THE EFFECTS OF SIMULATED AFFECT FILMS AND VIDEOTAPE FEEDBACK IN GROUP PSYCHOTHERAPY WITH ALCOHOLICS

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ABSTRACT

THE EFFECTS OF SIMULATED AFFECT FILMS
AND VIDEOTAPE FEEDBACK IN GROUP
PSYCHOTHERAPY WITH ALCOHOLICS

By

Daniel G. Munoz

The review of the literature regarding the treatment of alcoholics suggests that none have been established as a commonly accepted and clearly effective method of treatment. Furthermore as Stieper and Wiener (1965) summarize, "Generally, the good prospect for counseling or therapy is described as not very disturbed, well-oriented, well educated and having good personal resources. If the literature regarding the treatment of alcoholics reflects little progress, then the development and evaluation of new approaches is direly needed.

The use of Interpersonal Process Recall (IPR) in conjunction with simulated affect films has been demonstrated to be a potent tool in accelerating client growth in individual counseling (Kagan, Krathwohl *et al.*, 1967; Schauble, 1970). The purpose of this study then, was to evaluate the effects of simulated affect films and videotape feedback in group psychotherapy with alcoholics.

Subjects were randomly assigned to one of two treatment methods: (1) IPR treatment in conjunction with group therapy, (2) regular group therapy. Subjects in this study

were primarily male volunteer patients from the community requesting treatment for alcoholism from the Alcoholic Rehabilitation Unit of a Veterans Administration Hospital. The same three therapists were used across treatments.

Subjects were administered the Minnesota Multiphasic Personality Inventory and the Michigan Sentence Completion Test pre- and post-treatment and were also rated weekly by two sets of raters, therapists and technicians, on each of the three Characteristics of Client Growth dimensions.

The three main hypotheses tested were:

HO_1 There are no differences between the IPR treatment group and the conventional treatment group in pre- to post-treatment change in scores on the dependent measures.

HO_2 There are no main effects due to therapist differences as indicated by pre- to post-treatment change in scores on the dependent measures.

HO_3 There are no main effects due to therapist by treatment interaction as reflected by pre- to post-treatment change in scores on the dependent measures.

A Multivariate Analysis of Variance procedure was used to analyze the data. The findings indicated that because of the significance of therapist differences and therapist by treatment interaction effects, a true evaluation of IPR in conjunction with group psychotherapy was not obtained. Further implications included:

1. Therapist differences and therapist by treatment interaction effects prevented a true evaluation of the IPR procedure. However, with noted trends in the data favoring the IPR approach, ongoing studies should be continued to

provide more substantial evidence as to whether the technique results in accelerated movement in group therapy. A thorough therapist training program might be an initial step in eliminating undesirable main effects; however, it it possible that IPR will work well only for certain types of therapists. It might be worthwhile to control for therapist level of functioning in future research.

2. As an extension of this study a follow-up study will be done providing a true assessment of treatment effectiveness in actual behavior outside of therapy. For the alcoholic, sobriety and current job picture will be the main criteria for success in this follow-up. Longitudinal studies examining such criteria will also provide data on the long range effectiveness of the traditional approach.

3. Observations regarding client growth in the first through the fourth week of treatments indicated that the IPR treatment group advanced in a positive direction more so than the conventional therapy group. Future research might investigate the effectiveness of IPR at different stages of the group therapy process. It might also be worthwhile to extend Phase I of the IPR model based on the findings of this study.

4. The use of the Michigan Sentence Completion Test (MSCT) appears to be a useful tool for depicting treatment differences. As an indices of attitude and need change the MSCT might be found a valuable tool in evaluating therapeutic effectiveness and seems to be especially responsive to the kinds of changes IPR effects.

5. There were differences in results between previous IPR research with one-to-one therapy and the present study. Future research should consider if IPR methods, successful in individual therapy, can be effective in group therapy. Should or can IPR methods or sequences of methods be devised uniquely for group therapy?

6. It should be noted that the results of this study by no means detracts from the research evidence supporting the effectiveness of IPR in individual therapy. This was a first attempt in using this method in a group therapy setting in addition, to using it with a psychologically "hard core" population.

7. The covariates IQ and years of drinking were not significant in this study and one questions further the value of using these factors as covariates in future research.

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Mr. Elmer Sootsman I cannot thank enough for his continuous moral and technical support throughout every step of this study. Others who assisted me are: Lee Erlandson, Ph.D. and Dianne Borchelt. To my committee members a thank you: to Norman Kagi, Ph.D., my chairman, who was always there when I needed him; Bill Kell, Ph.D., for caring, his sensitivity and willingness to share; Jan Plyler, Ph.D. who was with me from the beginning; and to Richard Johnson, Ph.D. for his interest in me as a person.

DEDICATION

To My Love,
Kathryn

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I would like to thank the entire psychology staff of the Veterans Administration Hospital in Battle Creek, Michigan for their moral encouragement during my graduate school years. Personal gratitude is expressed to Stewart Armitage, Ph.D., Chief of Psychology Service and the Alcoholic Rehabilitation Unit staff of the Veterans Administration Hospital whose unlimited cooperation made this study possible. To specific staff members Joann Sinclair, Ph.D.; Dianne Permelia, R.N.; Joseph Lesiak, M.S.W.; Virgil Prince, David Perkins and John Gilmore who gave of themselves far beyond normal limits--deepest and warmest thanks. And to the IPR team who assisted in this project, a special note of appreciation.

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CHAPTER I

THE PROBLEM

Specific Problem

The purpose of this study is to investigate the effects of affect simulation films together with stimulated recall on the positive growth of alcoholics in group therapy. A treatment program which combines the use of affect simulation films and stimulated videotape recall to accelerate positive growth in group therapy is compared with a conventional group therapy program.

In a recent review of the literature, Blocher (1967) listed characteristics of clients who persist in therapy or counseling with favorable prognosis toward a successful outcome. These characteristics included:

(1) Greater anxiety and self-satisfaction (Lorr, Katz and Rubenstein, 1958).

(2) Willingness to communicate problems and feelings to others (Hiller, 1958).

(3) Greater needs for achievement (Hiller, 1958).

(4) Higher social class background (Bailey, 1966).

(5) More formal education (Hiller, 1958).

(6) Higher measured intelligence (Stieper and Wiener, 1965).

(7) Tendency to be first born or only children (Stieper and Wiener, 1965).

(8) Less tendency to anti-social or delinquent behavior (Hiller, 1958).

Stieper and Wiener (1965) summarize, "Generally, the good prospect for counseling or therapy is described as not very disturbed, well-motivated, well-educated and having good personal resources."

> Since overwhelming evidence exists that the incidence of what we call mental illness, delinquency, promiscuity, alcoholism and most other social problems increases as we move down the socioeconomic ladder, the data above are not very encouraging indications to support the hope that counseling and psychotherapy as presently constituted are likely to be major factors in the alleviation of critical social problems. (Blocher, 1967).

The treatment of alcoholics is one of the psychologically "hard core" problems in which positive outcome rate remains less than impressive. Wallerstein (1957) acknowledges the lack of progress in effectively treating the alcoholic. "The increased knowledge of the nature of the dynamics of alcoholic process and the character structure of the alcoholic patient...has not been significantly translated into increased therapeutic effectiveness."

If the literature regarding the treatment of alcoholics reflects little progress, then the development and evaluation of new approaches is direly needed. Group

therapy has increased in popularity due to a number of reasons, one of which is that a single therapist sees a number of clients simultaneously. The ethical obligation of therapists goes beyond the number of clients seen, however. Therapy must be evaluated in terms of length of treatment, economy of effort and degree of success.

Research has recently been conducted to determine the effectiveness of a specific methodological technique using videotape to facilitate the therapeutic process. This technique is referred to as Interpersonal Process Recall (IPR), using a videotape playback of the actual therapy session to stimulate recall of the underlying feelings and thoughts operating between therapist and client (Kagan, Schauble, Resnikoff, Danish and Krathwohl, 1969). This technique was shown to have promise in accelerating client growth in therapy with prisoners and alcoholics (Kagan, Krathwohl *et al.*, 1967) and in association with hypnosis (Woody, Kagan, Krathwohl and Farquhar, 1965). Schauble (1970), in a controlled study, has demonstrated the effectiveness of this procedure in accelerating the therapeutic process with clients in individual therapy. Involved in this research was the development of a simulated confrontation procedure which was incorporated into the method as a means of accelerating client growth.

The use of simulation films and stimulated recall in therapy appears to be a promising method in accelerating the group therapy process among alcoholics.

Definition of Terms

Special terms used in this study are defined as follows:

1. Interpersonal Process Recall (IPR)

   The term used to describe the process of recording on videotape any interpersonal interaction (e.g., the counseling relationship), and then playing back the videotape to enable the participants to examine the interpersonal dynamics of the original experience. This exploration is accomplished by the use of a third person not in the original who conducts the stop-start recall of the videotaped interaction.

2. Alcoholism

   A chronic illness, psychic or somatic or psychosomatic, which manifests itself as a disorder of behavior, is characterized by the repeated drinking of alcoholic beverages to an extent that exceeds customary dietary use or compliance with the social customs of the community, and that interferes with the drinker's health or his social or economic functioning (Keller and Efron, 1955).

3. Stimulated Recall Session

   The phase of the IPR process where the videotape of a counseling interview is played back and a clinical "interrogator"* helps to stimulate the group's examination of the underlying dynamics of the interaction during the recorded group session.

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*For a detailed description of the role and training of the interrogator see Appendix A.

4. Interrogator

The designation given to the third person (therapist) whose function is to facilitate the group's self-analysis of thoughts, feelings, images and general patterns of interaction within the group. This person's function is limited to actively probing the immediate past (videotape playback); the name "interrogator" was selected to describe his role.

5. Affect Simulation

A technique using films which simulates various kinds and intensities of emotional stress. The films are structured to confront subjects with various interpersonal stress situations so that the group's reactions to such situations can then be probed and elaborated upon within the group in order to develop understanding and more satisfying ways of responding to the kinds of stress simulated by the films.

6. Video Recall of Affect Simulation (VRAS)

Subjects are videotaped while viewing the Affect Simulation Films, and the subject's videotaped behavior while watching the films becomes the focus of the group therapy session.

Hypotheses

(a) Subjects receiving IPR treatment within group therapy will be evaluated both by objective tests and ratings of their behavior as having made more positive growth than subjects receiving group therapy alone.

(b) There will be no main growth changes among subjects due to therapist differences.

(c) There will be no main growth changes among subjects due to interactions between therapist and method of treatment.

Theory

The theory underlying the treatment program in this study was derived from observations and assumptions regarding what constitutes positive change for the alcoholic in group therapy. These observations and assumptions will be reviewed followed by a description of the model of treatment.

Positive Change

"The alcoholic is driven by feelings, motives and urges of which he himself is not aware and which he therefore cannot direct to best advantage...the group's processes are mobilized to bring about insight, emotional growth, and ego-development." (Blum and Blum, 1967). Recent literature (Sanguiliano, 1967) regarding the alcoholic's initial exposure to group therapy suggests that he is extremely resistant to change. His distrust in the initial stages of group therapy is reflected by a suspicious and superficial level of interaction--not unlike his everyday behavior in the outside world. Like other clients entering therapy (Kell and Burow, 1970) the alcoholic has little access to many basic emotions. Because the alcoholic is afraid that affective experiences will be overwhelming, he denies feelings and ultimately escapes into inebriation. This inability to recognize and deal with feelings is generally the focal point of the alcoholic's problems. The alcoholic remains anxious and

dependent upon alcohol because he cannot identify and/or experience his feelings. Since he does not know and understand his feelings, it is impossible to change the behavior they cause.

Authorities agree that the purpose of therapy is ultimately to change people's behavior (Kell and Mueller, 1966; Krumboltz, 1966). This is accomplished in insight oriented group therapy by exploring anxiety-laden areas. Exploration begins at a non-threatening surface level and as therapy progresses, the alcoholic is able to handle material of increasing depth and meaning, usually of feelings and thoughts that heretofore have been too threatening to consider.

Rogers (1961) proposes that this process of changing occurs in seven stages, and the last stage--the goal of therapy--is when

> new feelings are experienced with immediacy and richness of detail, both in the therapeutic relationship and outside...the situation is experienced and interpreted in its newness, not as in the past.

Positive change in group therapy is therefore defined as the increased capacity of the client to gain access to, communicate, and fully experience his feelings. The principal means used in group therapy to facilitate positive change is to bring about insight through group and self-exploration of ideas, thoughts and feelings experienced within and between group members.

Resistance to Positive Change

Effecting positive change among alcoholics becomes a formidable task in therapy because of an established behavioral and emotional repertoire that impedes efforts toward positive change.

"A considerable number of persons who consume large amounts of alcohol over a prolonged period ultimately suffer a certain disintegration of personality, the change ranging from an impairment of emotional stability and control to a noticeable dementia (Noyes and Kolb, 1963)." In the early stages of alcoholism an increased tendency to act impulsively and irresponsibly is noted. Feelings of rejection and frustration result in mixed feelings of resentment, hostility and guilt. There develops a strong tendency to deny and gloss over whatever is discrediting in behavior or character. Thus, an inability to face the facts of reality and of his own situation becomes paramount in his behavior. Associated with this distortion of reality is the blaming of others for his failure--the world is seen as the enemy, withholding, depriving and punitive. Intimate relationships become strained usually to the point that affection is lost and ambition in life disappears. With his friends he may remain on a superficially congenial basis, but at home he becomes intolerable as a result of his argumentative, surly and at times brutal behavior. A similarly poor sex adjustment becomes

part of the overall downhill picture. As a candidate for therapy the alcoholic possesses none of the characteristics indicative of a successful outcome. Sangiuliano (1966) summarizes "The alcoholic does not present the typical picture of a good client entering group therapy--he is suspicious, hostile, impulsive, demanding and doesn't readily admit to problem areas."

A basic factor in the alcoholic's conflicts is his intense desire to establish relationships and the opposing drive to avoid such anxiety-arousing relationships. Previous research with the IPR process (Kagan, Krathwohl *et al.*, 1967) furnished evidence of this approach-avoidance dynamic in terms of a counselor-client relationship. The researchers observed that during an ongoing relationship, there were times that the participants experienced conflicting feelings about the relationship itself that weren't being verbalized. These feelings are typically evidenced in group therapy with alcoholics: (1) the therapist or group members might hurt or reject him; (2) the therapist or group members might make an affectionate, dependent and/or seductive approach toward him; (3) the subject's own hostile impulses toward group members and/or therapist might emerge; (4) the subject's own dependent, affectionate, or seductive impulses toward the group members and/or therapist might be expressed or acted out. These four basic elements of subject-group

members and/or subject-group therapist interactions seem to pervade the alcoholic's repertoire of interactions with others (though differing in intensity with different individuals). This fear of emotional intimacy can prevent the alcoholic from expressing or exploring feelings even in a group therapy setting.

