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# THERAPIST VARIABLES IN THE TREATMENT OF ALCOHOLISM: THE RELEVANCE OF PROFESSIONAL TRAINING AND A PREVIOUS DRINKING PROBLEM

by

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I hereby recommend that this dissertation prepared under my direction by Camille Lloyd

entitled Therapist Variables in the Treatment of Alcoholism: The Relevance of Professional Training and a Previous Drinking Problem

be accepted as fulfilling the dissertation requirement for the degree of Doctor of Philosophy

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SIGNED: Camille Floyd

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ABSTRACT

There has been much controversy regarding who is best qualified to treat the alcoholic patient. One issue which has been debated concerns whether individuals with professional training are more effective treatment personnel than individuals without such training. A second issue concerns whether recovered alcoholics are more effective therapists than those who have never personally experienced a drinking problem. The present study examined, therefore, the relevance of the Professional Status and Recovery Status variables to treatment outcome for alcoholics receiving group psychotherapy. The relationships of these experimental variables to the therapist's personality and attitudes toward alcoholism and to client perceptions of therapeutic atmosphere were also investigated.

Eight therapists participated with two in each of the following four conditions: (1) recovered alcoholic professional, (2) non-alcoholic professional, (3) recovered alcoholic paraprofessional, and (4) non-alcoholic paraprofessional. Clients volunteered for group therapy following a three-week stay at an alcoholism inpatient facility. They were randomly assigned to one of the four treatment conditions, and pre- and post-therapy measures of adjustment were obtained.

Results demonstrated that all therapists showed quite similar profiles on the Sixteen Personality Factor Questionnaire. Nevertheless, recovered professionals were significantly more self-assured than

recovered paraprofessionals. Professional therapists also showed a trend toward being more outgoing, relaxed, self-assured, and able to act in ways consistent with their self-image.

Data from the attitude measures indicated that professionals were more likely than paraprofessionals to recognize that a periodic excessive drinker could be an alcoholic; similarly, recovered therapists were also more likely than non-alcoholic therapists to recognize this. Recovered alcoholics also demonstrated a trend toward a stronger belief than non-alcoholics that psychological difficulties can be an important contributing factor in the development of alcoholism.

Neither Professional Status nor Recovery Status of the therapist demonstrated a significant relationship to client perceptions of therapeutic conditions. There was a trend, however, for professionals to receive higher empathy ratings than paraprofessionals. A consistent pattern emerged as the professionals also received higher mean ratings on the warmth, genuineness, and cohesiveness measures. It should be noted that the statistical analyses contained little power since the sample size of therapists was small. It was concluded that the relationship between Professional and Recovery Status and therapeutic conditions should be further studied.

Professional Status appeared to bear little relationship to outcome. There were no significant differences between professionals and paraprofessionals in attendance rates, attrition rates, therapist ratings of client outcome, or on six of the seven client reports of post-therapy adjustment. The only significant difference was that clients

of the paraprofessionals reported less anxiety following treatment than clients of the professional therapists.

A few preliminary findings, however, suggested that Recovery Status might be related to therapy outcome. Recovered therapists obtained a significantly higher therapy attendance rate and they rated their clients as having shown significantly more improvement than did the non-alcoholic therapists. The clients of the recovered alcoholic therapists also showed significantly less hostility following treatment, and they tended to be less depressed and more well-adjusted socially. It was suggested that the effectiveness of recovered personnel may partly lie in their ability to elicit favorable client expectations about therapy.

Limited findings also indicated possible drawbacks to the use of non-alcoholic paraprofessional therapists. These therapists gave their clients significantly poorer improvement ratings and their clients showed less improvement on the Drinking Severity Scale. Perhaps those therapists without either professional training or personal experience with alcoholism are less well prepared to deal with alcoholic clients. Further study of therapist variables in the treatment of alcoholism was encouraged and the need for the use of a larger sample size of therapists was also emphasized.

## STATEMENT OF THE PROBLEM

In recent years alcoholism has been recognized as one of the most serious public health problems in the United States. Many treatment modalities have been developed in the attempt to provide help to those millions of individuals afflicted by this disorder, and many outcome studies have attempted to identify those factors which contribute to successful treatment. The majority of these studies, however, have investigated treatment or patient variables while therapist variables have been seriously neglected. This is unfortunate since the therapist is an important aspect of any treatment modality. Sheldon, Davis and Kohorn (1974) have pointed out that a vital aspect to any recovery program is the alcoholic's knowledge that another human being is concerned about him.

The lack of research concerning therapist variables is particularly distressing in view of the fact that a wide divergence of individuals are currently treating alcoholics. Alcoholism is a concern of professionals in psychiatry, psychology, social work, and rehabilitation counseling. Non-professionals or paraprofessionals such as clergymen or physicians are also involved in treatment. One major source of therapeutic personnel is the recovered alcoholic himself; many recovered alcoholics engage in volunteer work while others obtain positions as paraprofessional counselors. Alcoholics Anonymous also exists as a

major treatment resource and relies on members to provide "treatment" by lending support and encouragement to one another.

This great diversity of treatment personnel leads to considerable debate concerning the relative effectiveness of therapists with different background characteristics. Theoretical speculation surrounding the issue abounds; empirical information is virtually non-existent. Despite the paucity of empirical data, debates often reach heated proportions and some administrators are known to possess such set views on the issue that they may attempt to preclude from their staffs those persons not fitting into a specific therapist category (Strachan 1973). Since practical hiring decisions are being made on the basis of such prejudices, it would clearly seem important to conduct research relevant to the question of whether such background characteristics of the therapist are indeed related to treatment effectiveness.

## Professional versus Paraprofessional Therapists

One background characteristic of the therapist to receive particular attention has been that of training. Some maintain that only professionals should provide direct service while others propose that paraprofessionals can also provide such service. In the famous Krystal and Moore (1963) debate, Krystal argues that the basic problem of the alcohol addict is an emotional one and hence, often very complex and requiring the skills of a mental health professional. Moore disagrees, maintaining that not all alcoholics have deep underlying emotional conflicts and therefore many can be treated by the lay person, such as by a paraprofessional recovered alcoholic. The debate has attracted

much attention and subsequent articles by Agrin (1964), Lemere (1964), and Williams (1965) have added further speculation to the issue.

A close examination of such debates actually indicates that two separate issues are often involved. One major area of disagreement centers around the forementioned question of the relative efficacy of professional versus paraprofessional personnel. The second area of disagreement concerns the question of whether those who have recovered from alcohol abuse themselves are more effective as therapists than those persons who have not had such a first-hand experience with the disorder and the recovery process. There is considerably more research concerning the professional/paraprofessional controversy than the recovered/non-alcoholic therapist controversy.

A brief look at the use of paraprofessionals in providing mental health services indicates that their use has increased rapidly in recent years (Sobey 1970). Providing impetus for this growth has been the recognition of the shortage of professional manpower (Albee 1959) and the recognition of the financial savings involved in the use of such personnel which takes on increased significance with the current emphasis on austere budgeting. Falkey (1971) has also drawn attention to the manpower shortage among alcoholism treatment personnel.

Despite the manpower and financial benefits of these paraprofessionals, much of the final decision about what mental health role they should assume will be based on their demonstrated ability to provide effective therapy. Rioch et al. (1963) and Carkhuff and Truax (1965) were among the first to demonstrate that lay personnel could function

effectively as direct service providers. The research basis pertaining to the effectiveness of paraprofessionals has fortunately continued to accumulate. A recent review of this literature concluded that there is considerable evidence that paraprofessionals can facilitate the improvement of psychotic adult inpatients (Karlsruher 1974). It was also concluded, however, that the effectiveness of paraprofessionals with outpatient adults, adolescents, and children, had not yet been sufficiently demonstrated. While most groups consisting of these types of patients demonstrated improvement, untreated control groups were usually not included for study; this made it impossible to determine whether their improvement was greater than that which would occur in an untreated group due to spontaneous remission. Karlsruher (1974) also concluded that the comparative effectiveness of professional and paraprofessional psychotherapists had not been adequately examined.

Five studies do provide, however, limited information about the comparative effectiveness of professionals and paraprofessionals. Anker and Walsh (1961) found more improvement among inpatient adults treated by a "nondirective resource person" who was a recreational therapist than among patients treated by a professional therapist. However, the type of treatment was not held constant for the groups; the paraprofessional therapist assisted the patients in an activity group while the professional therapist provided group therapy. It cannot be determined, therefore, whether the results were a function of the training of the therapist or of the type of treatment. Mendel and Rapport (1963) demonstrated that female chronic schizophrenic patients treated by either

professionals or by paraprofessionals (psychiatric aides) tended to show quite similar improvement rates as measured by the number of months spent out of the hospital. Berzon and Solomon (1966) demonstrated that members of self-directed therapy groups achieved comparable results to members of professionally-led groups. It was concluded in this study that self-directed therapy groups were particularly feasible when the members had had previous therapeutic experience and when stimulus materials were provided. A fourth study by Zunker and Brown (1966) compared the effectiveness of carefully trained students with certified school counselors in providing academic adjustment guidance to college freshmen. Student counselors were found to be as effective as professional counselors on all outcome criteria; furthermore, freshmen seen by the student counselors evidenced higher first-semester grade reports and fewer residual problems.

A fifth study by Poser (1966) calculated the amount of change among male schizophrenic inpatients treated by professionals (psychiatrists, psychologists, social workers, and occupational therapists) and paraprofessionals (young undergraduate women students without mental health experience). Patients treated by the paraprofessionals achieved a significantly better performance on three of the six outcome measures than did patients of professional therapists. Perhaps this study provides the best evidence to support the proposition that paraprofessionals can provide direct service. The study has, however, been subjected to some criticism. Rosenbaum (1966) raised three issues in regard to the study. He first noted that experimental groups received treatment at

different times without any attempt being made to counterbalance times at which the groups were treated. Secondly, no attempt was made to control for sex of the therapist. All 11 paraprofessionals were women; there were nine men and six women comprising the professional therapists. This may be an important aspect since there is some evidence (Rappaport, Chinsky and Cowen 1971) that male chronic schizophrenics respond particularly well to the interest shown them by female college students. It is thus possible that Poser's (1966) finding of increased effectiveness of paraprofessionals might be partially due to the fact that all of these paraprofessionals were young women. The third issue raised by Rosenbaum (1966) relates to the problem of experimental mortality; while 48 patients were lost to the study, no data were presented concerning the treatment group to which these patients belonged. Despite these shortcomings, this study appears to provide the most adequate empirical data to date.

These five articles thus seem to indicate that paraprofessionals are as effective, or possibly more effective, than professional therapists with the populations studied. However, the studies are few in number and are beset with methodological weaknesses; it is for these reasons that Karlsruher (1974) concluded that the comparative effectiveness of the two groups had not yet been adequately examined. The need for more study is clearly evident.

## Recovered Alcoholic versus Non-alcoholic Therapists

While the research basis pertaining to the relative effectiveness of professionals and paraprofessionals is limited, the research

pertaining to the comparative effectiveness of recovered alcoholic and non-alcoholic therapists is almost non-existent. Lay therapists who are themselves recovered alcoholics have long been accorded a fairly large role in the treatment of alcohol abuse (Bowman and Jellinek 1941). Alcoholism was long neglected by mental health professionals because of early moralistic views of the disorder and because of the belief that alcoholics were difficult patients generally not amenable to treatment (Glasscote et al. 1967). This reluctance of the mental health professionals to assume responsibility for treatment created a vacuum of treatment personnel. It seems that the vacuum was largely filled by those persons who had themselves "recovered" from the disorder; these recovered alcoholics apparently possessed sufficient experience to feel comfortable in assisting other alcoholics to achieve sobriety and sufficient motivation to do so.

It has been argued that there are some unique advantages to the use of the recovered alcoholic as a therapist. Over 30 years ago, Silkworth (1939) proposed that only an ex-alcoholic could effectively work with the alcoholic patient. Falkey (1971) has listed several advantages possessed by the recovered alcoholic therapist, including the recovered alcoholic therapist's rich understanding of fellow alcoholics, familiarity with the problems of alcoholics, and the ability to be an important link to the self-help programs of Alcoholic's Anonymous. McInerny (1973) wrote that the recovered alcoholic therapist is particularly adept at confronting the rationalization system of the alcoholic and at overcoming resistance to treatment. Ottenberg (1974) also

noted that recovered treatment agents are often very committed to their work and that they are very sensitive to the feelings, thinking patterns, and defensive patterns of the problem drinker. These recovered personnel are frequently able to neutralize self-defeating behavior by challenging it out of their own experience.

Other writers have stressed the potential disadvantages to the use of the recovered alcoholic as a therapist. Sheldon et al. (1974) claimed that too often the recovered therapist expects the client to follow a pathway of recovery similar to his own, thus forcing the client into a narrow approach which may not take the individuality of the client into sufficient consideration. Ottenberg (1974) wrote that the recovered staff member is often suspected of problems of over-identification with the client and failure to maintain the distance necessary in a good therapeutic relationship. Strachan (1973) also notes that some recovered alcoholic therapists are too hard on their own kind. Once they are personally past the pain and fear, they seem to be unsympathetic with the suffering of others. Another objection to the use of recovered treatment personnel is the belief that the recovered therapist may share the same prejudices and blind spots of the client. The subjective literature thus reveals possible advantages and disadvantages to the use of recovered personnel. Only one study (Covner 1969) presents empirical data relating to the issue of whether a previous history of alcoholism is related to treatment style or effectiveness. Screened volunteers trained in an eight-week session on alcoholism were rated during 11 months of performance on the basis of six variables: initiative,

perception, perseverance, objective empathy, cooperativeness, and flexibility. These volunteer counselors were then assigned a rating of either good or unsatisfactory; a comparison of these two groups on the variable of prior history of alcoholism produced no significant differences. It was concluded therefore that a history of alcoholism neither guaranteed nor precluded counseling success. An outcome study was also undertaken which compared the outcome for clients counseled by volunteers with that of clients of staff members and no significant differences were found.

At this point in time it is abundantly clear that the debate concerning who should treat the alcoholic will continue. The debate centers chiefly around two issues: (1) the comparative effectiveness of professional and paraprofessional therapists, and (2) the comparative effectiveness of recovered and non-alcoholic therapists. Because the majority of professional alcoholism therapists are not themselves recovered alcoholics, and because the overwhelming majority of paraprofessional therapists are recovered alcoholics, the debate often distills to the question of the relative effectiveness of these two groups of treatment personnel. Nevertheless, one can see that the relevance of two variables--Professional Status and Recovery Status--are actually involved. It is the purpose of the present study to investigate the relevance of these two variables to the treatment of the alcoholic patient.

## The Approach to the Problem by the Present Study

The present study examines the relationship between the variables of Professional Status and Recovery Status and the therapist's

personality, attitudes, treatment atmosphere, and obtained patient outcome. Two levels of Professional Status are examined; a professional therapist is presently defined as an individual who has completed a master's degree program in a human services field, and a paraprofessional therapist is defined as an individual who has not completed a master's degree program in a human services field. A recovered alcoholic therapist is defined as an individual who has a prior history of treatment for alcoholism and who has maintained at least one year of sobriety; a non-alcoholic therapist is a person who has never been treated for alcoholism and who disclaims any serious drinking difficulties.

The first part of the study examines the relationship of the Professional Status and Recovery Status variables to the therapist's personality and attitudes toward alcoholism. The second part examines the relationship of the two experimental variables to the patient's perception of the therapist's empathy, warmth and genuineness and to the patient's perception of the group cohesiveness elicited by the therapist. The third part of the study examines the relationship of the two experimental variables to therapeutic outcome as measured by patient's post-therapy adjustment scores on several outcome measures following ten weekly group therapy sessions.

# REVIEW OF THE LITERATURE

## Alcoholism as a Public Health Problem

It has been estimated that there are over 70 million users of alcohol in the United States (Coleman and Broen 1972). Of these drinkers, some nine million may be termed "alcoholics," that is, they are persons whose drinking has progressed to such a stage as to seriously impair their life adjustment (National Institute on Alcohol Abuse and Alcoholism 1971).

