GROUP RATIONAL EMOTIVE THERAPY VERSUS USUAL
GROUP THERAPY IN RESIDENTIAL
TREATMENT OF ALCOHOLISM

DISSERTATION

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Michael D. Whitley, B.A.
Denton, Texas
December, 1981
The goal of this experiment was to determine whether
group rational emotive therapy would prove superior to
usual group therapy in improving the psychological
functioning of male alcoholics in an inpatient treatment
facility and to determine if memory dysfunction would
impede therapeutic progress. Four areas of psychological
functioning were discussed for their relevance to etiology,
recidivism, and treatment evaluation; they were depression,
self-conception, social anxiety, and cognitive functioning.
Further, rational emotive therapy as a potentially superior
treatment for alcoholism was discussed and outcome research
was reviewed.

Thirty-eight male veterans volunteered for the experiment and were randomly assigned to treatments. Four therapists, counterbalanced for therapy type, administered 18 hours of group therapy over a 4-week period. Dependent measures were administered before and after treatment and hypotheses were tested by the analysis of covariance technique. The dependent measures were the Beck Depression
Inventory, Tennessee Self Concept Scale, Social Anxiety Scales, Irrational Beliefs Test, Cognitive Impairment Index, and pretreatment credibility ratings.

Results revealed little evidence for the superiority of rational emotive therapy over the usual group therapy on any of the psychological variables. Some improvement in functioning between pre- and posttesting was observed within both treatment groups. Cognitive impairment was associated with poor treatment response on the Fear of Negative Evaluation Scale only for subjects in the usual group therapy.

Several implications were drawn from this study. Rational emotive therapy may not be clearly superior to other types of therapy in the treatment of alcoholism. The relative inexperience of therapists in using rational emotive therapy may have contributed to the lack of superiority of rational emotive therapy over usual therapy techniques. Future research on inpatients should develop comparison groups to control for the effects of treatment milieu and sobriety and include therapy manipulation checks. Finally, more precise assessment of cognitive impairment in response to treatment was discussed for future research.
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GROUP RATIONAL EMOTIVE THERAPY VERSUS USUAL GROUP THERAPY IN RESIDENTIAL TREATMENT OF ALCOHOLISM

According to the National Institute of Alcohol Abuse and Alcoholism (NIAAA) (1974), alcoholism is a major health problem in the United States. The NIAAA (1974) estimates that about 10 million Americans are alcoholics as measured by the personal, social, and medical deterioration related to alcohol abuse. Alcoholics are found in all socioeconomic levels in the United States: 25% are white-collar, 30% are blue-collar, and 45% are professional or managerial workers (NIAAA, 1974).

The effects of alcohol abuse on health are devastating. Alcoholism ranks only behind heart disease and cancer as a major health problem. Alcohol plays an important role in 1/2 of all murders, 1/4 of all suicides, and 1/2 of all automobile accidents involving death and injury (NIAAA, 1974). The alcoholic's life span is shortened by an estimated 10 to 12 years, with most deaths attributed directly to the effects of alcohol occurring from cirrhosis of the liver (NIAAA, 1974).

The personal and social costs of alcoholism are often as pervasive as health problems. Alcoholics are more likely to have unstable family relations. They are seven times more likely than the average person to be separated
or divorced. An estimated 40 billion dollars annually is lost in absenteeism from work, in health and welfare services, and in property damage resulting from alcohol abuse (NIAAA, 1974).

According to the Government Accounting Office (GAO) (1975), about 3 million veterans suffer from alcoholism, with alcoholism being the most frequently encountered diagnosis in the Veterans Administration (VA) hospital system. The GAO's (1975) statistics of veterans treated for alcoholism in the VA system describe the average veteran as a 45-year-old male with moderate to low income and an 11th grade education. Most are unemployed and hard liquor is the drink of choice. The average amount of drinking time before seeking treatment is 14 years. Most veterans are treated in VA residential programs, which makes the VA perhaps the single largest treatment system for alcoholism in the United States.

Because of the numbers of people treated at VA hospitals, VA treatment facilities would seem to offer fertile research opportunities for investigation of alcoholism treatment programs in the United States. Various problems have hindered the evaluation of the effects of alcohol treatment offered by VA hospitals, however. Several of these shortcomings were identified by the GAO (1975):
1. Although officials in the Veterans Administration Central Office have recognized the need for measurable treatment goals and objectives, personnel shortages have prevented the establishment of these goals. Furthermore, at least one influential official has stated that program effectiveness had not been measured because no goals had been established by which to measure performance.

2. Although VA alcoholism treatment facilities were encouraged to set their own individual treatment goals, the GAO found no system to quantify, evaluate, or measure whether treatment goals had been reached or to determine whether an acceptable degree of success had been reached.

3. Although some treatment goals had been established in at least some VA alcohol treatment units, some of the goals were so broad as to be unmeasurable. For example, sobriety or abstinence from drinking alcohol is a potentially measurable goal of treatment. Yet, other goals lacked the operational specificity to lend themselves to measurement, such as helping veterans (a) deal with personal problems and indifferent attitudes, (b) achieve personal freedom and accept responsibility, and (c) develop a lifestyle without need for alcohol.

Since the GAO (1975) report, some progress has been made in establishing more operationally definable treatment goals in the VA alcohol abuse treatment centers. How
widespread these changes have been is difficult to assess. For example, the American Lake Veterans Administration Medical Center Alcohol and Drug Treatment Program has no formal treatment evaluation program, although some treatment goals are measurable, such as increased assertiveness and sobriety. Although at least one program evaluation of increased assertiveness has been attempted at the Alcohol and Drug Treatment Program (ADTP) at the American Lake VA, experimental design was inadequate (e.g., lack of random assignment to treatments) and follow-up was virtually impossible due to inadequate follow-up procedures leading to unusually large attrition rates (over 60%), which would render any follow-up assessment largely meaningless.

Despite the difficulty of treatment evaluation in some VA alcohol treatment facilites, evaluation of the efficacy of service is crucial for providing adequate service to veterans seeking treatment for alcoholism and its related problems. Without adequate treatment evaluation, the rationale for maintaining existing treatments or for adding new treatment regimens becomes a matter of opinion or personal enthusiasm, not a matter of the demonstrable effects of treatment.

One of the problems facing researchers is the lack of universally accepted model of alcoholism. Instead, there are at least two general models of alcoholism, each
exerting an influence over the choice of treatment goals and outcome criteria. These two models are the traditional disease model and the more recent, emerging, multivariate model of alcoholism. Although these two models are not necessarily mutually exclusive, they can be shown to have some important differences in the implications for establishing treatment goals and for selecting the proper outcome criteria.

One of the preliminary goals in the evaluation of alcohol treatments should be the clarification of the model of alcoholism upon which evaluation of treatments is to be based. The multivariate and disease models contain certain assumptions about the nature of alcoholism, its etiology and treatment, that should be considered in order to make rational choices about outcome criteria. Once the assumptions and implications of the models are delineated, then researchers evaluating treatment outcomes based on one of these models would be in a better position to judge the usefulness of the model as well as derived treatments over the long term accumulation of outcome literature.

Perhaps the most influential conceptualization of alcoholism is the disease model proposed by Jellinek (1960). Briefly, he delineated five kinds of alcoholisms, two of which he asserted were diseases. These were gamma and delta alcoholism. Gamma alcoholism was described as (a) acquired increased tissue tolerance to alcohol, (b) adaptive cell
metabolism, and (c) physical dependence, withdrawal symptoms, craving, and loss of control over drinking. Loss of control implied that once alcoholics began to drink, they could not stop with just one drink but continued drinking until they became too sick to drink or passed out. Delta alcoholics were similar to gamma alcoholics, but instead of manifesting loss of control over drinking, they were unable to abstain from drinking. Jellinek (1960) proposed that alcoholism could take other forms that were not diseases. Yet, his theory about gamma and delta alcoholics stressed a loss of control and craving that were linked to physical dependence.

The disease model of alcohol abuse contains several assumptions that have influenced the choice of treatment goals and the choice of criteria of treatment evaluation. These assumptions have been summarized by Pattison, Sobel, and Sobel (1977) as follows:

1. Alcoholism is a distinct entity that can be described and recognized;

2. Alcoholics differ in some essential way from nonalcoholics;

3. Alcoholics may experience physical craving or a strong psychological compulsion to drink; and

4. Alcoholism is a progressive, permanent, irreversible condition.
Based on these assumptions, traditional goals in the treatment of alcoholism have been to produce permanent abstinence from alcohol. Correspondingly, treatment outcome research has traditionally focused on comparing abstinence rates in posttreatment functioning as the major or sole outcome criterion by which treatments were evaluated. A corollary assumption behind the choice of these goals and treatment evaluation criteria was that, once alcoholics remained sober, they would experience a corresponding improvement in functioning in other areas of their lives. Gradually, treatment outcome research and experimental evidence have accumulated to cast doubt on the adequacy of the disease model of alcoholism and on its influence over the choice of treatment goals and outcome criteria.

Large-scale research reviews have appeared in recent years summarizing the effectiveness of psychological treatments for alcoholism that were largely based on the assumptions of the disease model. These reviews ubiquitously report on the lack of differential effectiveness of various therapies and, indeed, on the sometimes minuscule effects of treatment on posttreatment drinking behavior of alcoholics. For example, Emrick (1974, 1975) reviewed 384 psychologically oriented outcome studies spanning the years 1952 to 1973. As an indication of the pervasive influence of the disease model on outcome criteria, he found that about 80% of the
studies used self-reported drinking behavior as the major outcome criterion, followed by vocational adjustment (26%) and and family relations (15%). Other therapy outcome measures included various cognitive-affective symptoms, physical health, arrest rates, interpersonal adjustment, and attendance at Alcoholics Anonymous. He found that typical abstinence rates varied between 10% and 53%, so that by the criterion of the disease model, improvement rates were poor to good. Further, Emrick (1975) found no evidence that different treatment techniques were powerful determinants of long-term abstinence. However, he did find that the amount of time in treatment, regardless of treatment type, was important to outcome as measured by sobriety: when treatment was continued beyond a minimal time (2 weeks on inpatient treatment), then treatments produced overall higher abstinence rates than no treatment. Similarly, two other large-scale reviewers have found a lack of differential treatment effects on posttreatment drinking behavior (Armor et al., 1976; Ruggles et al., 1976). These reviews suggest the pessimistic conclusion that while some treatment is better than no treatment at all, the kind of treatment one receives makes little impact on drinking, as long as one simply spends a minimal amount of time in some kind of treatment.

This pessimistic view of the role of treatments has been seemingly confirmed by research on patient characteristics.
Pretreatment functioning of patients has been found to be a better predictor of outcome than the kind of treatment received. Residential, occupational, and marital stability before treatment has been positively related to good treatment outcome (Bowen & Androes, 1968; Davies, Shepherd, & Myers, 1956; Dubourg, 1969; Evenson, Altman, Sletten, & Knowles, 1973; Kish & Hermann, 1971; McCance & McCance, 1969; Moore & Ramseur, 1960; Pokorny, Miller, & Cleveland, 1968; Rosenblatt, Gross, Malenowski, Bruman, & Lewis, 1971). Pretreatment socioeconomic status also has a strong positive relationship to good outcome (Gills & Keet, 1969; McCance & McCance, 1969; Mindlin, 1960; Pokorny, Miller, Kansas, & Valles, 1973; Trice, Roman, & Belasco, 1969).

On the other hand, a poor prognosis, regardless of treatment, is associated with such pretreatment factors as legal troubles (Corotto, 1963; Dubourg, 1969; McCance & McCance, 1969; Rubington, 1970), sociopathic personality characteristics (Caster & Parsons, 1977; Muzekeri, 1965; Pokorny, Miller, & Cleveland, 1968; Rathod, Gregory, Blows, & Thomas, 1966), and levels of depression (Baekeland, Lundwell, Kissin, & Shanhan, 1971; Bowman, Simon, Hine, Macklin, Crank, Burbridge, & Hanson, 1951; Lundwell & Baekeland, 1971; Caster & Parsons, 1977).

Regardless of the ubiquity of these findings, some researchers and clinicians in the field of alcohol treatment
believe that differential treatment effects do exist and that treatments are crucial to posttreatment functioning in alcoholics. Kissin (1979), for example, believes that the major review articles that keep finding a lack of differential treatment effects do not examine the correct variables. Kissin (1979) reported on research he and his associates have done which showed that when patients were randomly assigned to different treatment modalities, social and demographic factors actually had little effect on outcomes, but that psychological variables of depression, anxiety, and sociopathy had a detrimental impact. Pattison (1979) has essentially agreed with Kissin. He has argued that the large-scale reviews lump too many measures together, so that "the variability in the data produces so much random distribution that it wipes out any differential effects, whereas smaller-scale, more succinct studies do demonstrate differential results" (p. 122).

The doubts expressed by these researchers concerning the general findings of outcome research involve issues of outcome measurement. It may be that part of the lack of demonstrable differences in various treatments lies in the almost universal reliance on posttreatment sobriety as the major outcome variable. This heavy reliance on abstinence rates assumes that psychological treatments should directly affect drinking behavior. The fact that they have been
repeatedly shown not to do this is no argument that different treatments do not actually have differential effects on outcome other than sobriety. Rather, it may be that psychological treatments for alcoholism directly affect variables that have only indirect effects on posttreatment sobriety (Conkrite & Moos, 1980). Furthermore, the problems associated with measuring treatment outcome are compounded by the lack of knowledge concerning what posttreatment factors lead to alcohol abuse relapse. Knowledge of these relapse factors may help clarify a rational basis for choosing appropriate outcome criteria for psychological treatments and relating these variables to sobriety.

Several researchers have explored the effects of life stress on posttreatment functioning of alcoholics. Hore (1971) reported on a slight temporal association between significant life events and relapse in a small sample (14) of alcoholic patients. Marlatt (1977) suggested that relapse could be brought about by stressful life events and social pressure among patients who do not know how to cope with such situations. Similarly, two longitudinal studies (Ogbru, 1976; Finney, Moos, & Newborn, 1980) found that patients who experienced more posttreatment stressors or negative life change showed poorer treatment outcomes.

In an excellent study on posttreatment functioning, Conkrite and Moos (1980) used path analysis to assess the
direct, indirect, and total effects of pre-, post-, and treatment variables on the functioning of alcoholics after treatment. The variables they studied were sociodemographic characteristics, pretreatment symptoms, the amount of time in treatment, life changes, coping responses, and environmental resources. Treatment outcome was measured by the amount of alcohol consumption, depression, and vocational functioning. In general, they found that treatment had only a weak direct effect on posttreatment functioning as measured by alcohol consumption and vocational adjustment. In fact, almost all the variance on vocational functioning after treatment was predicted by pretreatment vocational functioning. However, they found that the indirect effects of treatment were substantial. Treatment was associated with reduced life stress and an increase in positive coping abilities. These positive changes in turn became important predictors of relapse and levels of depression after ending treatment.

One of the conclusions that can be drawn from the Conkrite and Moos (1980) study is that psychological treatments do not directly affect two common measures of treatment outcome: vocational adjustment and sobriety. Rather, psychological treatments more readily affect the cognitive, emotional, and behavioral variables that may indirectly affect relapse rates and sobriety. An important
implication of this conclusion is that posttreatment abstinence rates are actually an indirect measure of the effects of psychological treatments and are relatively insensitive as an outcome measure for these effects. A further implication is that unless treatments affect changes in the variables that are indirectly related to posttreatment abstinence, then abstinence rates are not likely to be influenced by treatment, directly or indirectly.

These considerations bring into question the sole reliance on sobriety as a major measure of treatment outcome. Perhaps more importantly, the reliance on sobriety alone as a goal of treatment may obscure other treatment goals just as legitimate and more amenable to psychological intervention than sobriety. In this regard, then, the limits of usefulness of the disease model in guiding the choice of at least short-term treatment goals and in selecting evaluation criteria may have been exceeded.

Recently, the disease model that gave rise to the emphasis on abstinence as a major treatment goal and outcome evaluation criterion has come under attack from a number of researchers and clinicians. As a result, a reconceptualization of alcoholism is emerging.

Since the 1960s, experimental work on the basic assumptions of the disease model have been extensively reviewed by Armor et al., (1976), Miller (1976), Pattison et al., (1977),
Sobel and Sobel, (1975), and Sobel (1978). These reviews demonstrate that under experimental conditions, alcoholics do not develop physical dependence after consuming small amounts of alcohol, and that some individuals with a history of physical dependence on alcohol can engage in limited and nonproblem drinking following treatment. Furthermore, although drinking outcomes are generally moderately correlated with improvement in other areas of life functioning, improved drinking outcome does not necessarily mean an individual will demonstrate improved social or psychological functioning as well. In fact, some researchers (Gerard, Saengar, & Wilie, 1962; Pattison, 1966, 1976) have shown that either abstinence or controlled drinking may be associated with decreases in functioning in other areas of life health for some people. These findings serve to question the validity of the disease model with regard to its application to alcoholism and its treatment; specifically, abstinence may not be the only essential precursor to rehabilitation of alcohol abusers.

In place of the disease model, a multivariate conceptualization of alcohol dependency and abuse has begun to emerge (Caddy, 1980). The basic tenet of the multivariate model is that alcohol abuse is actually an array of many behaviors, cognitions, and emotions that collectively comprise different syndromes defined by drinking patterns and the
adverse physical, psychological, and social consequences of drinking. Researchers adhering to the emerging model assert that a variety of factors may contribute to the etiology and maintenance of problem drinking and related difficulties (Caddy, 1978; Goldstein & Linden, 1969; Horn & Wanberg, 1969; Pattison, Sobel, & Sobel, 1977; Wanberg & Horn, 1973; Wanberg & Knapp, 1970).

The multivariate model does not obviate the disease analogues of alcoholism. Research on the genetic contribution to alcoholism is one area of possible rapprochement between the multivariate and disease models. Recent research on the role of socio-cultural, familial, and genetic contributions to the transmission of alcoholism in families have emphasized the heavy role of genes in the etiology of alcohol dependence. In investigating the implications of sex differences in the transmission of alcoholism, Cloninger and his associates (1978) argue that genetic factors play a significant role in predisposing members of both sexes to develop alcoholism with differences in prevalence rates between the sexes due largely to nongenetic factors. However, their data suggest that before alcohol dependence is manifest, continued heavy drinking is required, but that frequency of drinking develops in individuals independently of the predisposition to alcohol dependence. That is, the heavy drinking required to trigger the genetic predisposition
to alcohol dependence in susceptible individuals is determined by nongenetic factors. These nongenetic factors include sex roles and familial factors that shape personality and behavior. Thus, even though the later stages of heavy drinking may lead to a disease-like state of alcohol dependence underpinned by genetic influences, the factors leading to heavy drinking in the first place are likely to be complex and, in some respects, unique to the individual alcoholic or problem drinker.

The multivariate approach emphasizes the uniqueness without denying the commonalities of individuals who experience alcoholism. These commonalities include common genetic and personality factors in the etiology and maintenance of alcoholism (Sadava, 1978). The multivariate approach also stresses the usefulness of individualized assessment of alcohol abusers' problems and recognizes that different individuals may require different emphasis in treatment or different components of treatment programs for successful outcomes (Gills & Keet, 1967; Lazarus, 1976; Pattison, 1976; Wanberg & Knapp, 1970). For example, some individuals seeking treatment for alcoholism may state different reasons for their heavy drinking behavior. Flexible treatment regimens would address these different reasons for drinking to resolve them.
Caddy (1980) has suggested that there are two major implications for the multivariate approach concerning outcome evaluation of treatment programs. First, he recommends reporting outcome data on individual patient change instead of sole reliance on between-group data that average individual changes and may therefore obscure important individual differences in response to treatment. Second, he argues that treatment outcome research would present a more valid picture of treatment results if outcome evaluation made use of multiple measures of outcome rather than relying on abstinence rates as the sole or major outcome criterion.

The multivariate approach, of course, does not negate the usefulness of between-group research designs to assess the efficiency or efficacy of treatments. Rather, the heart of the multivariate approach lies in designing treatments to respond sensitively to individual differences in alcohol abuse and in recognizing the need to assess various areas of social, cognitive, and behavioral functioning in treatment outcome evaluation. In this way, the multiplicity of causes of alcoholism can be addressed by treatment regimens. Further, there should be some relationship between goals of treatment and outcome. For instance, if the goals of treatment are to alter levels of anxiety, then outcome measures should reflect these concerns.
Pattison (1976) has argued that alcoholism treatment goals should be organized into five major areas of life health. These are (a) drinking health, (b) emotional health (c) interpersonal health, (c) vocational health, and (e) physical health. Other authors have offered similar lists of broad treatment goals (Gibbins & Armstrong, 1959; Foster, Horn, & Wanberg, 1972; Caddy, 1980).

In general, the five areas suggested by Pattison (1976) reflect the treatment goals of many alcohol treatment programs with specific programs focusing on one or more areas. Some treatment regimens aim at abstinence; others aim at controlled drinking; still others aim at some combination of both, depending on the individual abuser (Sobel, Sobel, & Ward, 1980). Other programs, especially inpatient units, include as goals of therapy improved marital, social, and vocational adjustment, and improvement on various psychological variables such as depression, as well. Outcome research that ignores measuring these various areas of functioning in treatment evaluation may be missing some powerful treatment effects and may obscure important differences in effect between treatments as well.

In summary, then, the disease model has been influential in dictating abstinence from drinking as the major goal of therapy. Whereas alteration in drinking patterns may be one important goal of treatment, it is not the only goal as
alcoholics have a multitude of social and personal
difficulties that may contribute to recidivism. A more
useful model to guide treatment and outcome evaluation may
be the multivariate model which specifies that alcohol abuse
is determined by many factors, that treatment goals should
include changes in several areas of life functioning, and
that outcome criteria used to evaluate treatments should
reflect the goals of treatment.

The heart of the philosophical issue of program
evaluation involves the choice of both short- and long-term
treatment goals. Do the treatments for alcoholism focus
mainly on abstinence or altered drinking patterns; or do
programs focus on the personality, cognitive, and emotional
correlates of alcoholism; or do they focus on some mixture
of both spheres? When evaluating the long-term impact of
treatments, should drinking patterns be the primary criterion
of change, or should equal weight be given to the cognitive,
emotional, and behavioral correlates, or possibly both sets
of criteria?

Along with the considerations for long-term treatment
goals, treatment planners are also faced with short-term
treatment goals. That is, what is to be done with alcohol
abusers once they have submitted themselves for treatment?
what is to be done during treatment tenure that will make
achievement of long-term, posttreatment goals more likely?
It may be that some program planners will wish to instill rational value systems, ease anxiety and depression, or offer support and strategies on how to handle temptations to drink. Hopefully, the choice of short-term goals and treatment strategies will have some relationship to the goals of posttreatment functioning.

One of the first goals of treatment evaluations, then, should be to clarify short-term treatment goals and to evaluate the success of treatment strategies in achieving short-term goals. For example, treatments designed to ease depression, lower anxiety, or alter self-concepts should be evaluated as to how these goals are accomplished. Later, the achievement of short-term goals could be related to various measures of posttreatment functioning, such as sobriety, to assess how the level of achievement of short-term goals reflects posttreatment functioning.

The current research project is based on the emerging multivariate model. The alcohol abuser is seen as having problems in various areas of life functioning, and significant improvements in these areas are seen as legitimate immediate treatment goals and outcome criteria. At the same time, sobriety or decrease in heavy drinking patterns are seen as important long-term goals of treatment. The areas of research focus involve cognition, self-concept, interpersonal fears, and depression. These areas fall under the categories
of emotional and interpersonal functioning suggested by Pattison (1976).

The purpose of the present study is to assess the degree of change residential group therapy for alcohol abuse produces on psychometric measures of self-concept, depression, interpersonal anxiety, and irrational beliefs and to evaluate the impact of cognitive impairment on treatment outcome. The contribution of self-concept, depression, and interpersonal anxiety in the life functioning of the alcohol abuser, and the role of RET in increasing functioning in these areas will be reviewed in the following sections. In addition, impairments of new learning ability associated with chronic alcoholism will be briefly reviewed.

**Self-Concept**

The construct of the self-concept as a personality variable has been subjected to a great deal of theoretical speculation. Various theorists, while emphasizing different aspects of self-concept, agree as to the importance of self-concept as a means of studying and understanding human behavior (e.g., Rogers, 1951; Raimy, 1948; Snygg & Combs, 1959; Fitts, 1965).

Many definitions of self-concept exist. Raimy (1948) emphasizes both conscious and unconscious factors:

The self-concept is the more or less organized perceptual object resulting from present and past
self-observation . . . [it is] what a person believes about himself . . . The self concept is regarded as a learned perceptual field . . . [and] is constantly used as a frame of reference when choices are made. Thus, it serves to regulate behavior . . . portions of it may be unverbalized immediately or may be subject to the process of repression. (p. 154)

Rogers (1951) defined the self-concept as an organized configuration of perceptions which are admissible to awareness. These include one's characteristics and abilities, one's relations with others and the environment, one's values in association with one's experiences, and one's goals and ideals.

Coopersmith (1967) has synthesized these traditional views of the self-concept. He regards the self-concept as an abstraction which the individual develops and usually maintains concerning the attributes, abilities, activities, and objects that he possesses and pursues. Self-esteem, on the other hand, has been defined as the evaluation the individual makes concerning attributes and abilities. Self-esteem, then, results from judgments of self worth, significance, or approval and disapproval which the individual makes concerning the self or self-concept.
These traditional views of the self involve attitudes and information individuals have concerning several dimensions of the self: their physical bodies, their moral-ethical standards, their behavioral and intellectual abilities or deficits, and their notion of themselves as members of social groups. These dimensions of the self-concept are the result of development and learning and are more or less integrated. Fitts and his associates (1971) have identified three classes of the self-concept that can be distinguished within each of the dimensions of self: self-identification, self-acceptance, and the perceived correspondence between self-identity and behavior. Fitts believes that the self-concept is a complex, multidimensional, cognitive-affective person variable that affects the individual's behavior across a variety of situations (Fitts, 1965).

Current social-learning and cognitive approaches to human behavior see the self-system as an information processing system, which codes information about the coping abilities of the individual in various life situations (Bandura, 1978; Beck et al., 1979). In the cognitive-information-processing view, how one acts or reacts in the world depends on what one knows, believes about the world or self, or how one evaluates, realistically or unrealistically, the self and world.
Fitts (Fitts et al., 1971) on the other hand, argues that self-concept is a real entity which acts as a super-moderator of behavior. As a super-moderator of behavior, the self-concept subsumes motives, needs, behaviors, and other personality variables. As such, the self-concept is the organizer of behavior and the final arbiter of the meaning of behavior for the individual, as well as the meaning of other trait variables such as anxiety, achievement motivation, and sex identity.

Conceiving the self-concept as a trait subjects the construct to the antitrait criticism of Mischel (1968). He argued that the research on trait consistency across situations has consistently demonstrated the situational specificity of behavior, which is contrary to what trait theory would predict. Furthermore, behavior has been effectively altered not by altering traits, but by altering the consequences which serve to maintain the behavior in question (Kasdin, 1978).

