better for himself.

10. Discuss that at our next session we can look at things that happen that give him problems and find some new ways of thinking, feeling, and acting.

Give client appointment card and discuss the date and time of the next session.
A GUIDE FOR STAGE DIRECTING THERAPY SESSIONS

Session 1 Introduction

The therapist and client may or may not get through all the above steps in the first session. It is important for each client to move at his own pace when introducing the cognitive restructuring paradigm; allow sufficient time for awareness and exploration within each of the components of the A-B-C-D cognitive restructuring paradigm. Asterisks indicate places where the session could be concluded and continued the following session. If a session is concluded at one of these points, review the session and discuss with the client that together you will be looking at this problem next time and will talk about some new ways of thinking, feeling, and acting.

Sessions 1-2

The therapist and client continue Awareness and Exploration of the A-B-C-D's of socially maladaptive and more socially adaptive behavior as just described using drawings, discussion and any other techniques listed in the introduction to this manual.

At each session, the client may wish to discuss problematic situations occurring in his daily life. The format outlined in the first session will be used. Problematic situations from previous sessions may be reviewed periodically.

The drawings are used to focus the client's attention on each of the A-B-C-D components of the cognitive restructuring paradigm. The client should be encouraged to tell about what is happening in each
of the pictures in the maladaptive and in the adaptive series. Reinforce the more socially adaptive responses. Emphasize how much better the client makes things for himself when he finds better ways of talking to himself. How he does not feel so extremely upset and how he can choose some other ways of acting or behaving when he does not make himself so upset.

After the client and therapist feel that they have sufficiently explored and have become aware of some old ways and some new ways of thinking, feeling and acting in the problematic situation, the client is guided into the third and fourth stages of the cognitive experiential model: Commitment to the new (more self-enhancing or rational) thinking and (more socially adaptive) behavior and Implementation.

The Commitment Stage involves the consistent drawing and talking about himself using more self-enhancing or rational ways of thinking more socially adaptive ways of behaving. The client reports less intense emotional responses to problematic situations.

The Implementation Stage implies that the subject is actively engaging in newly acquired skills that he has become committed to. When presented with a previously problematic situation, he is able to respond with more self-enhancing self-messages, feelings and more socially adaptive behavior. The Implementation Stage is the testing ground for the subject's new behaviors. He is encouraged and reinforced in applying what he has learned in the therapy session to situations outside therapy in the form of homework assignments.

The therapist or client can write the more self-enhancing, rational messages for the client to practice outside therapy.
The therapist will continue to reinforce the client's efforts. If the client has difficulty, the therapist and client re-examine the problematic situation.

Once the commitment to more rational thinking and socially adaptive behavior and the implementation of more self-enhancing thinking, feeling, and acting have been attempted, the client may be ready to internalize the process and proceed to the internalization stage.

**Internalization** is a logical progression from the preceding stages. Once the subject begins implementing more self-enhancing thinking, feeling, and behaving successfully, he is likely to internalize them.

The therapist and client discuss that "Once you find out how what you tell yourself has a lot to do with the way you feel and act, you can be more in control of yourself in problem situations. You can make things better or worse for yourself by what you tell yourself and what you do. The more you practice these new ways of talking to yourself, feeling and acting, the better you will become at doing it."

The therapist can review and outline how rational or self-enhancing thinking leads to more socially adaptive behavior in previously presented problematic situations.

Finally, the client reaches the final stage within the cognitive experiential model, the **Behavioral Stabilization Stage**. In this stage the therapist observes the client engaging in self-directed activity and assuming responsibility for his behavior. The client is reinforced in his striving to change. Behavioral changes are more easily observed by the person as well as significant others. If the goal of therapy was limited to one specific client concern, it may be terminated at this point.
Should the client wish to continue working on his problems, he is re-directed through the entire process once more, focusing on the particular stage where he is having difficulty.

In each session, all stages are contained within each other. While a client exploring more rational thinking, he is also becoming more aware of them. With increasing awareness comes greater commitment and the likelihood of implementation and internalization with stabilized behavior.

The therapist uses the stages as a specific logical problem solving procession to guide the client through the therapy process. The stages can serve to assist the therapist and client in focusing on the problems and improve in managing or coping with problems. Some clients may go through all stages more than once, while others may slowly progress through only a few stages.
STIMULUS DRAWINGS

OF PROBLEMATIC

SITUATIONS
Your instructor tells you he doesn't like your work.
Someone calls you a name.
Your girlfriend is talking to another guy.
You have no money to buy lunch.
Someone wants to fight with you.
You are late for work.
You miss your bus.
Someone bumps into you.
Someone takes your seat on the bus.
Someone picks up a lunchbox that looks just like yours.
APPENDIX D

PRE-TESTING, POST-TESTING I AND II

ADAPTIVE BEHAVIOR SCALE SCORES
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<th>Sex</th>
<th>Level of Intellectual Func.</th>
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Part I