The seriousness of the problem of alcoholism can hardly be overemphasized. Alcoholism has been listed as the fourth leading public health problem in the United States, outranked only by mental illness, heart disease, and cancer (National Council on Alcoholism 1970). Coleman and Broen (1972) cite these additional statistics. Alcoholics constitute about 15 to 20 percent of first admissions to mental hospitals. The life span of the average alcoholic is about 12 years shorter than that of the average non-alcoholic. Alcohol is probably involved in at least one-half of all automobile fatalities in the United States. The financial cost of alcoholism in the United States is estimated to be about 25 billion dollars annually when such factors as accidents, reduced income for the alcoholic, cost of treatment, and loss to industry from alcohol related absenteeism, etc., are considered (National Institute on Alcohol Abuse and Alcoholism 1974).

The citing of such figures might imply that alcoholism is easy to define. Such is, of course, not the case. It is difficult to draw the line that separates a social drinker from an alcoholic, and many definitions of alcoholism have been proposed. Coleman and Broen (1972), for example, following the World Health Organization, define an alcoholic as a person whose drinking seriously interferes with his physical or mental health, his marital or home relationships, or his work. Fox (1957) has employed her own definition. She claims that if a person is unable to stop drinking after two or three drinks, he is almost certainly an alcoholic. Jellinek (1960) described alcoholism as a progressive disease characterized by uncontrollable drinking.

Excessive alcohol intake can have serious adverse affects upon physical health. The illnesses associated with alcohol abuse include chronic progressive diseases of the central and peripheral nervous systems, and of the liver, heart, muscles, and gastrointestinal tract (National Institute on Alcohol Abuse and Alcoholism 1971).

Emotional disorders are also associated with alcoholism. Certain brief psychotic reactions are known to occur in those individuals who have been drinking excessively. These include a pathological intoxication, delirium tremens, acute alcoholic hallucinosis, and Korsakoff's syndrome (Coleman and Broen 1972). Excessive drinking additionally may lead to depression, feelings of guilt, and lowered self-esteem.

## Stages in the Development of Alcoholism

Jellinek (1952) has outlined certain phases or stages which he believes to occur in the development of alcoholism. The first stage is labelled the pre-alcoholic symptom phase. In this stage, a person begins to drink socially but soon finds himself experiencing a rewarding relief from tension. Gradually he progresses to drinking almost daily in order to relieve tension. The second stage, the prodromal phase, is characterized by such indicators as blackouts or periods of time for which he has no recall, surreptitious drinking, a preoccupation with alcohol, gulping the first few drinks, and guilt feelings which lead to a subsequent avoidance of references to alcohol in conversations. The third phase, the crucial phase, is characterized by the loss of control over drinking; once drinking is begun, the individual cannot stop until he becomes intoxicated. He may begin to hide his beverages in order to assure himself of ready access to alcohol. The fourth and final phase is characterized by drawn-out drinking spells. A marked impairment of thinking may also be evident. When no alcohol is present in the body, the individual may experience tremors. The person may also begin to drink anything with alcohol in it and with any type of company. Many individuals also show a loss of tolerance for alcohol during this final stage.

## Factors in the Dynamics of Alcoholism

A prominent goal in many alcoholism studies has been the identification of the factors involved in the development of an alcohol dependency. Relevant factors have been postulated from every level of

conceptualization. Physiological, psychological, and social factors all appear to play a role in the development and course of alcoholism.

Many studies have focused on the biological factors involved in alcoholism. Israel and Mardones (1971) have provided an introduction into the types of research being conducted within this area. Researchers have in particular been searching for a definitive answer to the question "Is alcoholism hereditary?" Results remain inconclusive, however. While some evidence has accumulated that alcoholism runs in families (Irwin 1968, Winokur et al. 1970), it is not known whether this results from a genetic component or from a shared environment. While studies by Rose and Burks (1968) and Rose, Burks and Mittelmann (1945) have cast doubt on the genetic hypothesis, more recent studies by Goodwin et al. (1973) and by Winokur et al. (1970) suggest that a hereditary predisposition may be more important than previously believed.

Other theorists have postulated the existence of psychologically relevant factors. The question has arisen as to whether there is an "alcoholic personality," that is, a type of personality structure that predisposes a person to alcoholism. While there is no single type of person who is highly susceptible to alcoholism there may well be some predisposing psychological characteristics. Some investigators have emphasized the depressive features that characterize the personality of many alcoholics (Weingold et al. 1968). Others have stressed the importance of the lack of adequate impulse control (Goss and Morosko 1969). Other postulated characteristics include rebelliousness, reliance upon denial as a defense, a need for much praise and affection from others,

and an oversensitivity to criticism (Coleman and Broen 1972). Wood and Duffy (1966) found female alcoholics to be submissive, passively resentful, and lacking in self-confidence. Whitelock, Overall and Patrick (1971) also reported several distinct personality patterns among alcoholic patients.

Some attention has also been directed toward identification of the social or cultural factors that are relevant to the development of an alcohol addiction. McCord, McCord and Sudeman (1960), for example, demonstrated that alcoholism was related to ethnic and social class background. Urban dwellers have been found to drink far more than those in rural settings (Cisin and Calahan 1970). Horton (1943) studied 56 primitive societies and concluded that the greater the anxiety level of the culture, the greater the amount of alcohol use. Bales (1946) provided a more specific framework from which to view cultural factors. He cited the relevance of three factors: (1) the degree of stress or tension produced by the culture, (2) the culture's attitude towards drinking, and (3) the degree to which the culture could provide alternate means of satisfaction and ways of coping with stress. Research related to causal factors in alcoholism thus indicates that biological, psychological and social factors all appear to be relevant. A fuller understanding of these factors and their interrelationships will emerge only from further study.

## Treatment Methods

For many years a fairly common belief was that alcoholics were generally not amenable to treatment and were difficult patients

(Glasscote et al. 1967). There was also a reluctance in the mental health field to even establish treatment facilities for alcoholics (Pittman and Snyder 1962). This was largely due to the early view of alcoholism as a self-inflicted problem of morally inadequate individuals. Fortunately, however, attitudes have become more positive and realistic in recent years. There has accumulated, for example, evidence that many persons with drinking problems are able to gain control of their drinking and resume an adequate level of social functioning. Nevertheless, it is clear that no single treatment approach has clearly established itself as being superior to the others. There is, in fact, a proliferation of treatment methods currently in use. Numerous kinds of therapy have demonstrated mild effectiveness with various kinds of alcoholics. However, there is little accumulated data from which to base the practical decision concerning who should receive what type of treatment, and continuing research is needed.

The National Institute on Alcohol Abuse and Alcoholism (1974) reported that treatment of alcoholics generally tends to be based on one of two policies. Some centers specialize in a single modality; others expose their patients to a barrage of methods hoping that one will be of some use. It was recognized that both of these methods waste therapeutic resources. In the first case, resources are wasted by treating everyone with one specific modality even when an individual may not be suited to that method. The multi-modality approach wastes resources by applying unnecessary procedures to its clients. The report recommends, therefore, that a community alcoholism rehabilitation

program should have a variety of treatment methods available and then develop procedures to match patients to the most helpful types of treatment for them individually. Again it appears that what is badly needed in the alcoholism field today is research concerning the effectiveness of various treatment modalities, and in particular, research concerning the effectiveness of the treatments with various types of patients.

One of the major treatment approaches for alcoholism is psychotherapy. Therapists working with alcoholics tend to be active, focusing in particular on their client's drinking. The therapist usually emphasizes helping the client to cope more adequately with the tension and anxiety which often lead to the drinking behavior. Typical psychological problems of the alcoholic have reportedly included the areas of depression, anxiety, hostility, and dependency (Kissin and Platz 1968, Selzer 1967).

Another commonly used approach is group therapy. Hartocollis and Sheafor (1968) reviewed the literature concerning this modality. Group therapy seems to have several advantages. It is certainly less costly than individual therapy and it also provides a readily available opportunity for the development of interpersonal skills. The group can confront denial of drinking problems more effectively and probably in a less threatening manner than can the individual psychotherapist. The group can also provide support and there will be less dependence on the therapist. Finally, if the group contains members who have achieved sobriety, these members can serve as role models for the remaining members. Forrest (1975) even goes so far as to state that based on

research and on his own clinical experience, group therapy is probably the single most effective treatment modality available. Also in current use is the practice of including the alcoholic's spouse in group or couple therapy (Corder, Corder and Laidlaw 1972; Esser 1970; Gallant et al. 1970), or including the alcoholic's family in the therapy (Hyman 1972, Meeks and Kelly 1970).

Although empirical data is sparse, thus making its evaluation difficult, Alcoholics Anonymous has historically been considered as one of the most effective treatment approaches (Maxwell 1962). Gellman (1964) suggested that as many as 75 percent of Alcoholics Anonymous members are successfully treated, and A.A. itself claims that about 60 percent of those attending achieve sobriety within one year (Alcoholics Anonymous 1972).

Drug therapies are also frequently employed in alcoholism treatment. Chafetz (1967) provided one review of the use of drugs in treatment. Tranquilizers such as Librium have frequently been prescribed to control agitation and anxiety. Anti-depressants such as Tofranil are frequently used to relieve the depression so commonly found among alcoholics. These drugs are often used as an adjunct to therapy even when the prime mode of treatment is not drug therapy. Lysergic acid diethylamide has also been postulated to have a significant therapeutic potential, although Ludwig, Levine and Stark (1970) evaluated the efficacy of LSD therapy and concluded that it did not appear to be more effective than other treatment programs. Emetine has been used in aversion therapy; drinking results in nausea when this drug is present,

and in this manner, drinking alcohol becomes associated with very unpleasant effects. Antabuse has been used to produce extreme discomfort and violent physical reactions when alcohol is ingested. Antabuse may be particularly useful as part of a positive treatment regime for a selected set of patients who need an extra "chemical help" to aid them in their efforts to avoid the initiation of drinking (Lundwall and Baekeland 1971).

The actual effectiveness of any drug treatment is very difficult to ascertain. A recent comprehensive review by Mottin (1973), which included studies of aversive drugs, hallucinogens, and tranquilizers, concluded that no evidence of their effectiveness had been established. Perhaps the early success of many drugs in the treatment of alcoholism may be related to their placebo effects (Viamontes 1972). The reassuring sense of "being treated by a medical practitioner" alone may lead to a good therapeutic relationship with a beneficial outcome.

In recent years, additional treatment methods have been based on conditioning and learning models. In covert sensitization, for example, a client is deeply relaxed and then asked to visualize himself drinking, feeling sick, and becoming nauseated. In this procedure, the patient learns to associate drinking with unpleasant stimuli. Among reported investigations using this method are those of Cautela (1966) and Ashem and Donner (1968). Electrical aversion therapy has also been employed (Blake 1965; Lunde, Johnson and Martin 1970). This treatment requires that an electric shock be delivered whenever the subject sips an alcoholic beverage. The effectiveness of these behavior modification

techniques is yet to be thoroughly investigated. While some short-term effects have been demonstrated, few studies have focused on the permanence of improvement. Some carefully controlled studies have shown that aversion techniques are no more effective than placebo procedures (Devenyi and Sereny 1970; Hallam, Rachman and Falkowski 1972).

Two additional treatment methods are transactional analysis and hypnosis. Transactional analysis emphasizes games, rules, and scripts, and it is not difficult for the alcoholic patient to understand or use such concepts (Steiner 1969). Among studies investigating the effectiveness of hypnosis are those of Edwards (1966) and Smith-Moorhouse (1969). It is thus apparent that a great number of treatment modalities for alcoholism are currently being used.

## Evaluation of Treatment Outcome

The proliferation of treatment methods has produced a vital need for research which can shed light on the relative effectiveness of the various modalities. Edwards (1970) stated that the real need in the alcoholism field is not the development of new treatments, but a proper and scientific assessment of the treatments now in use. While a multitude of outcome studies have been conducted, they have been of limited use because of their deficiencies. In 1942, for example, Voegtlin and Lemere published a review of all studies between 1909 and 1941 evaluating any form of treatment for alcoholism. They wrote that it was not possible to form any valid opinion as to the value of conventional psychotherapy in the treatment of alcoholism because of methodological weaknesses in these studies. They also noted that many authors had

demonstrated a reticence to present actual statistical data about the efficacy of treatment.

Bowman and Jellinek (1941) wrote an excellent review on alcoholism. From an examination of only those outcome studies which used large samples and which were related to treatment rationales, they came to the conclusion that psychotherapy with alcoholics resulted in an average success rate of 25 to 30 percent in terms of two to four years of abstinence. They mentioned that Voegtlin (1942) had obtained a much higher rate using conditioning by emetine, although it was not known whether this higher success rate was due to his treatment method or to the fact that his patients were from a private sanitorium.

Bruun (1963) reviewed nine articles which met his criteria of a large sample size, specification of type of treatment, and an explicit definition of "success." He concluded that these studies resulted in successful treatment of between 19 and 53 percent of the client population. Bruun (1963) also reported treatment results for two clinics in Finland. Among those individuals who received treatment consisting mostly of medical assistance and Antabuse, 16 percent were "cured" of their drinking and 35 percent had improved their social and psychological makeup. Among those individuals receiving psychotherapy, medical help (disulfiram), and a team approach, the figures were 20 and 40 percent, respectively.

Hill and Blane (1967) reviewed 49 studies of psychotherapy with alcoholics in the United States and Canada which were published between 1952 and 1963. They concluded, as did Voegtlin and Lemere (1942) some

25 years earlier, that it was still not possible to form a valid opinion on the efficacy of psychotherapy in the treatment of alcoholism. Again, the inability to draw conclusions was attributed to the inadequacies in the experimental design of these studies. Of the 49 studies, 47 were planned retrospectively rather than prior to treatment. Control groups were employed very infrequently, and when they were employed, the members of the control groups were neither matched to the treatment groups nor were they usually randomly assigned to the groups. Furthermore, these studies typically used the criterion of abstinence despite the fact that the utility of employing this criterion has been very seriously questioned (Pattison 1966, Pattison et al. 1968). In those studies which utilized such additional outcome measures as social, occupational, and psychological adjustment, the main source of data was the clinical interview, and very few of these researchers described how the interview was scored, nor did they frequently report the reliability of such scoring methods. Hill and Blane (1967) also criticized these studies because so few of them employed specific instruments such as attitude scales, mood scales, projective tests, or other standardized psychological tests in order to assess treatment results. In the studies reviewed, the rates of improvement varied from 7 to 100 percent with the great majority reporting a success rate of 20 to 80 percent.

Emrick (1974) reviewed 265 reports of psychologically oriented treatments of alcoholism. He concluded that about two-thirds of the patients had improved and that about one-half had achieved total abstinence.

It thus appears that there is a fairly wide range of estimates concerning the percentage of alcoholic patients who improve as a result of treatment. The great majority of such estimates fall within the range of 20 to 80 percent effectiveness. Such a wide variance is probably to be expected when one considers the vagueness of the criterion employed and the wide divergence of treatment methods utilized. Furthermore, it appears that the rehabilitation potential varies widely among the different types of alcoholic clients. The National Institute on Alcohol Abuse and Alcoholism (1974) concluded that while only five to ten percent of the "skid row" alcoholics may be expected to improve, perhaps as many as 80 to 90 percent of those problem drinkers in business may improve their drinking habits.

A review of the outcome literature has thus provided an estimate of the success rate for alcoholism treatment, and it has also drawn attention to the fact that many outcome studies have been in large part inadequate. Many of their weaknesses are due to the fact that they have been planned after treatment rather than before it. Typical inadequacies include the lack of control groups, the use of abstinence as the sole criterion of improvement, the failure to adequately report methods and reliability of scoring clinical interviews, and the failure to employ any standardized psychological tests to assess treatment results. Despite these shortcomings, such studies are useful inasmuch as they have provided some initial directions about how to approach the evaluation issue.

## Spontaneous Remission Rate for Alcoholism

In order to truly assess the effectiveness of any treatment program, it is necessary to have some information concerning the number of individuals who would recover "spontaneously" without the benefit of any treatment regime. There is very little data presently available which would provide an adequate estimate of the rate of spontaneous recovery from alcoholism. What sparse data is available suggests that the rate is a very low one.