Rationale for Affect Simulation Films

It was observed (Kagan, Krathwohl *et al.*, 1967) that the potency of the IPR method depended greatly on the quality of the therapy session. If the session contained intense interactions over matters of concern to the client, the recall seemed to have more effect than if the therapy session consisted of a bland exchange. This observation led to the development of a new method to be used with the older form of IPR. It was reasoned that if the client in the group were exposed to various kinds and degrees of emotional situations, if his reactions were videotaped, and if after each exposure he were given the opportunity to view his behavior via IPR, the client could be confronted with his own videotaped reactions to a series of planned threatening behaviors of another person. It seemed that this might serve as a microscope, focused on the type of interpersonal behavior so stimulated. It also seemed that a client's efficiency in communication would be increased if he and the therapist could discuss client

behavior which they observed together. In short, it appeared that a variety of intense interpersonal encounters compressed into a short period of time through simulation could lead to valuable feedback on client behavior for both client and therapist.

The four dimensions of the approach-avoidance behaviors discussed above were used in the development of a common stimulus for interpersonal behavior which would be applicable across a wide range of clients. It was reasoned that in successful therapy clients usually become aware of their own approach-avoidance behaviors. These behaviors are related to the clients' past experiences and are usually typical of present interpersonal interactions with significant others.

A series of vignettes was created which portrays interpersonal confrontations. In some cases, the actor (or actress) directs affection or rejection toward the viewer; in others the actor or actress reacts to being rejected or seduced (e.g., with fear or anger). Each of four emotions is contained in several (from four to seven) filmed scenes which can be used as discrete entities--progressing from a mild to a very intense degree of emotional involvement. The four emotions portrayed are hostility, affection, fear of hostility, and fear of affection.

Although the films were developed as an adjunct to the IPR method, further investigation (Kagan *et al.*, 1967) has demonstrated their effectiveness as a stimulus for interaction and self-exploration in a group situation as well.

Treatment Program: A Theory of Positive Change

The treatment program developed for this study consists of three phases. In the first phase, (on Monday and Thursday) the group is shown a film designed to simulate various interpersonal stress situations. After each scene, group reaction to the film sequence serves as a focal point for group therapy discussion and individual self-exploration. A research assistant who is familiar with the use of the films as a therapy stimulus conducts the session while the regular group therapist assumes a participator-member role (as he does during all IPR treatment sessions). In this phase, the alcoholic is helped to identify his own individual reactions and feelings to the simulated emotional confrontations. As he learns better to know his own typical reactions, it is expected he will become better able to deal with the simulated confrontation in a more effective manner. As group members become aware that they are capable of sharing feelings with others, it is expected that they will discover the uniqueness of their own feelings, those

which they share with others, and the unique feelings of others. With the gradual awareness that he and the group are able to handle his emotional stress, the group member looks upon group interaction, openness and access to feelings as desirable and obtainable goals in group therapy. Clarifying feelings toward the female stimulus on the films is expected to facilitate awareness into relationships with spouses, girl friends, mothers and women in general. After each scene the videotape is played back immediately to provide the group and the interrogator with what is assumed to be a sample of each subject's reactive behavior in actual emotional stress situations. This videotaped behavior sample serves as the focal point for group therapy discussions. The interrogator tries to help group members use the videotape examples of their own behavior to examine the nature of (and feelings about) actual and existing relationships. Group members are encouraged to become increasingly more able to identify specific feelings elicited and experienced during and after the emotional confrontation and explore more satisfying ways of responding. As the alcoholic is helped to own feelings and to specifically identify the experienced feelings during the videotape recall of the emotional confrontation, it is assumed he is ready to deal with the "here and now" relationships within the group.

In the final stage of this approach to using Interpersonal Process Recall (IPR), the group is videotaped during a regular group therapy session led by the regular group therapist. After 20 minutes of videotaping, the interrogator conducts a recall, focusing on the interactions and feelings communicated among the group members on the videotape. It assumed that the interrogator had been helpful in clarifying feelings and reactions to the relatively safe confrontations of the film stimulus, but the role of the interrogator becomes even more important in this final stage. Most alcoholics are not able to relate during the recall the actual feelings which were experienced in the videotaped session--they are unable to confront the group members out of concern for the consequences; for example, "If I get mad at him, the group might not like me." In other words, with many group members, the same thoughts and feelings that were avoided in the original group interaction are avoided during the recall. By means of focusing on the videotape, the interrogator is to channel the group therapy discussion toward what had transpired in the original interaction. In this manner the interrogator attempts to help the alcoholic achieve the awareness of his feeling state in an actual "here and now" relationship. The interrogator tries to facilitate the communication of the thoughts and feelings that were avoided by the group members.

As a group member is helped in clarifying his underlying feelings about the original interaction, the interrogator invites comments from the other group members. In other words, the interrogator elicits responses from the group members to the "clarified" communication of the individual member by queries such as, "What did you think was going on?" As reactions are exchanged regarding the videotaped portion of the session, greater involvement and clearer communication among group members usually occurs with the interrogator then playing a progressively less active role. As the interaction between group members moves from the "then and there" of the videotaped portion to the "here and now" of their present relationship, the interrogator literally drops out as an active participant. Thus the client is engaged in an actual, honest, open relationship in which he is expected to become aware of the "here and now" aspects of his behavior as well as the behavior of other group members. The alcoholic is able to confront group members with their feelings and take the responsibility for the consequences. It is expected that he is ready and capable to adjust and behave more effectively in the community without needing alcohol.

The treatment program toward positive growth thus progresses through three phases, beginning with the identifying and owning of the individual feelings, moving toward a more intense self-exploration of specific feelings,

and what provoked them, and ending with a final stage when group members communicate in a "here and now" relationship. With the completion of the three phases, the alcoholic is expected to be communicating openly and directly within the group and is assumed to be better able to assume life in the community.

Overview

In this chapter, statements of purpose, need and theory for this study were presented. In Chapter II, a review of the literature relevant to the therapeutic value of stimulated recall using videotape and simulation methods in therapy will be examined. In addition, a review of the literature regarding treatment of the alcoholic will be presented. Chapter III contains the research design, treatments and method of collecting and analyzing data. In Chapter IV, an analysis of the data is presented. A summary of the study, in addition to a discussion of the results and implications for further research, is presented in Chapter V.

CHAPTER II

REVIEW OF LITERATURE

Introduction

In the first chapter, a theory of treatment for the alcoholic was presented which serves as the basic rationale for this study. In Chapter II the review of the literature will be focused on the following areas relevant to the study: 1) Can Gains Be Made With Alcoholics in Treatment?; 2) Psychoanalytic Treatment; 3) Psychodrama; 4) Conditioning and Learning Treatment; 5) Alcoholics Anonymous; 6) Synanon; 7) Use of Videotape in Therapy; 8) Interpersonal Process Recall; 9) Simulation in Therapeutic Settings; 10) Accelerating Client Progress Using Videotape Recall and Simulated Affect Films; 11) Psychodynamic Group Therapy.

Can Gains Be Made with Alcoholics in Treatment?

Reported success in treatment with alcoholics is inconsistent. Voth (1963) indicates that in twelve years of group psychotherapy with alcoholics in a state hospital, up to 77 percent of the patients showed improvement. Other authors (Voegtlin and Lemere, 1942) cite a 51 percent overall rate after certain established procedures are

followed with respect to choice of patients and method used. In one of the few group studies with alcoholics, Wallerstein (1957) compared the treatment effects of four different types of treatment methods--antabuse, conditioned reflex, group hypnotherapy and milleu therapy. A multi-dimensional measure of improvement was used, including: degree of abstinence; overall levels of social adjustment (job performance, marital adjustment, interpersonal relationships); reported subjective feelings; and personality changes reflected by psychological testing. 178 patients were randomly assigned to one of the four treatments. The results indicated that treatment by antabuse was most effective with 53 percent improved, group hypnotherapy obtained 36 percent improved rating with milleu therapy and conditioned reflex obtaining a low of 26 percent and 24 percent respectively. Wallerstein explained that the antabuse patients appeared to be the most satisfied and compliant treatment group, "since nothing more was demanded of them than that they take a pill at scheduled times in a hospital setting." However, once outside of the hospital their problems and anxieties returned as the "battle of will power" to avoid drinking began. Observations made by the researchers suggested that the more compulsively organized the character structure of the patient, the more he could ritualize the antabuse ceremony itself, thus the better his prognosis

for continued sobriety. Wallerstein is not overly optimistic about the success of the antabuse treatment since many of the patients using antabuse dispelled their urges to drink "by keeping busy, by compulsive and constraining routines. Not atypical is the report by one wife that sober, the patient is actually more irritable and less pleasant as a person; he has to be on the go all the time and enjoys life less." The author also mentioned that the use of antabuse to enforce sobriety can be disastrous when used with some patients. He noted that with borderline schizophrenics and deep depressive reactions, antabuse was not an improvement agent. In fact, in one borderline case a "florid psychotic state" began to erupt before the drug was actually taken. Apparently, just the mere thought of deprivation from alcohol was so intense that the subject lost mental control and recovered from his acute episode only when he was forcefully told that he was being taken off antabuse.

Wallerstein's study stands out as a contribution to the literature of alcoholic treatment, but it likewise necessitates further scrutiny before clearcut implications can be drawn. A well thought out rationale and review of the literature was presented for each of the treatment methods used, but there was no attempt at controlling for therapist effectiveness. The crossing of therapists across

treatments would have added strength to the design. Because all four treatments were offered on the same ward, a positive or negative Hawthorne effect may have been operating since some groups received more attention than others. The closed ward hospital population used included patients under legal commitment, others under external pressures (e.g., financial), and some patients were trying to win back the favor of their wives. Such varied motivations may well have influenced the research outcome. In addition, the author is unclear about the exact criteria used. After stating four distinct criteria, there is no explanation of how a global, single "improvement" criterion was arrived at.

Although antabuse was the most effective treatment, the researcher states, "These patients tended to propel away from the recognition of the need for individual psychotherapy." Wallerstein concluded that perhaps antabuse could be used helpfully in conjunction with psychotherapy.

Even though the treatment methods and reported outcomes varied, the research cited tends to support the conclusion that alcoholics can be treated with some degree of success.

Psychoanalytic Treatment

Psychoanalysts and psychoanalytically oriented therapists have found it necessary to modify their

techniques in the direction of becoming more active, more directive and more manipulative, while trying to maintain their traditional nonjudgmental position. As Knight (1937) puts it: "Alcoholics cannot stand an impersonal, passive and withdrawn attitude..." such as a therapist in classical psychoanalysis might assume.

Common to most of those (Silber, 1963, 1959; Chafetz *et al.*, 1962) who use modifications of the psychoanalytic method is (1) the care with which they treat the alcoholic's tenuous self-respect; (2) the importance they attach to establishing and maintaining a continuous, positive relationship with him by reducing anxiety and guilt through teaching the difference between aggressive fantasies and hostile deeds; and (3) their efforts to promote greater emotional maturity in the patient.

On the basis of five years of experience with several hundred alcoholic patients who were offered outpatient long-term psychoanalytically oriented therapy, Chafetz claims that 25 percent of the entire sample of his patients developed and maintained a continuous therapeutic relationship, and of these patients 62 percent achieved improved drinking habits as well as overall behavior adjustment. He also states that the remaining 38 percent achieved some beneficial change in their drinking patterns. It appears then that only 25 percent of the people seen by Chafetz endured in therapy, and that 62 percent of those who

remained in therapy reaped outright benefit. In other words, approximately 15 percent of the overall sample seen by Chafetz are considered successfully treated. For one reason or another, 85 percent of the people offered treatment rejected it or did not make significant gains. Thus, treatment by Chafetz's psychoanalytic based methods still remains a less than effective treatment for the majority of alcoholics.

In summary, the emerging trends of psychoanalytically oriented treatment with the alcoholic seems to be more relationship oriented with greater involvement between therapist and patient. There is likewise less stress on what kind of subject can be treated by this method. Although the emphasis now seems to be on fitting treatment to the patient (Blum and Blum, 1967), the research representing the psychoanalytic orientation does not indicate that it is an effective treatment for the majority of alcoholics.

Psychodrama

Moreno is credited with the invention of psychodrama when he first began using it with children in 1911. Underlying his practice of psychodrama is his belief that the individual develops independence and autonomy gradually just as a child grows with the aid of his environment. In psychodrama the patient is assisted by gradual steps from helplessness and overdependence to attitudes consonant

with his chronological age. This is accomplished by encouraging the patient to dramatize situations spontaneously, thereby reliving many of his conflicts, wishes, fears and attitudes. The treatment personnel facilitate the patient's efforts by assuming the role of "auxiliary egos," or, in other words, family members and other significant persons in the patient's life. The material elicited is dealt with either in a group format or used in individual sessions with the therapist at a later time. Although this method has been used for dealing with a wide range of problem areas, it is noted that this method becomes difficult to use with alcoholics because of "their lack of imagination, disinterest in self-reflection and in verbal expression, and in certain culturally deprived alcoholics, their lack of experience with the theater (Blum and Blum, 1967)." In spite of these hardships, psychodrama grows in popularity. Weiner quotes Fox in her unequivocal recommendation in favor of psychodrama:

> Though I have used group psychotherapy for seven to eight years before the psychodrama, I have become increasingly impressed by the results we are obtaining now by the use of psychodramatic techniques...In trying to determine in my own mind the reasons for our good therapeutic results I have come to feel that it is due to the fact that there is an actual living through of events, attitudes and emotions...

However, in the absence of controlled studies, such reports remain largely testimonials.

The clinical appeal of psychodrama appears to be in the patient's emotional involvement in conditions representing conflictual situations. An emotional as well as cognitive reliving of the experience is believed to lead to insight and consequent modification of behavior. Although this technique has gained the favor of some authorities, it has yet to be convincingly demonstrated in controlled research with alcoholics.

Conditioning and Learning

The terms "behavior therapy" or "behavioristic therapy" designate those techniques which make explicit use of either learning theory or behavior principles to analyze the therapeutic process and establish the conditions and procedures for therapy. Virtually all the methods in behavior therapy are based on principles derived from laboratory investigations of animal behavior in classical conditioning and instrumental learning.

Voegtlin and Lemere (1942), adhering closely to the tenets of classical conditioning, set up an adversive program for the alcoholic. Treatment of alcoholism consisted of the association of a CS (whisky or beer) with a noxious experience, USC, by means of drug inducement. Lazarus (1965) used electric shock when the subject raised a glass of liquor to his lips as part of his treatment. When the CS has finally acquired aversive properties and tends to produce nausea and vomiting, or

fear and avoidance in Lazarus' case, conditioning is achieved. The subject is then considered cured and new learning behavior has replaced the previously maladjusted learned behavior. When the conditioning procedures established by Voegtlin and Lemere are followed, the results usually approximate 51 percent overall recovery rate. Again, it is difficult to estimate from the author's report how many subjects enter treatment and drop out or are selected out by the therapist compared to how many complete it successfully. As noted earlier, Wallerstein (1957) found rate of recovery for avoidance-conditioning therapy at a low of 24 percent in comparison with three other forms of treatment.

Other behaviorists use reward training or operant principal based on the work of Skinner (1953) who is pessimistic about the effects of adversive conditioning with humans. Kepner (1964) proposed a treatment program for alcoholics using operant principals, but as yet results of such efforts have not been reported in the literature. Basically the program is one of accepting, nonjudgmental supportive reinforcement supplied by the change agents along each step of the patient's recovery. "Understand that if the patient experiences some gratification from his sober behavior, this more adjustive pattern can be learned in the same fashion as the old drinking behavior."