The trait-state controversy is ongoing in psychology, however, and has not yet been resolved. Various explanations have been advanced to account for the common sense observation that people do show enough consistent behavior across time and situations to allow for a high degree of predictability in everyday life. Recently, for example, Epstein (1980) has argued that the research data Mischel has used to
argue for the antitrait position was based on inadequate sampling of behavioral events, usually single items of behavior in laboratory experiments, that are inadequate to the task of demonstrating stability of behavior. He argued that behavior has a natural variability so that single behavioral events are unreliable measures of a trait. However, once objective behavior is sampled over several occasions and averaged over a sufficient number of occurrences, then reliable relationships between personality measures and objective behavior are consistently obtained.

Regardless of the merits of either side of the trait-state controversy, Pollard (Note 2) has cogently argued the situational specificity of behavior does not negate the importance of self-concept as an influence on behavior. He has argued that the identification of the functional class of behaviors emitted in a situation, such as lack of impulse control, represent only one possibility of classifying behavior. Behavior can also be classified as to its efficiency and effectiveness in reaching a goal or as to the correspondence between the class of behaviors emitted and the nature of the environmental demands actually present or anticipated. Self-concept may be important to the determination of effectiveness of behavior or of the correspondence between behavior and the optimal coping response. The arguments advanced by both Pollard (Note 2)
and Epstein (1980) suggest that trait conceptualizations, such as self-concept, are useful and important for understanding, predicting, and changing generalized behavioral styles.

A number of investigations have related self-concept to consistent patterns of pathological behavior. Self-concept studies of the alcoholic juvenile offenders and the emotionally disturbed have found these individuals to have deviant self-concepts characterized by much internal conflict, large variability in major ways of conceiving the self, and much internal stress signified by a lack of correspondence between behavior and self-concept. Self-esteem was found to be defensively high or extremely low, and adequate defenses that would allow adequate adjustment to the environment were lacking. These populations were found to see themselves as unworthy individuals and as being unable to cope with life stress or to alter their behavior to acquire the necessary skills (Fitts, 1972; Fitts, Arney, & Patten, 1973; Fitts & Hammer, 1969).

Alterations in deviant behavior may not occur without alterations in self-concept. Juvenile offenders who continue a life of crime show corresponding deficits in self-concept, whereas nonrecidivists show healthy alterations in self-concept during the course of rehabilitation (Fitts & Hammer, 1969). Positive changes in phobic avoidance behavior
(Wagner & Fitts, 1973), sexual deviance (Marks & Gelder, 1967), general neurotic styles (Lazarus, 1971), and the functioning of hospitalized psychotics (Fitts, 1972, 1973) have been related to positive changes in self-concept.

These consistent findings relating changes in deviant behavior to changes in deviant self-concept may mean that the individual's self-concept limits the range of behaviors the individual will consistently perform. For example, psychotic individuals in hospital settings can be taught to change their behavior once they become aware of the consistent contingencies of change (Kasdin, 1978). However, the alteration of specific behaviors has not led to a corresponding alteration in the recidivism rates (Kasdin, 1978; Murry & Jacobson, 1978; Yates, 1975).

Perhaps new learning without a corresponding change in self-concept leads to rapid extinction of learned behaviors in new stimulus situations, so that self-control over behavior may be partially determined by the self-concept (Pollard, Note 2). In the area of alcohol treatment, then, effective treatment efforts may require a simultaneous attention to the behavioral and cognitive deficits and excesses in the individual and the self-concept which serves to limit behavior and cognition to self-defeating patterns. In this way, new learning in therapeutic settings may more likely generalize to nontherapeutic settings and remain stable after therapy termination.
Many researchers have studied and referred to the self-concept of alcoholics as inevitably portraying low self-evaluations. Although it is frequently asserted that there is no agreement on the existence of specific alcoholic personality traits (Freedman, Kaplan, & Saddock, 1972; Masserman, 1963), it is generally agreed that alcoholics do not like or respect themselves (Jellinek, 1962; Hoffman, 1976; Pitts & Hammer, 1969; Pitts, 1972; Pitts, Arney, & Patton, 1973; Higbee, 1977).

Chafetz, Blane, and Hill (1970) reported on certain personality characteristics and consistent behavior patterns that seemed to occur commonly among alcoholics they assessed. The authors state:

A recurrent observation in prolonged psychotherapy with alcoholics is that they eventually bring up violent feelings of hatred toward themselves and speak convincingly of their lack of worth and inadequacy . . . the alcoholic may have all sorts of substantial achievements to his credit and be a person of considerable success, but nevertheless, pervasive feelings of worthlessness and low self-esteem accompany his every thought and action. (p. 19)

Empirical support of the clinical observation that alcoholics hold disparaged self-view was provided by Gross
and Alder (1970) in a study of 140 male alcoholics. Aspects of alcoholics' self-concepts were measured by the Tennessee Self Concept Scale (TSCS). Scores were obtained for the 10 subscales: Total Positive, Identity, Self-satisfaction, Behavior, Physical Self, Moral/Ethical Self, Personal Self, Family Self, Social Self, and Self-criticism (See Appendix F for definition of these terms). The data were compared with scores from the standardization sample (N = 626) reported in the TSCS manual. Multivariate analysis was used to compute differences between groups, and a t value was found for each subscale. Self-concept scores for the alcoholic population were significantly lower than the normative sample scores on subscales in which the individual describes himself (Identity, Self-satisfaction, and Behavior) and on scores pertaining to internal frame of reference (Physical, Moral/Ethical, Personal, Family, and Social).

Vanderpool (1969) tested 100 male alcoholics to determine what changes in self-concept varied with different degrees of sobriety and drinking. The TSCS and the Adjective Check List were administered to an experimental alcoholic group and a control alcoholic group. All alcoholics in both groups were found to have lower self-esteem and more negative self-concepts than the normative groups. These differences between one alcoholic group and the other revealed than drinking tended to lower self-esteem,
self-confidence, self-acceptance, sense of adequacy, social worth, and tolerance to stress. Further, the drinking alcoholics were able to project better self-images by escaping from feelings of loneliness and inadequacy; this factor was considered a major reason for their continued drinking. Finally, results suggested that despite improvement in the nondrinking alcoholics' presentation of themselves on the TSCS and Adjective Check List, their sense of self-worth was still lower than the normative sample for the TSCS.

Felde (1973) found low patient profiles on the TSCS before participating in a 90-day multimodal alcoholism program and only slight changes after completion. To verify Felde's results, Tomsovick (1976) conducted a similar study in a 90-day residential program. He believed a relationship existed between self-concept and behavior, and that positive changes in self-concept were necessary for the individual to learn and apply consistently new coping patterns for altering drinking patterns. In essence, he found that significant changes in self-concept occurred in patients who participated in a closed encounter group whereas no changes occurred in a usual, open, eclectic group therapy.

Charalampous, Ford, and Skinner (1976) found that alcoholics had significantly lower self-esteem than
nonalcoholics, but also found that alcoholics who seek
treatment had lower self-esteem than alcoholics who do not
seek treatment.

In summary, people who have problems with alcohol abuse
have been described in both clinical and research literature
as having poor self-concepts and low self-esteem that deviate
from more normal populations, whether the alcohol abuser is
a current problem drinker or not. Improvement in the
self-concept appears to be related to important behavioral
changes in a variety of deviant behavior patterns, including
alcoholism, as well as to the maintenance of those changes
in posttreatment functioning. Changes in self-concept,
then, should be a major treatment goal, as well as a major
criterion of short-term treatment effects.

**Depression**

Depression is actually a group of psychological
dysfunctions usually marked by a lowered mood or sadness.
It is among one of the most common and painful emotional
disturbances, and it manifests itself in a number of
psychiatric disturbances. Some of the more common signs
and symptoms that occur in depressive syndromes have been
classified by Becker (1974) as follows:

1. Sad, lonely, apathetic, or irritable moods;
2. An exaggeratedly negative, self-punitive
self-concept;
3. Disturbed vegetative functioning, with overactive autonomic nervous system, accompanied by decreased appetite, appetite, poor sleep, constipation, and diminished sexual interests;

4. Physical complaints of aches, weakness, and fatigue;

5. Altered activity level, with slowing or agitation; and

6. Impaired thought processes, with high distractibility, indecisiveness, disinterestedness, and preoccupation with hopelessness or helplessness. (p. 8)

In addition, depressive disorders have been noted to be a persistent change in mood often characterized by feelings of guilt and loss and a deep sense of emptiness, deprivation, and sometimes, anhedonia (Bassuck & Schoonover, 1977). Further, depressions may be more or less responsive to life situations, or they may come to function autonomously from life changes in response, perhaps, to biochemical deficits or excesses. Depressions may also be character- logical, long-term personality problems, or they may develop secondarily in response to other physical or mental health problems (Hipple & Cimbolic, 1979).

Depression is a frequent finding in alcoholics who have been evaluated at the beginning of treatment (Rohan, Tatso, & Rotman, 1969; Weingold, Lechin, Bell, & Coxe, 1968;
Weissman et al., 1977; Keller, Taylor, & Miller, 1979). They have been found to differ from normals in level of depression (Robins, Gentry, Monuz, & Morten, 1977) and from social drinkers (Brown, 1980). Weissman and Myers (1980) have found that most untreated alcoholics drawn from a large community survey suffered from heterogenous depressions, including unipolar, bipolar, primary, and secondary depressions.

Gibon and Becker (1973) conducted a factor analytic study of inpatient alcoholics' responses to two common depression scales and found three of four factors previously reported in eight other factor analytic studies of patients with a primary diagnosis of depression. This is consistent with an earlier factor analytic study of outpatients' Q-sort self-depictions, which found that one of the effects of alcohol was to reduce depression and anxiety (McAndrew & Garfinkel, 1962), although more recent research has served to question the beneficial effects of alcohol on depression.

That many alcoholics suffer from various kinds of depressions is a widespread finding. The role of alcohol abuse as the cause of depression or as the consequence of depression is clouded. It may be that depression is the social, psychological, and pharmacological consequence of chronic, excessive drinking. It may be that alcoholics are primarily depressed and alcohol abuse is an attempt at
self-medication or an escape from the symptoms of depression and concomitant threats of personality disintegration (Bassuk & Schoonover, 1977; Arieti, 1978). It may also be a combination of these two: the alcoholic drinks to alleviate depression but becomes more depressed as a result.

Depression and self-destruction may be linked together in the etiology and maintenance of chronic alcohol abuse. Psychodynamic theorists have described self-punishment as a common component of both alcoholism and depression (Minninger, 1938; Simmel, 1948). Several studies have found a link between alcoholism and suicidal behavior (Batchelor, 1954; Glatt, 1954; Palola, Dorpat, & Larson, 1962), while studies of alcoholics also link suicide and both affective depression (Woodruff, Guze, Clayton, & Carr, 1973) and a cognitive component of depression, hopelessness (Beck, Weissman, & Kovacs, 1976). The link between depression and self-destructiveness is well established (Hipple & Cimbolic, 1979). The associations between the self-destructive, self-punitive effects of alcohol, and the self-destructiveness often found in depressed people suggest an etiological link between depression and alcoholism and may help explain the paradoxical findings reported in the experimental literature that drinking alcohol in chronic alcoholics is associated not with increases in mood levels, but with deterioration in mood and increased depression and anxiety (McNamee, Mello, &
Mendelson, 1968; Mendelson et al., 1964; Nathan et al., 1970; Allman et al., 1972; Williams, 1966). It may well be as Menninger (1938) suggested, that chronic alcohol abuse is a form of slow suicide.

In addition to the links between alcohol abuse and depression in the maintenance of destructive drinking patterns, depression has implications for treatment outcome. Several investigators have found that the greater the level of depression, the more likely the failure of both drug (disulfram) treatment and psychological therapy (Baekeland, Lundwall, Kissin, & Shanhan, 1971; Bowman, Simon, Hire, Macklin, Crank, Burbridge, & Hanson, 1951; Caster & Parson, 1977; Lundwall & Baekeland, 1971; Moore & Drury, 1951; Winship, 1957). Obviously due to the possible etiological significance of depression, its role in treatment failure, and its frequency in alcoholic populations, the alleviation of depression should be a major short-term goal in the treatment of alcoholism and a major outcome evaluation criterion.

Anxiety

The theoretical basis for studying anxiety in alcoholics is the tension-reduction model (Cappell & Herman, 1972). The basic model is that alcohol consumption is a learned instrumental response reinforced by the tension-reducing properties of alcohol. The assumption of the model
is that if alcohol reduces tension, then the experience of anxiety should be lessened in drinkers who have anxiety problems, which increases the likelihood of drinking when anxiety is reexperienced.

Studies of the effects of alcohol on anxiety have produced mixed results. Mayfield and Allen (1967) compared the self-reports of mood among groups of alcoholics, depressed patients, and normals. Alcohol was administered intravenously. Mood was improved among the depressed patients, which supports the etiologic significance of alcohol as a mood elevator. However, alcoholics failed to benefit from alcohol.

Mendelson and his associates (1964) followed mood changes in 14 alcoholics during several days of experimentation. Mood was assessed by self-report. During an early alcohol phase, subjects drank from 6 to 30 ounces of whiskey per day over a 5-day period. Most of the subjects reported that alcohol normally made them feel less tense, but initially, mood was unaffected by alcohol intake. For the subsequent 14 days, the subjects drank 30 ounces per day, and anxiety levels actually increased. Five more days of drinking 40 ounces per day was related to anxiety increasing even further was accompanied by increases in depression. Other investigators have found similar results (Polivy et al., 1976; Tamerin & Mendelson, 1969; Cappell & Herman, 1972).
However, the issue is unresolved and involves the complexity inherent in measuring the experience of anxiety. An example of this complexity is the research conducted by Steffen and his associates (1974). They intensively studied the effects of alcohol consumption on four male chronic alcoholics. They used both self-reported measures of distress and muscle tension as dependent measures. The four subjects were given free access to alcohol beverages and were monitored for blood alcohol level, electromyographic (EMG) response, and subjective distress every hour of their waking day for 12 days. They found that 13 of the 40 potential product moment correlations relating blood alcohol level and EMG were statistically significant, and 11 of those were in the negative direction, which suggested that the higher the blood alcohol level, the lower the muscle tension at least part of the time. Further, the majority of all correlations were negative in the direction expected by the tension-reduction hypothesis. Since the number of significant negative correlations were greater than chance, the authors concluded that the data supported the tension-reduction hypothesis: that is, increases in blood alcohol levels tended to be associated with decrease in muscle tension. Paradoxically, they also found that mood disturbances increased with continued alcohol consumption.

This research has at least two implications for the significance of anxiety in the etiology and maintenance
of alcohol abuse. First, Conger's (1956) original theory of tension-reduction stressed that alcohol ingestion acts as a negative reinforcement in reducing tension, but implied that the effects of alcohol on tension was continuous. The data of Steffen et al. (1974) indicate that alcohol's tension-reduction effect is variable, not continuous, producing a variable schedule of negative reinforcement that can occur with high frequency and should show considerable resistance to extinction (Ferster & Skinner, 1957).

Secondly, alcohol ingestion appears to affect mood adversely in chronic abusers. It may be that the Schachterian (1962) model applies to mood variables. That is, alcohol may act as a generalized physiological activator, so that its effects on anxiety depend on the cognitive and social environment. In certain stressful social contexts, alcoholics may turn to alcohol because of their expectation that alcohol may help them control anxiety.

In a major review article on the tension-reduction hypothesis, Cappell (1975) concludes that, overall, the hypothesis lacks sufficient support. Alcohol ingestion may temporarily relieve tension, but its continued use invariably leads to increased self-reported anxiety. Cappell (1975) further suggests that alcohol intake is not unrelated to stress, but that it is incumbent on clinicians and researchers to specify the stressful conditions that lead to relapse or continued drinking in alcoholics.
Some attempts have been made to relate specific classes of stressors to drinking. One of these has been interpersonal stress and anxiety. In a direct test of the tension-reduction hypothesis, Higgins and Marlatt (1973) manipulated tension levels in both alcoholic and nonalcoholic social drinkers by threatening them with electric shock. No significant differences were found between high and low fear conditions. The authors raised the possibility that the source of anxiety should be meaningful in its relationship to alcohol consumption. That is, it may be that drinking will increase only in those situations defined by the individual as stressful and for which he expects alcohol to reduce his experience of anxiety.

Williams (1966) has reported that problem drinking in college students appears to be related to self-critical tendencies and low self-esteem, a problem found in older populations of alcohol abusers with deviant self-concepts (Fitts, 1972). One type of social stress that would likely evoke subjective discomfort in drinkers with self-esteem problems would be the experience or expectation of criticism or negative evaluation in an interpersonal context.

Researchers have generally found that social stress leads to increased drinking behavior in a variety of drinking styles. For example, Miller, Hersen, Eisler and Hilsman (1974) have shown that alcoholics respond in this way.
Marlatt, Kosturn, and Lang (1975) studied the effects of evaluation anxiety on drinking behavior of social drinkers. An experimental confederate gave subjects negative feedback concerning their performance on a task supposedly tapping intellectual ability. Insulted subjects drank more alcohol in a subsequent taste-rating task than did control subjects who received positive feedback or similarly insulted subjects who were given an opportunity to retaliate against a confederate. This study suggests that negative feedback about an important self aspect creates intrapersonal stress that leads to increased drinking if alternative coping responses are not available.

In a follow-up of the Marlatt, Kosturn, and Lang (1975) study, Higgins and Marlatt (1975) investigated the effects of interpersonal evaluation anxiety on drinking behavior in 64 male college students who were classified as heavy drinkers. All subjects participated in a wine-tasting task as an unobtrusive measure of drinking behavior. Half the subjects were led to believe they would take part in a second experiment in which their physical characteristics would be evaluated by a panel of women, and the other half did not expect the evaluation. Results showed that the half who expected evaluation drank significantly more alcohol than the low-fear control subjects. In addition, they found that there was a marginally significant relationship
in the high-fear subjects between a trait anxiety measure (Form A of the Eysenck Personality Inventory) and the total amount of beverage consumed, which was in contrast to the insignificant negative correlation for the low-fear subjects. The authors suggest that trait anxiety may interact with some stress-producing situations to produce increased drinking and that situations in which fears of negative evaluation or interpersonal anxiety are evoked can lead to increased drinking by heavy drinkers.

Hamburg (1975) has suggested that interpersonal situations requiring appropriate interpersonal skills can promote anxiety. Alcoholics who have experienced some reduction in tension as a result of alcohol ingestion can be expected to perform their usual coping response in the face of anxiety, which is drinking. This is more likely to occur if the alcoholic does not have the appropriate coping responses.

Marlatt (1978) has engaged in extensive aversive-conditioning treatment of alcoholics. From his experience, he classified typical relapse situations into five categories, three of which involve interpersonal stressors that may arise from either response inhibiting interpersonal anxiety, fears of criticism from others, or lack of alternative coping skills. These three categories are (a) frustration and inability to express anger (b) inability to
resist social pressure to drink, and (c) intrapersonal anxiety.

In bringing these findings and conceptualizations together, the effects of alcohol on anxiety can involve the alcoholic in a vicious cycle of inadequate coping and increased drinking. Social or interpersonal stress and anxiety about expected negative criticism about important self-aspects have been associated with increased drinking in alcoholics and heavy social drinkers. Paradoxically, whereas alcohol ingestion may reduce muscle tension on a variable-interval negative reinforcement schedule, the subjective experience of anxiety for chronic abusers actually grows more intense with continued use of alcohol. This may set up a cycle of inappropriate, self-destructive responses to interpersonal stress. That is, alcoholics enter social situations they expect may involve evaluation of some self-aspect. Due to poor self-concept and low self-esteem or due to past experience, they expect evaluation to be critical or negative concerning the important self-aspect. They become anxious. Because they expect alcohol to help, anxiety becomes a cue to initiate drinking. They may experience some transitory or variable tension relief, but drinking itself leads to increased subjective discomfort to which they continue to respond with drinking. The use of alcohol as a coping response
disrupts the possibility of learning alternative, more appropriate responses in coping with interpersonal stress. In this view, decreasing interpersonal anxiety and fears of negative evaluation is an important short-term treatment goal that may interrupt the vicious cycle and which may be related to positive posttreatment functioning and a decrease in recidivism rates.

**Principles of Cognitive Therapy: An Overview**

A comprehensive treatment regimen for evoking positive changes in the variables reviewed so far may be rational emotive therapy (RET). Ellis (1973) and other practitioners of RET have reported it to be highly successful in altering the fundamental and disturbance-creating values of clients, including creating positive changes in self-concept, overcoming a variety of anxieties, and fundamentally altering the personal causes of depression. If true, such a therapy could prove a highly useful addition to current alcohol treatment programs.

Rational emotive therapy is part of the general cognitively oriented behavior therapies, and indeed, some hold its founder, Albert Ellis, to be the modern father of cognitive therapy movement (Harper, 1977). Regardless, RET has historically been the most dominant and visible therapy of the genre of cognitive therapies (Rimm & Masters, 1979). Along with Ellis, however, Aaron Beck and his associates
(1978) and Donald Meichenbaum (1977) have also had a major impact on the theory and practice of cognitive behavior therapy.

Rational emotive therapy and other cognitive therapies promote the notion that maladaptive feelings and behavior are often the product of irrational maladaptive patterns of thought or irrational beliefs. These beliefs may take the form of silent internal dialogue or self-talk, but it is not necessary for the individual to be aware of his internal self-talk in order that his beliefs cause him emotional and behavioral problems. Rather, the implicit or explicit verbalizations arise from fundamental assumptions or beliefs that constitute the individual's basic value system. If the fundamental values are rational, then the individual evaluates reality accurately and does not experience emotional disturbance. When self-talk arises from irrational fundamental values, however, reality is distorted and the individual most likely becomes emotionally disturbed. Thus, to RET, adult human behavior and emotions are not a function of external events, but are a function of how the individual evaluates those events (Ellis, 1973).

The way therapeutic change is approached in RET can be explained by the A-B-C-D-E paradigm (Ellis, 1977). A is some real experience that activates cognition, emotion, and perhaps overt behavior in the client. It is the objective
situation to which the client responds. B is the belief or the chain of thoughts by which the individual evaluates the meaning or judges the personal significance of the event. C is the emotional and behavioral consequences that result from B. The A-B-C portion of the paradigm represents Ellis' theory of emotions and behavior. Behavior change begins with the D and E portion of the paradigm. D is the therapeutic intervention, which is the disputation and rational challenging of the irrational beliefs that are supposed to cause the maladaptive consequences at C. In the D portion, the client's belief systems become restructured to reflect more rational, realistic thinking. E represents the effect of a thorough application of the new, rational beliefs. The client replaces the faulty reasoning at B with the new rational values and reasoning learned in D. As a result, the client is supposed to feel better and act less self-defeating and acquire more self-enhancing behaviors.

The heart of disputation of D is the Socratic Dialogue technique. This involves either the therapist or the client actively using pointed, often leading and confrontive questions in a logical, empirical attack on irrational beliefs (Ellis, 1977). Socratic-styled analysis of irrational beliefs is not the only technique employed in RET. Emotional-evocative techniques are used, such as humor, role-playing, and modeling, to coax clients from their
unqualified commitment to irrational thinking, to help them experience and remain in contact with their anxieties, anger, or depression, in order to uncover the cognitions that lie behind them. Imagery techniques, such as rational emotive imagery (Maultsby, 1975) may be used to practice rational thinking and feeling in therapy sessions.

Homework is a crucial part of RET and is often used extensively to extend therapy beyond the consulting room (Ellis, 1977; Maultsby, 1975). Homework can take many forms, from reading material prepared by Ellis and his associates (e.g., Ellis, 1972, 1976) to formal written assignments (Maultsby, 1975). Homework can also be in the form of active exercises designed to desensitize clients' fears. For example, clients who are afraid of critical evaluation may be asked to seek out negative criticism to learn that they can function effectively despite frustration or fear. Typically, such homework assignments also include cognitive exercises. That is, part of the homework involves learning to monitor untoward emotional reactions, to uncover the thoughts associated with them, and when irrational thoughts are uncovered, to dispute them vigorously, in order to undermine and change the thoughts that mediated the unpleasant emotional experience.

According to Ellis (1977), beliefs are irrational when they are empirically false or unverifiable and when they
necessarily lead to self-destructive or self-defeating consequences. Thus, the belief that all snakes are dangerous is empirically false, but the belief that one is worthless because one is snake phobic is not verifiable. That is, personal worth cannot be rated; only performances can be judged as to worth (Ellis, 1977).

Ellis (1971, 1977) maintains that there are certain irrational beliefs common to our culture. Although no list is exhaustive, some of the irrational ideas Ellis has listed are as follows:

It is a dire necessity for an adult to be loved or approved by almost everyone for virtually everything he does.

One should be thoroughly competent, adequate and achieving in all possible respects.

Certain people are bad, wicked or villainous and they should be severely blamed and punished for their sins.

It is terrible, horrible and catastrophic when things are not going the way one would like them to go.

Human unhappiness is externally caused and people have little or no ability to control their sorrows or rid themselves of their negative feelings and are helpless victims of the whims and manipulations of others.
If something is or may be dangerous or fearsome, one should be terribly worried, occupied with and upset about it.

It is easier to avoid facing many life difficulties and self-responsibilities than to undertake more rewarding forms of self-discipline.

The past is all important and because something once strongly affected one's life, it should indefinitely do so.

People and things should be different from the way they are, and it is catastrophic if perfect solutions to the grim realities of life are not immediately found.

Maximum human happiness can be achieved by inertia and inaction, or by passively and uncommittedly enjoying oneself. (Ellis & Harper, 1975, p. 22).

Each of these ideas can be conceived of as irrational inner dialogue governing feelings and actions. If these ideas are strongly held, they produce distortions in perception of reality, misunderstandings of other people's motives, emotional upsets, and very likely, self-defeating behavior. Because the manifestations of irrational beliefs occur in behavior and feelings, the rational-emotive therapist does not necessarily need self-reports of thinking to find irrational beliefs; they can be inferred from behavior. In
fact, Goodman and Maultsby (1978) identify several classes of human difficulties that are prima facie evidence for the existence of mediating irrational ideas. Some of these are a high degree of interpersonal difficulties, desiring what one cannot have or is unlikely to get, the tendency to attribute all one's difficulties to others, the tendency to see oneself as worthless, pursuit of contradictory goals or behavior inconsistent with professed goals, tolerating bad situations rather than taking steps to rectify or improve them, hypersensitivity to criticism, remaining angry or hurt past a reasonable period, demanding perfection in one's own behavior or of others, being in consistent difficulties with the law, indulgence in behavior that injures one's body or mind or impedes their functioning, unreasonable fears, excessive angers, excessive enthusiasms, chronic or intermittent states or depression or anxiety. Fortunately, in most cases, the rational-emotive therapist does not have to make inferences from behavior to thoughts since most clients have little difficulty verbalizing irrational beliefs aloud (Rimm & Masters, 1979).