Lemere (1953) obtained information about 500 deceased alcoholics from their relatives who subsequently became his patients. He found that only 11 percent eventually became abstinent, and only seven percent had done so by themselves. Another seven percent were able to regain partial control of their drinking, and an additional three percent were able to resume a moderate level of drinking. Horwitz et al. (1970) further suggested that the results of Amark (1951) also demonstrated a very low spontaneous remission rate.

Kendell and Staton (1966) reported a follow-up study of 62 patients who had refused or were refused treatment at the Maudsley Hospital in London. The follow-up covered a period ranging from 2 to 13 years, with an average of about seven years. They concluded that of these individuals, 15 percent were found to have been abstinent for a minimum of 12 months at the time of follow-up. Of these nine individuals (five percent) had attained abstinency for six to ten months, but were in danger of relapsing. Five patients (eight percent) had

resumed normal social drinking. They reported a high incidence of mortality and suicide among these untreated individuals as did Lemere (1953).

These few studies seem to indicate in summary that the spontaneous recovery rate from alcoholism is quite low. Probably only about ten percent or less achieve abstinence and probably only about 15 percent are able to return to normal social drinking. The Kendell and Staton (1966) study further raises the question as to whether there really is such a thing as "spontaneous" recovery since they found only one individual who achieved abstinence without the benefit of any treatment whatsoever. It may well be that many of those persons whom one usually assigns to the spontaneous remission category have received some form of assistance unbeknownst to the investigator.

## Emerging Guidelines for Outcome Research

While past outcome studies can provide guidelines for future investigations, explicit guidelines have also been offered. Hill and Blane (1967), for example, presented an excellent discussion on the necessary elements of such investigations. They stressed the importance of the following: (1) the inclusion of a comparison group, (2) a random assignment of patients to treatments, (3) the selection and definition of the type of behavior to be evaluated, (4) the use of reliable instruments for measuring change, and (5) the application of measures both before and after treatment. They further suggested that the patient population and treatment techniques should be specifically described.

Ludwig (1971) also presented a discussion of critical issues in the design of clinical alcoholism treatment studies. He concluded that

the basic requirements include: (1) using randomly assigned controls, (2) definition of the type of behavior to be evaluated, (3) using reliable methods for measuring behavior change, and (4) the application of the same measures before and after treatment. He encouraged the researcher to provide a full description of the patient population and to examine both process and therapist variables. He suggested that abstinence ought to be very carefully defined if used as an outcome measure. He also indicated that additional outcome variables are important since an abstinent patient may not be well adjusted in other ways. Smart (1970) made suggestions very similar to those mentioned by Ludwig (1971).

## Specific Problems Encountered in Outcome Studies

### Problems with Abstinence as a Criterion of Outcome

One of the difficulties in evaluating alcoholism treatment programs is that it is very hard to establish well-defined success criteria. The most frequently used single criterion has been that of abstinence, that is, an alcoholic has been successfully treated if he no longer drinks any alcoholic beverages at all. As mentioned, however, the use of abstinence as the success criterion has come under serious attack (Pattison 1966, Pattison et al. 1968). Pattison (1966) wrote that abstinence used in isolation is often a grossly misleading criterion of improvement for a number of reasons. First, it is based on the questionable assumption that it is impossible for an alcoholic to return to social drinking at a normal level. Several studies, however, have

reported that some alcohol addicts have subsequently returned to normal social drinking (Davies 1962, Nørvig and Nielsen 1956, Sobell and Sobell 1973, Verden and Shatterly 1971).

A second problem with using abstinence as a criterion is that it requires treatment to be 100 percent successful. That is, it requires not that drinking be lowered to average levels, but that it be eliminated altogether. It requires a standard of behavior that is more strict than that accepted in the normal population. Probably most psychological difficulties would have very low rates of successful treatment if the criterion for success was total rehabilitation.

A third problem with abstinence as a sole criterion for successful outcome is that abstinence might conceivably be associated with detrimental effects. Pattison (1966) reported for example that some borderline psychotics may use alcohol to allay overwhelming anxiety and hence, to avoid ego disintegration. Abstinence may be attained by some persons only at the expense of effective functioning in other areas. It may, for example, demand a considerable investment of time and energy for them to maintain this state.

A fourth problem which arises in the use of this criterion is that abstinence does not necessarily suggest parallel improvement in other areas of adjustment. Thomas et al. (1959) found that drinking behavior did not correlate with social, vocational or psychological adjustment. Clancy, Vornbrock and Vanderhoff (1965) found that improvement in other areas of personal adaptation were separate variables and not closely related. Kissin and Platz (1968) concluded from their investigation that controlled drinking accompanied by a significant improvement

in social adjustment may be a more meaningful criteria than complete abstinence. Other investigators in contrast have reported that an improvement in drinking behavior is usually accompanied by improvement in other areas of adjustment (Mindlin 1959, Gerard and Saenger 1966). A majority of investigators have suggested that outcome measures should include areas other than drinking behavior alone. One of the major difficulties in the past use of measures of social, occupational, or psychological adjustment has been that these have not been sufficiently sensitive measures (Gillis and Keet 1969).

It appears that there are severe difficulties associated with the use of abstinence as the sole criterion for successful outcome. This does not mean that abstinence should be abandoned as a goal of therapy or as a measure of outcome. What it does suggest is that it would be useful to measure the severity of the drinking problem rather than merely to employ a dichotomy of abstinence and drinking. It would also seem necessary to obtain measures of adjustment in such areas as social or occupational functioning.

## The Problem of Selecting Other Outcome Criteria

While a majority of studies have employed abstinence as the sole or major criterion of improvement, there are several additional studies that have included measures of several areas of adjustment. Gerard and Saenger (1966) in an excellent research project, for example, examined the following areas of adjustment: drinking, physical health, interpersonal relationships, work, and social stability. Studies following a very similar procedure for rating these areas of adjustment were also

reported by Pattison et al. (1968) and Pattison, Coe and Rhodes (1969). Mindlin had set an early example by using outcome measures of work, social, and emotional adjustment as well as a measure of drinking behavior. Also Gliedman et al. (1956) had employed multiple measures of outcome and had examined patient responses to a Psychological Symptom Checklist and a Social Ineffectiveness Scale.

Other researchers have included measures of change in such areas as home life (Goldfried 1969), ecological adjustment including housing and marital stability (Trice, Roman and Belasco 1969), feelings of job inadequacy (Hollister, Shelton and Krieger 1969), and self-image (Ends and Page 1959, Gross 1971, Levinson and Sereny 1969). Other studies which measured outcome in multiple areas of adjustment are those of Bateman (1965), Bowen, Soskin and Chotlos (1970), Faillace et al. (1972), Gillis and Keet (1969), Kissin, Rosenblatt and Machover (1968), Kurland (1968), Mayer and Myerson (1970), Pokorny et al. (1973), and Rohan (1972).

It should also be noted that Chafetz, Blane and Hill (1970) published an annotated blibiography of outcome studies concerned with the psychotherapeutic treatment of alcoholism; they reported on the type of outcome measures which were used in each of these studies appearing between 1952 and 1963. It is apparent from the outcome studies reviewed that the current trend in evaluation research is to measure changes in various aspects of life adjustment. That this trend should be viewed as a beneficial one is suggested by Foster, Horn and Wanberg (1972) who factor analyzed the responses of a follow-up questionnaire and identified

seven relatively independent dimensions of treatment outcome. The seven dimensions were as follows: (1) abstinence, (2) interviewer evaluation of improvement, (3) job and social adjustment, (4) self-claimed improvement of the drinking problem, (5) decrease in sociopathy, (6) interpersonal adjustment, and (7) social involvement.

## Summary of Outcome Research

A review of outcome studies has revealed that while many investigations have been conducted, many have been retrospective studies which have not met essential requirements of good research. Furthermore, many studies used abstinence as the sole or main outcome criterion despite its questionable utility. Several examples of well-planned studies have been cited, however. There have also been a few good articles published on how to conduct proper outcome studies in this area. Therefore, a review of the alcoholism evaluation literature has provided useful guidelines for the present study.

# METHOD

As stated previously, the purpose of the present study was to investigate the relationship of the Professional Status and the Recovery Status variables to: (1) the therapist's personality and attitudes toward alcoholism, (2) the client's perceptions of the therapeutic conditions offered by the therapist, and (3) treatment outcome. In order to conduct such an investigation, eight therapists were selected for study, with two therapists in each of the following four conditions: (1) recovered alcoholic professional, (2) non-alcoholic professional, (3) recovered alcoholic paraprofessional, and (4) non-alcoholic paraprofessional.

The first part of the study compared the therapists within these categories with respect to their scores on a measure of personality and with respect to their attitudes toward alcoholism and their commitment to democratic principles as related to the mental health field. For the second part of the study, alcoholic patients were randomly assigned to therapy groups, and patient perceptions of group cohesiveness and therapist empathy, warmth and genuineness were studied in relationship to the experimental variables. The third part of the study focused on the obtained treatment outcome of therapists within these experimental conditions.

## Therapists

At the time of the study, all four professional therapists had obtained a master's degree in rehabilitation counseling and were employed at an inpatient facility for alcoholics associated with a general hospital in Tucson, Arizona. All paraprofessional therapists were individuals who were personally known to the administrator of this inpatient facility. Volunteer paraprofessional therapists were selected solely on the basis of their interest in participating and their availability for the ten-week course of group psychotherapy. No specific formal training was provided for the paraprofessional therapists although before leading groups themselves they were invited to attend regularly scheduled films and lectures on alcoholism at this facility. They were also invited to attend two ongoing inpatient group therapy sessions at the center and to discuss the sessions with the leaders afterwards.

The recovered alcoholic professional therapists were a 37-year-old man with two years' experience in alcoholism counseling and a 44-year-old woman with one year of experience in alcoholism counseling. The recovered paraprofessional therapists were a 32-year-old unemployed man with a bachelor's degree in psychology and a 38-year-old unemployed woman who was planning to accept a position as a paraprofessional alcoholism counselor soon after the group ended. She had completed a 12th grade education. Both of the recovered paraprofessionals had been closely associated with Alcoholics Anonymous and with 12-step counseling.

One of the non-alcoholic professional therapists was a 42-year-old man with two years' experience in alcoholism counseling; he had also had previous experience in family counseling as a chaplain. The other non-alcoholic professional therapist was a 35-year-old woman with three years' experience in alcoholism counseling and with several years of experience in counseling the physically handicapped, unwed mothers, drug addicts, and troubled high school students. The non-alcoholic paraprofessional therapists were a 26-year-old man with a bachelor's degree in English and a 26-year-old woman with a bachelor's degree in social work who had had a year's experience in individual counseling. Both of these persons planned to pursue mental health careers. The young man had just enrolled in a master's degree program in alcoholism counseling and the woman had enrolled in a master's degree program in social work.

## Subjects

Treated clients were individuals who volunteered to enter group therapy following their admission and three-week stay at an inpatient facility in Tucson, Arizona. Most patients entered group therapy shortly after their hospital release, and all patients entered therapy within four weeks after their release. Subjects in the comparison group were individuals who expressed some interest in obtaining outpatient group therapy but who were unable to do so because of their out-of-town residence.

Only those persons who said they would definitely be available for ten weeks were included in the study. There were 110 persons who

met this criterion and who volunteered to participate in the group sessions. Eighteen of these volunteers could either not be relocated at the time group assignments were made or else had indicated an inability to attend the sessions because of transportation difficulties, conflicting work schedules, plans to move out of town, etc. Of the remaining 92 clients, 80 were originally assigned to one of the eight therapy groups and 12 were assigned to begin attending at the second session as a replacement for those who did not attend the first session. Of the 92 clients who were assigned to group therapy, only 68 attended one or more sessions.

Of the 68 treated clients, 63 percent were men and 37 percent were women. Fifty-nine percent were married; 10 percent were separated; 15 percent were divorced; 3 percent were widowed, and 13 percent were single. Only 55 percent of the clients were employed; the remaining 45 percent were unemployed, retired, or housewives not desiring work. The mean education level was 12.9 years. Thirteen percent had less than a 12th grade education; 42 percent had a 12th grade education; 41 percent had either a bachelor's degree or some college, and 4 percent had done graduate work of some kind. The mean age was 45.9 years with a range of 18 to 65 years. Forty-eight percent had received previous treatment for their alcohol abuse.

There were 21 persons who agreed to serve as comparison subjects in the experiment. However, only 13 of these could be located at follow-up and actually mailed in the follow-up questionnaire. Of these comparison subjects, 54 percent were men and 46 percent were women.

Sixty-one percent were married; 23 percent were separated; 8 percent were divorced; and 8 percent were widowed. Thirty-one percent of this group were employed, and the mean educational level was 12.9 years. The mean age was 52.5 years with a range of 34 to 68 years. Forty-six percent of the comparison subjects had been previously treated for alcoholism.

## Measuring Instruments

Three types of measures were essential to the study. One set of measures was selected to assess differences in the therapists' personality and attitudes. A second set assessed differences in the clients' perceptions of the treatment conditions offered by their respective therapists, and a final set of measures was used to assess treatment outcome.

### Therapist Personality and Attitudes

The 1967 Revision of Form A of the Sixteen Personality Factor Questionnaire (Cattell and Stice 1957) provided information about the personality traits of the therapists.

The Alcoholism Questionnaire (Marcus 1963) was used to assess the therapists' attitudes toward alcoholism. A copy of this measure can be found in Appendix A. This questionnaire is the result of a factor analytic study and consists of 40 statements to which the subject responds by checking a position on a 7-point scale ranging from agree to disagree. Scoring yields nine mean factor scores which are defined in Table 1. A high score on factors 1, 2, 4 and 9 indicates a "positive"

Table 1. Factor definitions of the alcoholism questionnaire.

| Factor | Interpretation |
|---|---|
| Emotional difficulties | A high score indicates the belief that emotional difficulties or psychological problems are an important contributing factor in the development of alcoholism. |
| Loss of control | A high score indicates the belief that the alcoholic is unable to control his drinking behavior. |
| Prognosis for recovery | A high score indicates the belief that most alcoholics do not, and cannot be helped to recover from alcoholism. |
| The alcoholic as a steady drinker | A high score indicates the belief that periodic excessive drinkers can be alcoholics. A low score indicates the belief that a person must be a continual excessive drinker in order to be classified as an alcoholic. |
| Alcoholism and character defect | A high score indicates the belief that the alcoholic is a weak-willed person. |
| Social status of the alcoholic | A high score indicates the belief that alcoholics come from the lower socio-economic strata of society. |
| Alcoholism is an illness | A high score indicates the belief that alcoholism is not an illness. |
| Harmless voluntary indulgence | A high score indicates the belief that the alcoholic is a harmless heavy drinker whose drinking is motivated only by his fondness for alcohol. |
| Alcohol addiction-producing | A high score indicates the belief that alcohol is a highly addicting substance. |

attitude while a high score on factors 3, 5, 6, 7 and 8 indicates a "negative" attitude. The questionnaire has been found to be sensitive to changes in attitudes following a training program (Paine and Ferneau 1974).

The Democratic Values Scale (Lerner 1973) was used to measure the therapists' authoritarian attitudes in the mental health field (see Appendix B). This measure assesses the therapist's genuineness and depth of commitment to democratic values, and it has been found to be highly related to therapeutic outcome (Lerner 1972, 1973). The more democratic therapists have been found to be egalitarian in outlook as indicated by a more positive attitude toward low status individuals (lower class and more severely impaired patients) and by a less unequivocally positive attitude towards persons of high status (the therapist's own therapist); the more democratic therapists also show a greater willingness to accept lower-class or severely-impaired individuals as clients (Lerner 1973).

Client Perceptions of the Therapist's Treatment Approach

The alcoholic client's perceptions of the therapist offered conditions of empathy, warmth, and genuineness were measured with the Relationship Inventory developed by Truax in 1963 and reported in Truax and Carkhuff (1967). The questionnaire is an attempt to translate previous scales used for objective ratings into a form that can be answered by the client. The Group Cohesiveness scale used in this study was reported by Lieberman, Yalom and Miles (1973). A copy of this scale along with the scoring method used in this study is found in Appendix C.

Outcome Measures

Attendance and attrition rates in the different experimental conditions were included as an indicator of outcome; any client not attending at least one session, however, was omitted from the reported figures since it was assumed that non-attendance or attrition in these cases could not reflect therapist influences. Any individual attending five or more sessions was said to have completed therapy whereas any client attending less than five sessions was considered a therapeutic loss.