In summary, the behaviorist view of the treatment of alcoholics seems to be moving from a negative to a positive reinforcement program. Results from aversive methods remain questionable as to its effectiveness and applicability to humans; furthermore, initial research results seem less than impressive. The reward reinforcement seems to be a new trend for behaviorists.

Alcoholics Anonymous

Alcoholics Anonymous is a well known type of symptom removal treatment method. Basic to A.A. is a religious devotion to the Twelve Steps (1952) leading to recovery. This dedication is inherent in the first three of the recommended "12 Steps to Recovery" which follow:

1. We admitted we were powerless over alcohol--that our lives had become unmanageable.
2. Came to believe that a power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood him.

Basic to the A.A. program is an admission of dependency and helplessness combined with a denunciation of omnipotent fantasies.

How does A.A. work? The "pigeon" or new A.A. member is taken under the wing of an "old timer," a volunteer member of A.A., who provides him with an interpersonal dependency that replaces the former dependence on the impersonal intoxicant. Group meetings of once a week or

more provide example and proof to the "pigeon" that sobriety can be achieved. A.A. prides itself on its program of effecting sobriety without the help of psychotherapy. Furthermore, it reports a recovery rate of 50 to 75 percent. Unfortunately, A.A. does not encourage scientific verification of these figures. Blum and Blum (1967) caution, "Useful as this propaganda is in helping alcoholics to accept A.A., it should not be overestimated at the expense of other facilities and treatment modalities that make fewer claims but attempt to validate those they do make." Generally, therapists view A.A. as an important adjunct to their own treatment. "No matter what other form of treatment is used, each patient should be urged to take part in the group life of A.A. as well" (Fox, 1957).

Synanon

Synanon is one of the more recent adaptations for the treatment of alcoholics using a therapeutic community concept. Started by an ex-alcoholic, Synanon uses more or less informal discussions of six patients (preferably half male and half female) and one leader--who himself had been addicted to alcohol but has remained symptom free for an appreciable length of time. He acts as a moderator using many unorthodox "weapons" such as insult, criticism, ridicule, cross-examination, and hostile attack (Blum and Blum, 1962). The rationale follows a "fight fire with fire" logic as these tactics are used to get at the gut

level destructive drives of the recovering alcoholic. Withdrawal takes place on the couch in the living room of the Synanon house. Older members assist the patient's drying out through acts of kindness but never of sympathy and without the use of any drugs. Synanon treats patients who are addicted to narcotics, dangerous drugs and alcohol. Since its initiation in 1958, Synanon claims a 55 percent success rate defined as people who have kept free of addiction and have stayed at the live-in facility. The literature regarding Synanon is mostly of a favorable but descriptive nature (Yablonsky, 1964). Research evaluations have yet to demonstrate its actual value in the treatment of alcoholics. Its main clinical tool for treating alcoholics seems to be its confrontation potency.

Use of Videotape in Therapy

In the last decade, a variety of methods using videotape have been developed and applied in counseling or psychotherapy. The majority of these studies have dealt with the training of counselors or therapists (Gruenberg, Liston and Wayne, 1969; Walz and Johnston, 1963). Although differing in procedure, the researchers fundamentally agreed that supervision becomes more complete and honest, providing the necessary feedback with which to determine the progress of the patient and therapist. Gruenberg *et al.*, claim that the supervisor becomes a more effective consultant, "in effect, a co-therapist, and is better able to

help the therapist-trainee arrive at a therapeutic result." With this intensified and improved supervision, the quality of client treatment should improve as well. This greater involvement afforded by the videotape should augment the effectiveness of the supervisor in helping his supervisee become a more effective therapist. In two independent studies (Landsman and Lane, 1963; Walz and Johnston, 1963), new insights and greater self awareness were effected among counselor trainees with the use of videotape feedback. If videotape playback of the trainee's therapy session helped develop significant gains in the trainee's insight and self awareness, it seemed logical that clients might benefit in like manner.

In a carefully controlled study, Goldberg (1967) used a structured approach which involved the videotaped recall of the client immediately after the counseling interview. The focus of the study was to maximize counselor effectiveness although videotaped recall of the client was an important factor in the design. The counselor trainee observed the client's "stimulated recall" (Kagan, Krathwohl *et al.*, 1967) through a one-way mirror, thus augmenting feedback for the trainee in understanding client perception of the therapy session. After a later session, the client, counselor and supervisor met in a "mutual recall" session where counselor and client shared directly their feelings about the videotaped counseling session. Positive change was significantly greater in the treatment group compared

to a control group receiving intensive traditional supervision. The treatment group was rated more favorably on the following counseling behaviors: affective, understanding, specific, exploratory, and effective. Clients interviewed by these counselors reported a more satisfactory interview with experimentally trained counselors. Though counselor growth was demonstrated, this study offered further speculation regarding the use of videotape to facilitate client growth.

There have been few studies that directly examine the potential of videotape on client movement in therapy. Wachtel (1967) suggests that videotape recordings of therapy interviews enable the study of body positions plus verbal material thus providing a richer understanding of what is happening in the interview than would either alone. Wilmer (1968) reports that videotaped behavior of patients in their daily activity, therapy and while viewing previously made films is a strong stimulus for open communication in group therapy. This study was carried on in a hospital psychiatric ward with adults and hippies with character disorders. The videotape playback was used as a behavioral feedback leading to further patient introspection and therapist's analysis.

The use of videotape has also been incorporated into other forms of therapy. Catanzaro (1967) videotaped alcoholics engaged in psychodrama using the playback for

group therapy discussion. He found that stopping the videotape at significant places captured the momentary emotional intensity of the drama thus leading to more intense group discussion. In addition, the videotape playback demonstrated nuances of expression by the actors which would otherwise go unnoticed or forgotten. In another study, the use of videotape playback was reported as less likely to provide defensiveness than with a therapist's feedback in showing people any of Berne's games they may be playing (Rogers, 1968).

Generally, the studies reviewed lacked adequate controls and did not seem to make optimal use of videotape. In most cases, the clients simply viewed the playback without a systematic procedure, not obtaining optimal benefit of the videotape as a therapeutic tool. Thus, clients were not helped to use this tool to its full potential, stopping short of exploring and understanding the inner feelings that lead to the undesirable behavior.

Kagan *et al.* (1963; 1967), devised a structured method of stimulating immediate client recall of a videotaped therapy session. In a series of studies it was demonstrated that a structured approach in examining the videotape accelerated client movement in counseling (Kagan and Schauble, 1970; Schauble, 1970). This approach is termed Interpersonal Process Recall (IPR) and will be discussed in the next section.

Interpersonal Process Recall

The technique of using stimulated recall by videotape as a means of accelerating client insight and change during counseling is the heart of the Interpersonal Process Recall (IPR) method developed by Kagan *et al.* (1963, 1967, 1969). The development of this technique stems from the work of Bloom (1954) who used audio tape playbacks to stimulate recall with students in a classroom situation and Nielson's (1962) investigation of perceptual change through self-confrontation on film.

Interpersonal Process Recall is a clearly formulated approach which uses the videotape of the client's own in-therapy behavior as the stimulus for the clients exploration of the dynamics underlying the behavior. The initial research with IPR was structured in the following manner:

> A counselor and client were videotaped in a counseling interview. As soon as the interview was concluded, the counselor left the room; and a second trained clinician--designated an 'interrogator'--entered the room whereupon a playback of the interview was conducted. Then the 'interrogator' with the aid of a remote-control stop-start unit, helped the client probe for the underlying affective components of the client-counselor communication.
>
> An essential variable of the process when used as a means for accelerating client growth was for the counselor to directly observe or else to participate in the recall session. Through the recall, the counselor seemed to gain a great deal of understanding of the nature of the client's problems and of the client's interpersonal relationships by observing the kind of interpersonal relationship the client had established with

> him. That is, by observing the client's projections, fears and aspirations about him (the counselor), the counselor could more clearly understand the client's interpersonal behavior and some of the more central qualities of the client's presenting problem. At the same time the client began to understand his own general perceptions and reactions to people by observing the way in which he interacted with the counselor (Schauble, 1970).

The promise for the acceleration of client movement was indicated in reported case studies (Kagan, Krathwohl and Miller, 1963; Woody, Kagan and Schauble, 1970). In later controlled investigations (Kagan, Krathwohl *et al.*, 1967) the following conclusions were derived:

> (1) When IPR is introduced as an intervention in the counseling process, client growth can be accelerated but only when the counselor is actively involved in the recall process.

In a study examining the effects of IPR with prison inmates, no differences in client growth were observed after the intervention of the IPR session. It was later discovered that the counselors themselves were not observing the recall session and therefore were not aware of what growth the client was experiencing. They returned to the counseling relationship oblivious to the client's new-found insight, thus discouraging the exploratory behavior initiated in the IPR session. A second study with the same counselors was conducted, this time requiring the counselors to remain with the client and interrogator during the recall session. By remaining

in the room and eventually participating in the recall session, the counselor was directly involved with client feedback. This "mutual recall" variation resulted in significant client growth as therapy processed.

(2) Different variations of IPR intervention may be appropriate, based on the functioning level of the therapist.

In a study comparing the regular IPR session with the mutual IPR session for two counselors it was found that the more effective counselor benefited more from regular IPR than from the mutual IPR. The less effective counselor gained more from mutual IPR than regular IPR. The researchers conclude:

> The IPR procedure provides the client with insights into his interpersonal behavior but it is necessary that the counselor be able to integrate these insights into his ongoing relationship with the client if growth is to be accelerated. It would appear that the more competent counselors under such conditions gain new understandings from studying the session between interrogator and his client and gain less from taking part in the interrogation. The less competent therapists, on the other hand, may either not understand the dynamics uncovered in recall or may not be able to implement them, thus frustrating the client's new understanding--perhaps even retarding client growth (Kagan, Krathwohl *et al.*).

It appears that the less effective counselor becomes more effective by participating directly in the recall session where the presence of a third person (interrogator) may serve to reduce the anxiety of the counselor thus

permitting him to deal more directly with the interpersonal relationship between he and his client.

In summary, it appears that stimulated recall with videotape can be influential in accelerating client growth in therapy when counselor involvement, effectiveness of counselor and the specific portion of the IPR methods are taken into account.

Simulation in Therapy

The development and use of simulation techniques have been successfully employed in astronaut training (Kersh, 1965), and more recently in teacher education (Utsey, Wallen and Belden, 1966; Fattu, 1965; Wallen, 1966). The rationale for simulation techniques is similar among the various settings used. The use of such techniques in training results in saving of time because participants can increase their understanding of material and sharpen their skills through immediate observation of the results of their decisions made during the simulation experience.

Counselor educators have begun to use simulation in training programs. Delaney (1969), concluded the following:

1. Simulation is effective as an instructional technique.
2. The use of a television monitor for stimulus presentation is appropriate.
3. Realism is not a primary requirement for transfer of learning.

4. Simulation positively affects actual performance.

5. Simulation provides economy of time and reduces long term expense.

6. The application of simulation techniques to counselor education has shown to be feasible and effective.

The implications stated are hopeful, but actual research of the benefits of simulation techniques has been sparse. One of the few studies (Beaird and Standish, 1964) reported involved a simulated environment to train practicum student counselors to discriminate between cognitive and affective client responses. They were then prompted to use counselor response leads to facilitate more affective behavior in clients. Audio recordings were used as the simulated stimuli within a programmed learning instructional format. Results indicated that experimental subjects made significant performance gains over the control group and also did better than the control group subjects in post-training performance.

In summary, a number of investigations indicate that simulation techniques have been beneficial in the acceleration of learning. However, the reported literature in this area lacks the support of controlled research studies.

Accelerating Client Progress Using Interpersonal Process Recall and Simulated Affect Films

Kagan, Krathwohl *et al.* (1967) demonstrated the effectiveness of the "traditional" IPR process using

videotaped recall of the therapy session. In an attempt to make the procedure more effective, simulated affect films (see Chapter I) were developed and incorporated into the IPR method. The development of this new technique was tested in a controlled investigation by Schauble (1970).

After obtaining positive results from a pilot investigation, Schauble set out to integrate videotape recall of affect simulation (VRAS) and IPR into a sequential program of treatment. The use of a sequential approach stemmed from the data observed in the pilot study. The following series of "therapeutic developmental tasks" were assumed to be important for the client to undergo in the therapeutic process: a) the need for the client to become aware of his feelings and reactive behavior in emotional stress situations; b) the need to identify and examine feelings he has during the therapeutic relationship itself; c) the need to experience and deal with these feelings in the immediacy of the counseling relationship itself.

Twelve female undergraduates who had made contacts with the university counseling center were randomly assigned to one of two treatment groups; 1) traditional counseling group or 2) IPR treatment group. Therapists used were advanced doctoral candidates in counseling and had similar background and training. Subjects were randomly assigned to therapists and treatment.

Each therapy interview was recorded for subsequent rating by independent judges (two Ph.D. Counseling Psychologists) on the following three dimensions of client behavior in therapy identified as Characteristics of Client Growth (see Chapter III): Client's Owning of Feelings (OF), Commitment to Change (CC), and Differentiation of Stimuli (DS). In addition, the Wisconsin Relationship Orientation Scale (Steph, 1963) and two questionnaires developed by Orlinsky and Howard (1968), one for patients and one for therapists, were used to survey various aspects of the therapy experience.

The IPR treatment program consisted of three distinct yet sequential phases. Phase I (Sessions II and III) combined video-recall and affect simulation films (VRAS). In Phase 2 (Sessions IV and V) the client went through a stimulated recall session of a videotape of his in-counseling interaction with his therapist (i.e., a traditional IPR session, conducted by a trained interrogator). In Phase 3 (Session VI) the therapist remained with his client during video playback and a mutual recall was conducted. Both treatment groups were seen in six ninety minute sessions and both control treatment groups received an equal number of sessions of traditional counseling from the same therapists.

Results indicated that the IPR treatment had a significant accelerating affect on client movement in

therapy, as rated by independent judges. Clients in the IPR group also had a greater positive change difference in the degree to which they felt able to relate to their therapist, when compared with the traditional counseling group. Clients in the IPR group had more positive feelings about coming to their treatment sessions and about the progress that was made within these sessions. Therapists also were found to look forward more positively to the IPR treatment sessions than to the traditional treatment sessions.

The overall results suggested that the IPR procedures are a potent tool for use in accelerating client progress in therapy.

Psychodynamic Group Therapy

There are probably as many different kinds of group therapies as there are different leaders, different patients and different purposes for which a group convenes (Blum and Blum, 1967). However, psychodynamic group therapies in their many forms are primarily focused on the achievement of insight; the aim is to allow the patient's covert feelings to emerge into conscious awareness. This insight is presumed to permit the patient to control his behavior and to choose between alternative courses of action. This goal is accomplished in group therapy as patients meet at least once a week to discuss their problems and to gain insight into what they are

doing. The primary therapeutic value of group treatment compared to individual therapy is the role changes that the members impose upon each other by their remarks and interactions (Ackerman, 1949). Group therapy remains a popular treatment modality among many institutional programs for many reasons (Hartocollis, 1967). The list includes: identification with a group with a common goal, the reassurance and support from other group members, a sharing with peers of problems associated with guilt and anxiety, and a sense of mutual assistance and trust.