Rational emotive therapy and other cognitive therapies are being used with alcohol abusers in several treatment settings across the country, in both inpatient and outpatient settings (Hindman, 1976). The general objective of
these programs is to change the beliefs or attitudes that lead to alcohol abuse with the goal of either abstinence or controlled drinking. Some of the more useful aspects of the rational-emotive approach that have been identified by Hindman (1976) are its therapeutic emphasis on dealing with reality and the emphasis on learning to tolerate emotion, pain and frustration that are inevitable in life: helping alcoholics learn to accept themselves without passing judgments as to personal worth, thereby increasing self-esteem and altering poor self-concepts; helping them accept the personal responsibility for their continued choice to drink alcohol; and the emphasis in RET in teaching them alternative behavior and thinking patterns to replace the self-defeating ones they have learned and applied previously to stressful situations; and finally, helping alcoholics to use RET as a self-help skill after termination of treatment.

Recently, McCourt, and Glantz (1980) have reported on their uses of cognitive behavior therapy closely resembling RET in their outpatient treatment center. They report finding maladaptive thought processes similar to those Beck (1976, 1972) has found in depressives. These included arbitrary inferences, dichotomous (black-white) evaluations, overgeneralizations, and the thinking that is either too global, abstract, and undifferentiated or, conversely,
narrow, concretized, and specific. They describe some patients as so dominated by emotions that they could not at first identify and differentiate affects or the origins of affects (e.g., professing to be angry most of the time at nothing in particular). They have also identified some maladaptive themes that appear related to the maladaptive cognitive styles. Some of these themes include the belief that the patient is totally powerless and victimized, overly negative or overly positive self-images, and the belief that alcohol is the only alternative to bad feelings and problems.

McCourt and Glantz (1980) view alcohol abuse as both a problem and a solution to a problem, whether the problem is emotional, social, or interpersonal. Their use of cognitive therapy is based on the hypothesis that alcoholics have always been poor problem solvers because of their maladaptive thought processes. Alcohol is used as a substitute for more effective problem-solving; that is, when alcoholics' attempts at coping are frustrated, they turn to alcohol to alter the experience of their problems. McCourt and Glank (1980) believe that therapy primarily should focus first on the modification of underlying maladaptive thinking and then the day-to-day problems of alcoholics. To help achieve the cognitive modification, they found it necessary to teach role-playing, homework, and self-monitoring skills; all of which are consistent with and extensively used in RET.
In conclusion then, RET is a cognitive-behavior therapy for the treatment of a wide range of emotional and behavioral disorders. Its central theoretical tenet is that most maladaptive emotions and behavior result from people's irrational evaluations of themselves and the world around them: evaluations which are based on fundamental, faulty, and disturbance-creating patterns of irrational thoughts and values. The most elegant and lasting change lies in fundamental alterations in the patients' fundamental irrational value patterns. This change is achieved by Socratic disputation techniques, as well as a number of emotional evocative and behavioral techniques, such as role-playing, homework assignments and cognitive and social skills training. The eventual goal of treatment is for patients to become their own therapist and apply the skills and insights learned in therapy to real-life situations. These goals could apply in the treatment of alcohol abuse, as well as depression and anxiety and the poor coping abilities implicated in the alcoholics' use of alcohol as a coping strategy.

**Outcome Studies of Rational Emotive Therapy**

Although RET appears to be widely accepted and practiced by the therapeutic community, evidence of its specific efficacy for emotional and behavioral problems, while promising, is not extensive. Mahoney (1974) reviewed the
controlled outcome literature and concluded the number of studies were so scant and methodologically poor that the clinical efficacy of RET was undemonstrated. More recent reviewers reach similar conclusions (Meichenbaum, 1977; Rimm & Masters, 1979).

One of the problems in reviewing the experimental and therapy outcome studies that directly test the efficacy of RET is deciding what is and is not pertinent to RET (Trexler, 1977). Some authors use the term cognitive therapy to refer to RET or another form of cognitive therapy closely related, such as the approaches Beck and Meichenbaum, or some other "cognitive restructuring" (Lazarus, 1971) technique. The review of the studies that follow were specified by their authors as explicit tests of RET or involved therapeutic procedures close enough to RET to provide a reasonably fair test of Ellis' therapeutic approach.

Jacobs (1971) studied the effectiveness of RET in reducing anxiety in college students. Treatment consisted of 5 30-minute sessions. Treatment groups were compared with no-contact and placebo controls. After treatment, the group receiving RET differed significantly from the two control groups, demonstrating less anxiety on the Adult Irrational Idea Inventory and the trait scale of the State-Trait Anxiety Inventory, and presented fewer problems in the
Money Problem Check List. Keller, Crooke, and Brookings (1975) investigated the use of RET in reducing irrational thinking and self-reported anxiety in a geriatric population. Treatment consisted of an intensive 4-week program which met once a week for 2 hours and included readings and homework. A control group was seen for only the pretesting and posttesting. The members of the RET group showed significant reductions in the dependent measures at posttest, while the control group showed no change. These two studies suggest that RET can have positive effects in a relatively short period of time.

In a study assessing the relative effectiveness of RET, client-centered therapy, systematic desensitization, and no-treatment controls in reducing test anxiety among high school students, Maes and Heimann (1970) found support for the superior efficacy of RET and systematic desensitization. Treatments were given in 10 sessions covering a 5-week period. Training manuals were used for each therapy, and two weeks of training were provided for each therapist (advanced graduate students). The criterion measures were the heart rate, Spielberger State Trait Anxiety Inventory (STAI), and galvanic skin responses. After treatment, subjects were asked to imagine they were about to take an examination and were then given the STAI. Following this, subjects took
what they were led to believe was an intelligence test, during which physiological responses were measured. The anxiety measure failed to distinguish among the treatment groups, but on the psychological measures, both RET and systematic desensitization subjects showed significantly less emotional reactivity than either the client-centered or the nontreated control group subjects.

Meichenbaum, Gilmore, and Fedoravicious (1971) compared the merits of RET, systematic desensitization, and a combination of the two, to an attention-placebo discussion group and a waiting-list control group. Treatments were administered in 8, 1-hour sessions. Subjects were 35 male and 18 female high speech-anxious volunteers, mainly college students, who gave pre- and posttreatment speeches involving behavioral and self-report anxiety measures. Treatment manuals were employed for each treatment. The major findings were that both RET only and systematic desensitization only showed the greatest effectiveness in reducing speech anxiety over controls at posttreatment and 3-month followup assessments. The combination of RET and systematic desensitization did not differ from the attention placebo controls, and waiting list improved least of all.

DiLoreto (1971) investigated the effectiveness of systematic desensitization compared to RET, client-centered therapy, an attention-placebo, and a notreatment control
group in the treatment of 100 college students with interpersonal anxiety. Subjects were also divided into introverts and extroverts. Subjects received about 11 hours of treatment. In general, the three treatments produced greater reductions in interpersonal anxiety than the control groups with systematic desensitization showing the greatest amount of anxiety reduction. Rational emotive therapy produced a significantly greater increase in interpersonal activity than either client centered or systematic desensitization. Rational emotive therapy was also found to be more effective with introverts than extroverts.

DiLoreto (1971) invited prominent therapists from each of the three schools of therapy used in the study to comment on the investigation. Ellis (1971) criticized DiLoreto's version of RET. He cited the rational-emotive procedures as being watered down versions of RET, the counselors poorly trained, and the therapy process as making little use of Socratic Dialogue, with their being too didactic and lecturing and not sufficient time allowed to work and practice. Perhaps even more telling, he asserted that the other two therapies actually employed RET-like procedures, such as teaching subjects more rational attitudes toward themselves and others. This further confounded DiLoreto's (1971) results. These criticisms point to the importance of approximating the therapeutic system being tested.
Meichenbaum (1972) compared the relative efficacy of cognitive modification, systematic desensitization, and a waiting-list control group in the treatment of test anxiety among college students. The results showed that the cognitive modification produced greater change on the self-report measure of test anxiety and more greatly reduced test anxiety in an analogue test situation than systematic desensitization and the control condition. Grade point averages of the RET subjects were higher than the other two groups, and these results were maintained at a 1-month follow-up.

Trexler and Karst (1972) compared the effectiveness of RET to that of a relaxation treatment and nontreated controls in the treatment of speech anxiety. Treatments occurred in four group sessions spaced several days apart. Subjects receiving RET showed significantly greater improvement than the relaxation and no-treatment controls in the reduction of irrational beliefs and in increased self-confidence while speaking. Since all groups received RET eventually, greater statistical power was obtained by combining all subjects who received RET and comparing them to a group who had not yet received treatment. Results of this comparison revealed RET to be superior to the untreated group on most of the other measures used. A 7-month follow-up questionnaire revealed the stability of treatment gains.
Weissberg (1977) used speech anxious subjects and compared 6 hours of standard desensitization, desensitization with coping instructions, and a cognitive restructuring treatment modeled from the treatment used by Meichenbaum (1972). The cognitive treatment employed RET followed by desensitization with coping instructions; that is, when the subjects felt anxiety, they were to relax using breathing exercises and appropriate self-talk in order to cope more effectively with anxiety. Scores on the two self-report measures of speech anxiety showed no difference between treatment groups, but on the behavioral measure of speech anxiety, both the cognitive restructuring and desensitization with coping self-talk were superior to desensitization only. Treatments were not differentiable at follow-up after 11 weeks.

Although these studies selected for this review are generally supportive of RET, they can be criticized on several grounds. First, most of the controlled outcome studies used college students with relatively mild fears, not true clinical populations. Most of the studies employed analogs of RET, often a watered-down version missing some components of the RET procedure (Socratic Dialogue, for example). Even at this, none of the studies bothered to examine treatment credibility, which is crucial to answering questions about a therapy's specific efficacy for
the problems it is designed to treat (Kasdin & Wilcoxon, 1976). There have been at least two studies that have attempted to remedy these deficits.

Lipsky, Kassinove, and Miller (1980) conducted a clinical outcome study comparing three RET conditions with a realistic alternative and with a no-treatment control. The treatments were RET alone, RET with rational role reversal, RET with rational-emotive imagery and relaxation training, and supportive therapy. The patients were applicants for psychotherapy at an outpatient community mental health center. Patients were matched according to age, sex, intelligence, and socioeconomic status, then randomly assigned to one of the five treatment conditions. Patients were seen in individual, 45 minute sessions, once a week, for 12 weeks. The dependent measures, administered pre- and posttreatment, included measures of rational thinking, anxiety, depression and neuroticism. Results showed that patients in the rational-emotive treatments did much better on all dependent measures than either the relaxation training and supportive therapy or the untreated controls. This study supports the efficacy of RET with multi-symptomatic patient populations diagnosed as having "adjustment reactions of adulthood" or one of the neuroses. Psychotics, addicted personalities, children, and adults with IQs below 80 were excluded.
Unfortunately, this study did not assess the credibility of treatments prior to beginning treatment. They did administer a posttreatment questionnaire to patients that was designed to assess patients' thoughts and feelings about treatment. One question particularly addressed the effects of therapists' belief in the treatments they administered. All patients responded that they felt their therapist believed in treatment a great deal. Since no therapists' effects were found in this study, and patients perceived their therapist as committed to treatment, then differential therapists' expectations probably did not play an important role in patients' differential response to either placebo or veridical treatments.

It is possible that patients perceived the therapists as truly committed to treatment, but there could have been differential expectancies for improvement among the treatment groups that could have been responsible for the appearance of differential treatment effects. Rational emotive therapy could have been more powerful treatment simply because it was more credible to patients than the placebo treatment (Kasdin & Wilcoxon, 1976). Other researchers have found that treatment and placebo conditions have differed in credibility and have generated different expectations for improvement in subjects as a result (Borkove & Nau, 1972; McReynolds & Tori, 1972; McGlynn & Walls, 1976; Nau, Caputo, & Borkovec, 1974).
Recently, rational emotive therapy has been compared to an equally credible placebo control (Whitley, Rimm, Waid, & Winslow, Note 3). Speech anxious volunteers were recruited and randomly assigned to RET or a placebo treatment. In addition to a pretreatment credibility measure (Borkovec & Nau, 1972), both self-report and behavioral measures of speech anxiety and a measure of irrational beliefs were used. Subjects in both experimental conditions reported equally high credibility of treatments, but subjects in the RET groups showed significantly less public speaking anxiety and reported fewer irrational ideas at posttest and followup one month later. These findings support the notion that RET contains specific therapeutic mechanisms that carry the burden of client change beyond those changes that can be attributed to nonspecific factors, such as subjects' belief in treatment and hope of a cure.

In conclusion then, while the treatment outcome literature concerning the efficacy of RET is hardly overwhelming, it is promising. Rational emotive therapy has been shown to be effective with clinical analog populations and with multi-symptomatic, clinical outpatients. Numerous studies have shown RET to be superior to no-treatment and waiting list controls (DiLoreto, 1971; Holroyd, 1976; Jacobs, 1971; Karst & Trexler, 1970; Keller, Corake, & Brookings, 1975; Maes & Heiman, 1972; Maultsby, Knipping, & Carpenter, 1974;

Unfortunately, only one controlled study has been conducted to test the efficacy of RET as a treatment for alcoholism, and none have been with an inpatient alcoholic population. Brandsma, Maultsby, and Welsh (1980) have recently published the results of a 5-year comparative therapy outcome study involving 104 alcoholic outpatients being seen at the Out-Patient Psychiatry Clinic at the University of Kentucky. The purpose of the study was to examine differential efficacy of four treatment modalities: rational behavior therapy with both professional and non-professional counselors, traditional insight-oriented therapy, Alcoholics Anonymous, and a no-treatment control group. The time in treatment for each patient was to be a minimum of 10 sessions, but no treatment was to last longer than a year. Patients were terminated from treatment by
mutual consent with their therapist after having completed at least the 10 required sessions or when a total of 30 hours of treatment had been completed or when 46 weeks had passed since their first therapy session. Dropouts were defined as patients who had missed four sequential therapy sessions or who had chosen not to return. The basic pre-post dependent variable assessment consisted of a Behavior Rating Scale that assessed social functioning, economic stability, employment, legal troubles and drinking; a Craving and Withdrawal Questionnaire; an "alcohol-money machine" that measured the galvanic skin response to alcohol words, the patients' favorite alcoholic drinks, and their physiological response to alcohol once the beverage was consumed; a rating of subjective cravings; and the Minnesota Multiphasic Personality Inventory (MMPI).

Differential treatment effects of this study were few. In terms of efficiency of treatment (number of sessions), AA and pro-RET (professionally administered RET) had fewer treatment sessions for those who completed treatment than either insight or lay-RET. On the other hand, all treatment groups did better than controls on dependent measures, indicating that some treatment of any kind is better than no treatment. It is important, then, to keep people in treatment until completion, and to this end, differential dropout rates were an important finding. Clearly, AA was the worst (only 12 treatment completers out of 40 assigned to AA), but all
groups experienced a 40% to 50% dropout rate, although there was little difference in the dropout rates among the other treatments.

On legal difficulties, the insight groups were superior overall, although again, treatment of any type seemed to help. The two professionally treated groups (insight and pro-RET) appeared to have the most impact on cutting down drinking on the outcome measurement. During followup (one year), the number of significant differences between controls and treated groups decreased, although when significant differences were found, treated groups were always better than controls.

Overall, the authors conclude that almost any treatment will tend to help an alcohol abuser with drinking problems, and with his legal, behavioral, and general maladjustment problems. In general, treatment of any kind was better than no treatment, even though the untreated controls did tend to get better over a year's time, which is consistent with the majority of alcohol treatment outcome studies. In general, then, this study supports the efficacy of RET in the treatment of revolving-door outpatient alcoholics, although it does not lend much support to the differential efficacy of RET as a treatment for alcoholism.

In summary, RET has been shown to be an effective therapy with specific therapeutic ingredients for the
amelioration of a variety of psychological problems involving anxiety, depressive moods, and substance abuse in a variety of clinical and nonclinical populations. Continued evaluation is needed, however, to assess the contribution of RET to current treatments of alcohol abuse and related psychological problems. One evaluative study is hardly an adequate empirical base for evaluation of a therapy.

Cognitive Functioning of Alcoholics

One patient factor that could adversely influence response to any psychological treatment for alcoholism is the learning and memory impairment associated with long-term alcohol abuse. Dysfunction of short-term memory capacity would likely disrupt the learning of new, complex social and cognitive coping skills emphasized in multimodal treatment strategies, such as RET. The greater the short-term memory impairment, the less the response to treatment is likely to be.

Alcoholics have been found to have a number of cognitive deficits. Claeson and Carlson (1970) have found that 65% of their alcoholic subjects showed significant deficits in visual memory as compared to nonalcoholics. Alcoholics typically perform in the impaired ranges on the Category Test of the Halstead-Reitan Battery (Fitzhugh et al., 1960, 1965; Jones & Parsons, 1971a), and they have been shown to
have more difficulty switching cognitive sets and to have demonstrated less capacity for learning from their mistakes than nonalcoholics (Tarter & Parsons, 1971; Tarter, 1973). Jones and Parsons (1971b) found that visual-spatial information processing capacity of alcoholics become progressively inefficient with chronicity of alcohol abuse, which leads them to speculate that extended alcohol abuse leads to accelerated aging of the brain.

More recently, Butters and Cermak (1980) have hypothesized that short-term memory dysfunction associated with alcoholism lies on a continuum, beginning with the unimpaired nonalcoholic, and ending with the severely impaired Korsakoff alcoholic. Butters and Cermak (1980) reported on numerous laboratory studies involving the learning of new, complex verbal and perceptual information that are consistent with the continuum-of-impairment hypothesis. Typically, nonalcoholics' performance on a variety of new learning tests is superior to that of chronic alcoholics who, in turn, outperform the Korsakoff alcoholics.

Butters and Cermak (1980) have identified the psychometric hallmark of the cognitive performance of chronic and Korsakoff alcoholics: significant impairment on the digit symbol subtest of the Wechsler Adult Intelligence Scale compared with their overall performance on the other subtests. Korsakoff alcoholics demonstrate dramatic
Performance decrements on the digit symbol task, whereas chronic alcoholics have shown parallel but not as dramatic performance decrements (Glosser et al., 1976, 1977; Butters, 1977).

Performance on the digit symbol task of the Wechsler Adult Intelligence Scale is determined largely by the ability to learn the digit symbol code. The more rapidly the code is learned, the more items the individual will complete within the time limits of testing.

Several investigators hypothesize that the similarities in performance between Korsakoff and chronic alcoholics may be due to the similarities in learning strategies of these two groups. Like the Korsakoff alcoholic, the chronic alcoholic may not generate spontaneously effective learning and remembering strategies and have more subtle, but nonetheless real, information-processing deficits that impair efficient learning (Butters & Cermak, 1980; Ryan et al., 1980).

The cognitive deficits that retard or disrupt new learning in chronic and Korsakoff alcoholics presents a problem in treating these patients in a milieu emphasizing psychoeducational, multimodal treatment strategies. Alcoholics' response to such treatment regimens may be largely determined by the degree of cognitive impairment: that is, the greater the cognitive impairment due to alcohol
abuse, the greater the chance of disruption of new learning capacity with correspondingly poorer response to treatment.

It is not clear precisely how individual differences in degrees of cognitive impairment would influence response to psychometric measures of psychological functioning at outcome. No psychological treatment is likely to influence the new learning capacity of the Korsakoff alcoholic (Butters & Cermak, 1980). Cognitive learning strategies, such as RET, may benefit the less impaired chronic alcoholics by stimulating the use of more sophisticated learning and adaptational strategies than the chronic alcoholics appear inclined to use spontaneously. Although the effects on treatment of cognitive impairment associated with Korsakoff and chronic alcoholics cannot be predicted, the degree of cognitive impairment is expected to have a suppressing influence on response to treatment across treatment groups as measured by the psychometric measures of psychological functioning used as dependent measures in this study.

**Hypotheses**

The present study tests the superiority of RET as a treatment for inpatient alcoholics. There will be five dimensions of functioning used to assess the effects of RET. These dimensions are depression, social anxiety and fears of negative evaluation, irrational beliefs, self-concept, and ability to learn new information.
The research hypotheses are as follows:

1. **Depression.** The residents entering the ADTP will often show depression according to their scores on the Beck Depression Inventory. Rational emotive therapy will be more effective in lowering scores on this scale than usual group therapy.

2. **Self-Concept.** The residents entering the ADTP will have deviant self-concepts according to their scores on the Tennessee Self Concept Scale. Greater positive changes in self-concept will be associated with RET than with usual group therapy as measured by the Tennessee Self Concept Scale.

3. **Social Anxiety.** The residents entering the ADTP will produce moderate to high scores on the Social Anxiety Scale. Greater positive changes on the Social Anxiety Scale will associated with RET than with usual group therapy.

4. **Irrational Beliefs.** Rational emotive therapy will affect greater positive changes in total Irrational Belief Test scores than the usual group therapy.

5. **Drinking Behavior.** Residents who participated in group RET will evidence greater improvement in drinking behavior than residents in the usual group
therapy at a 4-month follow-up, as measured by abstinence and the frequency and amount of alcohol consumed.

6. **Credibility.** Both RET and the usual group treatments traditionally conducted at the ADTP will be perceived by residents as equally credible, as demonstrated by their scores in the credibility questionnaire.

7. **Cognitive Functioning.** There will be an inverse relationship between scores on the measure of cognitive functioning and improvement as measured by the other outcome instruments, revealing that the more cognitive impairment, the less the response to treatment.

**Method**

**Experimental Design**

The basic pre-post experimental design allows hypotheses to be tested by the one-way analysis of variance techniques with pretest measures as covariates and by the Pearson Product Moment correlation. The two treatments being investigated are group RET versus the usual group therapy as practiced in the ADTP at American Lake VA.

The ADTP at the American Lake VA consisted of a number of short one-time lectures about the ill effects of alcohol abuse, human sexuality, a lecture on assertiveness plus four
sessions of assertiveness training, various educational and inspirational films, and an intensive group psychotherapy. In the current study, the control group of patients received the usual group therapy as well as the other educational-inspirational parts of the program, and the experimental group received group RET as well as the other educational-inspirational parts of the program. Thus, the only difference between control and experimental treatment groups was that the experimental group received RET whereas the control group did not. In addition, all references to RET, such as a lecture on beliefs and emotions, outside readings, and films, were cancelled for the duration of the study.

In the present study, veterans applying for admission to the treatment facility were carefully screened by staff members to exclude psychoses and severe organic brain syndromes and to ensure that residents were mentally competent. All veterans underwent detoxification prior to admission to the program. The ADTP offers a 6-week inpatient treatment program, four weeks of which consist of intensive rehabilitation efforts. During the first two weeks, veterans were admitted, received medical checkups and were given orientation to the treatment program. During the 4-week rehabilitation stage, residents attended therapy groups and participated in various educational groups that
met for varying lengths of time. Group therapies began the end of the second week of the 6-week program and met concurrently three times a week, for 1-1/2 hours per session, for the remainder of the 4-week rehabilitation stage. Admissions to the ADTP occurred sequentially. That is, each week, 10 to 12 new veterans were admitted into the program for rehabilitation. Therefore, staff treatment teams rotated to a new group of admissions every seven weeks with one week as a "down" week for the treatment teams.

Population

The population sample for this study was all male alcoholics who were admitted to the ADTP at American Lake Veterans Administration Medical Center for treatment. All residents were physically detoxified before admission to residential status in the 6-week program. The age range of the residents was from 20 to 55 years of age, but most were young (between 20 and 40 years old). All were Caucasian, most of whom were unemployed at the time of admission. Educational levels ranged from high school to college. Some had had prior treatment experience either at the American Lake Veteran's Administration Medical Center or at another facility. In keeping with VA guidelines, all residents were requested to give informed consent for participation in the evaluation of treatments (see Appendix N, p. 204).
Procedures

Treatment teams were divided into A and B teams with each team composed of two therapists, which made a total of four therapists used in this study. Upon meeting the requirements for admission to the ADTP, new residents were randomly assigned to treatments and separately met with their respective therapists to complete orientation.

After two weeks, an Experimenter uninvolved in the treatments met with the residents and administered the pretreatment test battery. The pretreatment test battery consisted of the Beck Depression Inventory, the Tennessee Self Concept Scale, the Social Anxiety Scale, the Irrational Beliefs Test, the Cognitive Impairment Index, a credibility and expectancy check, and a measure of drinking behavior for the past four months. At the end of four weeks of active treatment, the same Experimenter met once more with residents and administered the posttreatment test battery. The posttreatment test battery consisted of the same dependent measures as administered in the pretreatment battery, except for the measure of drinking behavior. The order of administration of pre- and posttreatment tests was counter-balanced.

After a 1-week down period, Team A received a new round of admissions. Procedures were exactly identical to the first admissions, except the therapists switched
groups so that they were counterbalanced as to treatment type administered. Treatment Team B proceeded exactly as Team A, except they were one week behind Team A in admissions and beginning treatment. The sequential admissions employed in this study were made necessary by the admission policy structure of the alcohol treatment program at American Lake, which admitted residents every week and could not be altered for this study.

**Instruments**

Self-report psychometric measures of psychological variables were used to assess the outcome effectiveness of the two treatment groups. These instruments were designed to measure individual differences in levels of depression, subjectively experienced interpersonal distress and fears of negative criticism, levels of rationality, various forms of self-concept, memory functioning, drinking behavior, and belief in credibility of treatments and expectancy for improvement.

**Self-concept.** The Tennessee Self Concept Scale (Fitts, 1965) was selected as a major outcome measure because of previous research in the literature pertaining to self-concept and alcoholics (Gross & Alder, 1970; Vanderpool, 1969; Tomsovic, 1976). The Clinical and Research Form of the scale was used. The subscales analyzed were as follows: Self-Criticism, Total and Net Conflict scores, Total
Self Criticism, Total Positive, Self-Satisfaction, Behavior, Family Self, Physical Self, Moral/Ethical Self, Personal Self, and Social Self. These subscales were chosen because they are the major self-concept subscales, and past research on alcoholics has used these scales. (Refer to Appendix E for a description of these subscales.)

The Tennessee Self Concept Scale consists of 100 self-descriptive items of which 90 assess the self-concept and 10 assess self-criticism. For each item, the resident chose one of five responses ranging from completely false to completely true. Most subjects complete the scale in 10 to 20 minutes (Fitts, 1965).

Validation procedures for the Tennessee Self Concept Scale consists of (a) content validity, (b) discrimination between groups, (c) correlation with other personality measures, and (d) personality changes under particular conditions (Fitts, 1965). Content was determined by unanimous agreement of item classification by judges. The purpose was to ensure the dependability of the classification system used for the row scores and the column scores and that the categories in the Tennessee Self Concept Scale were logically meaningful and communicable.

Discrimination between groups was based on personality theory and research that suggested groups which differ on certain psychological dimensions should also differ in
self-concept. The scale is positively correlated with the Minnesota Multiphasic Personality Inventory and the Edwards Personal Preference Schedule.

The fourth validation procedure indicated considerable evidence that "people's concepts of self do change as a result of significant experiences" (Fitts, 1965, p. 28). Fitts (1965) has collected several monographs that deal with the self-concept as a criterion of change. The scale reflects these changes in predicted ways, thus, constituting additional evidence for the validity of the instrument.