Part II

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**Appendix d (continued)**
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Appendix D (continued)
### Part I

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### Note

Numbers in ( ) indicate Part II

Domains: 80%

- Part II a) Pre-testing Scores
- Part II b) Post-testing Scores
- Part II c) Post-testing Scores

- Emotionally Disturbed
- Untrustworthy Behavior
- Rebellious Behavior
- Antisocial Behavior
- Violent & Dist. Behav.
- Social Motivation
- Personal Motivation
- Cognitive Development
- Personal Independence
- Treatment
- Age Entered
- Institution Yrs.
- Institutionalized Yrs.
- Sex
- Age
- Intellectual Func.
- Subject

Appendix D (continued)
APPENDIX E

CLINICAL EXAMPLES OF COGNITIVE
EXPERIENTIAL THERAPY WITH DRAWINGS
MALADAPTIVE COGNITIVE (Bj), AFFECTIVE (Cj) AND BEHAVIORAL (Dj), RESPONSES TO A PROBLEMATIC SITUATION OR EVENT

Subject: 4
Sex: Female
Age: 48
Mild Retardation

Event: Mother's death when client was 13. She is now 48 but it is still a problem.

Bj) Cognitive Responses:
1. It's not fair.
2. Why did my mom have to die?
3. I'll have to go into an institution now.
4. I'll have to leave my friends.
5. Other people have moms and aren't alone.

Cj) Affective Responses:
1. I'm angry at my mom and dad.
2. Still feel sad.
3. Makes me feel good she didn't have to suffer so much.
4. Feels like you're all alone.

Dj) Behavioral Responses:
1. Go off by myself and cry.
2. Interferes with other things.
3. Keeps me from being happy.
Adaptive Responses (continued)

Subject: 4

(B2) Cognitive Responses
1. I can talk to other people and have other friends.
2. They can't take mom's place but can help.
3. Even though mom's dead I'm not alone.
4. I'm no longer in an institution and it doesn't help to still be angry.
5. Things don't have to be fair
6. My mom and dad didn't want to die and leave me.

(C1) Affective Responses
1. Feel better.
2. Not feel as sad.
3. Not feel as mad.
4. Not feel as lonely.

(D1) Behavioral Responses
1. When I feel happier I do something with somebody ... like watch TV with Alice.
MALADAPTIVE COGNITIVE (B₁), AFFECTIVE (C₁) AND BEHAVIORAL (D₁) RESPONSES TO A PROBLEMATIC SITUATION OR EVENT

Subject: 7
Sex: Female
Age: 58
Mild Retardation

A boy stole her purse.

(B₁) Cognitive Responses
1. It's not fair.
2. It's not right to take my purse.
3. It's terrible.
4. I can't go to work anymore.
5. The boy shouldn't have done that to me.
6. He's dirty because he steals.
7. Without my purse I can't work.

(C₁) Affective Responses
1. I don't feel good.
2. Feel bad.
3. Feel mad.
4. "I was on a tear."
5. Sad

(D₁) Behavioral Responses
1. Go got police.
2. cried
3. Come home.
4. Spent the day in my room.
5. Lots of other days too.
Adaptive Responses (continued)

Subject: 7

1. The boy didn't care whether it was fair or not.
2. He didn't care if it was right — he just wanted my money.
3. I can get another key card and another purse, but I didn't lose my money.
4. I could have been worse.
5. I can replace things. I wish I didn't, but I can.

(C2) Affective Responses
1. I'd have felt a little better.
2. Still sad because of having to make keys and replace things.
3. No mad or sad

(D2) Behavioral Responses
1. I don't need to stay in my room.
Subject: Il
Sex: Female
Age: 50
Moderate Retardation

Event:
Boss told Lillian that there is no work.

Cog. Responses (B):
1. It's not right. I should have work.
2. I'm not going to have money.
3. I won't be able to buy nothing.
4. I won't be able to buy coffee and toast.
5. I can't stand just sitting on my tail.
6. That girl will help me out.

Affective Responses (C):
1. Feeling nervous.

Behavioral Responses (D):
1. Hit a girl.

Behavior leads to social consequences that becomes another upsetting event (A):
A. Sent to the time-out room.
B. It's not fair.
C. Feels angry and nervous, frustrated.
Adaptive Responses (continued)

Subject: 11

No. (B1) drawing -
see response below

(B2) Cognitive Responses
1. That girl doesn't have
to help me out.
2. I can ask her to lend
me some money or keep
quiet.
3. She might say no or yes.
4. I'm going to keep quiet.
5. I can stand it even if I
don't like it.
6. I am strong.
7. There's other things I
can do not to spend money
(like bringing some from
home).
8. There's other things I can
do when there's no work
(sleep, learn to count
money).

(C2) Affective Responses
1. Feeling O.K.
2. Not nervous
3. Feeling strong

(D2) Behavioral Responses
1. Work with Case Manager
on counting money.