Powdermaker *et al.* (1953) believe that the psychodynamics by which improvement is achieved in group therapy are by no means clear, that they probably vary with the composition of the group, the technique employed, and the aim and leadership of the members and the group leaders. The research reported on group psychotherapy since this period seems to have done little in clarifying what is accomplished from group therapy, and how it is accomplished.

In 1966 Lubin and Lubin listed 1986 references dealing with the topic of group treatment. The bibliography covered the nine year period between 1956 to 1964. In spite of the apparent volume of the literature, the number of controlled investigations amounted to only a handful. More specifically, DiLoreto (1969) counted only eleven studies of research level. He summarized:

> Only two studies use a control group, only one of them was comparative in nature and none gave any meaningful information regarding either client pre-treatment individual differences or type of treatment received. However, six of these were outcome studies (four with no control groups) which did obtain follow-up data anywhere from six months to two years after treatment.

However stringent DiLoreto's evaluation of good research is, his observations bear a reflection on the quality and quantity of research studies in group therapy. In a recent assessment Matazzro (1965) concurred, "Research in group therapy continues to be notable by its paucity." Controlled research studies in the treatment of alcoholics is no exception.

Conclusions and Implications of the Literature

"There are more modifications of standard psychotherapeutic techniques in use with alcoholics than with virtually any other type of patient (Hartocollis, 1967)." The review of the literature in this chapter suggests that none have been established as a commonly accepted and clearly effective method of treatment. While each method reviewed has a seemingly well thought out rationale, there has not been consistent or conclusive empirical research supporting the claimed treatment objectives.

There does, however, appear to be a thread of commonality throughout most of the treatment methods. Alcoholics Anonymous and Synanon encourage "owning" of

problems; in addition, Synanon incorporates an intense confrontation element. Even psychoanalytically oriented therapists advocate a more involved and direct relationship in treating the alcoholic patient (Knight, 1937). Although adversive conditioning seems to be the most popular method of the learning approaches, more and more attention is being directed to the client-therapist relationship (Blum and Blum, 1967) as well as the use of positive reinforcement by the therapists' approving and accepting behavior (Kepner, 1964). In short, a relationship oriented (between therapist or group and client), involved, confronting and direct method of treating the alcoholic seems to be a common element in the methods reviewed.

The use of IPR procedures incorporating simulated affect films has been demonstrated to be a potent tool in accelerating client growth in individual counseling. The method uses a logical sequential treatment that is designed to actively, directly assist the client in becoming aware of feelings, to further explore such feelings in counseling and actually to experience and deal with these feelings in the counseling relationship.

CHAPTER III

DESIGN AND METHODOLOGY

An experimental research design was developed to test the hypotheses presented in Chapter I, that:

(a) Subjects receiving IPR treatment within group therapy will be evaluated both by objective tests and ratings of their behavior as having made more positive growth than subjects receiving group therapy alone. In order to test these hypotheses, the design had to permit comparisons of group functioning within experimental groups over time and treatment. A schematic representation of this design is presented in Table 3.1.

(b) There will be no main growth changes among subjects due to therapist differences.

(c) There will be no main growth changes among subjects due to interactions between therapist and method of treatment.

An adaptation of the institutional cycle design was the framework used to investigate the hypotheses. This design was adapted to the rotating admissions and discharge policy of the Alcoholic Rehabilitation Unit (ARU) where the research was conducted. (See Table 3.2).

Although the subjects participating in this study were all individuals with blatant alcohol problems, they also had their varying degrees and kinds of other personal and emotional characteristics and problems. Consequently, it was necessary to have a measure of their initial levels of functioning in order to evaluate the effectiveness of either type of treatment, group therapy with IPR or group therapy alone. The first week of treatment provided a pre-test measure of base line functioning for determining the degree of behavior change resulting from each type of treatment.

Table 3.1. Schematic Representation of the Overall Experimental Design

Groups	Treatments	Analysis
3, 4, 5 & 6	(Group Therapy with)	$O_1 - O_8 = D_1$
N = 24	(IPR Intervention Techniques)	
	(8 weeks)	
	D_1	
1, 2, 7 & 8	(Group Therapy without)	Analysis Between Treatment
N = 26	(IPR Intervention Techniques)	
	(8 weeks)	$O_1 - O_8 = D_2$
	D_2	

Table 3.2. Representation of the Institutional Cycle Design Including Groups and Therapists.

		WEEKS															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Groups	Therapists																
1	T_1	.....															
2	T_2		.....														
3	T_3			.....	x	x	x	x	x	x	.....						
4	T_1				.....	x	x	x	x	x	x	.....					
5	T_2					.....	x	x	x	x	x	x	.....				
6	T_3						....	x	x	x	x	x	x	.....			
7	T_1							.....									
8	T_3								.....								

.....Conventional group therapy groups

x x.....IPR Treatment Groups

The pre-treatment measures also served as an additional check on the power of each of the group therapy experiences. In order to determine the effectiveness of IPR intervention, it was necessary to determine if the group therapy experience afforded changed client behavior to the group not receiving the IPR intervention.

Finally, therapists' and judges' ratings of each client's behavior during the first week of treatment allowed a means of later analyzing the differential potential for change.

Description of the Experimental Procedures

Group Therapy with IPR

The first week of treatment was the same for both the group therapy with IPR subjects and the conventional group therapy subjects. Both control and experimental treatment subjects were informed from the beginning that a research assessment was being made of the alcoholic rehabilitation program, and that they would be incorporated in the study as part of their treatment program. During the first week standardized pre-treatment tests were administered and the first of the weekly ratings was performed. The first week served primarily to provide a pre-measure of each subject's level of functioning at the onset of therapy.

As outlined in Table 3.3, the IPR treatment fell into three distinct yet sequential phases. Phase 1, weeks 2

and 3, involved working with the simulated affect films. In phase 2, week 4, combined video recall and affect simulation films were used. In phase 3, weeks 5, 6 and 7, the groups went through a stimulated recall session with a videotape of their regular group reaction conducted by a trained interrogator. The regular group therapist was present and assumed a member-participator role during all IPR treatment sessions. Furthermore, the experimental IPR treatments were performed only on Mondays and Thursdays. Tuesday and Friday group therapy sessions resembled those of the control group in that IPR techniques were not used. However, these sessions on the days following IPR treatment were considered important to the design in that any residual material from the IPR treatment sessions could be brought up and worked through in this group therapy meeting.

Phase 1

During weeks 2 and 3, each session lasted the customary one hour period. The simulated affect films were used as a stimulus for group therapy sessions held on Mondays and Thursdays. Friday sessions were conducted by the regular group therapists in their usual conventional group therapy manner.

An introduction to the films was given to all new IPR treatment groups following the basic model given below.

> Before I begin discussing the films that you are about to see, I would like to talk a little about why we are going to be working with these films. Attached to most everything we do is some kind of basic feeling or attitude. We get mad or short tempered at someone when we feel that they mistreated us. This naturally guides what we do next, whether we punch them, yell at them or ignore them; all of us probably react a little differently. What I want to point out is that feelings guide our behavior with other emotions as well, such as feeling affectionate or in love, resentful or hurt, and so on. Here, too, we usually have a typical way of reacting to feelings of hurt, feelings of resentment or any other type of feeling. The problem is that a lot of times we regret doing what we do when we have those types of feelings. How many of us wind up making matters worse by blowing our stacks and/or running off to the nearest bar?
>
> I assume that all of you are here to receive help in making it on the outside without alcohol. It has been our experience that people who have used alcohol to excess could also use help in understanding themselves by looking into what is going on inside with regard to their feelings. That is where the films come in.

The subjects are instructed before each group therapy session where films are used:

> You are going to see a film in which there will be a person talking. I want you to imagine that this person is talking to you and you only. I want to emphasize it is important that you try to see this person as talking to you. After the film we will discuss any thoughts or reactions regarding the film.

Not more than five or less than three scenes were shown to a group in any one session (no scene is longer than two minutes in length). The film was stopped after each scene and group reaction was elicited and encouraged. Group discussion of any one scene varied with both the specific scene and the group itself lasting anywhere from 5 to 30

minutes in length. Any one of five research assistants familiar with the use of the films as a therapy stimulus, conducted these sessions. (Research assistants were all advanced doctoral students in Counseling at Michigan State University and all had been trained in using the IPR method.) These assistants were randomly assigned to sessions to avoid any systematic therapists competency effects. To facilitate group discussion and self exploration after each film scene, the research assistant used the following set of standardized probes which were addressed to the group:

> Are you having any reactions?
> What do you think this person was trying to tell you?
> How was that making you feel?
> What would you like to say or do to this person?
> How do you typically react in such situations?
> Have you ever had similar feelings in the past?
> What would you like this person to think of you?
> Do you have any notion of what the most satisfying thing is you could do or say in a situation like this?

Depending upon group participation, these probes were repeated, varied and addressed to individual members as well as the group as a whole. The main purpose of the Phase 1 portion was to help the group members identify their individual reactions and feelings to the simulated confrontation and to share their reactions with each other in group therapy.

It should be noted that in the first weeks of the experimental treatment it was necessary to repeat the explanation of the films before each session when they

were shown. Questions such as, "How are these films helping me?" or "How is this whole thing relevant to my living on the outside?" reoccurred without a constant cognitive reminder of the importance of the films. The repeated explanation seemed to give added meaning to the subject's affectual experience of reacting to the films.

Phase 2

During week 4 each session again lasted one hour. The group was videotaped while watching the films, and after each scene the tape was played back and a recall of the group's reaction to the scene was conducted. Sessions lasted the customary one hour with any one recall lasting anywhere from 5 to 30 minutes in length. Group reaction was elicited and encouraged. A counselor trained in the recall or "interrogation" technique conducted the Monday and Thursday sessions. (Same research assistants using the same probes as described in Phase 1.) The Tuesday and Friday meetings were carried on by the regular group therapist without IPR intervention.

The main objective of Phase 2 was to offer the subjects a feedback mode to enable them to further explore the nature of feelings they have in interpersonal relationships. Phase 2 also served as a transition period in which subjects could begin to learn how to use stimulated recall by videotape.

Phase 3

The final phase of the IPR group therapy treatment (weeks 5, 6 and 7) began with the first 15 to 20 minutes of the hour conducted in the usual group therapy manner with the group's regular therapist in charge. This first part of the hour was videotaped. For the remainder of the hour a recall of the videotape was conducted with the IPR research assistant serving as interrogator for the group. (Just as in Phases 1 and 2, the regular group therapist resumed a member-participator role during the recall.) It was the interrogator's role to encourage the sharing of any thoughts or feelings during the group interaction on videotape. As more direct communication and increased interaction between members evolved during the recall session the interrogator became less and less active in the recall session.

Conventional Group Therapy (without IPR)

Groups receiving conventional group therapy were seen in group therapy four times a week (Mondays, Tuesdays, Thursdays and Fridays) in one hour sessions for an 8 week period. To control for any Hawthorne effects due to the knowledge that other groups were receiving a "special" form of treatment, the groups receiving conventional group therapy were visited once very other week by guest consultants. Guest consultants were the same research assistants described in Phase 1 of the IPR treatment and

assumed the role of a consulting therapist in the conventional therapy group. The consultant was instructed to contribute as he would in a regular group therapy meeting. The consultant was instructed to contribute as he would in a regular group therapy meeting.

Table 3.3. Summary of the Experimental Procedures

IPR Treatment Group	Conventional Group Therapy
First Week: Group therapy sessions on Monday, Tuesday, Thursday and Friday each for one hour.	
a. When accepted to the Alcoholic Rehabilitation Program subjects were told they would be a part of the ongoing program evaluation study. They were also told that important to the success of the program evaluation was their taking certain paper and pencil tests during their first and last weeks on the program. At the end of the first week all subjects were rated with regard to their interpersonal functioning level by both their therapists as well as by objective raters.	
b. Subjects receiving IPR treatment were instructed at the beginning that the use of videotape equipment would be incorporated into their treatment program.	
IPR Treatment Group Second and Third Weeks	Conventional Group Therapy Second and Third Weeks
a. In sixty minute sessions simulated affect films were used on Mondays and Thursdays. A member of the IPR research team conducted these sessions using films as a stimulus for self-exploration in group therapy.	a. Sixty minute sessions were held on the Mondays, Tuesdays, Thursdays and Fridays of these weeks.

Table 3.3 (cont'd.)

IPR Treatment Group	Conventional Group Therapy
An introduction to the film was offered at the first session and a brief explanation of the rationale for the films was given at every session where the films were used. b. Tuesday and Friday sessions were conducted by regular group therapists without the use of IPR techniques.	
Fourth Week	Fourth Week
a. In a sixty minute session on Monday and Thursday simulated affective films were shown to groups, videotape of client reactions was made and tape was then played back for IPR interrogator and group to use in discussion of group reaction to these stimuli. b. Tuesday and Friday sessions were conducted by regular group therapists without the use of IPR techniques.	a. Same as week #1.
Fifth, Sixth and Seventh Weeks	Fifth, Sixth and Seventh Weeks
a. On Mondays and Tuesdays twenty minutes of regular group therapy. b. Forty minute group recall of videotape made of first 20 minutes. c. Tuesday and Friday sessions were conducted by regular group therapists without the use of IPR techniques.	

Table 3.3 (cont'd.)

IPR Treatment Group	Conventional Group Therapy
Eighth Week	Eighth Week
a. Conventional group therapy.	a. Conventional group therapy.