Evidence of the scale's reliability is found in the high test-retest reliability coefficients of all major scores in the scale (Fitts, 1965). Additional reliability is implied in the similarity of profile patterns found through repeated measure of the same individual over long periods of time, which suggests the scale measures are stable over time. Related to this is the finding that reliability coefficients for various profile segments used in computing the Number of Deviant Signs Score fall mostly in the .80 to .90 range (Fitts, 1965).

Depression. Depression was measured by the Beck Depression Inventory (Beck et al., 1961) because it is probably the best developed and most widely used self-report measure of depression available (Becker, 1974). The Beck Depression Inventory consists of 21 categories of
symptoms and attitudes clinically related to depression. Each category contains a set of self-evaluative statements that can be rated on a severity scale of 0 (neutral) to 3 (maximum severity). Analysis of scores from several large psychiatric samples (200 and 606) indicated good reliability as indexed by internal consistency and stability criteria (split-half Spearman-Brown corrected Pearson r = .93), and all items significantly related to total score at the p = .001 level (Beck et al., 1961). Validity has been assessed using clinician's ratings of severity of depression independent of knowledge of actual scores which were categorized as none, mild, moderate and severe. Mean scale scores for each respective category were 10.9, 18.7, 25.4, and 30.0, which were significantly different (p = .001) (Beck et al., 1961). The Beck Depression Inventory also correlates well with the Minnesota Multiphasic Personality Inventory D Scale (.75).

Social-Evaluative Anxiety. The Social Anxiety Scale (Watson & Friend, 1969) was chosen as a secondary outcome measure of assessing social anxiety and fears of criticism. It was chosen largely because of the assumption of treatment that people drink alcohol abusively to reduce distress associated with stressful, evaluative, interpersonal situations.

The Social Anxiety Scale is a 58-item, true-false, self-report measure of social anxiety. This scale is
divided into two subscales that measure social avoidance and distress and fear of negative evaluation. The Social Avoidance and Distress Scale assesses the degree of interpersonal anxiety as a response style in many social situations. The Fear of Negative Evaluation Scale reflects the degree to which respondents worry about other people's evaluations of them (Watson & Friend, 1969). The homogeneity of the two scales are very high. The mean biserial correlation of each item with its own scale, corrected for presence of the item in the total score was in the mid .70's for these subscales. The relationship with social desirability (the Crowne-Marlowe Scale) for both subscales were minimal (-.25).

Test-retest correlations were adequate for research purposes: .78 for the Fear of Negative Evaluation Scale and .68 for the Social Avoidance and Distress Scale. Validity data have shown the expected relationships. People high on the Social Avoidance and Distress Scale have tended to avoid social interactions, preferred to work alone, were more worried and less confident about social relationships, but were more likely to appear for appointments than people low in social avoidance and distress. People who experienced high levels of negative evaluation fears became nervous in evaluative situations and worked hard to either avoid disapproval or to gain
approval (Watson & Friend, 1969). Smith and Sarason (1973) reported that persons who scored high (17-30) or moderate (8-16) on the Fear of Negative Evaluation Scale, as opposed to low scorers (0-7), when subjected to the possibility of negative interpersonal feedback, perceive actual feedback as being more negative, reported more expected discomfort, and had a greater expectancy that others would evaluate them negatively.

The Social Anxiety Scale has been used in therapy outcome studies testing the efficacy of RET, and it has been shown to be sensitive to differential effects of therapy and pre-post changes (Meichenbaum, Gilmore, & Fedoravicious, 1971; Whitley, Rimm, Waid, & Winslow, Note 3). Taken together, these studies suggest the utility of the scale as a treatment research instrument to differentiate the effects of comparative therapy outcome and to assess the existence of social anxiety as a treatment factor.

**Cognitive assessment.** The Irrational Beliefs Test (Jones, 1968) is a measure of irrational beliefs. It was chosen because an evaluation of RET was considered incomplete without a measure of changes in irrational beliefs, which is the theoretically specific change mechanism in RET.

Of several alternative measures, the Irrational Beliefs Test is the most systematically developed
scale despite its limitations. It is a 100-item, self-report questionnaire derived from Ellis' list of common irrational beliefs. Subjects mark their agreement or disagreement for each item on a 5-point scale. The scale has been demonstrated to have good factorial validity (Jones, 1968), and total Irrational Beliefs Test scores have been shown to be very useful in evaluating the effects of differential treatments (Trexler & Karst, 1972; Whitley, Rimm, Waid, & Winslow, Note 3). Further, Irrational Belief Test scores were found by Cash and his associates (Note 4) to predict experimentally induced depression, and Nelson (1977) obtained a significant association between the Irrational Belief Test and the Beck Depression Inventory.

**Credibility and Outcome Expectancy Measure.** A check on credibility of treatments was used in order to determine if any differences in outcome between treatments could be attributed to initial between-group differences in treatment credibility and expectancies for improvement. The credibility and expectancy check used was similar to the instrument developed by Borkovec and Nau (1972). The questionnaire asked residents to rate the credibility of the treatment and their expectancy of a positive outcome resulting from treatment. Ratings were made on a 10-point scale. Specific scale items were (a) how logical does this treatment plan seem to you; (b) how confident would you be
that this treatment plan would be successful in helping you overcome your alcohol problems; (c) how confident would you be in recommending this treatment plan to a friend who had problems with alcohol; (d) how willing are you to undergo the treatment you have just read; and (e) how successful do you feel this type of treatment would be in helping you with emotional problems; for example, anger, loneliness, or depression? The credibility and expectancy check was administered only before the beginning of treatment.

**Cognitive Impairment Index.** The Cognitive Impairment Index is a measure of new learning deficiency. The index is achieved by the ratio of the raw vocabulary score on the Shipley Institute of Living Scale divided by the raw score on the Digit Symbol subtest of the Wechsler Adult Intelligence Scale. The vocabulary score provides an estimate of long-term intellectual ability while the Digit Symbol test provides a measure of current new learning capacity. As Butters and Cermak (1980) have noted, the psychometric hallmark of the Korsakoff syndrome continuum is deficient performance on Digit Symbol relative to performance on other tests of intellectual ability. On the Cognitive Impairment Index, as new learning capacity decreases, the ratio of the vocabulary score to the Digit Symbol test score increases. If new learning capacity has remained intact, the Cognitive Impairment Index will be
lower; that is, the Digit Symbol Score will be greater relative to the vocabulary raw score. Thus, the Cognitive Impairment Index provides an estimate of individual differences in the effects of chronic alcohol abuse on new learning capacity.

**Treatments**

**Rational Emotive Therapy.** Group RET followed a treatment manual composed by the author to conform to the general procedures of RET described by Ellis (1973) and Maultsby (1975). This treatment emphasized the rationale that alcoholism and psychological problems arise from the fundamentally irrational ways people evaluate their life situations and themselves. These irrational evaluations (or beliefs) cause people to say things to themselves that lead to debilitating emotional and behavioral consequences, such as alcohol abuse and depression. Subjects were told that the treatment goals were for each of them to become aware of their own irrational emotions and behavior and to dispute their irrational cognitions and replace them with rational thoughts and feelings and later, behavior.

To help the subjects overcome alcoholism, they first identified situations in which they become upset, or feel lonely, angry, depressed, frustrated. Then they recalled the thoughts they had in those situations. The subjects were then taught to separate irrational from rational
beliefs and were trained in the use of rational self analysis as a tool for disputing and changing their irrational thoughts to rational ones (Maultsby, 1975). Subjects were continuously encouraged to participate as co-therapists to help their fellow subjects in the group to dispute and change irrational thinking.

In addition to in-session training, subjects were given homework assignments between sessions as part of treatment. Homework assignments consisted of outside readings and discussions, practice in identifying irrational beliefs connected with alcohol abuse and other personal difficulties, practicing rational self analysis, completing written assignments, and practicing other assignments designed to wean them away from their unqualified belief in irrational thoughts.

Usual Group Therapy. Usual group therapy followed the therapeutic procedures developed by the professional therapy staff before the inclusion of RET in alcohol treatment program. Usual group treatments stressed the importance of subjects setting goals for themselves after treatment and discussing in group sessions how they could meet those goals. Other group members were expected to give both positive and negative feedback regarding the appropriateness of group members' goals. These goals included several areas
considered to be common human needs. These common human needs involved establishing and maintaining satisfying interpersonal relationships and support; planning and pursuing education or vocational goals in accordance with ability and talent; developing absorbing avocational interests that does not involve alcohol consumption; maintaining physical health and care for medical problems; and developing treatment followup plans involving attendance at some kind of self-help alcohol group.

In the context of personal goal setting and interpersonal feedback, therapists established and encouraged therapeutic ground rules of active participation and honesty of emotional expression and experience in the context of supportive group norms. Consistent confrontation of denials and rationalizations and appropriate self-disclosures were modeled by therapists in order to encourage and support the expression of strong, interpersonally directed emotion, which represented risk-taking on the subjects' part. Group interaction was encouraged, such as in directing group members to reflect or restate the feelings of other group members to encourage the appropriate expression of and growth in the capacity to give and receive accurate empathy. In general, the therapists took an active role in shaping group norms, and bringing out common elements of experience
shared by all group members, interpreting individual's behavior in terms of the group as a whole, and encouraging reality testing and group intimacy and closeness.

To help create these group norms, to encourage active participation, and to actualize personal goals of group members, therapists employed several structured group interactions. These structured activities included the giving and receiving of both negative and positive interpersonal feedback among group members and discussion with individuals concerning significant interpersonal or vocational difficulties or problems in living that led to drinking or adjustment difficulties both inside and outside the hospital milieu. In some cases when group members were passive or unsure of their role, therapists actively taught group members how to be effective participants by directing them to speak on personal or group topics, to offer their opinions or share their experiences regarding current personal or group issues, or to help other group members produce constructive solutions or alternatives to their life difficulties or destructive behavior which became evident in group sessions. As group norms and participation became consolidated, the therapists allowed group members to set their own agenda for group therapy and encouraged them to direct their own therapy and to assume responsibility for their own behavior both in and out of the group.
In addition to in-session work, residents were expected to complete a number of homework assignments outside of group. Some of these involved writing down treatment goals, aftercare plans, reading prepared material on alcoholism, visiting placement facilities, and writing an autobiography. Reading material that contained references to RET or to the philosophy of RET were not assigned as homework reading.

**Therapists**

Four therapists experienced in treating VA alcoholic populations were used as group therapists in this study. Two therapists were master's level social workers, one was a master of arts in psychology, and the fourth was a doctoral level intern in clinical psychology. Except for the doctoral level intern, therapists had an average of four years experience in group psychotherapy with alcoholics, but with little experience with RET. The intern had limited experience with alcoholism treatment but extensive graduate training in cognitive behavior therapy, which included RET.

All therapists received training in the general cognitive-behavioral approach to treatment, including Beck's cognitive therapy for depression. Most of the therapists' training involved RET, which included eight hours of extensive practice in identification and disputation of irrational thoughts and in the use of rational emotive imagery techniques and homework assignments. Training was
conducted in accordance with an RET treatment and training manual written by the author for the study. All treatment sessions, including homework assignments, were discussed by the therapists and the author to ensure comparability of treatments and conformance to treatment guidelines.

Results

Subject Assignment and Attrition

Thirty-eight male veterans were admitted to the ADTP and all volunteered as subjects for the present study. Three subjects dropped out of treatment: two, randomly assigned to the usual group therapy, left before the beginning of therapy; one, who had been randomly assigned to the RET group, was discharged from the hospital midway through treatment, due to his illegal use of drugs. All three of these dropouts occurred with different therapists (therapists 2, 3, and 4). The attrition rate from this study is considered minimal and distributed evenly across conditions.

Credibility Measure

The first hypothesis tested was that therapy credibility ratings would not differ between groups. The hypothesis was tested by a t test (two-tailed) between the RET and usual group therapy conditions. As presented in Table 1, the credibility ratings between groups failed to reach significance and the null hypothesis was retained.
Table 1

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t  Value</th>
<th>df</th>
<th>Prob. (2-Tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>17</td>
<td>48</td>
<td>2.26</td>
<td>1.72</td>
<td>33</td>
<td>.09</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>18</td>
<td>46.5</td>
<td>2.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therapist Effects

Possible effects of therapists on dependent measures within treatment conditions were examined. A series of one-way analyses of covariance (Appendices H and I, Tables 18 through 47) was used, with the appropriate pretest for each dependent variable as the covariate. Data from the following dependent measures were subjected to covariate analysis as provided for in the Statistical Package for Social Sciences (SPSS) (Nie et al., 1975), adjusted for inequality of groups. These were the (a) Irrational Beliefs Test, (b) Beck Depression Inventory, (c) Social Avoidance and Distress Scale, (d) Fear of Negative Evaluation Scale, (e) the Cognitive Impairment Index, and (f) the Tennessee Self Concept Scale.

The only dependent measure to reveal a significant therapist effect occurred under the RET condition on the Family Self Subscale of the Tennessee Self Concept Scale.
(F = 3.49, df 3/12, p = .05). Tests on the assumption of homogeneity of within-class regression, however, reveal that the assumption was violated in the present case (F = 3.49, df 3/12, p = .05). The analysis of covariance is robust with respect to violations of the assumption of homogeneity (Wildt & Ahotla, 1978; Winer, 1975). However, before the null hypothesis with regard to therapist effects on Family Self Subscale was rejected, a Duncan's Multiple Range Test was conducted on the adjusted means. The results of the Duncan's test present the interesting case where a significant F ratio was obtained on the analysis of covariance, but no differences were found among the individual cell means. As a result, it remains unknown which of the therapists was responsible for the significant F ratio, or indeed, if the observed F ratio is not actually a statistical artifact that resulted from violation of the assumptions of homogeneity of within-class regressions assumed by the F test.

Since the homogeneity assumptions of the analysis of covariance were violated and since the Duncan's test revealed no differences between therapists, then the null hypothesis was accepted. There were no differences between therapists in their effects on the Family Self Subscale of the Tennessee Self Concept Scale or on any of the other dependent measures. The adjusted means for each
therapist were (a) Therapist 1 = 59.59, (b) Therapist 2 = 62.75, (c) Therapist 3 = 69.02, and (d) Therapist 4 = 70.73.

**Treatment Effects**

Hypotheses concerning the effects of treatment were tested by a series of one-way analyses of covariance on all pre- and posttreatment dependent measures with the appropriate pretest as the covariate on each dependent measure tested. Hypotheses were tested by direct statistical comparisons of RET versus the usual group therapy. Failure to find a statistical difference was considered sufficient to accept the null hypothesis. In such cases, \( t \) tests (two-tailed) for correlated data were conducted to determine if any pre- to posttest improvement occurs within the groups.

The analysis of covariance is conducted as provided for in the SPSS (Nie et al., 1975), adjusted for the inequality of groups. The following dependent measures were examined by means of the analysis of covariance technique: (a) Irrational Beliefs Test, (b) Social Avoidance and Distress Scale, (c) Fear of Negative Evaluation Scale, (d) Beck Depression Inventory, (e) Tennessee Self Concept Scale, and (f) Cognitive Impairment Index.
### Irrational Beliefs Test

**Table 2**

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest M</th>
<th>Pretest SD</th>
<th>Posttest M</th>
<th>Posttest SD</th>
<th>Adjusted M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>309</td>
<td>28</td>
<td>283</td>
<td>39</td>
<td>276</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>286</td>
<td>8</td>
<td>287</td>
<td>7</td>
<td>292.3</td>
</tr>
</tbody>
</table>

Table 2 shows the Irrational Beliefs Test pre-posttest means, standard deviations, and adjusted means for RET and the usual group therapy. Group means for RET decrease from pre- to posttest, whereas the pre- to posttest means for usual group therapy remain stable. Surprisingly, there is greater variation in the responses of the RET group than for the usual therapy group. Even though adjusted means differ in the hypothesized direction, the one-way analysis of covariance (Appendix J, Table 48) reveals that the difference did not reach statistical significance. Therefore, the null hypothesis is retained; that is, RET does not differ from usual group therapy at outcome for this variable.

The failure to find a significant difference between RET and the usual group therapy on the Irrational Beliefs Test may be because the greater variability of scores for
the RET group masks differences between the groups on this measure. In order to reduce variability and test for between-group differences on the Irrational Beliefs Test scores, an analysis of covariance was performed on the linear transformation of pre- and posttest scores for both groups. However, no differences were found between the groups on the transformed scores ($F = 1.83, df = 1/32, p = .19$). Table 3 shows the pre- and posttest means of standard deviations for the two treatment groups.

Table 3

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest M</th>
<th>SD</th>
<th>Posttest M</th>
<th>SD</th>
<th>Adjusted M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>5.78</td>
<td>.09</td>
<td>5.63</td>
<td>.15</td>
<td>5.62</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>5.65</td>
<td>.11</td>
<td>5.65</td>
<td>.12</td>
<td>5.68</td>
</tr>
</tbody>
</table>

As can be seen from the table, the logarithm transformation of the raw data reduced the differences in variance between the two treatment groups, as well as the distance between the means, so that no between-group differences emerged in the analysis of covariance. The null hypothesis is again retained on the transformed scores between groups.

In order to determine if the two treatment groups improved significantly from pretest to posttest, the
pre-post scores for each therapy condition were examined by means of \( t \) tests (two-tailed) for correlated data. The data as presented in Table 4 show that despite the lack of differential effectiveness, the RET group improved significantly from pre- to posttesting, whereas the usual therapy group did not improve.

\[ \text{Table 4} \]

\textit{t Test Analysis of Within-Treatment Changes on the Irrational Beliefs Test}

<table>
<thead>
<tr>
<th>Group</th>
<th>( t ) Value</th>
<th>( df )</th>
<th>2-Tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>2.60</td>
<td>16</td>
<td>.02</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>-.09</td>
<td>17</td>
<td>.92</td>
</tr>
</tbody>
</table>

\[ \text{Social Avoidance and Distress Scale} \]

\[ \text{Table 5} \]

\textit{Group Means and Standard Deviations for Social Avoidance and Distress Scale}

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Adjusted M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Rational Emotive Therapy</td>
<td>12</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>11.09</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>14</td>
<td>10</td>
<td>14</td>
<td>10</td>
<td>12.98</td>
</tr>
</tbody>
</table>

Table 5 presents the group means and standard deviations for subjects' pre- and posttreatment scores.
and adjusted means for the Social Avoidance and Distress Scale. Mean scores for both groups reveal that on pretesting, both groups displayed moderately elevated scores (Watson & Friend, 1969; Smith & Sarason, 1973), which remained relatively stable at posttesting. One-way analysis of covariance (Appendix J, Table 49) showed that the observed differences were no greater than that expected by chance, so that the null hypothesis concerning between group differences is retained for this variable.

$t$ tests (two-tailed) for correlated data were used to examine for pre- to posttest differences within therapy conditions. As Table 6 indicates, no significant changes from pre- to posttest occurred on this dependent measure.

Table 6

<table>
<thead>
<tr>
<th>Group</th>
<th>$t$ Value</th>
<th>df</th>
<th>2-Tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>1.43</td>
<td>16</td>
<td>.17</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>.25</td>
<td>17</td>
<td>.81</td>
</tr>
</tbody>
</table>

Fear of Negative Evaluation

Table 7 presents group means and standard deviations for pre- and posttreatment scores on the Fear of Negative Evaluation Scale. The pre- and posttest means for both
Table 7

Group Means and Standard Deviations for the Fear of Negative Evaluation Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest M</th>
<th>SD</th>
<th>Posttest M</th>
<th>SD</th>
<th>Adjusted M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>16</td>
<td>10</td>
<td>15</td>
<td>10</td>
<td>14.05</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>13</td>
<td>8</td>
<td>14</td>
<td>9</td>
<td>15.18</td>
</tr>
</tbody>
</table>

groups are moderately elevated (Watson & Friend, 1969) and show little change between pre- and posttesting. Analysis of covariance between groups (Appendix J, Table 52) showed that the differences between treatment conditions fail to reach statistical significance, so that the null hypothesis regarding the lack of superiority of RET over usual group therapy is retained. t test analysis of within-group changes, as presented in Table 8, shows no significant improvement from pre- to posttesting.

Table 8

\( t \) Test Analysis of Within-Treatment Changes in Fear of Negative Evaluation Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>t Value</th>
<th>df</th>
<th>2-Tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>.87</td>
<td>16</td>
<td>.40</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>-.46</td>
<td>17</td>
<td>.65</td>
</tr>
</tbody>
</table>
Beck Depression Inventory

Table 9

Group Means and Standard Deviations on Beck Depression Inventory

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Rational Emotive Therapy</td>
<td>13</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>11</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 9 presents the pre- and posttest means and standard deviations for subjects' self-report of depression on the Beck Depression Inventory. The pretreatment means show that subjects' depression scores were mildly elevated, but that by posttreatment testing, depression scores in both treatment conditions were low. One-way covariance analysis (Appendix J, Table 49) showed that differences between treatments failed to reach statistical significance, so that the null hypothesis is retained for this variable. Table 10

Table 10

$t$ Test Analysis of Within-Treatment Changes on Beck Depression Inventory

<table>
<thead>
<tr>
<th>Group</th>
<th>$t$ Value</th>
<th>df</th>
<th>2-Tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>2.85</td>
<td>16</td>
<td>.05</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>2.13</td>
<td>17</td>
<td>.01</td>
</tr>
</tbody>
</table>
presents the t test analysis between pre- and posttest scores within each treatment condition and reveals a significant difference for both groups.

Cognitive Impairment Index

Table 11

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest M</th>
<th>Pretest SD</th>
<th>Posttest M</th>
<th>Posttest SD</th>
<th>Adjusted M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>.67</td>
<td>.34</td>
<td>.65</td>
<td>.36</td>
<td>.63</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>.62</td>
<td>.21</td>
<td>.59</td>
<td>.21</td>
<td>.61</td>
</tr>
</tbody>
</table>

Table 11 shows that there was a slight decrease on the Cognitive Impairment Index from pre- to posttesting for each treatment group, while variability within each treatment condition remained stable. It also shows that the means and variation of the subjects in the usual therapy group were less than those of subjects in the RET group. However, analysis of covariance (Appendix J, Table 50) revealed that these differences failed to reach statistical significance, so that the null hypothesis is retained. As presented in Table 12, t test analysis of pre- and posttest changes within treatment conditions showed that only subjects in the usual group therapy improved significantly from pre- to posttesting on this variable.
Table 12
\[ t \] Test Analysis of Within-Treatment Changes on Cognitive Impairment Index

<table>
<thead>
<tr>
<th>Group</th>
<th>( t ) Value</th>
<th>df</th>
<th>2-tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Emotive Therapy</td>
<td>.86</td>
<td>16</td>
<td>.40</td>
</tr>
<tr>
<td>Usual Group Therapy</td>
<td>2.45</td>
<td>17</td>
<td>.03</td>
</tr>
</tbody>
</table>

The Tennessee Self Concept Scale

Hypotheses regarding the Tennessee Self Concept Scale involve scores on ten subscales representing the major self-concept categories. These ten subscales are Self-criticism, Total Positive, Identity, Self-acceptance, Behavior, Physical Self, Moral/Ethical Self, Personal Self, Family Self, and Social Self. Table 13 shows the pre- and posttest mean scores on the relevant subscales for both therapy groups. The table allows a comparison of the mean scores with the upper and lower limits of the normal range for each subscale.

The columns titled "high" and "low" represent approximate cut-off scores for the upper and lower limits of adjustment. Subjects' scores falling above or below these cut-offs are considered pathological self-concept scores. The high scale score represents defensively overvalued and pathological self-concepts, and the lower
scale score represents pathologically devalued levels of self-concept. The median scale score represents the healthy norm on these subscales. For purposes of scale interpretation, scores that fall near the upper and lower limits are viewed as areas of difficulty in self conception.

Table 13
Pre- and Posttest Mean Scores on Tennessee Self Concept Subscales for the Therapy Groups in Comparison with Standardized Limits of Normality for Each Subscale

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Standardized Normal Limits</th>
<th>Group Means</th>
<th>RET&lt;sup&gt;a&lt;/sup&gt;</th>
<th>UGT&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>high medium low</td>
<td>RET&lt;sup&gt;a&lt;/sup&gt;</td>
<td>pre post</td>
<td>UGT&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Self Criticism</td>
<td>49 35 26</td>
<td>37 36</td>
<td>34 36</td>
<td></td>
</tr>
<tr>
<td>Total Positive</td>
<td>420 347 316</td>
<td>321 344</td>
<td>317 331</td>
<td></td>
</tr>
<tr>
<td>Identity</td>
<td>148 127 117</td>
<td>118 125</td>
<td>112 123</td>
<td></td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>145 104 86</td>
<td>98 108</td>
<td>102 103</td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td>140 115 101</td>
<td>105 111</td>
<td>103 106</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>88 72 62</td>
<td>67 72</td>
<td>61 66</td>
<td></td>
</tr>
<tr>
<td>Moral/Ethical</td>
<td>89 71 62</td>
<td>66 71</td>
<td>65 67</td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>82 65 51</td>
<td>61 67</td>
<td>61 64</td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>89 71 62</td>
<td>63 65</td>
<td>65 68</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>81 69 59</td>
<td>65 69</td>
<td>64 67</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Rational Emotive Therapy
<sup>b</sup>Usual Group Therapy
As Table 13 shows, on pretest, subjects in both treatment groups reported nearly pathological levels of self-esteem (Total Positive), disturbances in identity (Identity Subscale), dissatisfaction with their own behavior (Behavior Subscale), and disturbed self-concept with regard to their physical bodies (Physical Subscale). The other subscale scores showed slightly less devaluation of the self in the moral/ethical sphere (Moral/Ethical Subscale) and the family self concept (Family Subscale). Overall, the mean scores of both groups fell below the median range scores of the self-concept possible for these subscales. By posttesting, the scores of both treatment groups rose more toward the median in all areas of self-concept.