Each therapist also provided an improvement rating for each client on a 4-point scale ranging from a statement that the client had deteriorated since beginning treatment to a statement that the client had very much improved since beginning treatment (see Appendix D).

Since the literature review indicated that outcome of alcoholism treatment is not necessarily a unitary phenomenon, measures of the patients' adjustment in several areas were obtained. Seven measures were actually employed to tap the individual patient's social adjustment, occupational adjustment, drinking behavior, and psychological adjustment.

The Social Adjustment Scale developed for use in this study is presented in Appendix E. It should be noted that a higher score indicates the better social adjustment. Two aspects of social functioning were considered important in the development of this scale. The first aspect concerned the patient's social or interpersonal relationships while the second aspect concerned the type of physical residence the

client had been able to attain. The first question in this scale concerns the place of residence of the client and it resembles Kurland's (1968) Residential Adjustment Scale. The next 15 items were drawn from a social functioning scale of the Bell Adjustment Inventory (Bell 1958) because of their direct relevance to current interpersonal functioning. The final five items were constructed to assess aspects of functioning deemed important by Gerard and Saenger (1966).

The Occupational Adjustment Scale developed for use is presented in Appendix F. Again, a high score indicates a better adjustment. The first item is based upon a scale used by Kurland (1968) and requires the client to place a check mark next to one of five categories that best describes his vocational standing during the last month. The remaining 20 items were drawn from an occupational adjustment scale on the Bell Adjustment Inventory (Bell 1958). Only 20 of the 32 possible items on that inventory were used in this study because it seemed best to omit items that were similar to one another or that referred to long-standing rather than current functioning.

While several measures of drinking behavior were considered for the present study (Bell, Weingold and Lachin 1969; Edwards 1970; Gerard and Saenger 1966; Kurland 1968; Mulford and Miller 1961; Pattison et al. 1968; Rossi, Stach and Bradley 1963; Shelton, Hollister and Gocka 1969), none of them seemed entirely appropriate for the present study. Those using only a few categories are not particularly sensitive measures. Others rely upon observor ratings which were beyond the practical limitations of this study. Other measures referred to longer time periods

than those presently considered; others combined the measurement of drinking with its effects on adjustment in other areas. For these reasons the Drinking Severity Scale was developed for use in this study; it is presented in Appendix G. The first three items are similar to items of the Drinking Status Schedule (Pattison et al. 1968). Items numbered 4 through 11 are similar to items on the Iowa Scale of Preoccupation with Alcohol (Mulford and Miller 1961). Items 12 and 13 are based on items on the Drinking Behavior Interview (Shelton et al. 1969), and items numbered 14, 15 and 16 are based on questions from the Alcohol Use Questionnaire (Horn, Wanberg and Foster 1974).

The final area of adjustment studied was that of psychological functioning. Aspects of psychological functioning which were examined included the areas of depression, anxiety, hostility, and dependency since they are believed to be particularly relevant dimensions of the alcoholic individual's emotional difficulties (Kissin and Platz 1968, Selzer 1967).

Measures selected to assess psychological functioning were chosen particularly for their brevity and general familiarity. The Zung Self-Rating Depression Scale (see Appendix H) provided an indice of depression (Zung 1965). This 20-item scale has demonstrated its usefulness with alcoholic populations in past research (Gibson and Becker 1973; Weingold et al. 1968; Wilson, Alltop and Riley 1970). A short form of the Taylor Manifest Anxiety Scale (see Appendix I) was used to measure anxiety (Bendig 1956). The hostility measure used is presented in Appendix J, and it consists of 39 items from four subscales of the

Buss-Durkee Hostility Inventory (Buss and Durkee 1957). The Succorance and Deference scales of the Edwards Personal Preference Schedule (Edwards 1954) were used to assess dependency (see Appendix K).

## Procedure

Each therapist was asked to complete the Sixteen Personality Factor (16 PF) Questionnaire, the Alcoholism Questionnaire, and the Democratic Values Scale before the treatment groups began. At the end of the ten weeks of group therapy, each therapist was also asked to rate the improvement made by each of the clients in his group who attended at least five sessions.

The project extended over four periods of ten weeks each. In the first and third periods, clients were randomly assigned to either a non-alcoholic professional or a recovered alcoholic paraprofessional therapist. In the second and fourth periods, clients were randomly assigned to either a recovered alcoholic professional therapist or to a non-alcoholic paraprofessional therapist. The outpatient groups were held for ten consecutive weeks and were conducted in accordance with each therapist's own preferences.

Prior to the first session and subsequent to the tenth and final session, each client completed the measures of social adjustment, occupational adjustment, drinking behavior, and the measures of psychological adjustment including scales of depression, anxiety, etc. If a client did not personally return or mail in the final outcome questionnaires within one week after his therapy group ended, he was contacted by telephone and requested to complete the forms. Two more bi-weekly

phone calls were made to any client still not returning such data, and the experimenter offered to personally pick up such forms from the homes of those not initially complying in order to reduce experimental mortality. At the end of the ninth session, clients were asked to take home and complete the measures of therapist empathy, warmth, genuineness and group cohesiveness which were to be returned at the tenth session. The experimenter also observed the fourth and the ninth sessions held by each of the therapy groups in order to gain a subjective impression concerning the nature of each therapist's treatment approach.

## Statistical Analyses

Data concerning personality and attitudes of the therapists was submitted to a simple 2 x 2 analysis of variance (Professional Status x Recovery Status). Attendance and attrition rates between conditions were submitted to chi square analyses.

Data concerning client perceptions of therapeutic conditions, therapist ratings of client improvement, and data from client reports of post-therapy adjustment is not analyzed in such a straightforward manner and this may require explanation.

While this data formed a 2 x 2 factorial design (professional versus paraprofessional therapist and recovered versus non-alcoholic therapist), it is important to recognize that two therapists were actually nested within each of the four cells in the design. Therefore, the statistical analyses performed acknowledge such a nesting and Professional and Recovery Status effects were actually tested against the Therapist effect unless the results clearly indicated that the Therapist

effect was non-significant ($p < .20$), in which case Therapist and Subject effects formed a pooled error term. This is, of course, a more conservative procedure than ignoring the nested therapist factor; nevertheless, it is actually the more appropriate design. Previous investigations of professional and paraprofessional therapists such as Poser (1966) appear to have ignored the fact that therapists are nested within each of these categories (at least it is never mentioned), thus in effect, such investigators assume that therapists within these categories do not differ from one another and hence they use a pooled error term without actually demonstrating that such a pooled term is justifiable. Further methodological discussion is needed concerning the appropriateness of such procedures.

# RESULTS

## Part I. Therapists' Personality and Attitudes

The 16 Personality Factor scores of all therapists were first converted to sten scores using the general population norms for both men and women combined. Mean sten scores on each of the 16 personality traits are presented in Table 2 for each of the four experimental conditions. Therapist scores were then subjected to a 2 x 2 analysis of variance (Professional Status x Recovery Status). Table 3 shows the F ratios and the levels of significance for the experimental variables on each of the personality traits. Results indicated few significant differences among conditions. There were no significant differences on any of the 16 personality traits between recovered and non-alcoholic therapists. There was a trend for professional therapists to be more outgoing ($F = 4.5$; $df = 1,4$; $p < .10$), more self-assured ($F = 6.0$; $df = 1,4$; $p < .10$), more controlled ($F = 5.4$; $df = 1,4$; $p < .10$), and more relaxed ($F = 5.4$; $df = 1,4$; $p < .10$) than paraprofessional therapists. There was a significant interaction ($F = 10.67$; $df = 1,4$; $p < .05$) between Professional Status and Recovery Status on Factor #12 (Self-assured versus apprehensive). A Tukey Honestly Significant Difference post-hoc analysis indicated that recovered alcoholic professional therapists were significantly more self-assured than recovered paraprofessional therapists.

Table 2. Therapists' mean scores on the Sixteen Personality Factor Questionnaire.

| Factor | Professional | | Paraprofessional | |
|---|---|---|---|---|
| | R* | N** | R | N |
| 1. Reserved vs. outgoing | 8.0 | 8.0 | 7.0 | 6.0 |
| 2. Less vs. more intelligent | 5.5 | 8.0 | 5.5 | 5.5 |
| 3. Affected by feelings vs. emotionally stable | 6.0 | 5.0 | 5.5 | 5.0 |
| 4. Humble vs. assertive | 6.0 | 6.0 | 8.0 | 7.0 |
| 5. Sober vs. happy-go-lucky | 7.5 | 5.0 | 7.5 | 6.0 |
| 6. Expedient vs. conscientious | 5.5 | 5.5 | 5.5 | 6.5 |
| 7. Shy vs. Venturesome | 7.5 | 7.5 | 8.0 | 7.5 |
| 8. Touch-minded vs. tender-minded | 8.0 | 6.0 | 8.0 | 8.0 |
| 9. Trusting vs. suspicious | 2.5 | 3.5 | 3.5 | 5.5 |
| 10. Practical vs. imaginative | 8.5 | 6.5 | 5.5 | 7.5 |
| 11. Forthright vs. shrewd | 6.0 | 4.0 | 4.0 | 6.0 |
| 12. Self-assured vs. apprehensive | 2.0 | 4.0 | 5.5 | 3.5 |
| 13. Conservative vs. experimenting | 5.0 | 6.5 | 6.0 | 6.0 |
| 14. Group dependent vs. self-sufficient | 6.0 | 6.5 | 4.5 | 6.5 |
| 15. Undisciplined self-conflict vs. controlled | 8.5 | 7.0 | 4.5 | 6.5 |
| 16. Relaxed vs. tense | 3.5 | 3.5 | 4.0 | 7.5 |

* R = Recovered

** N = Non-alcoholic

Table 3. Analysis of variance of therapists' scores on the Sixteen Personality Factor Questionnaire.

| Factor | F Ratio for Professional Status(P) | F Ratio for Recovery Status(R) | F Ratio for Interaction(PR) |
|---|---|---|---|
| 1 | 4.50* | .50 | .50 |
| 2 | 1.67 | 1.67 | 1.67 |
| 3 | .02 | .22 | .02 |
| 4 | 1.50 | .17 | .17 |
| 5 | .15 | 2.46 | .15 |
| 6 | .06 | .06 | .06 |
| 7 | .02 | .02 | .02 |
| 8 | 1.00 | 1.00 | 1.00 |
| 9 | .82 | .82 | .09 |
| 10 | .57 | .00 | 2.29 |
| 11 | .00 | .00 | 1.60 |
| 12 | 6.00* | .00 | 10.67** |
| 13 | .02 | .15 | .15 |
| 14 | .29 | .81 | .29 |
| 15 | 5.40* | .07 | 3.27 |
| 16 | 5.40* | 3.27 | 3.27 |

* $p < .10$, df = 1,4

** $p < .05$, df = 1,4

Democratic Values Scale scores of the therapists were also analyzed by a 2 x 2 analysis of variance. Mean scores for each of the four conditions are presented in Figure 1. There was a trend for professional therapists to score more democratically than paraprofessional therapists ($F = 4.70$; df = 1,4; $p < .10$) as can be seen in Table 4. Recovery status was not found to be related to the democratic values scores of the therapists, and the interaction between Professional Status and Recovery Status was also non-significant.

Mean factor scores on the Attitudes Toward Alcoholism Scale for therapists within each of the experimental conditions are presented in Table 5. Statistical analyses (see Table 6) revealed only one significant difference between professional and paraprofessional therapists. Professional therapists received a significantly more positive score on Factor #4, thus indicating that professionals were more likely than paraprofessionals to realize that a periodic excessive drinker can be an alcoholic ($F = 66.27$; df = 1,4; $p < .01$). Results also indicated only one significant difference between recovered alcoholic therapists and non-alcoholic therapists, although a second difference showed a trend toward significance. Recovered therapists received a more positive score on Factor #4 than did non-alcoholic therapists ($F = 11.0$; df = 1,4; $p < .05$). There was a trend for recovered alcoholic therapists to show a more positive attitude than non-alcoholic therapists on Factor #1 ($F = 6.15$; df = 1,4; $p < .10$). This indicates that recovered alcoholic therapists tended to be more likely to recognize that psychological difficulties can be an important contributing factor in the development of alcoholism.

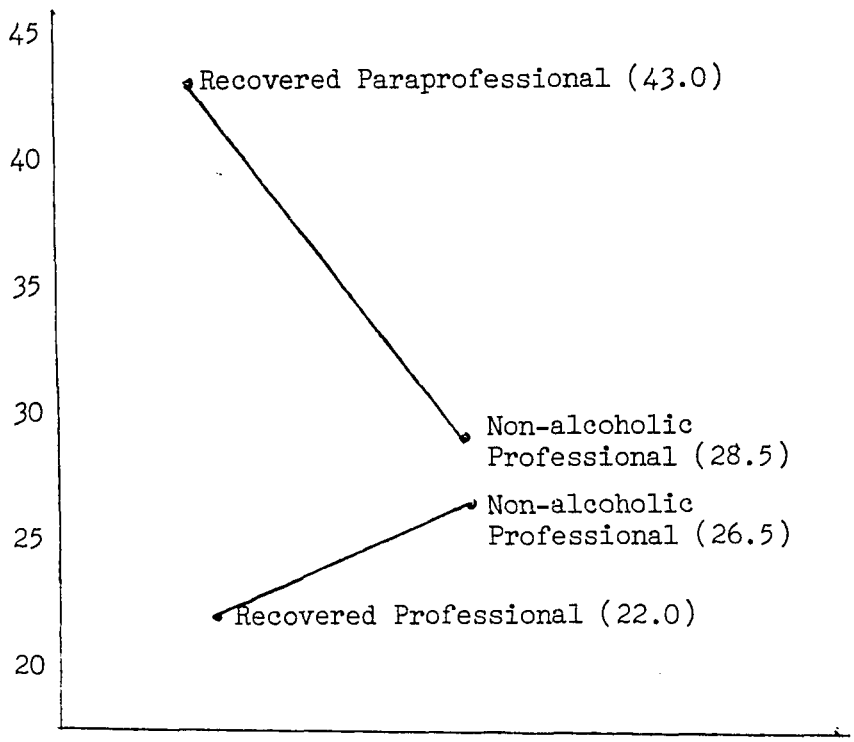



Figure 1. Therapists' mean scores on the Democratic Values Scale.

Table 4. Analysis of variance of therapists' Democratic Values Scores.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 264.5 | 264.5 | 4.702 | .10 |
| Recovery Status (R) | 1 | 50.0 | 50.0 | .889 | ns |
| P x R | 1 | 180.5 | 180.5 | 3.209 | ns |
| Subjects with PR (Error) | 4 | 225.0 | - | - | - |
| Total | 7 | 720.0 | - | - | - |

Table 5. Therapists' mean scores on The Alcoholism Questionnaire.

| Factor | Professional | | Paraprofessional | |
|---|---|---|---|---|
| | R* | N** | R | N |
| Emotional difficulties | 4.50 | 3.13 | 4.38 | 2.50 |
| Loss of control | 5.00 | 4.00 | 4.63 | 5.25 |
| Prognosis for recovery | 1.63 | 1.50 | 1.63 | 1.88 |
| The alcoholic as a steady drinker | 6.38 | 5.63 | 4.63 | 4.00 |
| Alcoholism and character defect | 1.38 | 2.75 | 1.38 | 1.25 |
| Social status | 1.25 | 1.50 | 1.38 | 1.75 |
| Alcoholism as an illness | 3.38 | 2.63 | 2.00 | 3.00 |
| Harmless voluntary indulgence | 2.23 | 1.38 | 1.75 | 1.25 |
| Alcoholic addiction-producing | 4.63 | 6.13 | 5.38 | 4.38 |

* R = Recovered

** N = Non-alcoholic

Table 6. Analysis of variance of therapists' scores on The Alcoholism Questionnaire.

| Factor | F Ratio for Professional Status(P) | F Ratio for Recovery Status(R) | F Ratio for Interaction(PR) |
|---|---|---|---|
| 1 | .38 | 6.15* | 1.78 |
| 2 | .18 | .03 | .06 |
| 3 | .23 | .03 | .23 |
| 4 | 66.27*** | 11.00** | .09 |
| 5 | .48 | .69 | .69 |
| 6 | 1.92 | .69 | .08 |
| 7 | .45 | .03 | 1.38 |
| 8 | .42 | 2.63 | .11 |
| 9 | .10 | .41 | 2.56 |

* $p < .10$, df = 1,4

** $p < .05$, df = 1,4

*** $p < .01$, df = 1,4

## Part II. Client Perceptions of Therapeutic Conditions

Mean client ratings of the therapeutic conditions offered by their respective therapists are shown in Table 7. While individual source tables for empathy, warmth, genuineness, and group cohesiveness are contained in Appendix L, a summary of these results is presented in Table 8. This table reveals that the main effect for Therapists either attained significance or approached it for each of the four therapy conditions studied. Therefore, pooling might have resulted in a positive bias in the $F$ tests and was thus not carried out. Using the more conservative procedure then, no significant effects were demonstrated for Professional or Recovery Status or their interaction. There was a trend, however, for professional therapists to be rated as more empathic than paraprofessional therapists ($F = 5.94$; $df = 1,4$; $p < .10$). It can also be noted that while differences were insufficient to attain significance, professionals also received higher mean scores than paraprofessionals on the warmth, genuineness, and cohesiveness measures. A comparison between recovered alcoholic and non-alcoholic therapists shows that the two groups received quite similar mean ratings on all scales except on the group cohesiveness measure which indicated a higher rating for the recovered therapists, though as noted, this was not a significant difference.