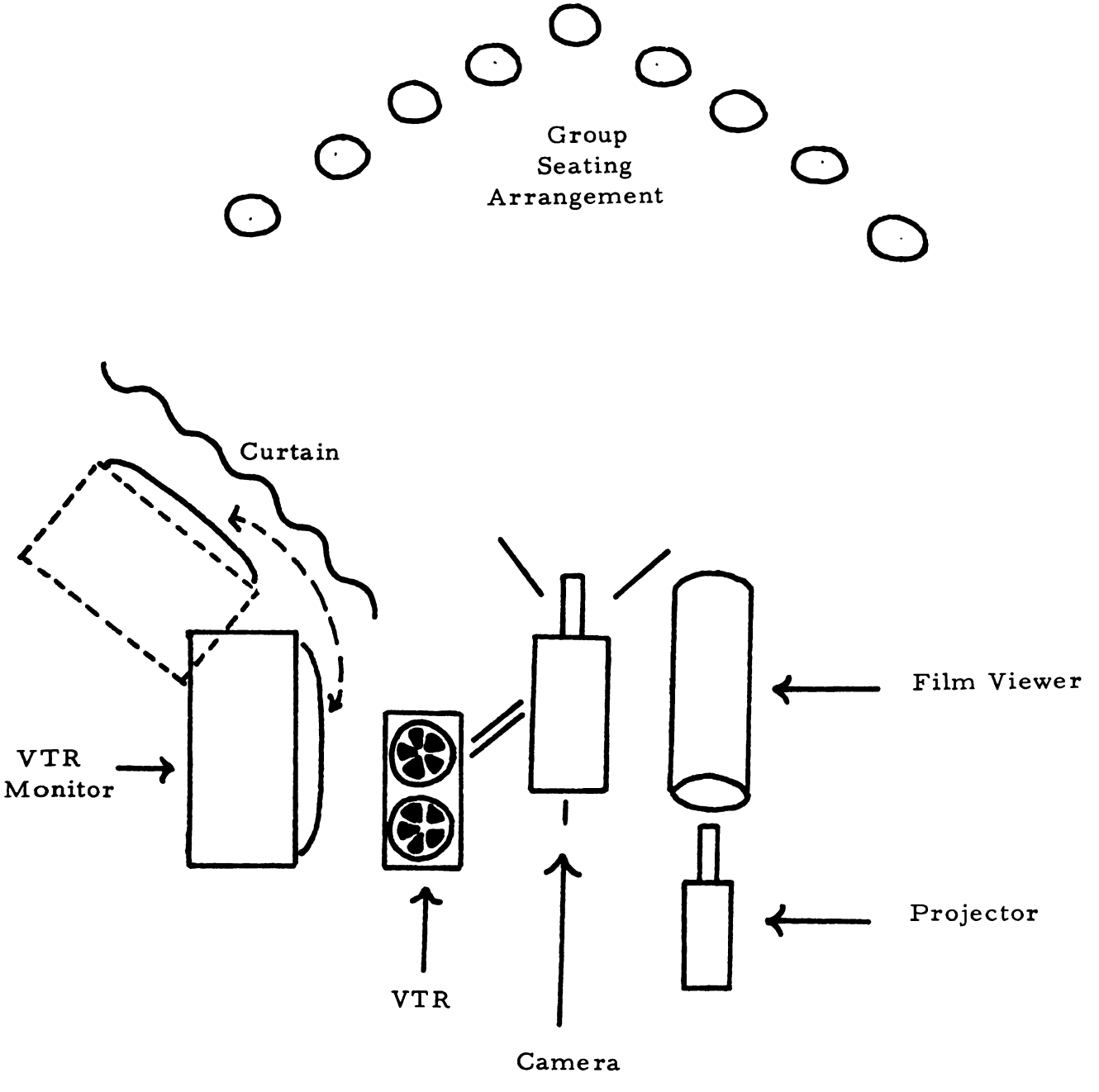
Physical Environment

A large room was used for the IPR treatment sessions. Equipment used included a single television camera, a microphone, a one inch videotape recorder (VTR), a single 24 inch monitor to receive the replay and a 16 mm projector with a special tube screen. An assistant trained and experienced in the operation and production of videotape programming arranged the equipment before each treatment session and operated the equipment during all IPR group sessions. Although most of the equipment was visible to the subjects during treatment, the novelty of its presence seemed to become minimal as therapy progressed. A wide-angle lens was used on the VTR camera which allowed the cameraman to focus on three subjects at one time. The VTR monitor was kept out of the view of the subjects until needed for the IPR recall portions on the meeting.

Control subjects were seen in rooms specifically designated for group meetings on the Alcoholic Rehabilitation Unit. IPR treatment groups met in these same rooms on the Tuesdays and Fridays of regular group therapy.

Figure 3.1

Representation of IPR Physical Environment



SAMPLE

Therapists

Three therapists were used across both forms of treatment (See Table 3.1). They included a female Registered Nurse (T_1), a male social worker of ACSW creditation (T_2) and a female Ph.D. in clinical psychology (T_3). While the therapists came from different educational backgrounds, all are employed by the Alcoholic Rehabilitation Unit and considered experienced therapists with alcoholics. Therapists were used across treatments; although administrative limitations did not allow all therapists to have equal numbers of groups in each form of therapy, they each saw at least one group in both forms of treatment.

The first therapist (T_1) was assigned two controls and one IPR treatment group; Therapist 2 (T_2) carried one control and one IPR treatment group and Therapist 3 (T_3) saw two IPR treatment groups and one control group.[1] Equality of therapist skill, background and training was thus assured across treatments.

In order to clarify the nature of the "conventional group therapy" treatment, each of the therapists wrote a brief summary regarding his own goals, means and theories in group therapy with alcoholics. (See Appendix B).

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[1]These therapists were, of course, aware of the treatment differences, but trust in their professional attitudes in avoiding biasing treatment effects seemed more favorable than using different therapists for each treatment.

Subjects

Subjects participating in this study were all males from the Alcoholic Rehabilitation Unit (ARU) of a large Veterans Administration neuropsychiatric hospital. Although the unit is located within the hospital grounds, it is largely independent of the rest of the hospital. In general, patients admitted to the ARU come directly from the community and have no previous neuropsychiatric history. Applicants with bizarre or gross symptomatology are not considered as candidates for the treatment program; a "sincere desire" to do something about their alcoholic problem is a primary criterion for admittance.

It should be noted that since the hospital is a Veterans Administration installation, all applicants must have served military duty. Furthermore, it is not unusual for some patients to have attended other alcoholic rehabilitative facilities.

Each week a group of subjects (5-9) is admitted for an 8 week treatment period. Simultaneously, a corresponding group is discharged after having completed its respective 8 week period of treatment.

Subjects are fully housed on the ARU and at any one time there are approximately 7 groups at their own respective levels of treatment. Daily activities include occupational, educational and recreational details in addition to lectures and discussions regarding alcohol and

its consequences. Attendance at weekly Alcoholics Anonymous meetings is also a requirement of the program. Subjects in the group receiving IPR treatment (GIPR) are very similar to the group receiving conventional treatment (GCT) with a mean age of 44.6 (GIPR) and 44.5 (GCT), a mean I.Q. of 98.39 (GIPR) and 95.57 (GCT), as obtained from the OTIS, a mean number of previous hospitalizations of 1.28 (GIPR) and 1.14 (GCT), mean years of drinking of 26.44 (GIPR) and 25.71 (GCT), and mean number of marriages 1.28 (GIPR) and 1.15 (GCT).

MEASURES

Minnesota Multiphasic Personality Inventory (MMPI)

The MMPI is a structured instrument composed of nine clinical scales and 3 validity scales offering a personality profile assessment.

Validity

Rationale for using the MMPI as an outcome criterion is based on a number of studies reported in the literature. Gallagher (1956) conducted a research to (1) determine whether there were any changes in the MMPI concurrent with the therapeutic process; and (2) to note how well the changes on the MMPI compared with a multiple criterion of success in therapy. The results arrived at found differences between the pre and post-therapy MMPI profiles: there were differences in the direction of health on six of the nine clinical scales.

Table 3.4. Comparison of Treatment Groups According to Mean Age, Intelligence, Previous Hospitalizations, Years of Drinking and Marriages.

		Age	I.Q.	Previous Hospitaliza-tions	Years of Drinking	Number of Marriages
IPR Group	Means	44.6	98.39	1.28	26.44	1.28
	Range	27-59	75-119	0-5	10-48	0-3
Conventional Treatment Group	Means	44.5	95.57	1.14	25.71	1.15
	Range	30-64	76-125	0-5	13-38	0-3

Kaufmann (1956) investigated changes in the MMPI as a function of psychiatric therapy. The results of the study demonstrated through a pattern analysis of pre and post-therapy MMPI profiles that a change indicative of improvement was evident after six months of therapy.

Schofield (1956) investigated the degree to which the MMPI reflected change following certain specific therapies. Findings of the study supported the hypothesis that the MMPI is an adequate measure of response to therapy.

Reliability

In a recent investigation by Perry (1969), the pattern analysis of pre and post-therapy MMPI profiles was used as a criterion to designate successful and unsuccessful therapeutic outcome. Three independent judges were used to evaluate change from pre to post on a one to five scale. Considering the nine basic scales in their evaluation, each judge scored the comparison as follows: satisfactory movement = 5; partly satisfactory = 4; no change = 3; partly unsatisfactory = 2; unsatisfactory = 1. The judges scored each set of profiles twice, one week apart.

Clients were again divided into a successful vs. unsuccessful categorization. Successful was defined as a 4 and 5 average rating and unsuccessful as a rating of 3

or below. Overall intra and interjudge reliability was computed by Hoyt's analysis of variance and was estimated at .85.

In another study, Crowder (1970) evaluated clients pre and post-therapy using the same scoring system for the MMPI described above. Three independent judges rated each of the 25 cases twice on a five point scale. Using Ebel's Intraclass Correlation formula an inter-judge reliability of +.86 was computed. A Pearson product-moment correlation coefficient formula was used to compute intra-judge reliability which was found to range from +.83 to +.97 among the three judges.

Michigan Sentence Completion Test (MSCT)

The Michigan Sentence Completion Test will be used to investigate attitude and need change. The instrument is composed of 100 item stems and provides information about four structured personality areas and some less easily categorized areas. The areas, with sample stems, are as follows: (See Appendix C for complete breakdown).

1. Family and Childhood - Opposite Sex

   The difference between Mom and Dad was...

   Most women are...

   She was happiest when...

   As a youth my greatest trouble...

2. Ego Tensions - Self Evaluation - Guilt Feeling

   It makes me nervous to...

   People get upset when...

   Sexual lust...

   We tend to forget the type of experience which...

3. Goals - Ambitions - Aggression

   As a youth, I used to daydream about...

   My personality would be much if...

   What makes me angry is...

   When he struck me in the face...

4. Positive and Negative Interpersonal Relations

   I like children who are...

   When the boss says, "You can do it," I...

   The kind of people I like most are...

   When the boss says I can't do it, I...

5. Unstructured

   Freedom...

   Sin...

   Love...

   Death...

Validity

A primary criterion for considering success in insight oriented therapy is the changing of attitudes and needs. If therapy has made an impact, basic attitudes of the client should reflect the change. A sentence completion

test was selected based on the literature regarding the sentence completion test measures. Rabin (1961) stresses the importance of the relationships between projective stimuli and concrete behavioral situations especially noteworthy in sentence completion tests. Murstein (1965) states that generally speaking the sentence completion test is probably the most valid of all the projective techniques reported in the literature. Datson (1968) agrees that the concurrent validity is good and the predictive validity is also high on sentence completion tests. In discussing psychological testing as a means of evaluating an alcoholic treatment program, Wolfson (1968) concluded that the greatest changes occurred in the TAT and SCT.

The MSCT, according to Rohde (1957), was found helpful in a psychology assessment program sponsored by the Veterans Administration giving higher correlated criteria than any of the other projective measures employed.

Each of the four specified areas seem to be especially relevant for evaluating positive attitude change among alcoholics. The first area, Family and Childhood - Opposite Sex, includes items reflecting the subject's style of familial adjustment such as with mother, wife and relationships with members of the opposite sex. The second area, Ego Tensions - Self Evaluation - Guilt Feelings, contains items suggestive of the person's general

anxiety level, type of self-concept and intensity of guilt feelings. The third area, Goals - Ambitions - Aggressions, contains items indicative of the subject's goals and ambitions in life as well as his sources of anger and the manner in which it is expressed. The fourth area, Positive and Negative Interpersonal Relations, is most important in reflecting the type of skills used in relating with others. This latter area is also suggestive of the subject's generally satisfying or generally dissatisfying relationships with others. Although the fifth area is unstructured in content it is reflective of the individual's philosophical views toward life.

Reliability

The MSCT was used by Rohde (1957) as a clinical device in her psychology assessment program and thus did not compute reliability data. In discussing the reliability of the Sentence Completion Method in general, Datson (1968) commented that he found no estimate of reliability which was "poor," and that many were "highly satisfactory." "It seems fair to say that reliability is generally less of a problem with sentence completion tests than it is with most projective techniques."

The Characteristics of Client Growth Scales (COGS)

The COGS investigates three separate areas which characterize productive client behavior in therapy (see

Appendix D). Each of these characteristics of client growth is operationalized into a five-point continuous scale of 1.0 the lowest possible rating and 5.0 the highest rating. A rating of 3.0 is arbitrarily defined as the minimal level at which constructive change can take place. The scales were modified for rating of individuals in groups and read as follows:

At Level 1 of the owning of feelings scale the subject appears to avoid accepting any feelings. He may remain silent or deny he feels anything at all. The subject seems to believe he is not part of the world of feelings. At Level 2 any expression appears intellectualized, distant and vague. At Level 3 the subject identifies his feelings and can usually tie them to their sources, but he does this in an intellectual way. At Level 4 the subject owns his feelings but seems to have some difficulty in connecting the feelings to their source. At Level 5 the subject is completely in tune with his feelings, expresses them in a genuine way, and is able to identify their origins.

At Level 1 of the commitment to change scale the subject shows no inclination to change. He is resistive to the group's attempts to accomplish change. This may take the form of complete passivity or defensive hostile behavior. At Level 2 the subject verbalizes a desire to change but there is little behavioral evidence of cooperation

or real commitment to the change process. He may be somewhat passive or evasive or seem more interested in rationalizing his behavior than in changing it. At Level 3 the subject vascillates between an overt desire and/or commitment to change and the desire to resist change. He may deal with feelings which are centrally involved with is problem but has some tendency to rationalize or move from topic to topic. In short, he varies in his persistence of motivation to change. At Level 4 the subject expresses the desire to change and although he may be hesitant to deal with painful feelings directly, he actively tries to cooperate with rather than resist the group's efforts. At Level 5 the subject actively cooperates in the group therapy process and continually engages in confronting his problems and feelings directly.

At Level 1 of the differentiation of stimuli scale the subject seems unable to sort out problems, feelings, or concerns and is unwilling or unable to move in this direction. He tends to lump broad groups of differentiable stimuli into stereotyped categories, e.g., all adults, all alcoholics, all women, etc. At Level 2 the subject may talk about different feelings and problems, but he does so in an intellectualized manner demonstrating little grasp of real differences among them or of their effects on him as an individual. At Level 3 the subject vascillates between discussing different stimuli and their effects on

him as a unique person and responding in a general, unclear fashion. The subject may initially make clear differentiations, but he is unable to maintain this behavior very long before he lapses into hazy generalizations. At Level 4 the subject seems almost always aware of the differences between stimuli in his world, and he responds to them in a differential manner. He actively attempts to become more aware of his various emotions and their sources. At Level 5 the subject appears always to perceive the different stimuli of his environment and reacts to them in a variety of differential ways. He shows immediate awareness of his own unique characteristics and the reactions he stimulates in others.

Validity

In a case study, the COGS was found to be a valid process instrument that would record changes in client behavior during therapy from one session to another (Resnidoff, Kagan and Schauble, 1970). In a controlled investigation, the instrument successfully discriminated between two treatment groups in terms of client growth behaviors from pre to post-therapy sessions (Schauble, 1970).

Reliability

The COGS has been used in previous research to measure client change within and between counseling

sessions. Kagan, Krathwohl *et al*. (1967) used the scales to evaluate the immediate effect of treatment on client behavior. Two groups of five judges were used in this study in order to provide replication for determining the reliability of the COGS. Reliability measures of .82 to .03 were obtained using Ebel's intraclass correlation.

A similar approach was used in examining change in client behavior over a period of time and/or treatment. In a pilot study Schauble (1970) had three independent judges rate videotapes of the 1st and 6th sessions of counseling. The original four point scale had been revised to permit scoring of the lessening of a behavior dimension, i.e., negative movement. The resulting nine point scale ranged from very markedly lessened to very markedly improved. However, though a more "clinically" satisfactory measurement of client behavior was established, inter-judge reliability was reduced, ranging from .69 to 0.75.

In using the COGS with a revised five-point scale, Schauble (1970) compared the effects of two forms of treatment. Two independent judges rated audio-recorded tapes of clients in two different treatment groups - regular counseling vs. counseling with IPR. Intraclass correlation reliabilities ranging from .91 to .94 were obtained as shown in Table 3.5.