Between-group differences were analyzed by one-way analysis of covariance technique with the appropriate pretest score as the covariate (Appendix J, Tables 53 through 62). Results indicate that the differences between the treatment groups failed to reach statistical significance on any of the subscales at outcome, so that the null hypothesis is retained for each of these subscales. Since both groups improved from pre- to posttesting, this improvement was analyzed by means of a series of t tests (two-tailed) for correlated data. Table 14 presents the results.
Table 14

$t$ Test Analysis of Within-Treatment Changes on the Tennessee Self Concept Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>Subscales</th>
<th>Pretest</th>
<th>Posttest</th>
<th>$t$ Value</th>
<th>Prob. (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>RET$^a$</td>
<td>Total Positive</td>
<td>321</td>
<td>41</td>
<td>344</td>
<td>-2.99</td>
</tr>
<tr>
<td></td>
<td>Self Criticism</td>
<td>37</td>
<td>6</td>
<td>36</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>Identity</td>
<td>118</td>
<td>15</td>
<td>125</td>
<td>-3.20</td>
</tr>
<tr>
<td></td>
<td>Self Acceptance</td>
<td>98</td>
<td>19</td>
<td>108</td>
<td>-2.62</td>
</tr>
<tr>
<td></td>
<td>Behavior</td>
<td>105</td>
<td>14</td>
<td>111</td>
<td>-1.96</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>67</td>
<td>9</td>
<td>72</td>
<td>-3.42</td>
</tr>
<tr>
<td></td>
<td>Moral/Ethical</td>
<td>66</td>
<td>10</td>
<td>71</td>
<td>-2.30</td>
</tr>
<tr>
<td></td>
<td>Personal</td>
<td>61</td>
<td>10</td>
<td>67</td>
<td>-2.92</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>63</td>
<td>10</td>
<td>65</td>
<td>-1.11</td>
</tr>
<tr>
<td></td>
<td>Social</td>
<td>65</td>
<td>6</td>
<td>69</td>
<td>-2.27</td>
</tr>
<tr>
<td>UGT$^b$</td>
<td>Total Positive</td>
<td>317</td>
<td>39</td>
<td>331</td>
<td>-2.66</td>
</tr>
<tr>
<td></td>
<td>Self Criticism</td>
<td>34</td>
<td>7</td>
<td>36</td>
<td>-1.44</td>
</tr>
<tr>
<td></td>
<td>Identity</td>
<td>112</td>
<td>14</td>
<td>123</td>
<td>-3.52</td>
</tr>
<tr>
<td></td>
<td>Self Acceptance</td>
<td>102</td>
<td>17</td>
<td>103</td>
<td>- .24</td>
</tr>
<tr>
<td></td>
<td>Behavior</td>
<td>103</td>
<td>15</td>
<td>106</td>
<td>-1.72</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>61</td>
<td>11</td>
<td>66</td>
<td>-3.10</td>
</tr>
<tr>
<td></td>
<td>Moral/Ethical</td>
<td>65</td>
<td>7</td>
<td>67</td>
<td>-2.39</td>
</tr>
<tr>
<td></td>
<td>Personal</td>
<td>61</td>
<td>10</td>
<td>64</td>
<td>-1.63</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>65</td>
<td>10</td>
<td>68</td>
<td>-1.67</td>
</tr>
<tr>
<td></td>
<td>Social</td>
<td>64</td>
<td>10</td>
<td>67</td>
<td>-1.59</td>
</tr>
</tbody>
</table>

Note: Increase in mean scores represent improvement on these measures.

$^a$Rational emotive therapy

$^b$Usual group therapy

Table 14 shows that subjects in the RET condition improved significantly from pre- to posttesting on 7 of the 10 subscales, whereas subjects in the usual group therapy improved significantly on only 4 of the 10 subscales.
Correlational Results

Pearson Product Moment Correlations were used to examine the hypothesis that subjects' learning impairment as measured by the Cognitive Impairment Index would lead to a suppression of their capacity to respond positively to treatment. Positive response to treatment was measured by the differences between the pretest and posttest scores, or gain scores, for the Irrational Beliefs Test, the Beck Depression Inventory, the Social Avoidance and Distress Scale, the Fear of Negative Evaluation Scale, and the Tennessee Self Concept Scale. A significant negative correlation between the Cognitive Impairment Index and the pre-post gain scores on these dependent measures would be consistent with the hypothesis that dysfunctions of new learning capacity would suppress response to treatment. That is, the occurrence of significant negative correlations would indicate that greater cognitive impairment would be associated with lower pre-post gain scores and, hence, less response to treatment.

The first level of correlational analysis was performed on all subjects regardless of the therapy condition in which they are assigned. Table 15 presents the results of this analysis.
As Table 15 indicates, all the correlations were small and failed to reach significance. The failure to find statistical significance indicates that no relationship exists between scores on the Cognitive Impairment Index and response to group therapy when the type of therapy is not considered.

In order to determine if the type of therapy would influence the role cognitive impairment plays in subjects' treatment response, Pearson Product Moment Correlations were obtained between subjects' scores on the Cognitive Impairment Index and the pre-post gain scores for subjects within each treatment condition. Tables 16 and 17 present the results of this correlational analysis.
### Table 16

Correlations Between Cognitive Impairment Index and Pre-post Gain Scores on Other Dependent Measures Within Rational Emotive Therapy Condition

<table>
<thead>
<tr>
<th></th>
<th>IBT</th>
<th>BDI</th>
<th>SAD</th>
<th>FNE</th>
<th>Self C</th>
<th>Tot P</th>
<th>R1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CII</td>
<td>.13</td>
<td>-.18</td>
<td>.20</td>
<td>.50*</td>
<td>-.21</td>
<td>.04</td>
<td>-.40</td>
</tr>
<tr>
<td>R2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CII</td>
<td>-.01</td>
<td>.32</td>
<td>-.13</td>
<td>-.20</td>
<td>.17</td>
<td>.23</td>
<td>.07</td>
</tr>
</tbody>
</table>

Note: CII = Cognitive Impairment Index; IBT = Irrational Beliefs Test; BDI = Beck Depression Inventory; SAD = Social Avoidance and Distress; FNE = Fear of Negative Evaluation; Self C = Self Criticism; Tot P = Total Positive; R1 = Identity; R2 = Self Acceptance; R3 = Behavior; A = Physical Self; B = Moral/Ethical Self; C = Personal Self; D = Family Self; E = Social Self.

*p = .02

### Table 17

Correlations Between Cognitive Impairment Index and Pre-post Gain Scores on Other Dependent Measures Within Usual Group Therapy Conditions

<table>
<thead>
<tr>
<th></th>
<th>IBT</th>
<th>BDI</th>
<th>SAD</th>
<th>FNE</th>
<th>Self C</th>
<th>Tot P</th>
<th>R1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CII</td>
<td>.05</td>
<td>-.10</td>
<td>-.22</td>
<td>-.44*</td>
<td>.05</td>
<td>-.10</td>
<td>.00</td>
</tr>
<tr>
<td>R2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CII</td>
<td>-.07</td>
<td>.17</td>
<td>.10</td>
<td>-.10</td>
<td>.20</td>
<td>-.09</td>
<td>-.09</td>
</tr>
</tbody>
</table>

Note: CII = Cognitive Impairment Index; IBT = Irrational Beliefs Test; BDI = Beck Depression Inventory; SAD = Social Avoidance and Distress; FNE = Fear of Negative Evaluation; Self C = Self Criticism; Tot P = Total Positive; R1 = Identity; R2 = Self Acceptance; R3 = Behavior; A = Physical Self; B = Moral/Ethical Self; C = Personal Self; D = Family Self; E = Social Self.

*p = .03
As shown in these tables, only two correlations reached statistical significance. For the RET group, a positive correlation was found between the Cognitive Impairment Index and the Fear of Negative Evaluation gain scores. This indicates that for subjects in the RET group, the greater the cognitive impairment, the greater is their response to treatment. This result is contrary to the hypothesized negative relationship between these variables. However, for the usual therapy group, the correlation between Cognitive Impairment Index and the Fear of Negative Evaluation Scale is negative and significant. This finding is consistent with the suppression hypothesis.

The correlational results suggest that support for the suppression hypothesis is minimal and depends upon the type of therapy subjects received. When correlations between the Cognitive Impairment Index and the pre-post gain scores are examined without regard to treatment conditions, no significant relationships are observed. When correlations are examined within the RET conditions, the only significant correlation is contrary to the hypothesized negative relationship. For these analyses, then, the hypothesis that cognitive impairment would suppress response to treatment is rejected. The only correlation that is consistent with the hypothesis occurs within the usual group therapy condition on the
Fear of Negative Evaluation Scale. For these subjects, then, the higher the levels of cognitive impairment, the less change they show between pre- and posttesting on the Fear of Negative Evaluation Scale.

**Summary of Results**

Alcoholics who volunteered as subjects for this study reported initially mild levels of depression, moderate levels of negative evaluation anxiety and interpersonal anxiety, and poor to pathological levels of self-conception as indicated by their responses to the psychometric measures at pretreatment testing. There were no significant differences at outcome between RET and the usual group therapy across all the dependent measures as analyzed by the analysis of covariance technique. Improvement of scores between pre- and posttesting on some dependent measures was observed for both therapy conditions. The only significant negative correlation observed was between the Cognitive Impairment Index and the Fear of Negative Evaluation Scale for subjects in the usual therapy condition. The other correlations, however, are inconsistent with the hypothesis that cognitive impairment would be negatively related to response to treatment as measured by the pre-post gain scores on the dependent measures of this study. Finally, treatment credibility was not rated differently across treatment conditions.
Discussion

The major finding of this study is that RET did not prove clearly superior to the usual therapy group on any of the dependent variables used in this study. The lack of clear superiority for RET is contrary to the research hypotheses. As a result, the superiority of RET over usual group therapy in the inpatient treatment of alcoholism has not been established by this investigation.

Subjects in both treatment groups improved between pre- and posttesting on several of the dependent measures. Interpretation of the within-treatment improvements must be cautious, since these improvements cannot be attributed directly to group therapy. Further, it is unlikely that scores on the dependent measures are independent of one another, so that, given the relatively large number of measures used (15), some of these pre-post changes may have reached statistical significance by chance alone. In the context of these cautions, the within-treatment changes are encouraging. Perhaps some unspecified components of inpatient treatment are responsible for the changes observed on the measures of psychological functioning of the chronic alcoholics of this study.

Correlational results concerning the hypothesized suppressing effect of cognitive impairment on response to
treatment are either contradictory and confusing or are generally not consistent with the hypothesis. Only one of the possible 14 correlations was significant in the expected negative direction. The only other significant correlation was positive in the opposite direction predicted by the hypothesis. The correlational results, then, provide only minimal support for the hypothesis that cognitive impairment with regard to learning ability would suppress response to treatment as indicated on the psychometric measures of psychological functioning which are used in this study.

**Hypothesis One: Discussion**

Hypothesis one predicted that residents entering the Alcohol and Drug Treatment Program would suffer from depression as measured by the Beck Depression Inventory and that RET would be more effective in reducing depression than the usual group therapy. Pretreatment testing with the Beck Depression Inventory indicated that subjects in both treatment groups tended to suffer from mild levels of depression. This finding is consistent with that of other researchers concerning depression in an alcoholic population (e.g., Weissman et al., 1977; Keller, Taylor, & Miller, 1979). However, RET does not produce superior improvement in depression scores relative to the usual group therapy. Therefore, the superior efficacy of RET
in the treatment of depression in the chronic alcoholic population in this study is rejected.

Despite the lack of superior efficacy for RET, analysis of within-treatments change shows that subjects in both treatments improve significantly between pre- and posttesting on depression. In the present context, the observed improvement in depression needs to be interpreted cautiously. It may be that both forms of treatment are equally effective in reducing depression. It is equally likely that the nature and requirements of inpatient treatment may be the sole contributor to improvements in depression.

Inpatient treatment as instituted at the American Lake VA requires that veterans enter treatment sober and remain abstinent for the duration of the 6-week program. The absence of alcohol intake may itself have produced an elevation of mood and a consequent lowering of depression scores on the Beck Depression Inventory for both treatment groups. Evidence for this explanation comes from the work of several investigators who have found that drinking alcohol in chronic alcoholics is associated with increased depression and other mood disturbances (Mendelson, 1968; Mendelson et al., 1964; Nathan et al., 1970; Allman et al., 1972; Williams, 1966). Since the subjects of this study were sober, they would not have experienced the depressant effects of alcohol for the period of time between pre- and
posttreatment testing, which could have accounted for improvement in depression scores.

Another factor involved in inpatient treatment which could have contributed to lowered depression scores is the nature of the treatment milieu. This treatment occurred in a highly supportive context in which subjects receive medical attention, peer group support, staff attention, nutritious meals, exercise, and temporary freedom from the pressures of living outside the hospital. The reassurance and supportive milieu attendant with inpatient treatment may have produced the observed decreases in self-reported depression.

The design of the present study does not permit an examination of these alternative explanations for decrease in depression scores. Inclusion of a no-treatment but sober control group and an attention-placebo group in future studies could help answer some of these questions.

Hypothesis Two: Discussion

Hypothesis two predicted that the subjects entering the American Lake VA for alcohol treatment would have deviant self concepts and that RET would produce greater positive changes in the self-concept than the usual therapy group. The scores on the Tennessee Self Concept Scale at pretesting are consistent with the first part of hypothesis two. Overall, the profiles of the means of the two therapy groups indicate general maladjustment and a failure of
subjects in both groups to respect or value themselves highly. Self-esteem is very low in both groups. Self-concept is lowest in terms of the way subjects tend to devalue their physical appearance, to report disturbed personality integration and lack of a stable sense of identity, and to express dissatisfaction with their behavior. They also evidence problematic self-concepts in terms of moral and personal worth and in adequacy as a family member. Fitts (1972) has summarized the research of several investigators who found similar self-concept difficulties in other alcoholic populations.

The second part of hypothesis two is not supported by the results of this study. Contrary to prediction, RET did not produce superior improvement in self-concept relative to the usual group therapy. Subjects in both therapy groups, however, generally improved on self-concept scores between pre- and posttesting. Rational emotive therapy group improved significantly on 7 of the 10 subscales, whereas the usual therapy group improved on only 4 of the 10 subscales. Both groups increased on levels of self-esteem, achieved better personality integration and a sense of identity, and both groups valued themselves more highly in their physical appearance and in the moral/ethical sphere of the self-concept. Only the RET group showed an increase in overall self-acceptance, an increase
in satisfaction with themselves apart from others, and an increase in self confidence with regard to their social roles.

The differences between RET and the usual group therapy with respect to the range of pre-post improvement across the Tennessee Self Concept subscales must be interpreted with extreme caution. The subscale scores on the Tennessee Self Concept Scale are not independent of each other because of the nature of deriving subscale scores. Each subscale shares test items in common with other subscales, so that a change in one subscale score will influence changes in other subscale scores, too. This lack of independence of the subscales violates the assumption of orthogonality of the t tests used to test the significance of these pre-post changes. This violation increases the probability that at least some of the observed improvements between pre- and posttesting are statistical artifacts. Although the limitations of the present study precludes attributing a greater range of improvement across the Tennessee Self Concept subscales to the RET subjects, these results offer some encouragement concerning the overall effectiveness of therapy in an inpatient setting in improving the problematic self-concepts of chronic alcoholics.
Hypothesis Three: Discussion

Hypothesis three predicted that alcoholic subjects would demonstrate high levels of interpersonal anxiety and fears of negative evaluation and that RET would produce superior amelioration of these fears relative to the usual group therapy. Pretreatment test scores on the Fear of Negative Evaluation Scale revealed that the subjects in both treatment groups reported moderately high levels of anxiety concerning potential criticism from others. Subjects' pretreatment test scores on these two scales are consistent with the predictions made by the first part of hypothesis three. Predictions made by the second part of hypothesis three are completely disconfirmed. Not only did RET fail to produce superior changes in social anxiety compared to the usual group therapy, but analysis of within-group changes revealed that neither group improved on their social anxiety scores between pre- and posttesting. Neither treatments nor the inpatient milieu have any impact on self-reported social anxiety.

The lack of change on self-reported anxiety was unexpected. Previous studies employing the two social anxiety scales have found them to be sensitive to the effects of therapy (Meichenbaum, Gilmore, & Fedoravicious, 1971; Fremouw & Zitter, 1978; Whitley, Rimm, Waid, & Winslow, Note 3). It is unlikely that the lack of change
observed in this study can be attributed to the insensitivity of these scales to therapeutic impact.

A combination of factors may have produced the lack of change in social anxiety. The social anxiety of chronic alcoholics in this study may have been refractory to treatments. Subjects undergoing treatment may not have learned the cognitive and social skills necessary to give them a sense of confidence in interpersonal relations and in coping with negative criticism sufficient to ameliorate social anxiety. A second possibility is that subjects may have learned these skills but had little opportunity to apply them in more anxiety-evoking situations outside of the relatively more supportive hospital milieu. In either case, subjects facing discharge from the hospital may have judged themselves as incompetent to cope successfully with expected interpersonal stresses after discharge, which would result in no improvement in their self-reported social anxiety at posttesting. Future research should include assessment of skill acquisition and efficacy expectations in the application of skills in order to better understand the role these factors play in decreasing self-reported social anxiety in chronic alcoholic populations.

Hypothesis Four: Discussion

Hypothesis four predicted that alcoholic subjects in the RET group would have lower total scores on the
Irrational Beliefs Test than their counterparts in the usual therapy group. The rationale for this prediction was that subjects in the RET group are more likely to learn the concepts and vocabulary appropriate to RET than the usual therapy group, who have none of the RET components as part of therapy. The different contents of the two therapies should be reflected in lower scores for the RET group relative to the usual therapy group at posttest. This prediction, however, was unconfirmed by the results of the study. The RET group did not score lower at outcome on the Irrational Beliefs Test than the usual therapy group does.

The failure to find significant between-group differences on the Irrational Beliefs Test is surprising. The Irrational Beliefs Test is a highly face-valid instrument, so that subjects trained in RET should have been able to recognize the proper way to endorse test items in a rational enough direction to create significant between-group differences. There may be several reasons why between group differences did not emerge on this variable.

A purely statistical explanation for the lack of between-group differences lies in the extreme variability in Irrational Beliefs Test scores evidenced by subjects in
the RET group compared with the relative homogeneity of scores observed in the usual group therapy subjects. The differences in variability would tend to mask between-group differences that might have shown up had variability been less divergent between the groups. The extreme differences in variability between the two groups suggest that, with respect to scores on the Irrational Beliefs Test, random assignment may not have protected the experiment from the occurrence of noncomparable treatment groups.

The factors that could account for the extreme variance in the RET group cannot be identified with certainty by the present investigation. Age differences between the groups do not appear to be a factor, since the average ages of the two groups are roughly equal (RET = 38 years; usual group therapy = 39 years). The possibility that subjects in the RET group may have suffered more brain dysfunction than subjects in the usual therapy group cannot be ruled out, however. Brain damage due to chronic alcohol ingestion tends to be highly variable (Fitzhugh et al., 1965; Jones & Parsons, 1971a), and individual differences in dysfunction could contribute to observed variances. Random assignment may have resulted in the RET group's receiving more brain-damaged subjects than the usual therapy group, thus accounting for some of the greater variability of scores of
the RET group on the Irrational Beliefs Test in comparison to the usual therapy group. Some evidence for this possibility is shown by the somewhat greater variance and higher scores evidenced by the RET group on the Cognitive Impairment Index, which is a rough estimate of brain damage in alcoholic populations.

Despite the greater variability of the RET group, it is still reasonable to expect the emergence of between-group differences on the Irrational Beliefs Test given the high face validity of the instrument. The failure to find between-group differences cannot be explained by the failure of the RET group to learn the concepts appropriate to RET. In examining within-group changes, the RET group were found to have lowered their total Irrational Beliefs Test scores from pre- to posttest, whereas the usual therapy group remained the same. Since no other facet of milieu treatment contained components of the RET treatment package, the pre-post improvement evidenced by the RET group may be attributed to the subjects' in RET acquiring the language and concepts pertinent to RET. The failure to find significant between-group differences on the Irrational Beliefs Test suggests that the RET subjects may have failed to learn the concepts of RET well enough to clearly differentiate them from their counterparts undergoing the usual group therapy.
In regard to the present discussion, one methodological weakness of this investigation was the failure to provide an independent check on whether RET was actually being conducted by therapists who were supposedly administering the RET treatment package. Since no independent manipulations check on RET was conducted, it is possible that the failure to find significant between-group differences in favor of RET in the present study may be a consequence of the failure to apply RET during therapy. However, the fact that RET subjects improved on Irrational Beliefs Test from pre- to posttesting, and the fact that therapy sessions and written RET homework assignments were discussed to ensure compliance to a thorough and detailed treatment manual serves to weaken this possibility somewhat. More plausibly, the severity of social and psychological impairment of the present subject population coupled with therapists' inexperience in administering RET may have been partially responsible for the failure of RET subjects to respond to RET well enough to clearly differentiate them from subjects in the usual group therapy on the Irrational Beliefs Test. It is equally possible that had RET been extended beyond the four weeks of group treatment, between-group differences would have emerged on this variable.
Hypothesis Five: Discussion

Hypothesis five predicted that subjects in the RET group would show greater improvement in drinking behavior than subjects in the usual therapy groups at a 4-month followup. There will be no discussion of this prediction at this time, however. Hypothesis five pertains to another investigation considered separate from this dissertation.

Federal laws regarding the privacy of veterans in treatment prevent the current investigator from participating in the followup study. In accordance with the addendum to the dissertation proposal (Appendix P), however, the followup study will be conducted by a staff psychologist at the American Lake Veterans Administration Hospital, Tacoma, Washington. The data of this followup will be analyzed and a report submitted to the current investigator, who may indicate the results in any future publication of the current dissertation project.

Hypothesis Six: Discussion

Hypothesis six predicted that subjects in RET and the usual group therapy would not rate their respective therapies as initially more or less credible than the other. Results indicate that both groups rated their respective therapies highly, and that there were no differences between the groups regarding the credibility of therapy and the subjects' expectations for change.
Hypothesis Seven: Discussion

Hypothesis seven involves two basic issues. The first one concerns the prediction that cognitive impairment with respect to new learning capacity would adversely affect, or suppress, response to treatment as measured by the psychometric instruments employed in this study. The second issue concerns the possibility of change in cognitive impairment as a result of undergoing treatment.

The first issue was investigated by means of the correlational analysis. The rationale for expecting a negative correlation between scores on the Cognitive Impairment Index and the pre-post gain scores on the other dependent measures involves information processing deficits. Group therapies in the present study emphasized a psycho-educational approach to alcoholic treatment. Rational emotive therapy specifically emphasizes the learning of new skills with regard to analyzing thoughts and emotions pertinent to alcohol abuse and changing them to conform to the tenets of rationality proposed by Ellis (1977) and others. The usual group therapy emphasizes learning to create emotional support, establishing adequate short- and long-term life goals, and learning social problem-solving skills, and insight into self-defeating interpersonal behavior. Given the emphasis in both treatments on learning new skills, any deficits in new learning ability should
lead to deficient learning during therapy. If true, then the greater the deficit in new learning capacity, the less should be the response to treatment.

The correlational analysis between the Cognitive Impairment Index and gain scores on other dependent measures without regard to treatment conditions did not confirm the existence of the expected suppression of therapeutic effectiveness. Although 11 of the 14 variables correlate with the Cognitive Impairment Index in the expected negative direction, these correlations are both small and nonsignificant.

When the correlations are examined within each treatment condition, a slightly different but confusing picture emerges. Most of the correlations within treatments are not significant. Contrary to expectation in the RET group, a significant but positive correlation occurred between the Cognitive Impairment Index and the gain scores on the Fear of Negative Evaluation Scale. This indicates that those subjects who showed the greatest treatment gain also showed the greatest cognitive impairment at the beginning of treatment. In contrast to the RET group, the correlation between the Cognitive Impairment Index and gain scores on the Fear of Negative Evaluation Scale for subjects in the usual therapy group is significant but negative. This indicates that those subjects who show the greatest
treatment gain have less cognitive impairment at the beginning of treatment than their more impaired counterparts. It is evident from these results that the role cognitive impairment plays in response to treatment differs somewhat depending upon treatment condition.

From the correlational results, it would appear that RET stimulates the more cognitively impaired subjects to greater improvement in negative evaluation fears at outcome compared to their less cognitively impaired counterparts. An explanation of why this should occur in RET is unclear. It is equally unclear why the opposite relationship between cognitive impairment and response to treatment should occur in the usual therapy group but not in the RET group. An explanation of these results would be useful, but the limitations of the current study provide no clues. Perhaps the inconsistencies could be explained by the operation of other unspecified variables that would have intervened to create contradictory relationships between cognitive impairment and response to treatment across the two treatment groups. Regardless, the relationship between cognitive impairment and response to treatment of negative evaluation fears in a chronic alcoholic population is not simple and deserves further investigation in future research. The overall conclusion that is warranted by the correlational analysis is that no
relationship exists between cognitive impairment and response to treatment as measured by the psychometric instruments of this investigation.

One of the difficulties of the present methodology was that the instruments used to evaluate outcome are not constructed to be direct measures of new learning or skill acquisition. They are designed to measure psychological variables. The dependent measures in this study may not be sensitive or immediately responsive to the changes in psychological functioning caused by the processing of new information about the self or the learning of new cognitive or social skills. As such, the method of measuring outcome in this study may not have been the most sensitive methodology for testing the hypothesis that cognitive impairment with respect to new learning capacity would suppress response to treatment. Future research should employ more direct methods of measuring individual differences in new learning or skill acquisition in order to examine similar hypotheses more precisely.

Hypothesis seven made no prediction with regard to improvement on the Cognitive Impairment Index as a result of therapy. Although no differences between treatments were found at outcome, analysis of within-group changes shows that the usual group therapy subjects improved between pre- and posttesting, whereas those in the RET group did not.
It is unlikely that some component in the usual group therapy stimulates improvement in cognitive impairment. Inspection of the pre- and posttest means of both treatments showed a decrease in size of means between pre- and posttesting, with the pre- and posttest means of the RET group higher than the means of the usual therapy group. Since cognitive and perceptual impairments in chronic alcoholics have been shown to ameliorate somewhat with the amount of time sober, (Allen, Faillace, & Reynolds, 1971; Long & McLachlan, 1974; Page & Linden, 1974; Smith et al., 1971; Weingartner et al., 1971) it may be that subjects in the RET group, having started with relatively greater impairment, simply needed more time free of alcohol to show significant cognitive recovery between pre- and posttesting. Without the inclusion of a no-treatment but sober control group, the effects of the amount of time sober cannot be assessed in the present study.

Findings and Indications

Summary of Major Findings

1. Chronic alcoholics in this present study evidenced mild depression, moderately high levels of social anxiety, and poor self concepts at the beginning of treatment.

2. At the end of treatment, decreases in depression and increases in the self-concept were observed for subjects in both treatment groups. Subjects in the RET group
improved significantly on the Irrational Beliefs Test, and subjects in the usual group therapy improved in cognitive functioning.

3. There were no differences between groups on any of the dependent variables used in this study.

4. All subjects rated their treatments as equally credible at outset.

5. The level of cognitive impairment of subjects in this study was unrelated to response to therapy when treatment condition was not considered.

6. When treatment conditions were considered, results of the correlational analysis between cognitive impairment and response to treatment were only marginally supportive of the suppression hypothesis at best, and at worst, were contradictory to it.

a. For the RET condition, there was a significant but positive correlation between initial cognitive impairment and gain scores on the Fear of Negative Evaluation Scale, which is precisely contrary to prediction.

b. For the usual therapy condition, there was only one significant negative correlation between initial cognitive impairment and the Fear of Negative Evaluation gain scores, exactly as predicted but opposite to the relationship on these scales in the RET group.
Implications

The alcoholics who participated in this study reported psychological difficulties with regard to mild levels of depression, poor self-concepts, moderately high levels of interpersonal anxiety, avoidance of social intercourse, and fear of negative criticism. Participation in a 6-week inpatient program consisting of guided educational and leisure activities, two different kinds of group therapy, and carefully enforced abstinence from further alcoholic intake, may have produced changes between pre- and posttesting on several of the dependent variables. By posttesting, depression had decreased in intensity, general improvement was found in the self-concept, and subjects in the RET group evidenced greater levels of rationality while subjects in the usual group therapy improved in cognitive functioning. By contrast, no improvement was found on the measures of social anxiety.