Table 7. Mean ratings of client perceived therapeutic conditions.

| Therapeutic Condition | Professional | | Paraprofessional | |
|---|---|---|---|---|
| | R* | N** | R | N |
| Empathy | 41.0 | 42.1 | 32.9 | 38.8 |
| Warmth | 67.6 | 65.9 | 57.1 | 64.6 |
| Genuineness | 48.8 | 46.8 | 44.5 | 46.6 |
| Group Cohesiveness | 70.1 | 59.5 | 66.1 | 62.0 |

* R = Recovered

** N = Non-alcoholic

On all measures, the higher score indicates the more beneficial therapy conditions.

Table 8. Summary table of F ratios for client perceptions of therapeutic conditions.

| Therapeutic Condition | F Ratio for Professional Status(P) | F Ratio for Recovery Status(R) | F Ratio for Interaction (PR) | F Ratio for Therapists (T) |
|---|---|---|---|---|
| Empathy | 5.94* | 2.20 | 1.01 | 2.33* |
| Warmth | 2.40 | <1 | 1.49 | 5.20*** |
| Genuineness | 1.46 | <1 | 1.30 | 3.37** |
| Cohesiveness | <1 | 2.96 | <1 | 5.62*** |

* $p < .10$

** $p < .05$

*** $p < .01$

F ratios for P, R, and PR were all computed using the therapist error term, thus yielding tests with 1 and 4 df. The therapist effect had 4 and 24 df.

## Part III. Treatment Outcome

### Attrition Rates

One of the first ways to assess the relative effectiveness of the different therapist groups is simply to compare attrition rates. For the purposes of this study, any client attending five or more sessions was said to have completed therapy whereas any client attending less than five sessons was defined as a therapeutic loss. Any client who did not attend at least one session was not included in the analyses since it was assumed that attrition in these cases could not be related to therapist influences. A chi square analysis shown in Table 9 revealed that Professional Status was not related to attrition rates ($X^2$ = .20; df = 1; ns). A chi square analysis shown in Table 10 revealed that while recovered alcoholic therapists had a lower attrition rate than did non-alcoholic therapists, the difference showed only a trend toward significance ($X^2$ = 2.55; df = 1; $p < .12$).

### Attendance Rates

Perhaps attendance rates are also related to therapeutic effectiveness. It would seem that the more successful therapists would be able to elicit client attendance so that the therapeutic process could take place. Again attendance figures were not included for those clients who did not attend at least one session since non-attendance in these cases could not be related to therapist influences. The chi square analysis shown in Table 11 indicated that Professional Status was not related to attendance rates ($X^2$ = .67; df = 1; ns). However,

Table 9. Relationship of professional status to attrition rates.*

| | Professional | Paraprofessional |
|---|---|---|
| Completed Therapy | 24 | 24 |
| Dropped Out | 11 | 9 |

* $X^2$ = .20, df = 1, ns.

Table 10. Relationship of recovery status to attrition rates.*

| | Recovered | Non-alcoholic |
|---|---|---|
| Completed Therapy | 27 | 21 |
| Dropped Out | 7 | 13 |

* $X^2$ = 2.55, df = 1, $p < .12$

Table 11. Relationship of professional status to attendance rates.*

| | Professional | Paraprofessional |
|---|---|---|
| Sessions attended | 213 | 219 |
| Sessions not attended | 122 | 106 |

* $X^2$ = .67, df = 1, ns.

the chi square analysis shown in Table 12 revealed that there was a significant relationship between Recovery Status of the therapist and attendance rates. Recovered alcoholic therapists obtained a significantly higher attendance at therapy sessions than did non-alcoholic therapists ($X^2 = 22.27$; df = 1; $p < .001$).

Table 12. Relationship of recovery status to attendance rates.

| | Recovered | Non-alcoholic |
|---|---|---|
| Sessions Attended | 248 | 184 |
| Sessions Not Attended | 87 | 141 |
| $X^2 = 22.27$, df = 1, $p < .001$ | | |

Therapist Ratings of Client Outcome

Mean therapist ratings of client outcome are presented in Figure 2 for each of the four experimental conditions. An analysis of variance using the unweighted means method (see Table 13) revealed that clients of the recovered alcoholic therapists received significantly higher improvement ratings than did clients of non-alcoholic therapists ($F = 17.1$; df = 1,4; $p < .025$). The mean improvement scores of clients of recovered therapists was 3.44 compared to a mean improvement score of 3.14 for the clients of non-alcoholic therapists. There was also a significant Professional Status x Recovery Status interaction

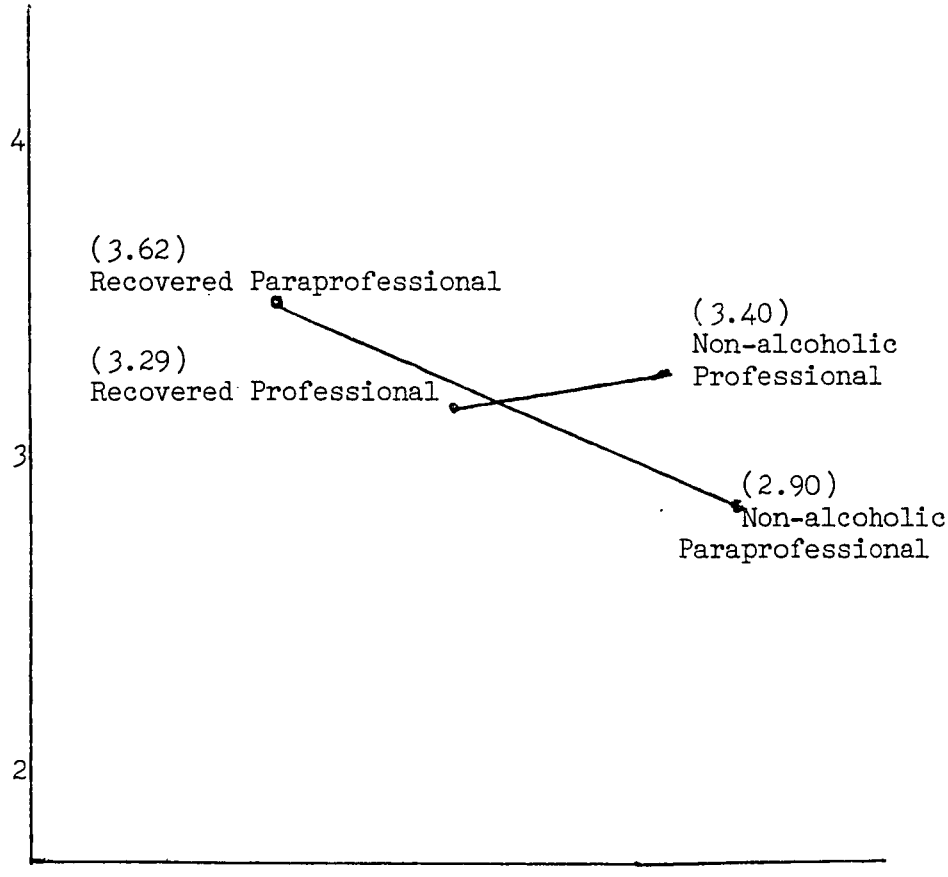



Figure 2. Therapists' mean ratings at client outcome.

Table 13. Analysis of variance of therapists' ratings of client outcome.

| Source | df | Sum of Squares | Mean Squares | F Ratio |
|---|---|---|---|---|
| Professional Status (P) | 1 | .013 | .013 | 1.30 |
| Recovery Status (R) | 1 | .171 | .171 | 17.10* |
| P x R | 1 | .352 | .352 | 35.20** |
| Therapists (T) | 4 | .042 | .010 | .135 |
| Subjects | 40 | 2.951 | .074 | |
| Total | 47 | | | |

* $p < .025$, df = 1,4

** $p < .005$, df = 1,4

($F = 35.2$; $df = 1,4$; $p < .005$). A Scheffé post-hoc analysis indicated that clients of the recovered alcoholic paraprofessional therapists received significantly higher improvement ratings than clients in any of the other three conditions. Clients treated by non-alcoholic paraprofessionals were also found to receive significantly lower improvement ratings than clients in any of the other three conditions. There was no significant main effect due to Professional Status of the therapist ($F = 1.30$; $df = 1,4$; ns).

Client Outcome Measures

A multivariate analysis of covariance was performed on the post-therapy scores for all clients. Pre-therapy scores were used as the covariate to adjust for initial level of adjustment on each of the scales studied. Post-therapy mean scores on the dependent measures are presented in Table 14. Univariate analyses of the seven dependent outcome measures are summarized in Table 15. Complete source tables on these dependent measures are contained in Appendix M.

Inspection of these tables indicates that Therapist effects did not reach significance on any of the seven measures. However, there was a trend toward significance found for Therapists on the Zung Depression Scale. Therefore, a pooled error term (Therapists plus Subjects) was used to test the experimental effects of Professional and Recovery Status and their interaction on all measures except the depression measure. On this depression scale, experimental effects were tested against the Therapist effect so as to avoid the possibility of a positive bias in the statistical tests.

Table 14. Clients' mean post-therapy scores.*

| Outcome Measure | Professional | | Paraprofessional | |
|---|---|---|---|---|
| | R** | N*** | R | N |
| Social adjustment | 20.6 | 14.8 | 20.6 | 20.4 |
| Occupational adjustment | 11.4 | 13.4 | 16.0 | 15.5 |
| Drinking severity | 24.1 | 24.8 | 24.9 | 22.9 |
| Depression | 27.2 | 39.4 | 24.4 | 29.8 |
| Anxiety | 6.5 | 12.2 | 4.4 | 4.3 |
| Hostility | 18.5 | 25.0 | 15.9 | 21.8 |
| Dependency | 22.2 | 22.3 | 20.1 | 21.9 |

* A high score on the social, occupational, and drinking scales is indicative of a good adjustment in these areas. A high score on the depression, anxiety, hostility, and dependency scales is indicative of impairment and hence a low score on these scales is indicative of a better psychological adjustment.

** R = Recovered

*** N = Non-alcoholic

Table 15. Univariate F ratios for adjusted post-therapy scores.*

| Outcome Measure | F Ratio for Professional Status (P) | F Ratio for Recovery Status (R) | F Ratio for Interaction (PR) | F Ratio for Therapists (T) |
|---|---|---|---|---|
| Social adjustment | 2.38 | 3.80** | 5.43*** | 1.15 |
| Occupational adjustment | 1.91 | <1 | <1 | 1.56 |
| Drinking severity | <1 | 1.34 | 5.27*** | 1.22 |
| Depression | <1 | 4.68** | 1.16 | 2.32** |
| Anxiety | 7.74**** | 2.34 | <1 | 1.07 |
| Hostility | 1.50 | 8.75**** | <1 | 1.45 |
| Dependency | <1 | <1 | 1.28 | 1.07 |

* Except for results on the depression measure, F ratios for P, R, and PR were all computed with the pooled error term thus yielding 1 and 36 df. On the depression scale, the therapist effect tended toward significance, and hence these effects were tested against the therapist error term, thus yielding 1 and 4 df.

** $p < .10$

*** $p < .05$

**** $p < .01$

A significant main effect for Professional Status was found on only one of the seven measures. Clients treated by paraprofessional therapists obtained significantly lower post-therapy anxiety scores than did clients of professional therapists ($F = 7.74$; $df = 1,36$; $p < .01$). A significant main effect for Recovery Status also occured on only one of the seven dependent measures. Clients of recovered alcoholic therapists evidenced significantly less residual hostility than did clients of non-alcoholic therapists ($F = 8.75$; $df = 1,36$; $p < .01$). Results of two other dependent measures showed a trend toward significance. Clients of recovered therapists tended to evidence a better adjustment on both the Social Adjustment Scale ($F = 3.8$; $df = 1,36$; $p < .10$) and on the Zung Depression Scale ($F = 4.68$; $df = 1,4$; $p < .10$).

Professional Status x Recovery Status interaction effects attained significance on two of the dependent measures. There was a significant interaction on the Social Adjustment Scale ($F = 5.43$; $df = 1,36$; $p < .05$) and on the Drinking Severity Scale ($F = 5.27$; $df = 1,36$; $p < .05$). A Scheffé post-hoc analysis indicated that clients of non-alcoholic professionals therapists evidenced a significantly lower post-therapy social adjustment than clients in any of the other three experimental conditions. A Scheffé procedure also showed that patients of non-alcoholic paraprofessionals evidenced a poorer drinking adjustment than did patients in the other conditions.

Results of the multivariate analyses are found in Table 16. The multivariate analyses provide some measure of the over-all effect

Table 16. Multivariate F ratios for adjusted post-therapy scores.

| Source | F Ratio | df | P Less Than |
|---|---|---|---|
| Professional Status (P) | 1.52 | 7,20 | .22 |
| Recovery Status (R) | 1.92 | 7,20 | .12 |
| P x R | 1.52 | 7,20 | .22 |
| Therapists | 1.54 | 28,74 | .07 |

of the experimental variables. Inspection of the findings of this procedure reveals no significant differences. Only the Therapist effect shows a trend toward significance, although Recovery Status shows a trend at the $p < .12$ level.

An error correlation matrix of scores on the seven patient-reported dependent measures is presented in Table 17. This matrix shows four significant correlations among dependent measures. The scores indicate that the more depressed or the more anxious a person was, the less adequate was his social adjustment ($r = -.52$ and $-.57$ respectively). There was also a high correlation between anxiety and depression ($r = .55$); the more anxious an individual was, the more likely he was to also be depressed. A final significant correlation ($r = -.33$) indicated that the more anxious the individual, the less adequate was his attempt to improve his drinking habits.

## Comparative Improvement Among Treated and Untreated Alcoholics

As can be seen from Table 18, the alcoholic clients receiving ten weeks of group therapy demonstrated a significantly greater amount of improvement than comparison subjects on six of the seven client-reported outcome measures when change scores were compared. One-tailed t-tests were used to analyze differences between the two groups since it was expected that treated individuals would improve more than untreated ones. Only on the dependency measure did the untreated comparison subjects surpass the treated clients.

Table 17. Error correlation matrix of post-therapy scores on all dependent measures.*

| | Soc | Occ | Drk | Dep | Anx | Hos |
|---|---|---|---|---|---|---|
| Social (Soc) | | | | | | |
| Occupational (Occ) | -.05 | | | | | |
| Drinking (Drk) | .28 | -.03 | | | | |
| Depression (Dep) | -.52*** | -.18 | -.28 | | | |
| Anxiety (Anx) | -.57*** | -.10 | -.33** | ..55*** | | |
| Hostility (Hos) | -.08 | .28 | .17 | .05 | .22 | |
| Dependency (Dcy) | -.06 | -.22 | .21 | -.03 | -.23 | -.22 |

* A high score indicates a good adjustment on the social, occupational, and drinking measures; a low score indicates a good adjustment on the depression, anxiety, hostility, and dependency measures.