Table 3.5. Intraclass Correlation Reliabilities of Average Ratings Calculated for Judge's Rating of Clients Across Tapes on Each Dimension of the COGS

	Intraclass Correlation Dimension			
	Tapes	N	Owning Discomfort	Commitment To Change	Differentiation of Stimuli
Average Ratings of Pre-Tapes	12		.94	.93	.91

Reliability of Instrumentation

Analysis of MMPI Data

In this study, first week and eighth week (pre and post-therapy) MMPI profiles were paired, coded and then shuffled to conceal individual identity and treatment group. Pre-therapy and post-therapy MMPI profiles were then rated by two judges who had considerable experience with MMPI interpretation and thus were considered expert judges. One senior staff member at the Counseling Center at Michigan State University and an advanced Ph.D. candidate in Counseling at Michigan State served as the MMPI judges. Judges performed the ratings independently and were given the following written instructions:

> Objective: To determine changes on the MMPI as an indication of psychological change.
>
> 1. Compare pre-counseling and post-counseling profiled MMPI scores for each subject. Consider the nine common scales:

H_s + .5 K, D, Hy, Pd + .4 K, Mf, Pa, Pt + 1 K, Ma + 2 K, Sc + 1 K.

2. Score the change as follows:

5 = satisfactory

4 = partly satisfactory

3 = no change

2 = partly unsatisfactory

1 = unsatisfactory

3. In order to establish intra-judge reliability, please score each profile twice, one week apart.

Judges' ratings were dichotomized into categories of successful and unsuccessful. The average of all ratings for each subject (two ratings of each subject by each judge) was obtained, and each subject whose average rating was <3.50 was regarded as an unsuccessful case, and, each subject whose average rating was >3.50 was regarded as a successful case. Appendix E contains raw ratings and average ratings of the 50 subjects evaluated by the two judges.

To determine inter-judge and intra-judge reliability the Pearson product-moment correlation coefficient formula was used. A complete set of correlations within and between raters at time one and at time two is presented in Table 3.6. Inter-judge reliability ranged from .791 to .885, whereas intra-judge reliability ranged from .897 for Rater 1 to .968 for Rater 2. Overall average reliability within and between raters ranged between .916 and .942.

Table 3.6. Inter-judge and Intra-judge Reliability Coefficients of MMPI Ratings

		Rater 1		Rater 2		
		Time 1	Time 2	Time 1	Time 2	Aver.
Rater 1	Time 1	1.000	.897	.885	.847	.942
	Time 2	.897	1.000	.805	.791	.916
Rater 2	Time 1	.885	.805	1.000	.968	.943
	Time 2	.847	.791	.968	1.000	.923
	Aver.	.942	.916	.943	.923	1.000

Since raters evaluated MMPI pre and post-profiles in a subjective clinical manner, it is a logical question to ask "What specific aspects of the MMPI profiles were most important?" In another perspective, since inter and intra-reliability coefficients were so high, is there correspondingly high agreement between the raters as to what scales are most important in evaluating change from pre to post-therapy? Another question of interest is how consistent are these scales from pre to post-treatment? To explore these questions a Pearson product-moment correlation matrix was computed between pre and post-MMPI scales and judges' ratings. (See Table 3.7).

Table 3.7. Pearson Correlations Between Pre and Post-MMPI Scales and Judges' Ratings.

	Pre-Post	R_1T_1	R_1T_2	R_2T_1	R_2T_2	Average Rating	
						Pre	Post
L	.533	.162	.129	.061	.017	.09	.15
F	.581	-.352	-.318	-.319	-.303	-.32	-.78
K	.828	.333	.245	.193	.124	.23	.20
HS	.732	-.439	-.491	-.480	-.435	-.48	-.55
D	.845	-.507	-.569	-.529	-.481	-.50	-.70
HY	.638	-.334	-.349	-.413	-.377	-.38	-.60
PD	.728	-.363	-.352	-.322	-.325	-.32	-.54
MP	.724	-.187	-.131	-.160	-.190	-.17	-.41
PA	.551	-.292	-.331	-.250	-.249	-.28	-.74
PT	.819	-.469	-.522	-.505	-.452	-.48	-.79
SC	.703	-.333	-.388	-.401	-.354	-.37	-.84
MA	.442	-.138	.054	.043	.060	.01	-.47
SI	.754	-.542	-.515	-.549	-.499	-.51	-.61

In looking at pre to post correlation of the 13 scales, higher correlations in the depression, K score, psychasthenia, social isolate, hypochondriasis, psychopathic deviate, masculine-feminine and schizophrenia categories ranged from a high of .845 depression to .708 in schizophrenia. Such correlations indicate the strong likelihood of obtaining a high post-treatment score if a high pre-treatment score is attained in the above categories. Conversely low pre-scores are predictive of low post-scores. The remaining scales ranged from .442

in manic to .638 in hysteria. Lower correlations suggest a lack of consistency between pre and post scores with a poorer chance of predicting post-treatment results on these scales based on pre-treatment scores.

An overall view of correlations between pre and post-MMPI scales and judges ratings at time one and time 2 suggests a very high agreement between judges as to what scales they were looking at in evaluating pre to post change. There was a marked consistency among ratings on all of the individual scales.

As expected, average post ratings were correlated more highly than average pre ratings with the individual MMPI scales. In other words, judges tended to look upon post scores as being more related to change in treatment than they did pre-treatment scores.

Post-treatment scales that were highly inversely correlated with average ratings included schizophrenia, F scale, psychasthemia, paranoia and depression. The inverse correlation ranged from -.84 in schizophrenia to a -.70 in depression. Evidently a high score in any of these categories was related to a low average rating from pre to post-treatment change. Conversely, a low score in these categories was associated with a favorable higher rating. From the high inverse correlation between average ratings and the categories, schizophrenia, F scale,

psychasthenia, paranois and depression, it is reasonable to assume that these categories were most influential in the judges' rating.

Rating of Subjects on the Michigan Sentence Completion Test

In this study, first week and eighth week (pre and post-therapy) MSCT protocols were coded and randomized to conceal individual identity and treatment. The profiles were then rated by an advanced Ph.D. candidate in Clinical Psychology from Michigan State who has had considerable experience with projective techniques and the sentence completion method. The judge went through two one-hour training sessions during which the rating system was discussed and explained. During these sessions, practice ratings were performed on MSCT sample protocols, and by the end of the training period there appeared a good understanding of the rating system.

The rater was given the following written instructions along with sample items (See Appendix F).

Rate each of the 100 responses on each MSCT Protocol in the following manner:

5 = very positive
4 = somewhat positive
3 = neutral
2 = somewhat negative
1 = very negative

The 1 to 5 rating of each response is an evaluation of mental health in terms of positive and negative.

The criteria for positive, negative and neutral ratings were defined as:

Positive mental health responses (#4 and #5 ratings) may reflect an assortment of themes, including: a positive self concept, a capacity to enjoy and cope with life, a good degree of openness and honesty or general satisfying relationships with others. Basically, the response reflects a positive aspect of the respondent.

Negative mental health (#1 and #2 ratings) may reflect the same type of themes as positive responses but in a negative direction, such as: self-deprecating statements, a poor adjustment to life, defensiveness and closed-mindedness or general dissatisfying relationships with others. Basically the response reflects a negative aspect of the respondent and is usually of the kind associated with poor mental health.

A neutral response (#3 rating) does not reflect either positive or negative mental health. It is not a positive statement but neither does it reflect material of a pathological nature.

When all the protocols were scored, the rater was then instructed to randomly select four protocols and rescore them. A comparison of the two ratings on the four hundred items contained in the four protocols seemed

a representative sample of all the MSCT items scored. (See Appendix G). Intra-rater reliability was then computed by the Pearson product-moment correlation coefficient, arriving at a .801 correlation.

Pretest and Posttest reliabilities were computed for each of the five subscales using Hoyt's Estimates of Reliability formula. These computations along with standard errors, standard means and standard deviations are presented in Table 3.8. Pretest reliability ranges from a .8867 on Scale 2 to .9115 on Scale 4. Posttest reliabilities range from .8976 on Scale 2 to .9267 on Scale 4. Such computations indicate that there was minimal interaction between items and subjects, and that the item itself accounted for the majority of the variance. Within each subscale then there was a homogeneity among items where a high score on one item was associated with a high score on other items within a particular subscale for both pretest and posttest. Conversely, low scores were predictive of low scores on other items within each subscale.

In breaking the MSCT down into five scales it was important to consider how each of these scales relates to each other. A Pearson product moment correlation coefficient computation was used for assessing intercorrelations among scales at pre-test and intercorrelations among scales at post-test.

Table 3.8. Hoyt's Estimate of Reliability for Pre-tests and Post-tests for the Five MSCT Scales

	Pretest				Posttest			
	Reliab.	SE	$\bar{X}$	SD	Reliab.	SE	$\bar{X}$	SD
Scale 1	.9016	4.1911	62.4359	13.7071	.9066	3.9060	59.3077	11.7723
Scale 2	.8867	4.5847	64.4103	13.9750	.8976	3.1612	54.5128	10.1330
Scale 3	.9036	3.4153	58.5128	11.2878	.9303	2.5367	55.8462	9.8610
Scale 4	.9115	3.4640	59.0000	11.9450	.9267	2.7529	59.5128	10.4299
Scale 5	.8856	4.1207	62.7436	12.5020	.9124	3.2730	60.3077	11.3489

Table 3.9. Intercorrelation Among the MSCT Scales at Pre-test and Post-test

		MSCT 1	MSCT 2	MSCT 3	MSCT 4	MSCT 5
Pre-Test	MSCT 1	1.00	.30	.38	.26	.66
	MSCT 2	.30	1.00	.45	.26	.34
	MSCT 3	.38	.45	1.00	.61	.48
	MSCT 4	.26	.26	.61	1.00	.40
	MSCT 5	.66	.34	.48	.40	1.00
		MSCT 1	MSCT 2	MSCT 3	MSCT 4	MSCT 5
Post-Test	MSCT 1	1.00	.56	.52	.42	.56
	MSCT 2	.56	1.00	.70	.57	.63
	MSCT 3	.52	.70	1.00	.52	.62
	MSCT 4	.42	.57	.52	1.00	.66
	MSCT 5	.56	.63	.62	.66	1.00

Pre-test correlations range from a .26 to .66 with at least 70 percent of the correlations at .45 or lower. There seems to be minimal relationship between scales with the implication that the five areas explored on the MSCT seem to be independent of each other at the beginning of treatment. Post-test correlations ranged from a low of .42 to a high of .70 with less than 50 percent of the correlations at a .56 or lower. In other words, more than 50 percent of the post-test intercorrelations among the MSCT scales ranged from .57 to .70. There seems to be a considerably higher relationship between scales at post-test than during pre-test.

The Pearson correlation formula was used again to calculate the intercorrelations between pre-post for the five scales. This data is presented in Table 3.10 and

reflects the value of the pre-test score in predicting the post-test outcome. Correlations ranged from a low of .2961 for Scale 2 to a high of .5667 on Scale 4 with Scale 1 at .5596, Scale 3 at .3522 and Scale 5 at .3303. Overall, the correlations are low with pre-test scores accounting for minimal variance in the post-testing.

Table 3.10. Pre-test - Post-test Correlation for the MSCT Scales

	Pre-Post
MSCT 1	.5596
MSCT 2	.2961
MSCT 3	.3522
MSCT 4	.5667
MSCT 5	.3303

A comparison of the means shows a slight tendency for the pre-test means to a higher than the post-test means. However, standard deviation scores were consistently smaller on the post-test than on the pre-test, indicating less variability in scores on the post-test measures of all five scales.

Rating of Subjects on the COGS

Two independent sets of judges were used in this study - group therapists (as explained earlier) and psychology technicians.

Because of their importance as raters a brief explanation of the function of the psychology technicians on the ARU is appropriate here. Just as newly admitted patients are assigned to specific groups and group therapists, they are also assigned to a specific psychology technician for daily "group motivation" meetings. (Motivation meetings are structured question and answer sessions usually dealing with topics related to adjustment without alcohol.) In addition, the psychology technician has duties comparable to that of the orderly or nursing aide in large neuropsychiatric hospitals involving the general supervision of patients. This daily contact with subjects afforded technicians considerable acquaintance with each patient's overall behavior outside of group therapy.

Initial training sessions were conducted with the three therapists and the three psychology technicians participating in the research. In two one-hour meetings, the use of the COGS was explained by the investigator. Later, practice ratings were conducted as the investigator sat in with each of the therapists in regular group therapy sessions and later discussed patient ratings on the basis of the behavior observed in the group therapy session. Similarly, the psychology technicians and the investigator met with patients in motivation meetings and later discussed the ratings of patients based on the

behavior observed during these motivation meetings. By the end of one week of practice and discussion of the COGS, there appeared to be adequate agreement among the raters.

In order to determine inter-rater reliability, both sets of raters viewed twenty minutes of a videotaped group therapy session and were told beforehand that they would be rating the people viewed on the three scales OF, CC, DS. Because of two silent members in the videotaped group session, only three of the group members were rated. A nonparametric Kendall Coefficient of Concordance (Siegel, 1956) was used to calculate inter-rater reliability for both therapists and technicians for each of the three COGS scales. (See Table 3.11.)

Table 3.11. Inter-rater Reliability by Kendall Coefficient of Concordance for Both Sets of Raters on Each Dimension of the COGS

Characteristics of Client Growth Scales	Therapists	Technicians
The Client owns discomfort	.861	.527
The Client commits himself to change	1.000	.694
The Client differentiates stimuli	.861	.694

Reliability figures obtained for technicians include a .527 in the owning of feelings, a .694 for commitment to change and a .694 for differentiation of stimuli. There seemed to be good agreement among technicians on how they would rank the subjects on CC and DS. There was lesser agreement with regard to the ranking of subjects on OF; however a correction for this formula was not used, and therefore the reliabilities cited are conservative.

Therapist reliability figures were comprised of a .861 in OF, a 1.000 on CC and a .861 on DS. There seemed to be high agreement among therapists regarding the ranking of subjects on all three of the COGS measures (See Appendix H for complete calculation of data).

Each of the therapists was responsible for the weekly ratings of all subjects within his respective groups - regardless of treatment used. Therapists were instructed to rate subjects on the basis of their behaviors in group therapy. Similarly, each of the psychology technicians was responsible for the weekly ratings of subjects based on their general behaviors observed on the ward and in motivation meetings. Independent ratings by both therapists and technicians were completed on Fridays after the end of each treatment week. Each subject was rated eight times during his eight week treatment program.

Therapists were, of course, aware of the differences in experimental procedures between treatment groups but

were asked to base their ratings of subjects on how they saw them functioning in group therapy. However, it had to be assumed that they could maintain reasonable objectivity, that as a group they did not consistently "favor" one of the treatments and that inter-judge reliability could serve as at least a partial indicator of objectivity.

Psychology technicians were aware of the differences in experimental procedure between treatment groups but never witnessed subjects actually functioning in group therapy. Their daily observation of patients on the unit as well as in one hour motivation meetings tended to negate any biasing effect due to knowledge of treatment differences.