Unfortunately, these results on the psychometric measures of psychological functioning cannot be directly attributed to the effects of treatment. Contrary to predictions, RET is not superior to the usual group therapy on any of the measures used in this study. The implication is that with respect to psychological functioning of chronic alcoholics, different treatment modalities may not produce differential treatment outcomes. This conclusion
is consonant with the findings of other researchers with regard to the effects of different treatments on posttreatment drinking behavior and general psycho-social adjustment in alcoholic populations (Armor et al., 1976; Brandsma, Maultsby, & Welsh, 1980; Emrick, 1974, 1975; Ruggles et al., 1976). The failure to find either therapy type superior to the other at outcome is also consistent with the findings of other investigators regarding therapy outcome with other clinical populations (e.g., Luborsky et al., 1975; Sloane et al., 1975).

The implication that RET is not superior to usual group therapy may be mitigated somewhat by a significant methodological limitation. The methodological limitation lies in the inequities of therapists' experience in using RET as compared with their experience in administering the usual group therapy procedures. Only one of the four therapists in this study had had previous experience in administering the components of the RET treatment package. The other three therapists had some familiarity with the procedures of RET but had never before used rational-emotive technique in the practice of group therapy in alcohol treatment.

To help overcome these experience deficits, an RET therapist manual was written and therapists were trained to that manual prior to the start of the study. It is doubtful, however, that flexibility crucial to successfully using RET
could have matched those therapists' flexibility in administering usual group therapy. Although all three therapists expressed commitment to RET, they nevertheless reported that they would feel more comfortable and perform more flexibly in therapy if they had the opportunity to repeat the study.

The present investigation would have produced a better test of the relative efficacy of RET had the length and intensity of therapists' training been increased by having them actually use RET in treatment before beginning the research project. In effect, the current research project may have compared the effects of RET administered by inexperienced therapists to the effects of usual group therapy administered by more experienced therapists. In this case, it is not surprising that RET fails to show superior results relative to the usual group therapy. The relative inexperience of the therapists in administering RET may have rendered the present investigation an unfair test of the superiority of RET over the usual group therapy.

A further methodological weakness needs to be remedied. No manipulations check was obtained in the present investigation to insure that RET was actually being conducted by the therapists. In future research, treatment sessions should be recorded so that individuals trained in RET can rate therapy sessions to provide independent
assessment as to whether the proper therapy is actually occurring and whether the therapy that does occur is in compliance with treatment manuals. It would also be useful to rate tapes of the comparison treatment sessions to insure that therapists do not contaminate comparison treatments by the inadvertent use of RET components during the course of therapy. In this way, treatments can be more clearly differentiated and outcome results more valid with respect to attributions concerning the effects of specific therapies.

Another implication of the present study is the need to assess the effects of sobriety and hospital milieu on the response of subjects on outcome measures. To assess this, adequate control groups must be developed for outcome alcohol research in an inpatient setting. The usual waiting-list controls are likely to prove inadequate. It is a common observation in the present treatment setting that waiting-list alcoholics often report continued alcoholic consumption while waiting for admission. The continued consumption of alcohol by waiting-list subjects would seriously confound their responses on the measures used in this study and would render their usefulness as a sober alcoholic control group in the interpretation of treatment results highly problematical.

One potential alternative to the present design would be the development of partial treatment comparison groups.
In inpatient facilities like that at the American Lake VA, subjects could be admitted to treatment and then randomly assigned to one of three conditions. One group would be assigned to milieu-educational treatment only and would not receive intensive group therapy. The other two sets of subjects would be randomly assigned to the different types of therapy and would receive the usual milieu and educational aspects of treatment. This would control for the effects of time abstinent from alcohol and provide a useful comparison group for determining the effectiveness of group therapies relative to the effects of simply attending classes and receiving staff attention and support. The design of the present study does not allow for making causal attributions as to the effectiveness of group therapy despite the observed pre-post improvement. The observed improvement may have been due to the beneficial effects of sobriety or to the treatment milieu alone or to a combination of these two factors.

A final implication relates to the usefulness of the measurement of new learning dysfunction in the present study: the Cognitive Impairment Index. Using the work of Butters and Cermak (1980) as a point of departure, it was reasoned that the chronic alcoholic subjects in the present study would likely suffer from different levels of deficit in learning new material. Since therapy procedures
emphasize learning new skills, it was thought that those subjects who are more impaired would learn and respond less to treatment than their less cognitively impaired peers. The results, however, show that for the most part there is no relationship between levels of cognitive impairment and responses to the psychometric measures of this study.

The lack of a significant relationship, however, does not necessarily mean that cognitive impairment does not suppress response to therapy in the present study. It may mean that the outcome measures used in this study are inappropriate for demonstrating the hypothesized relationship. The outcome measures tap psychological subject variables that may not respond directly to the acquisition of new skills and concepts. Rather, a more direct measure of the effect of cognitive impairment would have involved measuring the content of subjects' learning relative to the content emphasized during therapy. On these kind of measures, a negative relationship between cognitive impairment and response to therapy would more likely emerge. Future therapy outcome research on the psychological functioning of chronic alcoholics should treat cognitive impairment as a mediating variable between skill acquisition or conceptual learning and response to treatment.
Appendix A

Fear of Negative Evaluation

This instrument is composed of items regarding your feelings about various situations. After each question, there is a "true" or "false."

Try to decide whether "true" or "false" most represents your typical feelings associated with each Item. If the item tends to be about you, then circle "true"; if the item tends to be more false about you, then circle "false."

Your answers are confidential. Work quickly. Don't spend much time on any one question. We want your first impression on this questionnaire. Now go ahead, work quickly, and remember to answer every question.

1. I rarely worry about seeming foolish to others. T F
2. I worry about what people will think of me even when I know it doesn't make any difference. T F
3. I become tense and jittery if I know someone is sizing me up. T F
4. I am unconcerned even if I know people are forming an unfavorable impression of me. T F
5. I feel very upset when I commit some social error. T F
6. The opinions that important people have of me cause me little concern. T F
7. I am often afraid that I may look ridiculous or make a fool of myself. T F
8. I react very little when other people disapprove of me. T F
9. I am frequently afraid of other people noticing my shortcomings. T F
10. The disapproval of others would have little effect on me. T F
11. If someone is evaluating me I tend to expect the worst. T F
12. I rarely worry about what kind of impression I am making on someone. T F
13. I am afraid that others will not approve of me. T F
14. I am afraid that people will find fault with me. T F
15. Other people's opinions of me do not bother me. T F
16. I am not necessarily upset if I do not please someone. T F
17. When I am talking to someone, I worry about what they might be thinking about me. T F
18. I feel that you can't help making social errors sometimes, so why worry about it. T F
19. I am usually worried about what kind of impression I make.  T  F
20. I worry a lot about what my superiors think of me.  T  F
21. If I know someone is judging me, it has little effect on me.  T  F
22. I worry that others will think I am not worthwhile.  T  F
23. I worry very little about what others may think of me.  T  F
24. Sometimes I think I am too concerned with what others think of me.  T  F
25. I often worry that I will say or do the wrong things.  T  F
26. I am often indifferent to the opinions others have of me.  T  F
27. I am usually confident that others will have a favorable impression of me.  T  F
28. I often worry that people who are important to me won't think very much of me.  T  F
29. I brood about the opinions my friends have about me.  T  F
30. I become tense and jittery if I know I am being judged by my superiors.  T  F
Appendix B

Social Avoidance and Distress

This instrument is composed of items regarding your feelings about various situations. After each question, there is a "true" or "false."

Try to decide whether "true" or "false" most represents your typical feelings associated with each item. If the item tends to be about you, then circle "true"; if the item tends to be more false about you, then circle "false."

Your answers are confidential. Work quickly. Don't spend much time on any one question. We want your first impression on this questionnaire. Now go ahead, work quickly, and remember to answer every question.

1. I feel relaxed even in unfamiliar social situations. T F
2. I try to avoid situations which force me to be very sociable. T F
3. It is easy for me to relax when I am with strangers. T F
4. I have no particular desire to avoid people. T F
5. I often find social occasions upsetting. T F
6. I usually feel calm and comfortable at social occasions. T F
7. I am usually at ease when talking to someone of the opposite sex. T F
8. I try to avoid talking to people unless I know them well. T F
9. If the chance comes to meet new people, I often take it. T F
10. I often feel nervous or tense in casual get-togethers in which both sexes are present. T F
11. I am usually nervous with people unless I know them well. T F
12. I usually feel relaxed when I am with a group of people. T F
13. I often want to get away from people. T F
14. I usually feel uncomfortable when I am in a group of people I don't know. T F
15. I usually feel relaxed when I meet someone for the first time. T F
16. Being introduced to people makes me tense and nervous. T F
17. Even though a room is full of strangers, I may enter it anyway. T F
18. I would avoid walking up and joining a large group of people. T F
19. When my superiors want to talk to me, I talk willingly. T F
20. I often feel on edge when I am with a group of people. T F
21. I tend to withdraw from people. T F
22. I don't mind talking to people at parties or social gatherings. T F
23. I am seldom at ease in a large group of people. T F
24. I often think up excuses in order to avoid social engagements. T F
25. I sometimes take the responsibility for introducing people to each other. T F
26. I try to avoid formal social occasions. T F
27. I usually go to whatever social engagements I have. T F
28. I find it easy to relax with other people. T F
Appendix C

TENNESSEE SELF CONCEPT SCALE*

by

William H. Fitts, Ph.D.

Instructions

On the top line of the separate answer sheet, fill in your name and the other information except for the time information in the last three boxes. You will fill these boxes in later. Write only on the answer sheet. Do not put any marks in this booklet.

The statements in this booklet are to help you describe yourself as you see yourself. Please respond to them as if you were describing yourself to yourself. Do not omit any item. Read each statement carefully; then select one of the five responses listed below. On your answer sheet, put a circle around the response you chose. If you want to change an answer after you have circled it, do not erase it but put an X mark through the response and then circle the response you want.

When you are ready to start, find the box on your answer sheet marked time started and record the time. When you are finished, record the time finished in the box on your answer sheet marked time finished.

As you start, be sure that your answer sheet and this booklet are lined up evenly so that the item numbers match each other.

Remember, put a circle around the response number you have chosen for each statement.

Responses: Completely Mostly Partly false Mostly Completely false and true partly true

1 2 3 4 5

*Used by permission
Appendix C—Continued

1. I have a healthy body.  
3. I am an attractive person.  
5. I consider myself a sloppy person.  
19. I am a decent sort of person.  
21. I am an honest person.  
23. I am a bad person.  
37. I am a cheerful person.  
39. I am a calm and easy-going person.  
41. I am a nobody.  
55. I have a family that would always help me in any kind of trouble.  
57. I am a member of a happy family.  
59. My friends have no confidence in me.  
73. I am a friendly person.  
75. I am popular with men.  
77. I am not interested in what other people do.  
91. I do not always tell the truth.  
93. I get angry sometimes.  
2. I like to look nice and neat all the time.  
4. I am full of aches and pains.  
6. I am a sick person.  
20. I am a religious person.  
22. I am a moral failure.  
24. I am a morally weak person.  
38. I have a lot of self-control.
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>I am a hateful person.</td>
</tr>
<tr>
<td>42</td>
<td>I am losing my mind.</td>
</tr>
<tr>
<td>56</td>
<td>I am an important person to my friends and family.</td>
</tr>
<tr>
<td>58</td>
<td>I am not loved by my family.</td>
</tr>
<tr>
<td>60</td>
<td>I feel that my family doesn't trust me.</td>
</tr>
<tr>
<td>74</td>
<td>I am popular with women.</td>
</tr>
<tr>
<td>76</td>
<td>I am mad at the whole world.</td>
</tr>
<tr>
<td>78</td>
<td>I am hard to be friendly with.</td>
</tr>
<tr>
<td>92</td>
<td>Once in a while I think of things too bad to talk about.</td>
</tr>
<tr>
<td>94</td>
<td>Sometimes, when I am not feeling well, I am cross.</td>
</tr>
<tr>
<td>7</td>
<td>I am neither too fat nor too thin.</td>
</tr>
<tr>
<td>9</td>
<td>I like my looks just the way they are.</td>
</tr>
<tr>
<td>11</td>
<td>I would like to change some parts of my body.</td>
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<tr>
<td>25</td>
<td>I am satisfied with my moral behavior.</td>
</tr>
<tr>
<td>27</td>
<td>I am satisfied with my relationship to God.</td>
</tr>
<tr>
<td>29</td>
<td>I ought to go to church more.</td>
</tr>
<tr>
<td>43</td>
<td>I am satisfied to be just what I am.</td>
</tr>
<tr>
<td>45</td>
<td>I am just as nice as I should be.</td>
</tr>
<tr>
<td>47</td>
<td>I despise myself.</td>
</tr>
<tr>
<td>61</td>
<td>I am satisfied with my family relationships.</td>
</tr>
<tr>
<td>63</td>
<td>I understand my family as well as I should.</td>
</tr>
<tr>
<td>65</td>
<td>I should trust my family more.</td>
</tr>
<tr>
<td>79</td>
<td>I am as sociable as I want to be.</td>
</tr>
<tr>
<td>81</td>
<td>I try to please others, but I don't overdo it.</td>
</tr>
</tbody>
</table>
83. I am no good at all from a social standpoint.
95. I do not like everyone I know.
97. Once in a while, I laugh at a dirty joke.
  8. I am neither too tall nor too short.
10. I don't feel as well as I should.
12. I should have more sex appeal.
26. I am as religious as I want to be.
28. I wish I could be more trustworthy.
30. I shouldn't tell so many lies.
44. I am as smart as I want to be.
46. I am not the person I would like to be.
48. I wish I didn't give up as easily as I do.
62. I treat my parents as well as I should (Use past tense if parents are not living).
64. I am too sensitive to things my family say.
66. I should love my family more.
80. I am satisfied with the way I treat other people.
82. I should be more polite to others.
84. I ought to get along better with other people.
96. I gossip a little at times.
98. At times I feel like swearing.
13. I take good care of myself physically.
15. I try to be careful about my appearance.
17. I often act like I am "all thumbs."
31. I am true to my religion in my everyday life.
33. I try to change when I know I'm doing things that are wrong.  
35. I sometimes do very bad things.  
49. I can always take care of myself in any situation.  
51. I take the blame for things without getting mad.  
53. I do things without thinking about them first.  
67. I try to play fair with my friends and family.  
69. I take a real interest in my family.  
71. I give in to my parents. (Use past tense if parents are not living).  
85. I try to understand the other fellow's point of view.  
87. I get along well with other people.  
89. I do not forgive others easily.  
99. I would rather win than lose in a game.  
14. I feel good most of the time.  
16. I do poorly in sports and games.  
18. I am a poor sleeper.  
32. I do what is right most of the time.  
34. I sometimes use unfair means to get ahead.  
36. I have trouble doing the things that are right.  
50. I solve my problems quite easily.  
52. I change my mind a lot.  
54. I try to run away from my problems.  
68. I do my share of work at home.  
70. I quarrel with my family.
Appendix C—Continued

72. I do not act like my family thinks I should. 72
86. I see good points in all the people I meet. 86
88. I do not feel at ease with other people. 88
90. I find it hard to talk with strangers. 90
100. Once in a while I put off until tomorrow what I ought to do today. 100
Appendix D

Beck Inventory*

Name _____________________________ Date ______________

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY. Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1 0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can't snap out of it.
   3 I am so sad or unhappy that I can't stand it.

2 0 I am not particularly discouraged about the future.
   1 I feel discouraged about the future.
   2 I feel I have nothing to look forward to.
   3 I feel that the future is hopeless and that things cannot improve.

3 0 I do not feel like a failure.
   1 I feel I have failed more than the average person.
   2 As I look back on my life, all I can see is a lot of failure.
   3 I feel I am a complete failure as a person.

4 0 I get as much satisfaction out of things as I used to.
   1 I don't enjoy things the way I used to.
   2 I don't get real satisfaction out of anything anymore.
   3 I am dissatisfied or bored with everything.

5 0 I don't feel particularly guilty.
   1 I feel guilty a good part of the time.
   2 I feel quite guilty most of the time.
   3 I feel guilty all of the time.

6 0 I don't feel I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.

7 0 I don't feel disappointed in myself.
   1 I am disappointed in myself.
   2 I am disgusted with myself.
   3 I hate myself.

*Used by permission
8 0 I don't feel I am any worse than anybody else.
  1 I am critical of myself for my weaknesses or mistakes.
  2 I blame myself all the time for my faults.
  3 I blame myself for everything bad that happens.

9 0 I don't have any thoughts of killing myself.
  1 I have thoughts of killing myself, but I would not carry them out.
  2 I would like to kill myself.
  3 I would kill myself if I had the chance.

10 0 I don't cry anymore than usual.
   1 I cry more now than I used to.
   2 I cry all the time now.
   3 I used to be able to cry, but now I can't cry even though I want to.

11 0 I am no more irritated now than I ever am.
   1 I get annoyed or irritated more easily than I used to.
   2 I feel irritated all the time now.
   3 I don't get irritated at all by the things that used to irritate me.

12 0 I have not lost interest in other people.
   1 I am less interested in other people than I used to be.
   2 I have lost most of my interest in other people.
   3 I have lost all of my interest in other people.

13 0 I make decisions about as well as I ever could.
   1 I put off making decisions more than I used to.
   2 I have greater difficulty in making decisions than before.
   3 I can't make decisions at all anymore.

14 0 I don't feel I look any worse than I used to.
   1 I am worried that I am looking old or unattractive.
   2 I feel that there are permanent changes in my appearance that make me look unattractive.
   3 I believe that I look ugly.

15 0 I can work about as well as before.
   1 It takes an extra effort to get started at doing something.
   2 I have to push myself very hard to do anything.
   3 I can't do any work at all.
Appendix D—Continued

16  0 I can sleep as well as usual.
    1 I don't sleep as well as I used to.
    2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
    3 I wake up several hours earlier than I used to and cannot get back to sleep.

17  0 I don't get more tired than usual
    1 I get tired more easily than I used to.
    2 I get tired from doing almost anything.
    3 I am too tired to do anything.

18  0 My appetite is no worse than usual.
    1 My appetite is not as good as it used to be.
    2 My appetite is much worse now.
    3 I have no appetite at all anymore.

19  0 I haven't lost much weight, if any lately.
    1 I have lost more than 5 pounds.
    2 I have lost more than 10 pounds.
    3 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less.
Yes _____  No _____

20  0 I am no more worried about my health than usual.
    1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
    2 I am very worried about physical problems and it's hard to think of much else.
    3 I am so worried about my physical problems, that I cannot think about much else.

21  0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.
Appendix E

Credibility Check

Please complete the following questions by circling the point on the scale that corresponds to your answer.

1. How logical does this treatment plan seem to you?

<table>
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<tr>
<th>1</th>
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<th>8</th>
<th>9</th>
<th>10</th>
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<tbody>
<tr>
<td>completely illogical</td>
<td>completely logical</td>
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2. How confident would you be that this treatment plan would be successful in helping you overcome your alcohol problems?

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3. How confident would you be in recommending this treatment plan to a friend who had problems with alcohol?

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4. How willing are you to undergo the treatment you have just read?

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5. How successful do you feel this type of treatment would be in helping you with emotional problems; for example, anger, loneliness, or depression?

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Appendix F

Irrational Beliefs Test

INSTRUCTIONS: This is an inventory of the way you believe and feel about various things. There are a number of statements with which you will tend to agree or disagree. You will be given an answer sheet with spaces to mark one of five possible answers to each item. For each statement, you should mark your answer sheet as follows, according to your own reaction to the item:

Circle a if you STRONGLY DISAGREE
Circle b if you MODERATELY DISAGREE
Circle c if you NEITHER AGREE NOR DISAGREE
Circle d if you MODERATELY AGREE
Circle e if you STRONGLY AGREE

It is not necessary to think over any item very long. Mark your answer quickly and go on to the next statement.

Be sure to mark how you actually feel about the statement, not how you think you should feel.

Try to avoid the neutral or "c" response as much as possible. Select this answer only if you really cannot decide whether you tend to agree or disagree with a statement.
1. It is important to me that others approve of me.
   a b c d e
2. I hate to fail at anything. a b c d e
3. People who do wrong deserve what they get. a b c d e
4. I usually accept what happens philosophically. a b c d e
5. If a person wants to, he can be happy under almost any circumstance. a b c d e
6. I have a fear of some things that often bothers me. a b c d e
7. I usually put off important decisions. a b c d e
8. Everyone needs someone he can depend on for help and advice. a b c d e
9. "A zebra cannot change his stripes." a b c d e
10. There is a right way to do everything. a b c d e
11. I like the respect of others, but I don't have to have it. a b c d e
12. I avoid things I cannot do well. a b c d e
13. Too many evil persons escape the punishment they deserve. a b c d e
14. Frustrations don't upset me. a b c d e
15. People are disturbed not by situations but by the view they take of them. a b c d e
16. I feel little anxiety over unexpected dangers or future events. a b c d e
17. I try to go ahead and get irksome tasks behind me when they come up. a b c d e
18. I try to consult an authority on important decisions.
   a b c d e
19. It is almost impossible to overcome the influence of
   the past. a b c d e
20. There is no perfect solution to anything. a b c d e
21. I want everyone to like me. a b c d e
22. I don't mind competing in activities where others are
   better than I. a b c d e
23. Those who do wrong deserve to be blamed. a b c d e
24. Things should be different from the way they are.
   a b c d e
25. I cause my own moods. a b c d e
26. I often can't get my mind off some concern. a b c d e
27. I avoid facing my problems. a b c d e
28. People need a source of strength outside themselves.
   a b c d e
29. Just because something once strongly affects your life
   doesn't mean it need do so in the future. a b c d e
30. There is seldom an easy way out of life's difficulties.
   a b c d e
31. I can like myself even when many others don't. a b c d e
32. I like to succeed at something but I don't feel I have
   to. a b c d e
33. Immorality should be strongly punished. a b c d e
34. I often get disturbed over situations I don't like.
   a b c d e
35. People who are miserable have usually made themselves that way. a b c d e
36. If I can't keep something from happening, I don't worry about it. a b c d e
37. I usually make decisions as promptly as I can. a b c d e
38. There are certain people that I depend on greatly. a b c d e
39. People overvalue the influence of the past. a b c d e
40. Some problems will always be with us. a b c d e
41. If others dislike me, that's their problem, not mine. a b c d e
42. It is highly important to me to be successful in everything I do. a b c d e
43. I seldom blame people for their wrongdoings. a b c d e
44. I usually accept things the way they are, even if I don't like them. a b c d e
45. A person won't stay angry or blue long unless he keeps himself that way. a b c d e
46. I can't stand to take chances. a b c d e
47. Life is too short to spend it doing unpleasant things. a b c d e
48. I like to stand on my own two feet. a b c d e
49. If I had had different experiences I could be more like I want to be. a b c d e
50. Every problem has a correct solution. a b c d e
51. I find it hard to go against what others think. a b c d e
52. I enjoy activities for their own sake, no matter how good I am at them. a b c d e
53. The fear of punishment helps people be good. a b c d e
54. If things annoy me, I just ignore them. a b c d e
55. The more problems a person has, the less happy he will be. a b c d e
56. I am seldom anxious over the future. a b c d e
57. I seldom put things off. a b c d e
58. I am the only one who can really understand and face my problems. a b c d e
59. I seldom think of past experiences as affecting me now. a b c d e
60. We live in a world of chance and probability. a b c d e
61. Although I like approval, it's not a real need for me. a b c d e
62. It bothers me when others are better than I am at something. a b c d e
63. Everyone is basically good. a b c d e
64. I do what I can to get what I want and then don't worry about it. a b c d e
65. Nothing is upsetting in itself--only in the way you interpret it. a b c d e
66. I worry a lot about certain things in the future. a b c d e
67. It is difficult for me to do unpleasant chores. a b c d e
68. I dislike for others to make my decisions for me.  
   a b c d e
69. We are slaves to our personal histories.  a b c d e
70. There is seldom an ideal solution to anything.  a b c d e
71. I often worry about how much people approve of and  
   accept me.  a b c d e
72. It upsets me to make mistakes.  a b c d e
73. It's unfair that "the rain falls on both the just and  
   the unjust."  a b c d e
74. I am fairly easygoing about life.  a b c d e
75. More people should face up to the unpleasantness of  
   life.  a b c d e
76. Sometimes I can't get a fear off my mind.  a b c d e
77. A life of ease is seldom very rewarding.  a b c d e
78. I find it easy to seek advice.  a b c d e
79. Once something strongly affects your life, it always  
   will.  a b c d e
80. It is better to look for a practical solution than  
   a perfect one.  a b c d e
81. I have considerable concern with what people are  
   feeling about me.  a b c d e
82. I often become quite annoyed over little things.  
   a b c d e
83. I usually give someone who has wronged me a second  
   chance.  a b c d e
84. I dislike responsibility.  a b c d e
85. There is never any reason to remain sorrowful for very long. a b c d e
86. I hardly ever think of such things as death or atomic war. a b c d e
87. People are happiest when they have challenges and problems to overcome. a b c d e
88. I dislike having to depend on others. a b c d e
89. People never change basically. a b c d e
90. I feel I must handle things in the right way. a b c d e
91. It is annoying but not upsetting to be criticized. a b c d e
92. I'm not afraid to do things which I cannot do well. a b c d e
93. No one is evil, even though his deed may be. a b c d e
94. I seldom become upset over the mistakes of others. a b c d e
95. Man makes his own hell within himself. a b c d e
96. I often find myself planning what I would do in different dangerous situations. a b c d e
97. If something is necessary, I do it even if it is unpleasant. a b c d d
98. I've learned not to expect someone else to be very concerned about my welfare. a b c d e
99. I don't look upon the past with any regrets. a b c d e
100. There is no such thing as an ideal set of circumstances. a b c d e
Appendix G

Rational Emotive Therapy
Alcohol/Drug Treatment Manual

Session 1: 90 minutes

1. Personal introduction of therapist and group members. (10 min.)

2. Hand out the description of treatment and the Credibility Check. Explain to group members what they are to do. Answer any questions they have by referring to the explanation. (25-30 min.)

3. Collect the drinking behavior questionnaires. If any have not completed theirs, find out if there are any problems or questions about filling it out. Answer any questions and reassign it as homework for those who have not finished it. (10 min.)

4. Take history of drug/alcohol abuse problems. Identify some goals of treatment. (40 min.)

5. Assign homework: autobiography. (5 min.)
Session 1

1. Personal introduction of therapist and group members.

The purpose of this part is simply to break the ice. You can either have group members introduce themselves and tell something about themselves (such as where born, where live, who they are and vocation), or you can have them play some kind of introductory game. The point is simply to break the ice.

2. Credibility check and treatment description.

The purpose of this part is to distribute the treatment description and have the residents rate the credibility of treatment. Paraphrase the following explanation.

As you know, we are currently engaged in an evaluation of our program here at the Alcohol/Drug Treatment Center. Before you is a description of treatment you will receive as part of group therapy. What I would like you to do now is to read carefully the description of treatment. I will be glad to answer any questions about treatment you have, although the description you will read is self-explanatory. After you have read the treatment description, fill out the brief questionnaire attached to the back of the description. I will not be reviewing how you answer these questions, so put down your real feelings with regard to what the questions ask.