** $p < .05$, df = 39, two-tailed test.

*** $P < .01$, df = 39, two-tailed test.

Table 18. Comparison of improvement between treated and untreated alcoholics.

| Outcome Measure | Mean Change Score Treated Clients | Mean Change Score Untreated Persons | t-Value |
|---|---|---|---|
| Social Adjustment | 2.78 | -1.00 | 2.80* |
| Occupational Adjustment | 3.24 | -1.62 | 2.63* |
| Drinking Severity | 16.37 | 13.23 | 2.23* |
| Depression | 10.22 | 1.31 | 2.21* |
| Anxiety | 4.51 | 1.77 | 1.80* |
| Hostility | 2.68 | - .85 | 2.45* |
| Dependency | - .76 | 3.00 | 2.03 |

* $p < .05$, one tailed test, df = 52.
A higher score indicates greater improvement; any negative score indicates an actual deterioration from pre- to post-therapy.

## DISCUSSION

It is apparent from the results of the 16 PF Questionnaire that recovered alcoholic and non-alcoholic therapists differed little from each other on the personality traits measured. The only finding to even suggest that Recovery Status of the therapists was related to personality structure indicated that recovered alcoholic professionals were significantly more self-assured than recovered alcoholic paraprofessionals. In fact, the recovered alcoholic therapists were the most self-assured of all the therapists. Perhaps the experience of overcoming a serious personal problem such as alcoholism and then disciplining oneself enough to complete training for a professional position provides an individual with a calm sense of confidence and self-assurance in the face of other difficulties. On the other hand, it simply may be that only a very self-assured person would attempt to pursue a professional degree after having himself experienced a serious drinking problem.

It is interesting to note that professional and paraprofessional therapists also obtained personality profiles that were quite similar to one another. Only on Factor $Q_3$ (Undisciplined self-conflict versus controlled), did the differences between professional and paraprofessional therapists exceed two sten scores. Despite the fact that these profiles appear quite similar to one another when viewed in relationship to the range of scores the general population receives on

these traits, some trends were found for the two groups to differ from one another. Specifically, it will be recalled that professional therapists tended to be more outgoing, more self-assured, more relaxed, and more able to control urges and act in ways consistent with their self-image. While such differences were not sufficient to attain significance, it should be noted that there were only a small number of therapists included for study, and hence the procedures used to test such effects provided little power. It thus seems that additional studies using a larger number of therapists within these conditions are needed to determine whether or not Professional Status is related to personality structure. Results of the present study indicate that such a relationship is likely since a statistical trend was observed on several of the traits studied even though only a low-powered test was available for identification of such effects. It would thus appear that the Professional Status of the therapists may bear a stronger relationship to personality structure than does the Recovery Status variable.

Professional Status may also be related to the therapist's commitment to democratic values. Again such a relationship is not confirmed since results showed only a trend toward significance, but such a relationship is hinted since only a low-powered test was available. Another study using a larger sample size is needed to confirm the existence of such a relationship, however.

Results of the Alcoholism Questionnaire indicate that all therapists in the study evidenced quite positive views toward alcoholism and this may account for the finding that there were few significant

differences between professional and paraprofessional therapists or recovered and non-alcoholic therapists. Despite this general similarity, professionals were more likely than paraprofessionals to realize that a periodic excessive drinker can be an alcoholic. Recovered alcoholic therapists also demonstrated a more accurate opinion on this same factor; they additionally tended to hold the more positive attitude that psychological difficulties can be an important contributing factor in the development of alcoholism. Perhaps either experiencing first-hand a drinking problem or receiving some formal informational input allows one to learn more accurate opinions about alcoholism. Without such experiences, it seems that one may fail to recognize fully the possible implications of periodic excessive drinking or to realize that psychological problems can contribute to excessive drinking. Such a conclusion is substantiated by Ferneau and Paine (1972) who also found that their volunteer counselors held generally positive attitudes toward alcoholism, but needed to resolve their conflict about whether emotional problems are an important contributing factor in alcoholism and about whether a periodic excessive drinker could be an alcoholic. Taken together, these results indicate that some training ought to be provided related to these issues when individuals without professional training or without personal experience with alcoholism are recruited as treatment agents.

It is somewhat difficult to interpret results concerning the relationship of the experimental variables to client perceptions of the therapeutic conditions. It is to be recalled that no significant

effects were demonstrated for Professional Status or Recovery Status or their interaction. While it would be safe to conclude, therefore, that such background characteristics of the therapist are unrelated to perceived therapy conditions, such as inference seems premature and the need for further research is again evident. One should note, for example, that there was a trend for professional therapists to receive higher empathy ratings than paraprofessional therapists. A consistent pattern also emerged inasmuch as professionals received higher mean ratings on the warmth, genuineness, and cohesiveness scales also. The F tests for Professional Status again contained little power since there was such a small number of therapists studied and since the therapist effect was used to provide a conservative error term. It is interesting to note that had the more usual analysis been performed, that is had the nested therapist factor been ignored and the data analyzed by a simple 2 x 2 ANOVA, results would have shown that professionals received significantly higher empathy and warmth ratings, and that they evidenced a trend toward higher ratings of genuineness. Given these additional considerations, therefore, it would appear that future research should be directed toward explicating the role of the Professional Status variable to the therapeutic core conditions. It is also suggested that future investigators consider using observor ratings of these core conditions since the alcoholic clients in the present study tended to rate their therapists very highly, thus detracting from sensitivity of the measures.

The Recovery Status variable did not demonstrate the consistent pattern produced by the Professional Status variable. Non-alcoholic therapists received higher empathy and warmth ratings but lower cohesiveness ratings than recovered alcoholic therapists and both therapist groups received nearly identical genuineness ratings. The therapist effect was again used to provide a conservative error term and it is interesting to note that had the simple 2 x 2 ANOVA been used, again ignoring the nested therapist factor, it would have been concluded that recovered alcoholic therapists received significantly lower empathy ratings but significantly higher group cohesiveness ratings than did non-alcoholic therapists. The actual reported results suggest that Recovery Status of the therapist is unrelated to the therapeutic core conditions, and perhaps this is the most appropriate conclusion at present, although it is apparent that more study is yet needed.

Future investigators may want to undertake a further examination of the relationship of Recovery Status to group cohesiveness. Although the present study could not demonstrate such a relationship, again it can be noted that had the more usual 2 x 2 simple ANOVA been computed, this effect would easily have reached significance. Also, personal observation by the experimenter suggested that recovered therapists were more concerned with building a supportive group climate while non-alcoholic therapists tended to place an increased emphasis on their own interaction with group members. The two therapists who obtained the best attendance rates, the lowest attrition rates, and who were also

given the highest group cohesiveness ratings were both recovered alcoholic women.

In summary, it is difficult to draw conclusions concerning the relationship of the experimental variables to client perceptions of therapy conditions because of the conservative nature of the statistical techniques used. While professionals may be more empathic than paraprofessional therapists and while recovered alcoholic therapists may be capable of building more cohesive groups, the present data can only suggest not confirm such relationships; future study is indicated.

While statements concerning the relationship of Professional and Recovery Status to perceived therapy conditions are speculative, results clearly demonstrated significant effects due to the Therapist factor. Therapists differed significantly from one another on the warmth, genuineness, and cohesiveness measures and tended to show a difference in the empathy they offered to the client. This indicates that if one is searching for a therapist who provides high levels of the core conditions, it is better to consider the individual aspects of the therapist rather than merely his background characteristics.

The most important aspect of the present study is, of course, the information it provides concerning the relationship of Professional Status and Recovery Status to client outcome. Taken as a whole, results provide little reason to believe that therapy outcome is related to the professional standing of the therapist. A few results indicate, however, that recovered alcoholic therapists may be more effective treatment agents in some ways than non-alcoholic therapists. A few findings also

indicate that the Professional and Recovery Status variables may interact in some important ways.

The present finding that professional and paraprofessional therapists differed little in effectiveness is consistent with previous studies that have found paraprofessionals to be as effective or possibly more effective than professional therapists (Anker and Walsh 1961, Berzon and Solomon 1966, Mendel and Rappaport 1963, Poser 1966, Zunker and Brown 1966). Present results indicated no differences between professionals and paraprofessionals in attendance rates, attrition rates, therapist ratings of patient outcome, or on six of the seven client reports of post-therapy adjustment. The only significant difference to be demonstrated indicated that following ten weeks of group therapy, clients of the paraprofessional therapists reported less anxiety than clients of professional therapists. Rosenbaum (1966) noted that professional and paraprofessional therapists might differ in the extent to which they focus on either a supportive approach (repressive-constructive) or a regressive-reconstructive approach emphasizing change. As the groups developed, it appeared to the experimenter that the paraprofessional therapists heavily emphasized supportive functions of the group while professional therapists were more concerned with assisting group members to become more aware of past inadequacies in coping mechanisms and with assisting them in the development of new strngths and coping skills. It is possible, therefore, that the clients treated by professionals were more threatened by this introspection and experienced a smaller decrease in anxiety over time than the clients of the paraprofessional therapists.

Why paraprofessional therapists were as effective as professionals remains a matter of conjecture. Perhaps paraprofessional therapists bring a naive enthusiasm to the therapeutic enterprise (Poser 1966). Those persons serving as paraprofessionals in this study all seemed to consider leading the groups as a challenging experience from which they could learn much. If professionals actually do lean toward a more regressive-reconstructive approach than paraprofessionals, it may be unreasonable to expect much positive change to have been elicited within a short ten-week period and perhaps the demonstrated similarity in results of the two therapist groups actually reflects a similarity of results between supportive and reconstructive therapies when only a short time perspective is employed. A final explanation is simply that clients relate easier to and feel more comfortable with individuals who may be perceived as peers rather than as authority figures. It should be noted that professional therapists in the present study held masters degrees only; whether different results would occur with doctorate level professionals is a matter for future study.

The few results suggesting that recovered alcoholics may be more effective as treatment personnel than non-alcoholic persons merits a brief review. First of all, recovered therapists obtained a significantly higher therapy attendance rate than non-alcoholic therapists, and they evidenced a lower attrition rate although this difference was not statistically significant. Recovered therapists also rated their clients as having shown significantly more improvement than did non-alcoholic therapists. Clients of recovered therapists also evidenced

significantly less hostility following treatment than clients of non-alcoholic therapists. These clients also tended to be less depressed and more socially adjusted at post-treatment. These results consistently favor the recovered alcoholic therapist. Nevertheless, without stronger support from the patient reports of post-therapy adjustment, it would be premature to draw any firm conclusions. The most justifiable statement is that limited evidence indicates a comparative superiority of the use of recovered personnel to work with the alcoholic client.

In debriefing sessions following the course of treatment, several clients spontaneously volunteered their own preference for a recovered therapist who could "really understand" their problems. Perhaps the effectiveness of the recovered personnel lies partly in their ability to elicit favorable client expectations about therapy. It will be noted that there was no demonstrated superiority over non-alcoholic therapists in the therapeutic conditions offered to the clients. It is also possible that a successful outcome in alcoholism treatment bears a stronger relationship to therapy variables such as confrontation style than to the core conditions which are so helpful in the treatment of neurotics.

Perhaps it is also important to recognize that there was a significant interaction between the Professional Status and the Recovery Status variables on three dependent measures. Non-alcoholic paraprofessionals rated their clients as less improved than did all the other therapists. Correspondingly, clients of these non-alcoholic paraprofessionals also received significantly lower scores on the measure of drinking behavior, thus indicating the least improvement in this area.

While only one of the seven areas of adjustment reported on by the clients showed this decreased effectiveness for the non-alcoholic paraprofessionals, the finding takes on added significance when one recognizes that it is the drinking problem of the client which is of prime concern. If clients of non-alcoholic paraprofessional therapists are more likely to begin drinking again, it is possible that other areas of adjustment may soon be adversely affected. The importance of such a finding definitely indicates that additional study is needed. Perhaps the individual who has had neither professional training in the alcoholism field nor personal experience with overcoming the problem is at a disadvantage when it comes to treating the alcoholic client. Again, it should be noted that such a viewpoint is founded on limited data and firm conclusions must await further empirical support.

A significant interaction between Professional Status and Recovery Status was also found on the scale of social adjustment. Clients of non-alcoholic professional therapists received a significantly lower mean rating on this scale than clients in any of the other conditions. No readily apparent explanation is available for such a result.

Before summarizing the conclusions, a few additional items of interest should be mentioned. First, clients in all conditions received average scores indicating a better adjustment after treatment than before it except on the dependency scale. It will also be remembered that the dependency measure was not correlated with any of the other six measures of adjustment reported by the clients. It seems, therefore, that this dependency scale was not a useful outcome measure. Dependency

needs may reflect a long-standing personality feature that is not easily changed as a result of exposure to brief treatment.

It should also be noted that treated clients improved significantly more than untreated comparison subjects on all measures except the dependency scale. This attests to the benefits derivable from the addition of only ten weekly outpatient group sessions to the inpatient alcoholism treatment regime. The success of the treatment groups may also be suggested by several occurrences. First, two of the groups decided to continue meeting after the formal ten-week program was completed. Secondly, reports of satisfaction from clients and from several of the therapists reached administrative personnel, and outpatient groups were added to the treatment programs of the hospital.

It should also be mentioned that there were many difficulties which arose in working with this population group. There was, for example, a somewhat high rate of experimental mortality. In the short time period just between discharge from the hospital and being contacted for assignment to groups, several individuals had left town and others had returned to heavy drinking. Many individuals (24) who said they definitely wanted to attend never showed up for the first session. A few individuals left town in the middle of their treatment interval, and a few subjects never completed post-therapy measures despite repeated promptings. Future researchers ought to be aware of such difficulties and they may want to consider designing studies so as to minimize therapeutic or experimental losses.

In summary, background characteristics of the therapist seem to bear little relationship to client perception of therapeutic conditions such as empathy or warmth. If any trends are suggested, it is for the professional therapist to be perceived as more empathic than the paraprofessional therapist. Nevertheless, individual therapists do differ significantly from one another in the therapeutic conditions which they offer to their clients.

Recovery Status of the therapist was found to bear some relationship to therapy outcome. Recovered therapists attained better results on a few of the indicators, and it was suggested further study was needed to confirm these initial findings. Professional Status of the therapist seemed largely unrelated to patient outcome. This implies that serious attention ought to be given to the use of paraprofessionals as deliverers of alcoholism services. However, two findings provided minimal evidence that the use of such paraprofessionals might better be limited to recovered alcoholic paraprofessionals; without training at least, non-alcoholic paraprofessionals may have difficulty in achieving the optimal treatment results. Results have thus seemed to provide some useful initial information concerning the importance of the background characteristics of the therapist in working with the alcoholic individual, and further investigation in this area may be expected to provide additionally valuable findings.

## APPENDIX A

## THE ALCOHOLISM QUESTIONNAIRE

### Scoring Instructions for the Alcoholism Questionnaire

Scoring yields nine mean factor scores. The factors are defined in Table 1. A high score on factors 1, 2, 4, and 9 and a low score on factors 3, 5, 6, and 7 indicate a "positive" attitude toward alcoholism. The subject receives a score ranging from 1 to 7 on each item where 1 indicates complete agreement with the statement and 7 indicates complete disagreement. Factors are defined by the following items:

| | | |
|---|---|---|
| 1. | Emotional difficulties | 7, 19, 28, 36 |
| 2. | Loss of Control | 6, 16, 27, 32 |
| 3. | Prognosis for recovery | 9, 12, 30, 37 |
| 4. | Alcoholic as a steady drinker | 1, 11, 25, 35 |
| 5. | Alcoholism and character defect | 2, 18, 26, 34 |
| 6. | Social status | 4, 14, 22, 31 |
| 7. | Alcoholism as an illness | 8, 13, 29, 38 |
| 8. | Harmless voluntary indulgence | 3, 15, 21, 33 |
| 9. | Alcoholic addiction-producing | 10, 20, 24, 40 |

The scores for each item for each factor are summed, and the total divided by the number of scores to yield 9 mean factor scores.