STATISTICAL ANALYSIS

Change of Design

To strengthen the statistical analysis of the design it was decided to eliminate two of the groups--one experimental and one control--from the actual statistical-computations. The logic for this action was that the three therapists would then be crossed equally among treatment groups thereby lessening the change of a therapist biasing effect. Group 4 of the experimental treatment and Group 7 of the control group (See Table 3.2) were eliminated randomly by the mathematical procedure of an objective consultant. The remaining 6 groups left

18 IPR treatment subjects (Treatment 1) and 21 conventional therapy subjects (Treatment 2).

The cell frequencies for therapists and treatments is presented in Table 3.12.

Table 3.12. Cell Frequencies for Therapists and Treatments Used in the Statistical Analysis

	Therapist 1	Therapist 2	Therapist 3	Treatment Totals
Treatment 1	1/ n = 5	2/ n = 6	3/ n = 7	n = 18
Treatment 2	4/ n = 7	5/ n = 8	6/ n = 6	n = 21
Group Totals	n =12	n =14	n =13	n = 39

Attrition

Of the six treatment groups analyzed, two subjects in the experimental group did not complete the 8 week program. One left the program at the end of the second week and requested functional ward treatment stating, "I need to stay in the hospital longer, my nerves are acting up too much." The other experimental patient lost signed out of the hospital against medical advice (AMA) stating, "I'm cured." Two subjects in the control group were lost after they signed out AMA claiming that they had no problems. Data from these subjects was not used in the statistical analysis.

Analysis of Data

The data was analyzed twice by the Multivariate Analysis of Variance procedure.* The first procedure computed was a Multivariate Analysis of Covariance (MANCOVA) where IQ and chronicity of drinking were the covariates. The second calculation was a straight forward Multivariate Analysis of Variance (MANOVA) without the use of the covariates. In both instances a primary multivariate case tested each of the three primary hypotheses. With each of the three primary hypotheses tested, a univariate ANOVA was calculated for each of the 12 dependent measures. When the computed multivariate achieved a <-.05 level of significance a detailed breakdown of the 12 univariate cases was made.

A planned data matrix for the Multivariate Analysis is presented in Table 3.13.

Analysis Form and Further Elaboration of Dependent Measures

1. Michigan Sentence Completion Test - Mean gain scores for each of the five MSCT areas was the main unit of analysis used. In addition, a table of means comparing treatment groups on each of the five areas is discussed. This was analyzed as five separate dependent measures.

*The Multivariate Analysis used was programmed by Jeremy Finn, State University of Buffalo and as modified for the 3600 computer by David Wright, Michigan State University. For a further discussion of this procedure the reader is referred to Morrison, Donald F. Multivariate Statistical Methods, McGraw-Hill Book Co., N. Y., 1967.

Table 3.13. Analysis. Planned Data Matrix for the Multivariate Analysis of the 12 Dependent Measures

T Treatments	TH Therapists	S Subjects	SCT GAIN SCORES					Avr of MMPI Ratings	COGS						COVAR	
			Sct 1	Sct 2	Sct 3	Sct 4	Sct 5		OF		CC		DS			
									R1	R2	R1	R2	R1	R2	IQ	Chron
T_1	T_1	S_1														
		S_2														
		S_3														
		S_N														
	T_2	S_1														
		S_2														
		S_3														
		S_N														
	T_3	S_1														
		S_2														
		S_3														
		S_N														
T_2	T_1	S_1														
		S_2														
		S_3														
		S_N														
	T_2	S_1														
		S_2														
		S_3														
		S_N														
	T_3	S_1														
		S_2														
		S_3														
		S_N														

2. Minnesota Multiphasic Personality Inventory - The average score of the ratings was the unit used for the MMPI analysis. This was considered as one dependent measure. A table of means is also referred to in evaluating treatment outcome.
3. Characteristics of Client Growth Scales - Each of the three COGS scales OF, CC and DS was summed across the eight week period and mean scores were the main unit of analysis used. Since there were two sets of raters, therapists (R_1) and technicians (R_2), the COGS accounted for six dependent measures. A table of means with corresponding graphs on each of the COGS scales was traced representing ratings over the eight week period.
4. Covariates used included mean IQ scores as obtained from the OTIS and mean number of years drinking.

HYPOTHESES

The three main hypotheses of this study are presented in statistical form with the multivariate and univariate analysis represented for each of the hypotheses.

1. Null Hypothesis: There are no differences between $Treatment_1$ and $Treatment_2$

   MANCOVA - with covariates
   one multivariate case
   twelve univariate cases

   MANOVA - without covariates
   one multivariate case
   twelve univariate cases

   Alternative Hypothesis: reject the null hypothesis

2. Null Hypothesis: There are no differences among therapists

   MANCOVA - with covariates
   one multivariate case
   twelve univariate cases

   MANOVA - without covariates
   one multivariate case
   twelve univariate cases

   Alternative Hypothesis: reject the null hypothesis

3. Null Hypothesis: There are no differences due to treatment by therapist interaction effects

   MANCOVA - with covariates
   one multivariate case
   twelve univariate cases

   MANOVA - without covariates
   one multivariate case
   twelve univariate cases

   Alternative Hypothesis: reject the null hypothesis

SUMMARY

Subjects were randomly assigned to one of two treatment methods: 1) IPR treatment group, 2) Conventional group therapy. Two forms of the multivariate analysis of

variance were used--a MANCOVA and a MANOVA--to test the three main hypotheses and offer a univariate analysis of the twelve dependent measures. Patients were administered the Minnesota Multiphasic Personality Inventory and the Michigan Sentence Completion Test pre- and post-treatment and were also rated weekly by two sets of raters, therapists and technicians, on each of the three Characteristics of Client Growth dimensions.

Inter-rater reliability on the MMPI ranged between .791 to .885 with intra-rater reliability ranging between .897 to .968. Intra-rater was calculated for the MSCT at .809 with separate pre- and post- scale reliabilities at a .88 to .92 level. Inter-rater reliability for therapists on the COGS dimensions ranged from .861 to 1.000. Technician ratings on the COGS ranged from .527 to .694. Overall reliabilities calculated warranted their use as reliable criteria instruments. Analyses were made of the mean change score differences pre- to post- for both treatment groups on all criteria. In addition, patterns of client behavior were descriptively analyzed week by week and mean scores on the dependent measures were computed for purposes of comparison.

CHAPTER IV

ANALYSIS OF THE DATA

Chapter IV contains an analysis of the data derived from the methodology and statistical treatment outlined in Chapter III. Results of the Multivariate Analysis of Covariance (MANCOVA) and the Multivariate Analysis of Variance (MANOVA) procedures are reported for each of the three main hypotheses in the following order: (1) test for main treatment effects; (2) test for main effects of therapists; (3) and test for treatment-by-therapist interaction effects.

Test for Treatment Differences

The null hypothesis for treatment differences was:

HO I - There are no differences between the IPR treatment group and the conventional treatment group in pre-to-post-treatment change in scores on the dependent measures.

As indicated in Table 4.1, an F ratio of 1.1252 resulted in a multivariate apha of .3939 which is considerably higher than the acceptable .05 level. Therefore, with the MANCOVA procedure using IQ and years of drinking as covariates, the null hypothesis was not rejected. Treatment differences between the IPR treatment group and the conventional group therapy group were not supported.

Although the MANCOVA multivariate case was not significant, examination of the univariate tests of the dependent measures was made to help in explaining the meaning of the findings. Examination of the univariate F column of Table 4.1 suggests that Area 1 (MSCT 1), Area 2 (MSCT 2) and Area 5 (MSCT 5) of the Michigan Sentence Completion Test seemed to be the most sensitive of the twelve dependent measures to possible treatment differences. MSCT 1 represented "Family and Childhood - Opposite Sex" items. MSCT 2 consisted of "Ego Tensions-Self Evaluation-Guilt Feeling" items. MSCT 5 dealt with a variety of items including such themes as love, death, freedom and sin. Had the main multivariate case (all criterion measures) attained significance, it appears that MSCT 1, MSCT 2 and MSCT 5 would be significant univariate cases in demonstrating treatment differences since all had an alpha level less than the .05 level of significance.

A schi square test was performed to evaluate the influence of the covariates--IQ and years of drinking--on the dependent variables. An alpha of .2201 was obtained, indicating that the covariates together were not significantly associated with the dependent variables (see Appendix I for statistical computations). Further analysis corroborated these findings and revealed that the covariates accounted for only 4.96 percent of the variance.

Table 4.1. MANCOVA Test for Main Effects of Treatments. F-Ratio for Multivariate Test of Equality of Mean Vectors = 1.1252. D.F. = 12 and 20.000 P less than 0.3939.

Variable*	Between Mean SQ	Univariate F	P Less Than
1 MMP 1	1.3239	0.8111	0.3748
2 OFR 1	5.7717	0.2315	0.6338
3 OFR 2	7.8692	0.5396	0.4681
4 CCR 1	18.2951	1.0628	0.3106
5 CCR 2	0.1077	0.0060	0.9386
6 DSR 1	20.0138	1.2060	0.2806
7 DSR 2	0.0286	0.0020	0.9651
8 MSCT 1	152.6260	4.3341	0.0458
9 MSCT 2	141.3722	4.8401	0.0354
10 MSCT 3	11.7296	0.6931	0.4115
11 MSCT 4	3.1724	0.2385	0.6288
12 MSCT 5	129.1676	4.2316	0.0482

Degrees of Freedom for Hypothesis = 1
Degrees of Freedom for Error = 31

2 Covariates Have Been Eliminated

*Variables are defined and described in Chapter 3, pgs. 58-68.
Variables are abbreviated in this and all subsequent tables as follows: MMPI (Minnesota Multiphasic Personality Inventory), OF_{R1} (Owning of Feelings on the COGS as rated by therapists), OF_{R2} (Owning of Feelings on the COGS as rated by technicians(, CC_{R1} (Commitment to Change on the COGS as rated by therapists), CC_{R2} (Commitment to Change on the COGS as rated by technicians), DS_{R1} (Differentiation of Stimuli on the COGS as rated by therapists), DS_{R2} (Differentiation of Stimuli on the COGS as rated by technicians)
MSCT 1 (Michigan Sentence Completion Test - Area 1)
MSCT 2 (Michigan Sentence Completion Test - Area 2)
MSCT 3 (Michigan Sentence Completion Test - Area 3)
MSCT 4 (Michigan Sentence Completion Test - Area 4)
MSCT 5 (Michigan Sentence Completion Test - Area 5)

Based upon the questionable influence of the covariates, both a MANCOVA (with the covariates) and a MANOVA (without the covariates) were used in the analysis of the data.

Table 4.2 contains the data obtained using the MANOVA in testing for treatment differences. An alpha level of .4633 was obtained. The statistical hypothesis was not rejected; thus once again treatment differences were not indicated. The data presented in Table 4.2 indicates MSCT 1, MSCT and MSCT 5 as the most sensitive measures of the twelve univariate cases to possible treatment differences. The same univariate cases identified by the MANCOVA were repeated in the MANOVA analysis. Had actual treatment differences been indicated by a significant (all criterion measures) multivariate case, MSCT 1, MSCT 2 and MSCT 5 would have been significant univariates since each of the cases obtained alpha levels less than or equal to .05.

Table 4.2. MANOVA Test for Main Effects of Treatments. F-Ratio for Multivariate Test of Equality of Mean Vectors = 1.0218. D.F. = 12 and 22.0000 P Less Than 0.4633

Variable	Between Mean SQ	Univariate F	P Less Than
1 MMP 1	1.7011	1.0840	0.3054
2 OFR 1	6.9782	0.2098	0.6500
3 OFR 2	4.4827	0.2977	0.5890
4 CCR 1	22.7635	1.0377	0.3158
5 CCR 2	0.0278	0.0015	0.9695
6 DSR 1	25.1742	0.9313	0.3416
7 DSR 2	0.1007	0.0060	0.9386
8 MSCT 1	147.1951	4.4148	0.0434
9 MSCT 2	136.9447	4.8203	0.0353
10 MSCT 3	13.5923	0.8314	0.3685
11 MSCT 4	2.5920	0.1983	0.6591
12 MSCT 5	120.0643	3.8600	0.0580

Degrees of Freedom for Hypothesis = 1
Degrees of Freedom for Error = 33

There was little difference between the MANCOVA and MANOVA analysis. In both calculations the null hypothesis could not be rejected. Through the MANCOVA and the MANOVA analysis of the data, differences between the IPR treatment group and the conventional treatment group were not demonstrated. Furthermore, in each case MSCT 1 (Family-Childhood and Opposite Sex), MSCT 2 (Ego Tensions-Self Evaluation-Guilt Feeling) and MSCT 5 (Unstructured) appeared to be the most sensitive of the dependent variables to any treatment differences.

Since the main hypothesis was tested by the multivariate analysis, mean comparisons are presented to further explore the data. An inspection of the tables of means for MSCT 1, MSCT 2 and MSCT 5 reveals that the IPR treatment groups' mean scores were higher than those of

the conventional treatment groups across all three therapists. On MSCT 1 (Table 4.3) the IPR treatment mean total was 1.1667 compared to the lower mean score of -2.8095 of the conventional treatment group. Table 4.4 containing mean scores for MSCT 2 shows that the IPR treatment mean total was 4.6111 while the conventional treatment received a mean total of 1.0000. The pattern is similar on the MSCT 5, presented in Table 4.5, with the IPR group receiving a mean total of 2.7222 and the conventional treatment groups obtaining a mean total of -.6667. A complete table of means for all the dependent variables can be found in Appendix J.

Table 4.3. MSCT 1 Mean Scores Across Therapists and Treatments

MSCT 1	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 .8000	2) n=6 1.8333	3) n=7 .8571	n=18 1.1667
Conventional	4) n=7 -1.7143	5) n=8 -3.7500	6) n=6 -2.8333	n=21 -2.8095
Therapist Total	n=12 -.6667	n=14 -1.3571	n=13 -.8461	n=39 -.9743

Table 4.4. MSCT 2 Mean Scores Across Therapists and Treatments

MSCT 2	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 7.4000	2) n=6 2.8333	3) n=7 4.1429	n=18 4.6111
Conventional	4) n=7 .2857	5) n=8 1.6250	6) n=6 1.6667	n=21 1.0000
Therapist Total	n=12 2.9166	n=14 2.1428	n=13 3.0000	n=39 2.6667

Table 4.5. MSCT 5 Mean Scores Across Therapists and Treatments

MSCT 5	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 5.2000	2) n=6 3.0000	3) n=7 .7143	n=18 2.7222
Conventional	4) n=7 1.1429	5) n=8 -2.3750	6) n=6 -.5000	n=21 -.6667
Therapist Total	n=12 2.8334	n=14 .0714	n=13 .1538	n=39 .8974

Test For Therapist Differences

The null hypothesis for therapist differences was:

HO2 - There are no main effects due to therapists differences as indicated by pre to post-treatment change in scores on the dependent measures.

The F ratio for the multivariate case using the MANCOVA was 3.1596 which is significant at the .0007 level. Therefore, with the MANCOVA analysis the null hypothesis is rejected, and it is concluded that individual differences among the three therapists exist. In other words, individual therapist differences significantly affected scores on the dependent variables independent of the treatment used. The univariate test results of the twelve dependent measures is presented in Table 4.6.