Although I will try to answer any questions you have regarding the treatment description, I don't want to get into justifying the treatment or explaining more than what's written. But if something is not clear, I will try to clarify it for you. Take your time. After everyone has finished, we will continue with today's group session.

3. Collect the drinking behavior questionnaires.

The purpose of this part is to gather the drinking behavior questionnaires. If any resident has had problems with filling it out, inquire as to what the problems were and attempt to help them in group. Do not spend more than 10 minutes on this, however. If any one has special difficulty, work with him later in a special appointment.

Appendix G—Continued

The purpose of this part is to establish rapport among group members and yourself, help describe group members, and further your understanding and build motivation. Have each member describe his alcohol/drug abuse, problems associated with it. Guide them in answering these basic questions:

1. How long has each member been using alcohol/drugs?

2. How alcohol/drug abuse has interfered with their current functioning and life plans, such as job and marital or relationship problems. Have them describe some of these problems with some specificity, such as feelings about their problems.

3. What other personal or emotional problems give them trouble other than alcohol abuse. What do they think leads them to drink. That is, do they drink when depressed, anxious, angry; to have a good time; to avoid trouble or console themselves; or drink because of addiction or craving?

4. Have they attempted to quit in the past? What happened to that attempt? What were the reasons they give for going back to drinking? Have them identify those reasons with some specificity so that you can get a pretty good idea of the problems they are likely to face once they graduate. Find out if they have had treatment before, and if so, what were the problems they encountered such as problems with the treatment facility, their own attitudes, or some combination.

5. What do they want to change in their lives? This is some attempt to set goals for treatment and life after treatment. That is, what will they want to be different about themselves after treatment—different from before treatment. Some may talk about getting jobs, marriage, relationship improvements. These are good goals, but probe for personal goals—that is, how will they want to be different themselves as a result of therapy; personal changes in their attitudes, feelings, emotions, behavior?

5. Assign homework to write an autobiography. Autobiography is to include where they've been, where they are currently, and what they want to do with themselves and their lives after treatment.
Session 2

1. Inquiry regarding the effect of the first session. Take up homework and discuss the effects of doing homework (15 min.).

2. Review some of the problems people brought up in the first session. Review their thoughts regarding these problems and any new ones they may have come up with (20 min.).

3. Explain RET to residents. Include residents in the explanation and analyze some of the problems they have brought up in the first session as part of your presentation. Involve residents in discussion. Explain rational self-analysis as homework and the rationale for homework to help them become their own therapist after graduation (50 min.).

4. Assign homework to write out three situations where they have become upset and drank in the past. Be ready to discuss at least one of them for the next session (5 min.).
Session 2

1. Inquiry regarding the effect of the first session. Take up homework and discuss the effects of doing homework.

The purpose of this part is to build continuity between sessions and to probe for how residents have reacted to the first session: their thoughts and feelings. Also, inquire as to how the residents reacted emotionally to the homework assignment, the autobiography. Do not take simple shrugs at face value. Ask about what kind of thoughts they had about their homework--whether they took it seriously for example.

If any did not do their homework, inquire as to their feelings about it. Do not ask why questions, as this tends to pull for defensive justification. Rather, begin by informing them that homework is considered an integral part of treatment; it is designed very carefully to provide all residents with an opportunity to learn and reflect upon themselves. Usually, the residents' response to your inquiry about their feelings regarding the homework assignment can be classified under the heading of a "bothersome thing--or even a fearful thing," which you can reframe for them. Such a reframing may be something like this: "Well, you certainly can feel that homework is a bothersome thing, but that is not the only thing you can feel about your homework assignment. For instance, you can see homework as an opportunity for you to reflect calmly on your life and to begin thinking about how you wish to change it." After this reframing, you can ask the residents: "What prevented you from seeing homework as an opportunity for you?"

Listen to the residents' answer. Try to read between the lines for signs of fear of failure; that is, listen for the unspoken (or perhaps spoken) belief that homework has to be done right or perfect or it's no good (meaning "I'm no good"). If you believe this is operating (and it's a good bet it is), then you can offer your first rational disputation. Inform the residents that group therapy is a place where everyone has permission to fail, and to learn from failure. Homework is a problem to be solved, and there are no right or wrong ways to solve most of life's problems. Rather, homework is an opportunity for learning. It is like learning to ride a bicycle. No one rides a bicycle perfectly at the first try, but with practice, one gets better and better at it. Homework is the same way. Stress that you are certainly not judging them by the quality of their homework. If the homework is not good enough, you are
there to assist them. Stress your role as therapist: you are there to form an alliance against their problems. If doing homework is a problem, then you and the resident can make it into an opportunity for growth and learning.

Even if everyone did their homework, the above rationale for doing homework in the future is a good one to bring up anyway. But its timing has the most powerful impact when someone has failed to do homework.

2. Review some of the problems people brought up the first session. Review their thoughts regarding these problems and any new ones they may have come up with.

The purpose of this part is to build continuity with the first session and to probe for any reactions to the self-disclosures of the first session. The purpose is also to deepen the level of self-disclosure by having them reveal their thoughts and feelings about their problems, as well as any new disclosures they wish to make. This also allows you to focus therapy on life events in preparation for the following part 3.

3. Explain RET to residents. Include residents in the explanation and analyze some of the problems they have brought up in the first session as part of your presentation. Involve residents in discussion. Explain rational self-analysis as homework and the rationale for homework (see part 1 above) to help them become their own therapist after graduation.

The purpose of this part is to give the residents a thorough introduction to the rationale of RET, the ABC paradigm, and to make sure they understand the rationale. Handouts for this part include (a) the 10 irrational beliefs, (b) the four criteria for rational thinking, and (c) the RSA homework sheets.

In addition to the RET rationale, paraphrase the following material. You may wish to include other examples, especially since you have some material from the residents themselves.

Most people wrongly believe that they become anxious or upset by things that happen to them. Actually, this is not so. People become emotionally upset, depressed, or engage in self-defeating behavior according to what they believe about external events. For example, suppose you were to be offered a drink. You had just had a bad day and were feeling pretty frustrated. Now, like in the ABC paradigm,
Session 2

you were to think something like this at "B": (a) Wheew, I really feel the need for a drink, (b) I know I shouldn't have one, but I probably will anyway (c) if I do, that means I'll muck things up for myself pretty badly, (d) but what the heck, I've already mucked my life up pretty badly, (e) my whole life is pretty much of a waste, (f) that's awful, (g) I'll never be any good; nothing will ever change with me; I'll always be a worthless slob whom no one will ever want, (h) nobody else cares anyway, so why should I?

Now, if you were to think something like this in sequence of thoughts, what are you likely to experience at point C? Extreme inadequacy, anxiety, depression. And what are you likely to do, drink or not drink? You will probably drink, which would likely confirm that you are as worthless as you have told yourself that you are.

We cannot always control what happens to us, whether we have good or bad days, whether people accept or reject us. Sometimes, no matter how good we try to be, things turn out badly. However, what we can control is what we tell ourselves, what we think about what happens to us, or what we do. What we think determines how we feel and act. If we change the way we think—really change and practice new ways of thinking or talking to ourselves—then we will change the way we feel and inevitably, the way we act.

Let’s change the sequence of thoughts above to something like this and notice the changes that are likely to occur in feelings and behavior. The day has been bad for you and you are feeling very frustrated, but now suppose you thought something like this: (a) Wheew, I really want a drink, (b) but I know what would happen if I started drinking again, I would muck things up even worse for myself, (c) even though things are pretty bad right now, they are not that bad, and I can take frustration and disappointment, (d) no reason to make things even worse for myself, (e) besides, everyone mucks things up once in a while. Just because I make mistakes does not mean I'm a worthless slob, it just means I make mistakes, so big deal. (f) I can learn from my mistakes; that way, I won't have to repeat them, (g) and that bull about nobody caring is just wrong: I care for one, (h) so now, let me see, what can I do to make things better for tomorrow?

Now, if you were to think something like this, how would you likely feel? Better than before: perhaps a little
disappointed, maybe a little sad, and maybe still a little frustrated. These are slightly unpleasant emotions for many people (although they do not have to be unpleasant), but they are much more easily handled than anxiety, depression, and extreme inadequacy. Furthermore, if you think the different way, what are you likely to do, drink or not drink? You are more likely not to drink, but instead to do some good thinking about how you can improve things for yourself. Instead of mulling around in your own misery, you are much more likely to be happy and satisfied with yourself for not drinking and for doing some productive work.
Session 3

1. RMS visit (15 min.).

2. Clear up misconceptions about treatment and session 2. Inquire regarding the effects of Session 2 (15 min.).

3. Homework: have residents read aloud their three situations, choose one they feel is important to focus on for the next session or two. Choose one (or more if time permits) to be in the "hot seat": clarify the A section by getting it specified and separating facts from beliefs and consequences. Engage in Socratic Dialogue regarding identifying irrational beliefs, showing residents why they are irrational, and disputing them (50 min.).

4. Debrief the Socratic Dialogue of part 3 above. Assign homework (15 min.).

5. Clear up misconceptions (5 min.).
Session 3

1. RMS visit.

2. Clear up misconceptions about treatment and Session 2. Inquire regarding the effect of Session 2.

The purpose of this part is to build continuity between sessions, probe for how residents have reacted to the second session, clear up misconceptions, and stress the role of beliefs and thoughts (self-talk) in the experience of the emotions in self-defeating behavior. Use examples culled from the training manuals to help you if needed.

3. Homework: have residents read their three situations, and choose one they feel is important to focus on for the next session or two. Help one or two residents clarify A section, identify beliefs and consequences. Then place the chosen resident in the "hot seat" and begin The Socratic disputation of his irrational beliefs.

The purpose of this part is to help residents understand and more effectively use RSA homework, to begin working therapeutically on an important set of irrational beliefs, to show residents how disputation of irrational beliefs works, and to illustrate how they can come up with their own disuations and alternative rational beliefs and emotions.

In working with the resident in the "hot seat," identify and work on the obvious irrational beliefs first. An example of this is a statement like "It (he, she, they) made me angry (upset, depressed, resentful, frustrated)," with the disputation that each of us make ourselves upset. Use the techniques in the training manual. The point is to be relentless on these points in order to drive home the reorientation to rational thinking. Listen for the "shoulds," "musts," "ought," or "have to's." Show how such thinking necessarily leads to upsets. Be especially attentive to the language of addiction discussed during training, such as "I need a drink" (or anything else that is not a survival issue). The point of this is to drive home to the residents that the way they say things reveals fundamental, irrational belief systems that will continue to cause them trouble if left uncriticized by their reason.

To help you with identifying beliefs of residents who have trouble, use Imaginative Exercise #1. You may wish to have all the residents in the group participate—not just the one in the hot seat.
Instruct residents to get comfortable and relax. Have residents focus on a pleasant image or use any other way they have of relaxing. Have residents signal when they are relaxed by raising one of their fingers. (If they don't, simply accept that behavior by saying that the residents do not have to feel relaxed if they do not want to.)

Then, have the residents close their eyes (if open) and recall or visualize as vividly as possible the scene they have described in A. Have them recall as vividly as possible the actual feelings they felt in that situation. You can help them by reading or describing the A section for them. Have them signal by raising one finger when they have recalled as vividly as they can the situation and their feelings. Instruct them to take special notice of thoughts they may be having now about the situation, to take special notice of thoughts they remember having, and the feelings that go along with them. Ask "what are you worried about? When do these feelings occur? What are you feeling? When do these feelings occur? What are you thinking or imagining? When do these thoughts occur?" Tell them to pay attention to the most disturbing thoughts and feelings.

After a few moments of this, return them to the present and note the thoughts they've had. A variation of this technique is to have them describe their feelings and thoughts as they reexperience the scene in A. Once you have done this, you are in a position to help them separate thoughts from feelings and dispute the irrational thoughts. To help you in the disputation, use the four criteria of rational thinking. If possible, in this session, your goal is to begin constructing an E section with the resident.


The purpose of this part is to get feedback from residents about their responses to the disputation and clear up any misconceptions. As part of the debrief, assign homework.

Homework: residents are to take the A section they have chosen and clarify it, identify the consequences and the beliefs (thoughts or self-talk), identify the irrational and rational beliefs, and write out a disputation of the irrational beliefs. The homework will be discussed during the next session.

5. Clear up misconceptions.
Session 4

1. Clear up misconceptions about Session 3 (5 min.).

2. Review homework assignments by having residents read their A-B-C and D sections. Make this a group process, but assume the lead in disputation. Initiate further instruction in identifying irrational beliefs and in disputing them if necessary. Use imaginative exercise or role playing if called for. Explain how irrational thoughts distort reality (refer to training manuals) and cause emotional and behavioral problems (50 min.).

3. Explain the E section for homework. Choose one resident and help him set up an E section. Inquire if the rational beliefs feel right for him (20 min.).

4. Assign residents to do an E section homework on their RSA. Tell them that next session, you will teach them how they can experience new ways of thinking and feeling through imagery techniques, and that you will help them change the way they react to life events or to other people. However, to teach them the new technique, they must first have done a fairly good E section by next time (5 min.).

5. Clear up misconceptions about Session 4 (5 min.).
Session 4

1. Clear up misconceptions about Session 3.

The purpose of this part is simply to see if residents have any questions or confusions about what occurred in Session 3. If they have any questions about RET, tell them you will try to clear up problems when you go over their homework.

Keep discussion under 10 minutes, if possible.

If someone is having difficulty with therapy (i.e., there appears to be unacceptable levels of regression or decompensation), set up an appointment for the resident after therapy and consult with him.

2. Review homework assignments.

The purpose of this part is to engage the RET process more fully and to deepen residents' understanding of RET.

Have them read their homework aloud to the group. Have different group members comment on the homework in terms of the resident's success in separating beliefs from fact (A from B) and beliefs from feelings (B from C); in terms of the resident's success in identifying the irrational beliefs operating in the described A and C sections; in terms of the resident's success in setting up his D section; in terms of the way he broke down his irrational beliefs into disputable sentences; and perhaps most importantly, in terms of how successful his disputation was.

You may wish to have the resident comment on his success in the above terms first.

Be sure to guide comments from the group as you are still the leader at this point. You may need to help in disputation of the irrational beliefs at D. Use role playing and imagery techniques if called for.

3. Explain the E section for homework. Choose one resident and help him set up an E section as a demonstration. Be sure to inquire if the rational beliefs "feel" right for the resident.

The purpose of this part is to teach residents how to choose ideas from the D section disputation in order to practice thinking them and increase levels of rationality, as
well as prepare residents to begin training themselves for becoming their own therapist when they graduate from the program.

Explain to residents that many of the new, more rational thoughts or ways of feeling and acting come from their disputation of their irrational beliefs. The more thorough the disputation, the more likely they will have already identified better ways of thinking and feeling and acting that is right for them.

Choose one resident’s D section and use it to help the resident set up an E section. You may have to engage in more disputation. Often residents will have several irrational beliefs to choose from. Choose one as a demonstration and inquire as to what the resident would rather think—after first making sure he understands thoroughly why the thought is irrational and how it upsets him. After he chooses a thought he would rather think, write it down in the E section.

Then identify the emotion that would be connected with that thought. Write it down.

Then identify the behavior that would be associated with the thought and the emotion. Write it down.

Sometimes a resident may not be able to come up with a rational thought. To help him, you can change the above procedure somewhat:

Ask resident to identify the emotional consequences of the irrational thought. Make sure he wants to change it.

Have him identify how he would rather feel. For example, instead of depression or anger, perhaps only sadness or disappointment.

Now, have the resident identify what he would have to think in order to feel just sad rather than depressed or just disappointment rather than anger. That is, identify the rational belief that is most likely right for him.

4. Make homework assignment to do E section. Explain how E section will be used in future group sessions.

The purpose of this part is to have residents identify new ways of thinking, feeling, and acting in situations
that have caused them stress in the past (or present), and to give them a simple technique they can use to help themselves once they graduate. Tell residents the new techniques to be learned next time depend first upon their having identified their new thoughts and emotions.

5. Clear up misconceptions.
Session 5

1. Clear up misconceptions about Session 4 (5 min.).

2. Go over homework assignments. Clear up misconceptions (20 min.).

3. Pair off group members and have them refine, dispute, and analyze their A, B, C, D and E sections of the RSA. Have them pay particular attention to defining E section concerning the criteria for rationality of beliefs and defining closely what is right for them (30 min.).

4. Rational emotive imagery (30 min.)

5. Discuss REI. Clear up misconceptions. Refine E sections for those who have trouble. Give REI as homework (10 min.).
Session 5

1. Clear up misconceptions about Session 4.

The purpose of this part is simply to clear up any misconceptions about what is required or done in Session 4. If they have any questions about homework, go to part 2 below.

2. Go over homework assignments. Clear up misconceptions and point out areas of weakness (20 min.—about 5 min. per person).

The purpose of this section is to explore with all group members individually, skills in recognizing rational and irrational ideas and emotions and to lay groundwork for refining E section in the next part.

Have all members read section A and make sure they are happy with it. Make sure no opinions have slipped into the description of what happened. Use the camera check rule: the scene should be described as though through the lens of a camera (e.g., "I got upset," is reporting the event, but "That made me upset," is an opinion or belief).

For the B section, have residents read aloud the irrational and rational beliefs and help them make sure they know the difference between them; and can identify irrational and rational beliefs.

For C section: have residents point out which thoughts at B led to C.

For D section: have all residents read their disputation of the irrational thoughts at B. Ask if they are satisfied with the disputation. Point out where disputation could have been more thorough or deeper or more eloquent (see "Guide to Socratic Dialogue").

For E section: have residents read aloud and discuss the thoughts and feelings they would prefer to feel and think as opposed to what they thought and felt in the B and C sections. Stress the primary importance that thoughts and beliefs at E be rational and that emotions follow naturally from the thinking. Of secondary importance (but still crucial) after rationality has been established, is that the thinking is right for them; otherwise, they will be simply irrationally complying with you instead of working through their own belief systems.
Clarify the concept of cognitive-emotive dissonance. That is, old habits of thinking and feeling are like old shoes. They are comfortable because they have been worn for so long, but they are not good for your feet. Old irrational habits of thinking come automatically to residents, and so in a sense, "feel" right or familiar. New habits of rational thinking must become established, so that they will compete successfully and maybe come to replace old irrational habits eventually. Explain that it is natural at first to experience thinking rationally, but still feeling irrational emotions. This is cognitive-emotive dissonance. It happens to everyone and it will pass in time with practice of the newer rational habits of thinking.

(By the way, the above concept is a good way to dispute and reassure residents who complain of feeling "phoney" with their new rationality--and who report fearing the change.)

3. Pair off residents and have them refine their RSA, especially the E section, through Socratic Dialogue and discussion.

The purpose of this part is to give group members practice in disputing each other's irrational ideas and to refine E section.

During this time, pairs of residents will alternate with one playing therapist and the other playing client. They will switch roles after 10 minutes.

Pair up residents according to their level of understanding and acceptance of RET, one more advanced member with one who is less advanced, if possible. Odd resident can participate in a three-way interaction.

Have group members start off with the D section of the RSA and move quickly to section E. They are to collaborate with the "therapist" helping to dispute irrational beliefs and clarify and identify rational alternatives and emotions that follow. The aim of this collaborative effort is to bring the "client" member to an intellectual acceptance of the rational beliefs they have identified as alternatives and to make sure the rational beliefs at E "fit."

At the end of 10 minutes, announce it is time to switch roles. Give a 3-minute warning before the switch. As group therapist, go from pair to pair and help out as needed.
Appendix G—Continued

4. Rational Emotive Imagery (REI)

The purpose of this part is to teach REI as a tool for experiencing new rational-emotive habits.

Paraphrase the following instructions:

The purpose of REI is to help you gain emotional insight to compliment the intellectual insight you have been gaining in the RSA work and in therapy. This is actually the last phase of emotion re-education for the problem you have identified so far. REI will help you make your new feelings at E "feel right" for you, to make them as habitual as your old irrational habits. If you practice REI diligently enough, you can give yourself the same results as real life experience gives you, because REI is practicing the feeling-habits you want to learn. Soon you will be able to replace the irrational-emotive imagery you used to practice habitually with rational-emotive habits and be rid of the emotions that defeat you.

By practicing REI correctly, you gain several important advantages: (1) you correct past mistakes, (2) you practice handling old problem situations with much more rational skill and make fewer mistakes in the future, (3) your emotional re-education goes much faster, and (4) you begin to feel more rational self-confidence in your ability to cope with new life situations.

Instructional Sequence

1. Have group members reread their rational self-analysis, but only the A and E sections.
2. Now have them close their eyes, get comfortable, and relax.
3. Tell them to breathe in one continuous, slow motion. Take a deep breath, deeper, and then hold it. Do not release them for 10 seconds. Then tell them to let it all out and just relax. Tell them to say the word "relax" to themselves—to think it.
4. Tell them to force all the air out of their lungs. Hold that for 6 seconds, then tell them to breathe normally again.
5. Repeat steps 3 and 4 once more.
6. Ask them to signal feeling calm and relaxed by raising one finger to let you know. If they don't, tell them they do not have to feel relaxed to be successful in REI, it is just a bit easier. Reassure them that with practice, they can learn to relax even more than now, if they wish.
Appendix G--Continued

7. Now, tell them to picture in their minds the situation in the A section of their rational self-analysis homework, but to see everything as though it were on a movie or television screen, except for the resident himself—"as though you yourself were not in the scene yet. Just see it without you in it." (Pause). Then: "Now, see yourself in the scene thinking only your rational thoughts in section E. Make yourself feel in your gut only the rational feelings in E associated with your rational thinking." Have them repeat the scene over and over again for 5 more minutes.

During performance of REI on their own, repeat the following instructions: "If you get upset or anxious, stop the scene immediately and calm yourself once more. Use the relaxation exercise you've just learned to help you if necessary. If you still get upset, reread A and E sections. Look for errors in applying the rules for rational thinking. Are you sincerely convinced that the ideas and feelings in E meet at least 3 or more of the criteria for rational thinking?"

5. After the end of the REI practice, discuss what each resident experienced. Apply the four criteria for rational thinking to those who had trouble. Make sure each person believes that the new way of thinking, feeling, and acting is both in his best interest and is acceptable to him as a personality trait. If the answer to either is "no" or "I'm not sure," then have the resident rewrite E section more to his rational satisfaction.

Warn residents: do not do REI using thoughts that members recognize as rational but are not convinced are best for them to adopt. They will only end up practicing their old irrational habits. They will not be helping themselves.

Remind residents: rational re-education takes time and practice. Just like learning to play a musical instrument, thinking and feeling rationally requires practice before it becomes habitual and easy. The more you work at it and practice, the better you will be at doing it.

Homework: perfect the E section of their rational self-analysis. Once they are comfortable with their E section, they are to practice REI once a day until the next session. If they do not get satisfactory results, continue to refine the E section and keep trying REI.
Session 6

1. Announcements and go over the effects of the last session. Clear up misconceptions (10 min.).

2. Go over REI homework. Clear up misconceptions. Help those who have had trouble refine their E sections or dispute more thoroughly their D section. Use other group members to help (30 min.).

3. REI practice (20 min.)

4. Inquire of residents how they have responded to treatment so far. Emphasize the ABC's of RET. Probe for more significant problems of the residents: especially family or marital problems, problems with anger control assertiveness, depression, self-defeating hedonism, avoidance of productive self-discipline, or other problems you feel they may have (25 min.).

5. Individualize treatment homework assignments: RSA, shame exercises, behavioral assignments. Clear up misconceptions (5 min.).
Session 6

1. Announcements and go over the effects of the last session. Clear up misconceptions.

The purpose of this part is to probe how residents reacted to the REI and disputations of the last session, and to clear up misconceptions.

There is some research to suggest that acceptance of and success in homework assignments depend upon positive changes in self-concept. If a resident did not perform his homework assignment and denigrates its usefulness, most likely, what lies behind his behavior is a poor self-concept, a sense of worthlessness perhaps born of perfectionism or pessimistic, depressionogenic ideas (e.g., "I can never change so why try?"). Your tactic as therapist is to go straight for this assumption by pointing out to the resident: (1) REI or all homework you assign does not have to be done perfectly to be useful. The resident can learn from both his mistakes and his successes; (2) The homework is designed for him to define change for himself, but before he can do that, he must first begin to understand how his refusal to do homework is just another way of defeating himself, a sign that he at bottom does not think very much of himself; (3) If he wants to continue feeling bad about himself, feeling upset and depressed (angry or whatever he has shown you), then that is his business. If he does not want to get better, then fine; (4) Or if he does but wants to do it another way, then you and he can work together on it later, for there is more than one way to change irrational ideas, emotions and behavior. Ask him would he like to give it another try, and if it does not work out after a few more tries, then you and he and the group will come up with something that might work better.

Caution is advised here, however. If a resident does not do his homework, first find out what prevented him from doing it. What prevented him is rarely that he was too busy. Rather, it will often be an irrational idea. If several residents in your group did not do the homework, then take time to probe for the beliefs that prevented them and dispute these beliefs. This action on your part will slide easily into the topic of the next part of this session.

2. Go over REI homework. Clear up misconceptions.

The purpose of this part is to inquire how the REI practice went, how many times they practiced it, and did
they feel the need for any changes. Help those who have had trouble refine their E sections or dispute more thoroughly their D sections. Use other group members to help.

3. REI practice.

The purpose of this part is to give residents another session with REI as practice. Simply repeat the procedure outlined in session 5. Quickly go over how they did. Encourage residents who report successes and those who have had trouble.

4. Response to treatment inquiry.

The purpose of this part is to allow residents a chance to voice difficulties and successes with treatment and to allow you to assess their progress, their satisfaction, and their dissatisfaction and the reasons for their feelings.

Make sure all group members understand the differences between thoughts and feelings, facts and beliefs, the connection between beliefs and feelings and behavior, and the difference between rational and irrational beliefs. The aim is to deepen their commitment to rationality.

Probe for more significant problems than they have identified so far. Give them permission to change the problems they have identified so far.

In some respects, this 25-minute discussion is free-wheeling. Group members may have trouble with REI or feel they are not getting anywhere in treatment. Several things could be wrong. The RSA may not revolve around the crucial activating events, or their supposedly rational beliefs may be superficially rational but not specific antidotes to their irrational beliefs; they may not have adequately disputed their irrational beliefs; they may have disputed their irrational "self-talk" but have left untouched the fundamental irrational philosophies that gave rise to the irrational self-talk and emotional disturbance; they may not have done their homework; they may have done everything well, but while they are thinking rational thoughts in homework practice, they also practice another stream of irrational monologues behind the scenes, as if so, these will have to be worked through to a rational solution. Each of these or a combination of them may be responsible for deficiencies in understanding and commitment and will have to be worked through to a satisfying rational solution.
During this discussion, look for different aspects of their problems that could be worked on through different kinds of homework exercises, perhaps a different RSA, shame exercises, or other behavioral exercises with monitoring of thoughts.