On the following pages you will find a number of statements about alcoholism. We want to know how much you agree or disagree with each of the statements. To the right of each statement you can find a rating scale:

Disagree Agree
1 2 3 4 5 6 7

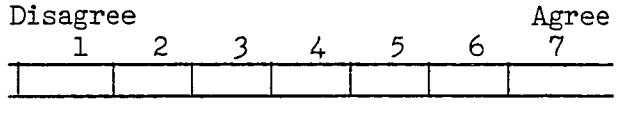
The points along the scale (1, 2, 3, . . . 7) can be interpreted as follows:

1. Completely disagree
2. Mostly disagree
3. Disagree more than agree
4. Neutral
5. Agree more than disagree
6. Mostly agree
7. Completely agree

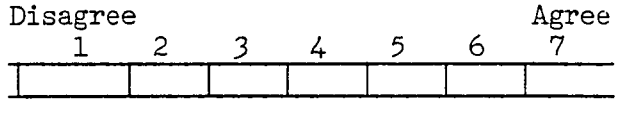
The use of the scale can be illustrated with the following statement:

"There are very few female alcoholics."

If you agreed completely with this statement, you would place a mark in column 7.
If you agreed slightly with the statement, you would place a mark in column 5.
If you mostly disagreed with the statement, you would place a mark in column 2.
In this manner you can indicate the extent to which you agree or disagree with each of the statements on the following pages.
Like everyone else, you will probably feel that you do not know the answer to some of the statements. When this occurs, please make the best guess you can.
Please make your marks inside the agreement or disagreement boxes of the scales. Do it like this:




Do not do it like this:




Please make sure that you make a mark for each statement. Leave none of the statements blank and make only one mark for each. You should not spend more than a few seconds marking each statement. If it is difficult for you to make up your mind, make the best guess that you can and go on to the next one.

| | Disagree 1 2 3 4 5 6 7 Agree |
|---|---|
| 1. A person who often drinks to the point of drunkenness is almost always an alcoholic. | |
| 2. People who become alcoholics are usually lacking in will power. | |
| 3. Most alcoholics have no desire to stop drinking. | |
| 4. The average alcoholic is usually unemployed. | |

| | Disagree 1 | 2 | 3 | 4 | 5 | 6 | Agree 7 |
|---|---|---|---|---|---|---|---|
| 5. A person can inherit a weakness for alcohol. | | | | | | | |
| 6. The alcoholic is helpless to control the amount of alcohol he drinks. | | | | | | | |
| 7. Alcoholics usually have severe emotional difficulties. | | | | | | | |
| 8. Alcoholism is best described as a habit rather than an illness. | | | | | | | |
| 9. The alcoholic drinks excessively mainly because he enjoys drinking. | | | | | | | |
| 10. An alcoholic can get into as much trouble by drinking beer as by drinking liquor. | | | | | | | |
| 11. A person who frequently stays intoxicated for several days at a time is unquestionably an alcoholic. | | | | | | | |
| 12. The alcoholic is seldom helped by any sort of medical or psychological treatment. | | | | | | | |
| 13. The alcoholic has only himself to blame for his problem. | | | | | | | |
| 14. Alcoholics, on the average, have a poorer education than other people. | | | | | | | |
| 15. Alcoholics seldom harm anybody but themselves. | | | | | | | |
| 16. Hardly any alcoholic could drink less even if they wanted to. | | | | | | | |
| 17. The most sensible way to deal with alcoholics is to compel them to go somewhere for treatment. | | | | | | | |
| 18. The alcoholic is a morally weak person. | | | | | | | |

| | Disagree 1 | 2 | 3 | 4 | 5 | 6 | Agree 7 |
|---|---|---|---|---|---|---|---|
| 19. An alcoholic's basic troubles were with him long before he had a problem with alcohol. | | | | | | | |
| 20. Once a person becomes an alcoholic, he can never learn to drink moderately again. | | | | | | | |
| 21. The harm done by alcoholics is generally overestimated. | | | | | | | |
| 22. Very few alcoholics come from families in which both parents were abstainers. | | | | | | | |
| 23. Even if an alcoholic has a sincere desire to stop drinking, he cannot possibly do so without help from others. | | | | | | | |
| 24. Nobody who drinks is immune from alcoholism. | | | | | | | |
| 25. Even if a heavy drinker is able to stop drinking for several weeks at a time, he may still be an alcoholic. | | | | | | | |
| 26. Alcoholism is a sign of character weakness. | | | | | | | |
| 27. Alcoholism never comes about very suddenly. | | | | | | | |
| 28. Unhappy marriages and other unpleasant family situations often lead to alcoholism. | | | | | | | |
| 29. Alcoholism is not a disease. | | | | | | | |
| 30. Most alcoholics could not be rehabilitated even if more help were available for them. | | | | | | | |
| 31. Alcoholics are seldom found in important positions in business. | | | | | | | |

Disagree 1 2 3 4 5 6 7 Agree

32. Preferring to drink alone rather than with friends is a sign of alcoholism.

33. Alcoholics are usually in good physical health.

34. The alcoholic is basically a spineless person who has found an easy way out of his problems.

35. Some people who drink heavily, but only on weekends, are alcoholics.

36. An alcoholic usually has something in his past which is driving him to drink.

37. Most alcoholics are completely unconcerned about their problem.

38. With proper treatment, some alcoholics can learn to take the occasional social drink without getting into trouble.

39. Most alcoholics are either drunk or drinking every day.

40. A person usually has very little warning before he becomes an alcoholic.

## APPENDIX B

## THE DEMOCRATIC VALUES SCALE

### Scoring Instructions for the Democratic Values Scale

Scores may range from a maximally democratic score of 10 (1 point for strong disagreement with each of the statements) to a maximally non-democratic 60 (6 points for strong agreement with each item). Lerner (1973) reported scoring instructions ranging from 10 to 70, but this method was altered slightly in the present study.

Your position on therapeutic issues: Please indicate the extent to which you either agree or disagree with each of the following statements by placing one of the following marks next to each.

| | |
|---|---|
| +3 agree strongly | -3 disagree strongly |
| +2 agree moderately | -2 disagree moderately |
| +1 agree slightly | -1 disagree slightly |

_____(a) Successful completion of personal treatment should be a mandatory requirement for all therapists.

_____(b) Ideally, close supervision of individual therapy should be provided for all therapists on all or most of their cases at all stages in their careers.

_____(c) There are some cases that should not be treated by non-medical therapists without psychiatric supervision.

_____(d) Heads of treatment facilities for the mentally ill should generally be medically trained.

_____(e) If they had had a successful treatment experience, most political radicals of both the right and left would change their views on society and its ills.

_____(f) Patients can profitably decide many things in inpatient settings with patient government systems, but decisions about discharges and passes should be made only by the professional staff.

_____(g) Nonpsychotic adults convicted of offenses like prostitution and homosexuality need help whether they know it or not, and therefore the courts should make outpatient treatment mandatory for them.

_____(h) Involvement of the poor in programs planned for their welfare is essential, but because they are mainly oriented to immediate gratification, it is unrealistic to give them top level decision-making powers in planning such programs because long-range goals would inevitably suffer.

_____(i) Most people who are very concerned about possible threats to civil liberties involved in large-scale community mental health programs are either naive or reactionary.

_____(j) To coordinate service and facilitate effective mental health programs on a community-wide basis, any properly qualified professional should have access to any information about a patient in the hands of any other properly qualified professional without either having to obtain the patient's consent.

## APPENDIX C

## GROUP COHESIVENESS MEASURE

### Scoring Instructions for the Group Cohesiveness Measure

The present method of scoring allows a range of 13 to 85 with a high score indicative of a highly cohesive group. For items 1 through 6, the first possible answer is given a score of 7, the second answer a score of 6, and so on until the last answer listed is given a score of 1. For example, a response to item 1 of: a great deal, very much, much, some, a little, very little, and not at all would be scored 7, 6, 5, 4, 3, 2 and 1 respectively. To score items 7, 8, and 9, a response of: a, b, c, d, and e would be scored 5, 4, 3, 2 and 1 respectively. To score items 10, 11, 12 and 13, a response of: a, b, c, d, e, f, and g would be scored 7, 6, 5, 4, 3, 2 and 1 respectively. The total score is obtained by summing up the scores obtained on each of the 13 items.

Answer the following questions in terms of your feelings at the present time. Circle the best answer.

1. In the group I have talked about intimate details of my life.

   A great deal
   Very much
   Much
   Some
   A little
   Very little
   Not at all

2. I have expressed my feelings of irritation, annoyance, sorrow or warmth in the group.

   A great deal
   Very much
   Much
   Some
   A little
   Very little
   Not at all

3. When expressing feelings of irritation, annoyance, sorrow, or warmth, I feel:

   Extremely comfortable
   Very comfortable
   Comfortable
   Slightly uneasy
   Uneasy
   Very uneasy
   Extremely uneasy

4. Since the last session I have thought about the group:

   All of the time
   Most of the time
   Much of the time
   Some of the time
   A couple of times
   Once
   Not at all

5. I like my group:

   Very much
   Pretty much
   It's all right
   Don't much care
   Dislike it a little
   Dislike it
   Dislike it very much

6. I feel that working with this particular group will enable me to attain my personal goals for which I sought an encounter group.

   Definitely
   Very likely
   Likely
   Uncertain
   Unlikely
   Very unlikely
   Definitely not

7. How often do you think your group should meet?

   a. Much more often than at present
   b. More often than at present
   c. No more often than at present
   d. Less often than at present
   e. Much less often than at present

8. How well do you like the group you are in?

   a. I like it very much
   b. I like it pretty well
   c. It's all right
   d. Don't like it too much
   e. Dislike it very much

9. If most of the members in your group decided to dissolve the group by leaving, would you try to dissuade them?

   a. I would try very hard to persuade them to stay
   b. I would try to persuade them to stay
   c. I would make a slight attempt to persaude them to stay
   d. It would make no difference if they left or stayed
   e. I would definitely not try to persuade them to stay

10. If you could replace members of your group with other "ideal" group members, how many would you exchange? (Excluding the leader.)

   a. None
   b. One
   c. Two
   d. Three
   e. Four
   f. Five
   g. More than five

11. To what degree do you feel that you are included by the group in its activities?

   a. I am included in all the group's activities.
   b. I am included in almost all the group's activities.
   c. I am included in most of the group's activities.
   d. I am included in some of the activities, but not in others.
   e. I don't feel that the group includes me in many of its activities.
   f. I don't feel that the group includes me in most of its activities.
   g. I don't feel that the group includes me in any of its activities.

12. How do you feel about the group leader?

   a. He couldn't be better.
   b. I am extremely satisfied.
   c. I am satisfied.
   d. I guess he's OK.
   e. I have many doubts.
   f. I am dissatisfied.
   g. I am extremely dissatisfied.

13. Compared to other groups in the course, how well would you imagine your group works together?

    a. Probably the best
    b. Much better than most
    c. Above average
    d. Average
    e. Not quite as well
    f. Not nearly as well
    g. Probably the worst

APPENDIX D

THERAPIST RATING FORM

Scoring Instructions for the Therapist Rating Form

The client receives an improvement score of 1 if statement #1 is checked, a score of 2 for the second statement, a score of 3 for the third statement and a score of 4 if the last statement is checked. A high score indicates the greater improvement.

Client's name_____

On the basis of your overall impression, please place a check mark next to the appropriate outcome category.

_____1. This client has deteriorated since beginning group therapy.

_____2. This client has shown no improvement since beginning group therapy.

_____3. This client has shown a moderate amount of improvement since beginning group therapy.

_____4. This client has very much improved since beginning group therapy.

APPENDIX E

SOCIAL ADJUSTMENT SCALE

Scoring Instructions for the Social Adjustment Scale

To obtain an individual's score on this scale, complete the following procedure. For item 1, a response of: A, B, C, D, E or F receives 0, 2, 4, 6, 8 or 10 points respectively. One point is also given for a Yes response on items 2, 4, 5, 9, 13, 15, and 17 through 21; one point is also scored for a No response to items 3, 6, 7, 8, 10, 11, 12, 14 and 16. The total score is simply the summation of the points received on each individual item. Scores may thus range from 0 to 30 and a high score indicates the better social adjustment.

1. Please place a check mark next to one of the following five categories which best describes your current living arrangements.

_____(A) I usually sleep anywhere I can find a place, such as a bus depot, airport, park, or public place.

_____(B) I frequently sleep in hotels or in some type of institutional setting such as a mission.

_____(C) I usually have access to some regular form of housing such as a half-way house, or the home of a friend or relative.

_____(D) I have been staying consistently at the home of a friend or relative for at least the last month.

_____(E) I am renting some type of accommodation such as an apartment or house.

_____(F) I am living in a home which I own or am presently buying.

Please feel free to give candid replies to the following questions. There are no right or wrong answers. Indicate your answer to each question by placing an X next to the Yes or No. There is no time limit; but work rapidly.

| | | YES | NO |
|---|---|---|---|
| 2. | Do you like to participate in festival gatherings and lively parties? | ____ | ____ |
| 3. | Do you keep in the background on social occasions? | ____ | ____ |
| 4. | Do you find that you tend to have a few close friends rather than many casual acquaintances? | ____ | ____ |
| 5. | Do you make friends readily? | ____ | ____ |
| 6. | Do you hesitate to enter a room by yourself when a group of people are sitting around talking together? | ____ | ____ |
| 7. | Do you feel very self-conscious in the presence of people whom you greatly admire but with whom you are not well acquainted? | ____ | ____ |
| 8. | Do you ever cross the street to avoid meeting somebody? | ____ | ____ |
| 9. | Have you found it easy to make friendly contacts with members of the opposite sex? | ____ | ____ |
| 10. | Do you have difficulty starting conversation with a person to whom you have just been introduced? | ____ | ____ |
| 11. | Are you troubled with shyness? | ____ | ____ |
| 12. | When you want something from a person with whom you are not very well acquainted, would you prefer to write a note or letter to the individual than go and ask him or her personally? | ____ | ____ |
| 13. | Do you ever take the lead to enliven a party? | ____ | ____ |
| 14. | Do you often have much difficulty in thinking of an appropriate remark to make in group conversation? | ____ | ____ |
| 15. | Do you take responsibility for introducing people at a party? | ____ | ____ |
| 16. | Do you often hesitate to speak out in a group lest you say and do the wrong thing? | ____ | ____ |

| | YES | NO |
|---|---|---|
| 17. Do you presently have at least one close friend of the same sex? | ____ | ____ |
| 18. Do you presently have at least one close friend of the opposite sex? | ____ | ____ |
| 19. Are you presently involved in a satisfying romantic relationship? | ____ | ____ |
| 20. Are you presently getting along well with those close to you? | ____ | ____ |
| 21. Are you presently an active member of any organization such as a social group, a church group, or a club? (Do not count an organization which is related to an alcohol problem such as A.A.) | ____ | ____ |

APPENDIX F

OCCUPATIONAL ADJUSTMENT SCALE

Scoring Instructions for the Occupational Adjustment Scale

An individual score on this scale is obtained by the following method. For item 1, a response of: A, B, C, D or E is given a score of 1, 2, 3, 4 or 5 respectively. One point is scored for a Yes response to items 9, 10, 12 and 17. One point is also given for each No response on items 2 through 8, 11, 13 through 16, and 18 through 21. The total score is then obtained by summing the points received on the individual items. Scores may range from 1 to 25, and a high score indicates a better occupational adjustment.

1. Please place a check mark next to one of the five following categories which best describes your occupational or vocational status during the past four weeks.