5. Clear up misconceptions. Assignment of homework: continue with new RSAs, old ones, or new work as required. Encourage them to practice REIs.
Sessions 7, 8, 9, 10, 11, 12.

1. Increase delegation of responsibility for setting the agenda to the residents.

2. Follow the same techniques as in earlier sessions using the same general format. That is, start each session with a brief review of previous session. Set agenda. End each session with a brief review of the current session, including any homework assignments, and clear up misconceptions.

3. Continue to identify irrational beliefs. Demonstrate rational responses to them.

4. Increase residents' responsibility for doing homework assignments.
Sessions 7, 8, 9, 10, 11, 12.

In the first six sessions the therapist sets the agenda of the group. That is, the therapist controlled the structure of the therapy, which was necessary to teach self-monitoring, rational analysis, affect differentiation, and self-therapeutic skills. Once REI and RSA have been mastered (more or less) by group members and once they have accepted the treatment, the group members themselves set the agenda of each meeting.

Setting Agendas. At the beginning of each session, it is desirable to set a flexible agenda which will allow the residents and the therapist to target specific areas for discussion. It is frequently useful to poll each participant for suggestions, so that everyone may begin the group session with some kind of active participation. It is generally preferable to note a topic for discussion and return to that topic later, rather than risk dwelling too long on any given subject at the beginning of the session.

This approach helps turn the group structure over to the residents, helping them become responsible for their own therapy. Yet, setting the agenda allows for a formal structure within which group members can function with maximum efficiency.

In case the group has a hard time getting started, you can choose an agenda to help them get started on their own. You are also part of the agenda setting process. At times, you will set the agenda yourself, especially for sessions 11 and 12, which will include testing for the research and saying goodbyes.

Even though control for the agenda of the sessions becomes more shared by the group as a whole, the treatment approach is still rational emotive therapy. Thus, the Socratic Dialogue, rational training, RSA, REI, and other rational-emotive techniques are still used exclusively to teach more rational beliefs and skills in attaining rational beliefs.

By session 10, residents should begin thinking seriously about discharge. Their discharge plans should be filled out and read over in the group. Within the context of discharge plans, have residents identify anticipated problems and then rehearse coping strategies with them. This should begin at least by the 10th session so that you will have plenty of time to cover rational coping strategies with each resident
in a thorough way. At this point in therapy, it is also a good idea to introduce what it means for the residents to become "nondrinkers": that is, what it means to define themselves in that way (if not already done).

Session 11.

This is the research posttreatment testing session. There will be no therapy during this session. Group leaders will hand out testing packets and take them up again. If it can be arranged, testing will occur in a room other than the usual therapy room.

Session 12.

This is the last session before graduation. The residents are prepared for termination of therapy during this session, so any special discharge problems should be discussed at this point. It is desirable to emphasize the role of continuing homework assignments and practicing other strategies after discharge, emphasizing psychotherapy as a learning process that continues throughout the individual's life.
Appendix H

Therapists' Effects for Usual Group Therapy

Table 18

Analysis of Covariance between Therapists on Irrational Beliefs Test

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<th>Source of Variation</th>
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Table 19

Analysis of Covariance between Therapists on Beck Depression Inventory

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Table 20

Analysis of Covariance between Therapists on Cognitive Impairment Index

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Table 21

Analysis of Covariance between Therapists on Social Avoidance and Distress Scale

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Table 22

Analysis of Covariance between Therapists on Fear of Negative Evaluation Scale

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Table 23

Analysis of Covariance between Therapists on Self-Criticism Subscale of Tennessee Self Concept Scale

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Analysis of Covariance between Therapists on Total Positive Subscale of Tennessee Self Concept Scale

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Table 25

Analysis of Covariance between Therapists on Identity Subscale of Tennessee Self Concept Scale

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Analysis of Covariance between Therapists on Self-Acceptance Subscale of Tennessee Self Concept Scale

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Analysis of Covariance between Therapists on Behavior Subscale of Tennessee Self Concept Scale

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Table 28

Analysis of Covariance between Therapists on Physical Self Subscale of Tennessee Self Concept Scale

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Table 29

Analysis of Covariance between Therapists on Moral/Ethical Self Subscale of Tennessee Self Concept Scale

<table>
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<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
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<th>Signi. of F</th>
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<td>Main Effects</td>
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Table 30

Analysis of Covariance between Therapists on Personal Self Subscale of Tennessee Self Concept Scale

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<th>Signi. of F</th>
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<td>581.545</td>
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<td>58.059</td>
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Table 31

Analysis of Covariance between Therapists on Family Self Subscale of Tennessee Self Concept Scale

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<th>Signi. of F</th>
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<td>Therapist</td>
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Table 32

Analysis of Covariance between Therapists on Social Self Subscale of Tennessee Self Concept Scale

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<th>Signi. of F</th>
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<td>Therapist</td>
<td>172.803</td>
<td>3</td>
<td>57.601</td>
<td>1.303</td>
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<td>530.642</td>
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<td>1148.118</td>
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<td>71.757</td>
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Appendix I

Therapists’ Effects for Rational Emotive Therapy

Table 33
Analysis of Covariance between Therapists on Irrational Beliefs Test

<table>
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<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Signi. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist</td>
<td>2533.975</td>
<td>3</td>
<td>844.658</td>
<td>1.378</td>
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<td>Residual</td>
<td>7967.288</td>
<td>13</td>
<td>612.868</td>
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<tr>
<td>Total</td>
<td>16515.778</td>
<td>17</td>
<td>971.516</td>
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Table 34
Analysis of Covariance between Therapists on Beck Depression Inventory

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<th>Mean Square</th>
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<th>Signi. of F</th>
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<tr>
<td>Therapist</td>
<td>158.526</td>
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<td>52.842</td>
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<tr>
<td>Residual</td>
<td>584.131</td>
<td>13</td>
<td>44.933</td>
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<td>53.559</td>
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Table 35
Analysis of Covariance between Therapists on Cognitive Impairment Index

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<th>Signi. of F</th>
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<td>.002</td>
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<tr>
<td>Residual</td>
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<td>.002</td>
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<td>.042</td>
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Appendix I—Continued

Table 36
Analysis of Covariance between Therapists on Social Avoidance and Distress Scale

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<td>Therapist</td>
<td>84.093</td>
<td>3</td>
<td>28.031</td>
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<td>Residual</td>
<td>408.787</td>
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<td>17</td>
<td>93.176</td>
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Table 37
Analysis of Covariance between Therapists on Fear of Negative Evaluation Scale

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<tr>
<td>Therapist</td>
<td>187.053</td>
<td>3</td>
<td>62.351</td>
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<td>65.643</td>
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<td>Total</td>
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<td>86.928</td>
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Table 38
Analysis of Covariance between Therapists on Self-Criticism Subscale of Tennessee Self Concept Scale

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<th>Source of Variation</th>
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<th>Mean Square</th>
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<td>Therapist</td>
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<td>42.810</td>
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Table 39

Analysis of Covariance between Therapists on Total Positive Subscale of Tennessee Self Concept Scale

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<th>Signi. of F</th>
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<td>650.270</td>
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<td>Total</td>
<td>26451.611</td>
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Table 40

Analysis of Covariance between Therapists on Identity Subscale of Tennessee Self Concept Scale

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<th>DF</th>
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<th>Signi. of F</th>
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<td>36.096</td>
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Table 41

Analysis of Covariance between Therapists on Self-Acceptance Subscale of Tennessee Self Concept Scale

<table>
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<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
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<th>Signi. of F</th>
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<tr>
<td>Therapist</td>
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<td>310.667</td>
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<td>125.088</td>
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Table 42

Analysis of Covariance between Therapists on Behavior Subscale of Tennessee Self Concept Scale

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<th>DF</th>
<th>Mean Square</th>
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<th>Signi. of F</th>
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<tr>
<td>Therapist</td>
<td>76.380</td>
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<td>976.997</td>
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Table 43

Analysis of Covariance between Therapists on Physical Self Subscale of Tennessee Self Concept Scale

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<th>Signi. of F</th>
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<td>Therapist</td>
<td>6.186</td>
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<td>.987</td>
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Table 44

Analysis of Covariance between Therapists on Moral/Ethical Self Subscale of Tennessee Self Concept Scale

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<th>F</th>
<th>Signi. of F</th>
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<td>32.020</td>
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<td>10.673</td>
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<td>57.977</td>
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Table 45
Analysis of Covariance between Therapists on Personal Self Subscale of Tennessee Self Concept Scale

<table>
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<th>Mean Square</th>
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<th>Signi. of F</th>
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<td>65.882</td>
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Table 46
Analysis of Covariance between Therapists on Family Self Subscale of Tennessee Self Concept Scale

<table>
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<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Signi. of F</th>
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<td>Therapist</td>
<td>19.330</td>
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<td>6.443</td>
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<td>83.500</td>
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<td>17</td>
<td>99.987</td>
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Table 47
Analysis of Covariance between Therapists on Social Self Subscale of Tennessee Self Concept Scale

<table>
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<th>Source of Variation</th>
<th>Sum of Squares</th>
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<th>Mean Square</th>
<th>F</th>
<th>Signi. of F</th>
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<td>97.389</td>
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Appendix J

Table 48
Analysis of Covariance between Groups on Irrational Beliefs Test

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Signi. of F</th>
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<td>1811.072</td>
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<td>1202.970</td>
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Table 49
Analysis of Covariance between Groups on Beck Depression Inventory

<table>
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<th>Source of Variation</th>
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<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Signi. of F</th>
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</thead>
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<td>Main Effects</td>
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<td></td>
<td></td>
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<td>1.110</td>
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<td>41.841</td>
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<td>52.798</td>
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Table 50
Analysis of Covariance between Groups on Cognitive Impairment Index

<table>
<thead>
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<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Signi. of F</th>
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<td></td>
</tr>
<tr>
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<td>.001</td>
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Analysis of Covariance between Groups on Social Avoidance and Distress Scale

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Table 52
Analysis of Covariance between Groups on Fear of Negative Evaluation Scale

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Table 53
Analysis of Covariance between Groups on Self-Criticism Subscale of Tennessee Self Concept Scale

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Table 55
Analysis of Covariance between Groups on Identity Subscale of Tennessee Self Concept Scale

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Table 56
Analysis of Covariance between Groups on Self-Acceptance Subscale of Tennessee Self Concept Scale

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Appendix J—Continued

Table 60
Analysis of Covariance between Groups on Personal Self Subscale of Tennessee Self Concept Scale

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Analysis of Covariance between Groups on Family Self Subscale of Tennessee Self Concept Scale

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Table 62
Analysis of Covariance between Groups on Social Self Subscale of Tennessee Self Concept Scale

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Appendix K

Research Protocol for Usual Group Therapy

A. Conduct preliminary evaluation for intake.
   1. Inform veterans of research.
   2. Have them sign concept forms.

B. Random assignment of veterans to treatment type.

C. Complete Orientation Week activities.
   2. Admit or reject from active treatment as appropriate.

Session 1

1. Establish rapport: introduction exercises.
2. Cover rules of the program and emphasize the necessity for remaining sober and the consequences if not met.
3. Inquiry regarding expectations of therapy.
4. Explain homework: autobiography assignment and the goal setting for treatment and after-treatment care planning.
5. Clear up misconceptions and questions.

Session 2

1. Make necessary announcements.
2. Inquire as to difficulties in adjusting to the inpatient program or questions about therapy.
Appendix K—Continued

3. Go over veteran's treatment goals and aftercare plans. Give feedback regarding adequacy of goals and encourage all group members to participate. Explore personal reasons for goals and areas of life left out.

4. Elect group leader.

Session 3
1. RMS visit.
2. Announcements.
3. Continue goal assessment and discussion of significant problems group members bring up.
4. Assign reading in alcoholism and assign some group members to help others in the group complete their assignments.
5. Collect autobiographies.

Session 4
1. Announcements.
2. Group discussion of issues veterans raised in the previous session or on current issues, if pressing. Bring group discussion to the definition of specific problems to be solved and definition of strategies for solving them.

Session 5:
Psychological testing feedback by Dr. Sauer.
Session 6:

1. Announcements.

2. Discussion of the psychological testing results. Note: discussion should aim at insight into how personality weaknesses lead group members to abuse alcohol.

3. Negative feedback assignment: all group members prepare constructive but negative criticism of all other group members, including therapists, to be shared at the next session. Explain that the point of this exercise is to learn to give and receive negative criticism.

Session 7:

1. Announcements.

2. Negative criticism exercise.

3. Assign homework to think about the experience of negative feedback and the kinds of feelings or fears it engenders.

Session 8:

1. Announcements.

2. Preparation of agenda.

3. Review of homework assignments.

4. Discuss reactions to previous session.

5. Assign group members responsibility for the next therapy sessions; make individualized homework assignments as appropriate.
Session 9:
1. Announcements.
2. Increase delegation of responsibility to group members for group therapy agenda.
3. Continue making individualized homework assignments between therapy as appropriate.

Session 10:
1. Announcements.
2. Assign group homework for group members to write out aftercare plans.
3. Discussion of aftercare planning and its importance for maintenance of sobriety.

Session 11:
1. Announcements.
2. Discuss individual aftercare plans with concern for their adequacy, specificity, and realistic applicability.
3. Assign positive feedback exercise: each group member including therapists, will write out a brief paragraph saying something personal and positive about every other group member.

Session 12:
1. Announcements.
2. Positive feedback exercise.
3. Preparation for graduation and discharge: includes a review of what treatment has covered.
4. Say goodbyes.
Appendix L

Rational Emotive Therapy Treatment Description

The following is a description of the group therapy you will receive in the treatment program. The purpose of group therapy is to help you gain control over your own life as much as possible by helping you to uncover and understand how you go about defeating yourself and causing yourself painful emotions and behavior, and then by showing you how to change yourself and gain control over your emotions and behavior to live more efficiently and happily.

The therapy you will receive is called Rational emotive therapy, or RET for short. Rational emotive therapy was developed by Dr. Albert Ellis over 20 years ago as a way of helping people learn to help themselves. Since then, RET has been successfully used to help people overcome such problems as depression, deeply rooted fears and anxieties, hopelessness and helplessness, marital problems, fears of failure and feelings of worthlessness, and problems with alcoholism and drug abuse. Almost anyone can be helped by RET, so long as one is willing to work at it both in and out of the therapy room.

Basically, the tenets of RET are easy to understand but sometimes hard to accept at first. In RET, your therapist will hard-headedly insist that your alcoholism
and your emotional and behavioral problems are caused not by other people, unfortunate life circumstances, or any combination of these things, but solely and completely by the way you think. In RET, all emotions, including anger, sadness, depression, joy, happiness, and despair are caused by thoughts or fundamental beliefs. Some of your thoughts are helpful to you. Helpful thoughts aid you in understanding clearly the realities around you and help you adapt to those realities in ways that allow you to feel happy about yourself and your behavior, even though your circumstances may be pretty bad. These thoughts are rational thoughts. On the other hand, some of your thoughts make you feel bad, depressed, angry, down, worthless, and lead directly to drinking abusively and mucking up your life. These thoughts are irrational thoughts. Since only you can think your thoughts, only you make yourself feel good or bad about life around you or about yourself. Therefore, you, and only you control your emotional destiny. You and only you can change it. According to RET, you may not always be able to control what happens to you, but you can always control the attitude you take towards what happens to you.

Perhaps an example will make things clearer. Let's look at the ABC's of emotional upsets according to RET. Let "A" be some event that occurs to you. For example, you make a mistake at work and your boss jumps you about it.
Let "C" be the consequences associated with "A". For instance, you get angry, feel worthless, and go get drunk. Now most people mistakenly believe that getting jumped on by the boss makes them angry. Actually this is not so. Rather, it's the way they evaluate or think about it that makes them angry. Between the "A" and the "C" falls the "B," or the beliefs about "A" that causes "C." Such as, suppose the thoughts or beliefs at "B" were something like this: (a) that s.o.b. has no right to jump on my case like that, (b) I know I failed, (c) I guess he's right, I am a failure and I'll never be any good at my job, (d) this is awful, (e) I need a drink; I deserve a drink; why not; no one else cares; why should I?

Now if you said these things to yourself and you really believed them, then you would feel angry and depressed, worthless and down. And if you thought and believed "I need a drink," then you would probably go get one if you had no other thoughts about drinking to stop you.

This is what RET is all about: taking a close look at what you think or believe about life events and how your beliefs influence the way you feel and act. The thoughts expressed above are all irrational thoughts. They lead to depression, anger, resentment, feelings of helplessness, hopelessness, self-worthlessness, and of course, possible self-destructive behavior such as drinking. There are more
specific reasons why these beliefs are irrational, and you will learn about these in therapy, as well as how to change beliefs just like them that you have. For now, however, imagine that instead of thinking those irrational thoughts, you thought more rationally, such as: (a) it's too bad my boss jumped me like that; it would have been better had he been more understanding, but he wasn't and I can take the frustration and I don't have to upset myself about it; (b) I know I did not perform well; but just because I mucked things up does not make me a failure as a person: I'll just work hard and do better next time; (c) failing at something is not awful; it's just a pain in the neck which I can take because it really is no big deal; (d) and I don't need a drink; I only want a drink; but I won't drink because that would just muck things up more for me. Boy, I feel good about not having a drink.

Now, if you actually said these kinds of sentences to yourself and believed them, you might feel disappointed in yourself, and perhaps some frustration, but you would not feel depressed, angry, resentful, helpless, and you would not go drink. And most likely, even your disappointment and frustration would go away as you turned your thoughts to other things in your life.

In your RET group, you will learn to identify your own specific thoughts concerning the events in your life.
that usually upset you and lead to alcohol or drug abuse. You will learn to identify those thoughts that are irrational and rational, learn why they are irrational or rational, and how to change your thoughts to rational ones, and thus, experience rational emotions and behavior.

To learn these things, your therapist will take an active and directive approach in examining your thoughts and beliefs. You will do homework assignments designed to help you identify and dispute your own irrational beliefs without the help of the therapist. In this way, you learn rational thinking skills so that you can become your own therapist when you graduate from the program. In addition to homework and disputation exercises, your therapist may have you role-play your emotions and thoughts or your "A" situations so that you can get a feel for how you can act, think, and feel differently than you did. Imagery and relaxation techniques will be used to help you practice your newly acquired rational skills so that you can feel comfortable with them and choose the rational ideas and beliefs that are right for you.

In essence, then, your group experience is to be an emotional and rational reeducation. You are not expected to do things well from the very first. You are expected to make mistakes, and mistakes become part of your learning—for without mistakes, you would never learn anything new or
grow. If you work hard, do your homework, and learn the rational skills taught to you, you never need to become emotionally upset about anything ever again as long as you live. And if you do become upset, you will not need to keep making yourself upset but you will have the skills to change your feelings by changing your thinking. You will not give up or suppress your feelings. Remember, to not have feelings is the same thing as to not have thoughts. Rather, your feelings will reflect your thinking If your thinking is rational, almost always your feelings will help rather than hinder you in feeling basically happy about yourself and your actions.
Appendix M

Usual Group Therapy Treatment Description

The purpose of group therapy is to help you remain sober when you are graduated from this treatment program. Below is a description of what will happen in group therapy and how it can help you obtain and maintain sobriety.

Group therapy is a way you can make positive changes in your life. However, group therapy will work for you if you work for it. That is, many residents, upon entering the treatment program, mistakenly believe that treatment is something that will be done to them, like going to the doctor and getting a pill for an infection. This is not true. Group therapy requires that each member contribute his fair share to the group process. This means that group members will be required to share their thoughts and feelings with each other concerning their drinking, their life dreams, disappointments, goals, hopes, failures, successes, pains, and joys. In this way, group members can come to know one another and give one another support and encouragement in maintaining sobriety and developing a positive attitude toward giving up alcohol. This can be scary at first. There is risk involved in opening yourself up to other people—risk of rejection and criticism—but
there are also rewards—deeper friendships, increased understanding of yourself and others, and emotional support.

Many residents, when entering the program, feel depressed, anxious, cynical, lonely, frightened, angry, lost, and uncertain of their future. But at the same time, most residents feel like they should not show their feelings or reveal their thoughts about themselves or others. Many do not even have a good idea of what they are going to do after treatment and cannot even share that uncertainty. By sharing these feelings, however, residents generally learn that they are not alone in their experiences, and that most others also feel the same way they do. That is very comforting. Sharing feelings and thoughts also allows other people to know what you are like and makes others more able to offer you a helping hand or advice that really makes sense. In this way, you can learn what your strengths and weaknesses are so you can better use your strengths and work on your weaknesses to make them better.

One of the first things you will do in therapy is to specify your treatment goals for the time you are in the program and specify some of your long-term goals. You will discuss these goals with the other residents in your group so that you can get some feedback regarding whether your goals are realistic, reasonable, and measurable. A measurable goal is simply one that is specified and realistic
enough that you can know when you have accomplished it or not. "I want to complete myself" is a goal that you may never be able to accomplish (when is anyone ever "complete?"), but "I want to get a better job after treatment" is a goal you can know when you have accomplished it. Goal setting helps you learn how to set goals for yourself and solve problems to help you accomplish your goals.

In addition to goal setting, you will learn how to give and take both negative and positive feedback, compliments and criticism. By doing this, you will learn the important social skills, such as sharing your feelings with others, standing up for your legitimate rights, and basically, learning how to make and keep friends who will help, not hinder, you in accomplishing your goals, both in the program and afterwards; friends who will help, not hinder, your sobriety.

You will also explore with group members why you drink and what individual needs you were trying to get met by drinking. You will find that many of these needs you were trying to meet through drinking are really needs most people have. Once you realize what your needs are, you can explore new ways to fulfill them—without alcohol. Some examples of important needs in your life are satisfying relationships, productive and enjoyable leisure and work,
and the importance of seeing yourself as worthwhile. The group will discover and define these goals along with ways to accomplish them without resorting to alcohol or any other mind-altering substance.

Finally, your group experience will include forming good after-care plans. Your group will discuss your plans with you in terms of how realistic and reasonable they are. In addition, your plans will also be reviewed with an eye to determining if they will actually sabotage your sobriety after treatment or will help you maintain sobriety as well as all the other gains you will have made through participation in the group therapy and treatment program.

In summary, group therapy is a process of growth and insight that can help you feel better about yourself, help you define new goals for yourself, and learn skills to help you attain your goals. It can help you understand your needs better and find new, more satisfying and productive ways of meeting those needs and solving life's problems without having to rely on alcohol or other drugs. It can help you maintain your newly-found sobriety after graduation from the treatment program and help you literally start a different kind of life. All it takes from you to accomplish these goals is your commitment to the group in the way of participation, willingness to try new ways of doing things, and eagerness to change. Even though changing yourself and
your habits can be scary sometimes, through your involvement in the group, the group can give you the emotional support, advice, and friendship that helps you over the initial rough spots. By the end of group therapy, other residents like you have generally felt better about themselves than they have in years. However, there is no magic in group therapy. What you get out of therapy will depend on what you put into it.
Appendix N

Information About ALVAMC Study "Evaluation of Insight and Cognitive-Behavioral Group Treatments for the Alleviation of Psychological Difficulties Related to Alcohol and Drug Abuse"

Principle Investigator: Michael D. Whitley, B.A.

1. The purpose of this study is to evaluate different parts of the total treatment offered by the Alcohol and Drug Treatment Program at the American Lake Veterans Administration Medical Center. The results of our evaluation could help us to help you in better ways, and help improve the treatment of other patients, not only at American Lake VAMC, but patients at other treatment facilities as well. You will also help us to add to the scientific knowledge about the effects of therapy on specific kinds of difficulties people seeking treatment for alcohol and drug problems often have.

2. Once you have been admitted to the residential treatment phase of the Alcohol and Drug Treatment Program, you will be given a short battery of psychological tests. After this, a staff member will assign you to one of two therapy groups, both of which are designed to help you cope with your drinking or drug-related problems. Your assignment to a particular group will depend upon chance only, and not upon scores on the psychological tests. Group therapy is already a part of the existing treatment program. The only
Appendix N—Continued

difference this research will make is that the treatments
are being evaluated as to how they help you. At the end
of treatment, you will be given another short battery of
psychological tests similar to the battery you took before
treatment.

3. There are no known ill effects from the therapies you
will be receiving. As in any psychological treatment, how
you respond to therapy will depend somewhat on your own
motivations.

4. Benefits that you may receive as a result of partici-
pation in this study are an increase in your ability to
cope with stress, insight into why you abuse drugs and/or
alcohol and what you can do about it, the probability that
you will feel better about yourself, and skills in over-
coming depression and various kinds of anxieties.

5. If you do not wish to participate in this evaluation,
you will not receive the psychological tests designed for
treatment evaluation. You will receive some testing and
group therapy as a usual part of the program.

6. Participation in the evaluation program is voluntary.
You may withdraw from the evaluation program at any time
without influencing the treatment you receive from this
hospital. You will still receive treatment for your
alcohol and/or drug abuse problems.
7. The information obtained from you as a result of psychological testing and program evaluation is completely private and will not be released to any party or agency outside of the VA without your written permission or request. Your identity as a participant will not be revealed in any published or oral presentation of the results of this study.
SUBJECT  I, ____________________________, certify that the above written summary was discussed and explained fully to me by ____________ on this date.

______________________________  __________________________
Date                          Signature

OR

SUBJECT'S LEGAL REPRESENTATIVE I, ____________________________, the ____________________________ of ____________________________, certify that the above written summary was discussed and fully explained to me by ____________ on this date.

______________________________  __________________________
Date                          Signature
Appendix O

Tennessee Self Concept Scales

1. Total Positive: Reflects the overall level of self-esteem. Persons with high scores tend to like themselves and feel that they are successful as persons. Persons with low scores feel doubtful of themselves and are often depressed and lonely.

2. Self-Criticism: Mildly derogatory statements that most people admit as being normal. High scores generally indicate a normal, healthy openness and capacity for self-criticism. Low scores indicate defensiveness and extremely high scores indicate an individual who is pathologically undefended.

3. Identity: These are the "what I am" items on which the individual describes his basic sense of identity.

4. Behavior: This scale measures the individual's perception of the way he acts or functions.

5. Self-Acceptance: This scale allows the individual to describe how he feels about the self he perceives.

6. Physical Self: This is the individual's view of his body, his state of health, his physical appearance, skills, and his sexuality.

7. Moral/Ethical Self: These scale items describe the self from the moral-ethical frame of reference, tapping
the individual's sense of moral worth and his feelings of being a "good" or "bad" person.

8. Personal Self: This reflects the individual's view of himself apart from other people. This includes the introspective judgments of self-worth apart from the roles one may play in life and the people one knows.

9. Family Self: Items of this scale reflect the judgments of worth made about the self as a member of a family.

10. Social Self: This scale reflects the individual's sense of adequacy and worth in his interactions with other people.
Appendix P

Addendum to the Dissertation Proposal

The present dissertation concerns only the hypotheses and data analysis pertinent to the pre- and posttreatment, between-group changes on the psychometric measures of self-concept, depression, social anxiety, irrational beliefs, and cognitive functioning. A followup study is planned for the purpose of further research, but the followup is not part of the dissertation project. After the dissertation project is completed, however, the followup results will be used for publication purposes.
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Reference Notes