_____(A) I have not worked at all during the past month.

_____(B) I have worked less than one week during the past month.

_____(C) I have worked for one week or more during the past month although I have not worked for the entire month.

_____(D) I have worked steadily for the last month but I cannot make full use of my abilities and education in the job.

_____(E) I have worked steadily for the last month in a job which allows me to use my full abilities and education.

Please feel free to give candid replies to the following questions. There are no right or wrong answers. Indicate your answer to each question by placing an X next to the Yes or No. There is no time limit; but work rapidly. If you have not worked at all during the last year, please omit items 23 through 42.

| | | YES | NO |
|---|---|---|---|
| 2. | Do you sometimes get badly flustered and "jittery" in your present job? | ____ | ____ |
| 3. | Do you think you must "play politics" to get promotion or an increase in pay in your present job? | ____ | ____ |
| 4. | Do you think that you have to work too long hours on your present job? | ____ | ____ |
| 5. | Would you like to secure some other job than the one you now hold? | ____ | ____ |
| 6. | Do you feel that your present employer or boss holds a personal dislike or grudge toward you? | ____ | ____ |
| 7. | Do you have to work on your present job with certain people whom you dislike? | ____ | ____ |
| 8. | Do you find that you have very little real interest in your present job? | ____ | ____ |
| 9. | Do you feel that your employer is paying you a fair salary? | ____ | ____ |
| 10. | Do you like all the people with whom you work on your present job? | ____ | ____ |
| 11. | Does your present job fatigue you greatly? | ____ | ____ |
| 12. | Do you feel that you have adequate opportunities to express your own ideas in your present job? | ____ | ____ |
| 13. | Is the pay in your present work so low that you worry lest you be unable to meet your financial obligations? | ____ | ____ |
| 14. | Do any of the people with whom you work have personal habits and characteristics which irritate you? | ____ | ____ |
| 15. | Does your present job force you to hurry a great deal? | ____ | ____ |
| 16. | Do you feel you are just a cog in an inhuman machine in your present job? | ____ | ____ |
| 17. | Does your present employer or boss praise you for work which you do well? | ____ | ____ |

| | | YES | NO |
|---|---|---|---|
| 18. | Do you get discouraged in your present work? | _____ | _____ |
| 19. | Is your present job very monotonous? | _____ | _____ |
| 20. | Do you feel that your immediate superior or boss lacks sympathy and understanding in dealing with you as an employee? | _____ | _____ |
| 21. | Do you experience a fear of losing your present job? | _____ | _____ |

APPENDIX G

DRINKING SEVERITY SCALE

Scoring Instructions for the Drinking Severity Scale

To score this scale, a response of: A, B, C, D or E is given a score of 1, 3, 5, 9 or 11 points respectively. One point is also given for each false response on items 2 through 15. Scores may range from 1 to 25 and a high score indicates a less severe drinking problem.

1. Please place a check mark next to one of the following five categories which best describes your drinking behavior over the past four weeks.

_____(A) I have not had anything to drink within the past month.

_____(B) I have been drinking only on specific social occasions, and this has not been as often as once a week.

_____(C) I have been drinking about once a week or less.

_____(D) I have been drinking more than once a week, but not daily.

_____(E) I have been drinking daily.

Please place a check mark in the appropriate space depending on whether the statement is true or false as it pertains to you in the past four weeks.

| | True | False |
|---|---|---|
| 2. I have been drinking when I am alone. | _____ | _____ |
| 3. I have had at least one episode of binge drinking lasting more than a day. | _____ | _____ |
| 4. I sneak drinks when no one is looking. | _____ | _____ |
| 5. Once I start drinking it is difficult for me to stop before I become intoxicated. | _____ | _____ |

| | | True | False |
|---|---|---|---|
| 6. | I have been intoxicated on work days. | _____ | _____ |
| 7. | I have taken a drink first thing in the morning. | _____ | _____ |
| 8. | I have neglected my regular meals when I have been drinking. | _____ | _____ |
| 9. | I haven't been nursing my drinks; I toss them down pretty fast. | _____ | _____ |
| 10. | I have been drinking for the effect of alcohol without paying attention to the type of beverage or brand name. | _____ | _____ |
| 11. | I have had a hangover within the past month. | _____ | _____ |
| 12. | I have been arrested for driving while drinking within the past month. | _____ | _____ |
| 13. | I have made myself physically sick as a result of drinking within the past month (vomiting, stomach cramps, etc.). | _____ | _____ |
| 14. | I carry a bottle with me or leave one close at hand. | _____ | _____ |
| 15. | I have had at least one blackout (loss of memory) within the past month as a result of drinking. | _____ | _____ |

APPENDIX H

THE ZUNG SELF-RATING DEPRESSION SCALE

Scoring Instructions for the Zung Self-Rating Depression Scale

This scale is constructed so that the more depressed individual will receive a higher score. Ten of the items are worded symptomatically positive and ten are worded symptomatically negative. In scoring, a value of 1, 2, 3 and 4 is assigned to a response depending upon whether the item was worded positively or negatively. For example, for the positively worded item #1: "I feel down-hearted and blue," a response of: a little of the time, some of the time, good part of the time, or most of the time, would be scored 1, 2, 3 and 4 respectively. For a negatively worded item such as item #2: "Morning is when I feel the best," a response of: a little of the time, some of the time, good part of the time, or most of the time, would be scored 4, 3, 2 and 1 respectively. The obtained score is simply obtained by summing the points received on each of the 20 items. Positively worded items are 1, 3, 4, 7, 8, 9, 10, 13, 15 and 19; negatively worded items are 2, 5, 6, 11, 12, 14, 16, 17, 18 and 20. Scores may thus range from 20 to 80 points.

Please place a check mark next to the statement that best describes your present feelings.

1. I feel down-hearted and blue.
   ___(a) a little of the time
   ___(b) some of the time
   ___(c) a good part of the time
   ___(d) most of the time

2. Morning is when I feel the best.
   ___(a) a little of the time
   ___(b) some of the time
   ___(c) a good part of the time
   ___(d) most of the time

3. I have crying spells or feel like it.
   ___(a) a little of the time
   ___(b) some of the time
   ___(c) a good part of the time
   ___(d) most of the time

4. I have trouble sleeping at night.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

5. I eat as much as I used to.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

6. I still enjoy sex.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

7. I notice that I am losing weight.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

8. I have trouble with constipation.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

9. My heart beats faster than usual.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

10. I get tired for no reason.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

11. My mind is as clear as it used to be.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

12. I find it easy to do the things I used to.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

13. I am restless and can't keep still.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

14. I feel hopeful about the future.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

15. I am more irritable than usual.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

16. I find it easy to make decisions.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

17. I feel that I am useful and needed.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

18. My life is pretty full.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

19. I feel that others would be better off if I were dead.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

20. I still enjoy the things I used to do.
___(a) a little of the time
___(b) some of the time
___(c) a good part of the time
___(d) most of the time

## APPENDIX I

## REVISED MANIFEST ANXIETY SCALE

### Scoring Instructions for the Revised Manifest Anxiety Scale

One point is given for a true response on items 2, 3, 4, 5, 7 and 9 through 20; one point is also given for a false response on items 1, 6 and 8. To obtain the total score, simply sum scores on the individual items. Scores may range from 0 to 20, and a high score indicates greater anxiety.

Read the following statements and decide whether each one is true as applied to you or false as applied to you. You are to mark your answers on the answer sheet which you have been given. If a statement is true or mostly true as applied to you, blacken between the lines in the column numbered (1). If a statement is false or mostly false as applied to you, blacken between the lines in the column numbered (2). Remember to give your own opinion of yourself. Remember to please make some answer to every statement.

1. I believe I am no more nervous than most others.
2. I work under a great deal of tension.
3. I cannot keep my mind on one thing.
4. I am more sensitive than most other people.
5. I frequently find myself worrying about something.
6. I am usually calm and not easily upset.
7. I feel anxiety about something or someone almost all the time.
8. I am happy most of the time.
9. I have periods of such great restlessness that I cannot sit long in a chair.
10. I have sometimes felt that difficulties were piling up so high that I could not overcome them.

11. I certainly feel useless at times.
12. I find it hard to keep my mind on a task or job.
13. I am unusually self-conscious.
14. I am inclined to take things hard.
15. I am a high-strung person.
16. Life is a straing for me much of the time.
17. At times I think I am no good at all.
18. I am certainly lacking in self-confidence.
19. I sometimes feel that I am about to go to pieces.
20. I shrink from facing a crisis or difficulty.

## APPENDIX J

## SUBSCALES OF THE BUSS-DURKEE HOSTILITY INVENTORY

### Scoring Instructions for the Hostility Measure

To obtain the total hostility score, sum the scores on each of the four subscales. For the verbal hostility subscale score, one point is given for a true response to items 4, 8, 12, 16, 23, 24, 28, 33 and 38, and one point is given for a false response on items 20, 30, 35 and 42. To score the indirect hostility subscale, one point is given for a true response to items 3, 7, 11, 19, 24, 29, 34 and 41 and one point is scored for a false response to items 15, 37 and 40. On the assault subscale, one point is scored for a true response to items 5, 13, 17, 21, 26, 31, 36 and 39, and one point is scored for a false response to items 1 and 9.

Please indicate on your answer sheet whether the numbered items are True (1) or False (2).

1. I seldom strike back, even if someone hits me first.
2. I sometimes spread gossip about people I don't like.
3. I lose my temper easily but get over it quickly.
4. When I disapprove of my friend's behavior, I let them know it.
5. Once in a while I cannot control my urge to harm others.
6. I never get mad enough to throw things.
7. Sometimes people bother me just by being around.
8. I often find myself disagreeing with people.
9. I can think of no good reason for ever hitting anyone.
10. When I am angry, I sometimes sulk.
11. I am irritated a great deal more than people are aware of.

12. I can't help getting into arguments when people disagree with me.

13. If somebody hits me first, I let him have it.

14. When I am mad, I sometimes slam doors.

15. I am always patient with others.

16. I demand that people respect my rights.

17. Whoever insults me or my family is asking for a fight.

18. I never play practical jokes.

19. It makes my blood boil to have somebody make fun of me.

20. Even when my anger is aroused, I don't use "strong language."

21. People who continually pester you are asking for a punch in the nose.

22. I sometimes pout when I don't get my own way.

23. If somebody annoys me, I am apt to tell him what I think of him.

24. I often feel like a powder keg ready to explode.

25. When people yell at me, I yell back.

26. When I really lose my temper, I am capable of slapping someone.

27. Since the age of ten, I have never had a temper tantrum.

28. When I get mad, I say nasty things.

29. I sometimes carry a chip on my shoulder.

30. I could not put someone in his place, even if he needed it.

31. I get into fights about as often as the next person.

32. I can remember being so angry that I picked up the nearest thing and broke it.

33. I often make threats I don't really mean to carry out.

34. I can't help being a little rude to people I don't like.

35. I generally cover up my poor opinion of others.

36. If I have to resort to physical violence to defend my rights, I will.

37. If someone doesn't treat me right, I don't let it annoy me.

38. When arguing, I tend to raise my voice.

39. I have known people who pushed me so far that we came to blows.

40. I don't let a lot of unimportant things irritate me.

41. Lately, I have been kind of grouchy.

42. I would rather concede a point than get into an argument about it.

43. I sometimes show my anger by banging on the table.

# APPENDIX K

## COMPLETE ANOVA SOURCE TABLES FOR THERAPEUTIC CONDITIONS

Table 19. Analysis of variance of therapist empathy.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 264.50 | 264.50 | 5.94 | .10 |
| Recovery Status (R) | 1 | 98.00 | 98.00 | 2.20 | ns |
| P x R | 1 | 45.13 | 45.13 | 1.01 | ns |
| Therapists | 4 | 178.25 | 44.56 | 2.33 | .10 |
| Subjects | 24 | 459.00 | 19.13 | | |
| Total | 31 | 1044.88 | | | |

Table 20. Analysis of variance of therapist warmth.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 276.13 | 276.13 | 2.40 | ns |
| Recovery Status (R) | 1 | 66.13 | 66.13 | 1 | ns |
| P x R | 1 | 171.13 | 171.13 | 1.49 | ns |
| Therapists | 4 | 460.50 | 115.13 | 5.20 | .01 |
| Subjects | 24 | 531.00 | 22.13 | | |
| Total | 31 | 1504.88 | | | |

Table 21. Analysis of variance of therapist genuineness.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 38.28 | 38.28 | 1.46 | ns |
| Recovery Status (R) | 1 | .03 | .03 | 1 | ns |
| P x R | 1 | 34.03 | 34.03 | 1.30 | ns |
| Therapists | 4 | 104.63 | 26.16 | 3.37 | .05 |
| Subjects | 24 | 186.25 | 7.76 | | |
| Total | 31 | | | | |

Table 22. Analysis of variance of group cohesiveness.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 4.50 | 4.50 | 1 | ns |
| Recovery Status (R) | 1 | 435.13 | 435.13 | 2.96 | ns |
| P x R | 1 | 84.50 | 84.50 | 1 | ns |
| Therapists | 4 | 587.25 | 146.81 | 5.62 | .01 |
| Subjects | 24 | 626.50 | 26.10 | | |
| Total | 31 | 1737.88 | | | |

# APPENDIX L

## COMPLETE ANOVA SOURCE TABLES FOR CLIENT OUTCOME MEASURES

Table 23. Univariate analysis of covariance of post-therapy scores on the social adjustment scale.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 18.97 | 18.97 | 2.38 | ns |
| Recovery Status (R) | 1 | 30.29 | 30.29 | 3.80 | .10 |
| P x R | 1 | 43.32 | 43.32 | 5.43 | .05 |
| Therapists | 4 | 36.12 | 9.03 | 1.15 | ns |
| Subjects | 32 | 251.20 | 7.85 | | |
| Total | 39 | 379.90 | | | |

Table 24. Univariate analysis of covariance of post-therapy scores on the occupational adjustment scale.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 68.07 | 68.07 | 1.91 | ns |
| Recovery Status (R) | 1 | 2.61 | 2.61 | 1 | ns |
| P x R | 1 | 4.24 | 4.24 | 1 | ns |
| Therapists | 4 | 209.08 | 52.27 | 1.56 | ns |
| Subjects | 32 | 1071.04 | 33.47 | | |
| Total | 40 | 1355.04 | | | |

Table 25. Univariate analysis of covariance of post-therapy scores on the drinking severity scale.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 2.94 | 2.94 | 1 | ns |
| Recovery Status (R) | 1 | 5.50 | 5.50 | 1.34 | ns |
| P x R | 1 | 21.57 | 21.57 | 5.27 | .05 |
| Therapists | 4 | 19.46 | 4.87 | 1.22 | ns |
| Subjects | 32 | 127.84 | 4.00 | | |
| Total | 40 | 177.31 | | | |

Table 26. Univariate analysis of covariance of post-therapy scores on the Zung depression scale.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 137.73 | 137.73 | 1 | ns |
| Recovery Status (R) | 1 | 647.51 | 647.51 | 4.68 | .10 |
| P x R | 1 | 69.03 | 69.03 | 1.16 | ns |
| Therapists | 4 | 553.40 | 138.35 | 2.32 | .10 |
| Subjects | 32 | 1904.96 | 59.53 | | |
| Total | 40 | 3312.63 | | | |

Table 27. Univariate analysis of covariance of post-therapy scores on the revised manifest anxiety scale.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 100.33 | 100.33 | 7.74 | .01 |
| Recovery Status (R) | 1 | 30.32 | 30.32 | 2.34 | ns |
| P x R | 1 | 10.44 | 10.44 | 1 | ns |
| Therapists | 4 | 55.12 | 13.78 | 1.07 | ns |
| Subjects | 32 | 411.52 | 12.86 | | |
| Total | 40 | 607.73 | | | |

Table 28. Univaraite analysis of covariance of post-therapy scores on the hostility scale.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 27.37 | 27.37 | 1.50 | ns |
| Recovery Status (R) | 1 | 160.05 | 160.05 | 8.75 | .01 |
| P x R | 1 | 15.35 | 15.35 | 1 | ns |
| Therapists | 4 | 101.32 | 25.33 | 1.45 | ns |
| Subjects | 32 | 557.76 | 17.43 | | |
| Total | 40 | 861.85 | | | |

Table 29. Univariate analysis of covariance of post-therapy scores on the dependency scales.

| Source | df | Sum of Squares | Mean Squares | F Ratio | P |
|---|---|---|---|---|---|
| Professional Status (P) | 1 | 7.92 | 7.92 | 1 | ns |
| Recovery Status (R) | 1 | 3.39 | 3.39 | 1 | ns |
| P x R | 1 | 33.87 | 33.87 | 1.28 | ns |
| Therapists | 4 | 112.56 | 28.14 | 1.07 | ns |
| Subjects | 32 | 843.84 | 26.37 | | |
| Total | 40 | 1001.58 | | | |

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