Table 4.6. MANCOVA Test for Therapist Main Effects. F-Ratio for Multivariate Test of Equality of Mean Vectors = 3.1596. D.F. = 24 and 40.0000 P Less Than 0.0007

Variable	Between Mean SQ	Univariate F	P Less Than
1 MMP1	0.4354	0.2668	0.7676
2 OFR1	113.9560	4.5715	0.0183
3 OFR2	9.1637	0.6284	0.5401
4 CCR1	80.5373	4.6788	0.0168
5 CCR2	16.1906	0.8090	0.4138
6 DSR1	147.4578	8.8856	0.0009
7 DSR2	10.9642	0.7472	0.4821
8 SCT1	1.0306	0.0293	0.9712
9 SCT2	9.4484	0.3235	0.7261
10 SCT3	15.8302	0.9354	0.4033
11 SCT4	5.2666	0.3959	0.6765
12 SCT5	47.2528	1.5480	0.2287

Degrees of Freedom for Hypothesis = 2
Degrees of Freedom for Error = 31

Of the twelve measures employed, therapist ratings on the three dimensions of the COGS Owning of Feelings (OF_{R1}), Commitment to Change (CC_{R1}), and Differentiation of Stimuli (DS_{R1}) were found to be significant. The first dimension (OF_{R1}) was at a 4.5715 univariate F which was significant at the .0183 level. The second area (CC_{R1}) was 4.6788 which was significant at the .0168 level. DS_{R1} resulted in an 8.8856 univariate, significant at the .0009 level. The remaining univariate cases had univariate F's exceeding the .05 level of significance.

The mean scores across therapists and treatments for OF_{R1}, CC_{R1}, and DS_{R1} are presented in Tables 4.7, 4.8 and 4.9 respectively.

Table 4.7. OF_{R1} Mean Scores Across Therapists and Treatments

OF_{R1}	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 20.40000	2) n=6 22.0000	3) n=7 15.1429	n=18 18.8889
Conventional	4) n=7 18.1429	5) n=8 20.0000	6) n=6 16.8333	n=21 18.4762
Therapist Total	n=12 19.0834	n=14 20.8571	n=13 15.9231	n=39 18.6667

Table 4.8. CC_{R1} Mean Scores Across Therapists and Treatments

CC_{R1}	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 22.6000	2) n=6 23.3333	3) n=7 17.4286	n=18 20.8333
Conventional	4) n=7 20.1429	5) n=8 20.2500	6) n=6 18.3333	n=21 19.6667
Therapist Total	n=12 21.1667	n=14 21.5714	n=13 17.8462	n=39 20.2051

Table 4.9. DS_{R1} Mean Scores Across Therapists and Treatments

DS_{R1}	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 19.0000	2) n=6 21.1667	3) n=7 15.0000	n=18 18.5000
Conventional	4) n=7 17.0000	5) n=8 19.6250	6) n=6 14.6667	n=21 17.3333
Therapist Total	n=12 17.8333	n=14 20.7143	n=13 14.8462	n=39 17.8718

A comparison of the total mean scores for each of the three therapists (Table 4.7) on the OF_{R1} shows Therapist 1 with 19.0834, Therapist 2 with 20.8571 and Therapist 3 with 15.9231. Therapist 1 and Therapist 2 scored similarly across treatments as well as in total scores. Therapist 1 obtained a mean of 20.4000 with IPR and 18.1429 with Conventional. Therapist 2 received a mean of 22.0000 with IPR and 20.0000 with Conventional. Therapist 3 differed from the other two therapists in total mean scores and across treatments, with a mean total of 15.1429 with IPR and 16.8333 with Conventional. Therapist 3 tended to rate subjects on the Owning of Feelings dimension markedly lower than the ratings by the other two therapists.

Mean scores of therapists across treatments for CC_{R1} are shown in Table 4.8. Again, Therapist 1 and Therapist 2 are similar with total mean scores of 21.1667 and 21.5714 respectively. Therapist 1 has an IPR mean score of 22.6000 and a Conventional mean score of 20.1429. Therapist 2 obtained an IPR mean of 23.3333 and a Conventional mean of 20.2500. In each case, Therapist 1 and Therapist 2 rate subjects in the IPR group slightly higher than the Conventional treatment subjects. Therapist 3's ratings are again lower than the other two therapists' ratings with a total score of 17.8462 and a mean score of 17.4286 for IPR and a mean score of 18.3333 for Conventional. In other words, Therapist 3 seemed to rate subjects on CC

noticeably lower than did the other two therapists. Therapist 3 likewise rated Conventional group treatments slightly higher than his IPR treatment group both on the OF and CC portions of the COGS.

According to the data presented in Table 4.9 of the DS_{R1} mean scores, Therapist 1 had a mean total of 17.8333 with 19.0000 for IPR and 17.0000 for Conventional. The mean total for Therapist 2 was 20.7143, with a mean score of 21.1667 for IPR and a mean score of 19.6250 for Conventional. Therapist 3 followed in his consistent pattern, obtaining a mean total of 14.8462 and a mean of 15.0000 for IPR and 14.6667 for Conventional.

In general, Therapist 1 and Therapist 2's mean scores on the COGS dimensions were similar to each other across treatments and on total mean scores. Both therapists consistently rated their IPR treatment groups higher than their Conventional groups. Therapist 3's total mean scores as well as mean scores across treatments were markedly lower than those of Therapist 1 and Therapist 2. In addition, on both the OF and CC portions of the COGS, the Conventional treatment group's mean score was slightly higher than that of the IPR treatment group. This discrepancy among therapist ratings will be separately analyzed in reporting the other dependent measures later in this chapter.

On Table 4.10, results of the test for therapist main effects using the MANOVA analysis are illustrated.

Table 4.10. MANOVA Test for Therapist Main Effects. F-Ratio for Multivariate Test of Equality of Mean Vectors = 2.6720. D.F. = 24 and 44.0000 P Less Than 0.0024

Variable	Between Mean SQ	Univariate F	P Less Than
1 MMP 1	0.5585	0.3559	0.7032
2 OFR 1	83.0435	2.4964	0.0979
3 OFR 2	9.1363	0.6068	0.5511
4 CCR 1	54.9185	2.5034	0.0973
5 CCR 2	12.1800	0.6513	0.5280
6 DSR 1	116.4337	4.3073	0.0218
7 DSR 2	3.9570	0.2373	0.7901
8 SCT 1	0.6764	0.0203	0.9800
9 SCT 2	5.8910	0.2074	0.8138
10 SCT 3	23.0872	1.4121	0.2580
11 SCT 4	3.6566	0.2797	0.7578
12 SCT 5	29.6145	0.9521	0.3963

Degrees of Freedom for Hypothesis = 2
Degrees of Freedom for Error = 33

The multivariate F-ratio yielded 2.6720 which was significant at the .0024 level. Just as with the MANCOVA procedure, the null hypothesis was once again rejected adding further support to the observation that therapist differences influenced outcome results independent of the treatment used. Examination of the twelve MANOVA univariate dimensions indicates that DS_{R1} is the only significant dimension with a univariate F of 4.3073 significant at the .0218 level. Interestingly, with the MANCOVA analysis, OF, CC and DS dimensions of the COGS were the significant univariate measures and with the MANOVA procedure only DS_{R1} was significant, but OF_{R1} and CC_{R1} were less than the .10 level. The only difference between the two analyses was the use of the covariates, IQ and chroncity

of drinking, with the MANCOVA test. Earlier in the chapter it was found that both covariates combined were not significant as factors influencing scores on the twelve dependent measures. An examination of the correlation matrix (see Appendix K) of the dependent variables indicates that the covariates correlated higher with therapist ratings than any of the other dependent measures. It was found that the COGS sum for therapist ratings correlated -.403869 with years of drinking. In other words, an inverse relationship existed between higher therapist ratings on the COGS dimensions and the number of years the subject drank. The more years the subject drank the more was the likelihood of receiving a lower rating by the therapist. A positive correlation of .512852 between therapist ratings and intelligence was also reported. The higher the person's intelligence the more likely he was to obtain a higher COGS rating. Conversely, the lower the intellectual level, the more likely he was to receive a lower rating by the therapist. Technician ratings on the COGS, minimally related to the covariates, were -.134622 with years of drinking and .363833 with intelligence. MMPl ratings correlated .058938 with chroncity of drinking and .120619 with IQ. The five MSCT areas ranged from a correlation of -.083738 in Area 1 to .123251 in Area 5 with chroncity of drinking, whereas IQ ranged from a -.083738 correlation in Area 1 to .123251 in Area 5.

Test for Therapist by Treatment Interaction

The null hypothesis testing for therapist by treatment interaction was:

HO 3 - There are no main effects due to therapist by treatment interaction as reflected by pre to post-treatment change in scores on the dependent measures.

The F-ratio for the multivariate was 1.9692 with an alpha significant at the .0283 level. The null hypothesis was thus rejected and it was concluded that there was a therapist by treatment interaction significantly affecting the results on the dependent measures. A review of Table 4.11 indicates that the technican ratings on the COGS dimensions--OF, CC and DS--were the significant univariate dimensions.

Table 4.11. MANCOVA Test for Therapist by Treatment Interaction Effects. F-Ratio for Multivariate Test of Equality of Mean Vectors = 1.9692. D.F. = 24 and 40.0000 P Less Than 0.0283

Variable	Between Mean SQ	Univariate F.	P Less Than
1 MMP 1	1.0614	0.6504	0.5289
2 OFR 1	35.7599	1.4345	0.2537
3 OFR 2	108.3301	7.4290	0.0024
4 CCR 1	20.1782	1.1722	0.3231
5 CCR 2	63.4650	3.5592	0.0406
6 DSR 1	17.5046	1.0548	0.3605
7 DSR 2	157.4173	10.7277	0.0003
8 SCT 1	14.0490	0.3989	0.6745
9 SCT 2	35.7995	1.2256	0.3075
10 SCT 3	21.9705	1.2982	0.2875
11 SCT 4	6.3920	0.4805	0.6231
12 SCT 5	24.3820	0.7988	0.4590

Degrees of Freedom for Hypothesis = 2
Degrees of Freedom for Error = 31

2 Covariates have been eliminated

OF_{R2} was significant at the .0024 level. CC_{R2} was significant at .0406 and DS_{R2} was found to be significant at the .0003 level. Of the twelve dependent measures used, it was the technician ratings that most clearly reflected the therapist by treatment interaction effect.

The results of the MANOVA (Table 4.12) are similar to those of the MANCOVA.

Table 4.12. MANOVA Test for Therapist by Treatment Interaction Effects. F-Ratio for Multivariate Test of Equality of Mean Vectors = 1.9569 D.F. = 24 and 44.0000 P Less Than 0.0264

Variable	Between Mean SQ	Univariate F	P Less Than
1 MMP 1	1.4099	0.8985	0.4170
2 OFR 1	15.9269	0.4788	0.6238
3 OFR 2	130.7132	8.6810	0.0010
4 CCR 1	14.9102	0.6797	0.5138
5 CCR 2	70.4332	3.7665	0.0337
6 DSR 1	4.1378	0.1531	0.8587
7 DSR 2	171.1932	10.2666	0.0004
8 SCT 1	12.0871	0.3625	0.6987
9 SCT 2	27.2063	0.9576	0.3943
10 SCT 3	25.1478	1.5382	0.2298
11 SCT 4	8.2002	0.6272	0.5404
12 SCT 5	18.9178	0.6082	0.5504

Degrees of Freedom for Hypothesis = 2
Degrees of Freedom for Error = 33

The multivariate was significant at the .0264 level with OF_{R2} obtaining an alpha level of .0010, CC_{R2} an alpha level of .0337, and DS_{R2} was found significant at .0004. Unlike the therapist ratings of the second hypothesis, technician ratings were relatively unaffected by the addition of the covariates in the MANCOVA analysis. In summary, the

multivariate case and the same three univariate cases were significant in both the MANOVA and MANCOVA analysis.

The OF_{R2} mean scores of technician ratings across treatments and therapists (Table 4.13) are a total mean of 19.5556 for the IPR treatment group and a similar mean score of 20.0952 for the Conventional therapy group. There was little difference between the IPR treatment mean of 18.8000 and the Conventional treatment score of 19.4286 for Therapist 1. The IPR treatment group of Therapist 2 had a mean score of 23.6667 which was higher than the Conventional treatment group mean of 18.0000. The IPR treatment group of Therapist 3 obtained a mean of 16.5714, and the Conventional treatment group scored higher with a mean score of 23.6667. Therapist 1 subjects obtained similar scores on the Owning of Feelings dimension regardless of treatment used. Therapist 2's IPR group was rated higher than the Conventional treatment group. Therapist 3's groups scored lower with the IPR treatment than the Conventional treatment group. Therapist 3's Conventional group did not score unusually high but his IPR group scored unusually low for this sample of groups. Total means of technician ratings across therapists reflect no consistent difference between the IPR and Conventional treatment groups.

Table 4.13. OF_{R2} Mean Scores of Technician Ratings Across Treatments and Therapists

OF_{R2}	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 18.8000	2) n=6 23.6667	3) n=7 16.5714	n=18 19.5556
Conventional	4) n=7 19.4286	5) n=8 18.0000	6) n=6 23.6667	n=21 20.0952
Group Total	n=12 19.1667	n=14 20.4286	n=13 19.8462	n=39 19.8461

Table 4.14 contains the CC_{R2} mean scores of technicians ratings across treatments and therapists. The IPR treatment mean total was 19.7778 with the Conventional treatment group obtaining a mean of 19.8099. Therapist 1's treatment groups had similar mean scores. The IPR treatment had a mean of 20.4000 and the Conventional treatment group had a mean of 19.1429. The IPR treatment group of Therapist 2 was higher with a mean of 23.0000 than the Conventional treatment group with a mean score of 19.0000. Therapist 3's IPR treatment group was lower than the Conventional therapy group with the IPR mean of 16.5714 and the Conventional treatment mean of 21.6667. Again, the differences in Therapist 3's groups are not so much a function of high conventional group scores but of unusually low IPR group mean scores.

Table 4.14. CC_{R2} Mean Scores of Technician Ratings Across Treatments and Therapists

CC_{R2}	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 20.4000	2) n=6 23.0000	3) n=7 16.5714	n=18 19.7778
Conventional	4) n=7 19.1429	5) n=8 19.0000	6) n=6 21.6667	n=21 19.8099
Group Total	n=12 19.6667	n=14 20.7143	n=13 18.9231	n=39 19.7949

The DS_{R2} mean scores of technician ratings across treatment and therapists is reported in Table 4.15. Total treatment mean scores are similar. The IPR treatment mean was 18.7222 and the Conventional group mean was 18.4048. The IPR treatment mean of Therapist 1 was 20.6000 with a Conventional treatment mean of 18.7143. Therapist 2's IPR treatment mean was a high 21.8333 with a comparatively lower mean of 15.6250 for the Conventional treatment group. Therapist 3's IPR treatment mean was a low 14.7143, whereas the Conventional group obtained a mean of 22.5000.

In summary, mean technician ratings on the COGS dimensions followed a consistent pattern across therapists and treatments. Total treatment mean scores across therapists were similar. Therapist 1's IPR and Conventional treatment mean scores were also similar. Therapist 2's group, on the other hand, was rated higher with the IPR treatment than the conventional treatment group across all three portions of the COGS. The converse was true of Therapist 3. With Therapist 3, the IPR group's mean scores were consistently low and lower than his Conventional treatment group across the three dimensions of the COGS.

Table 4.15. DS_{R2} Mean Scores of Technician Ratings Across Treatment and Therapists

DS_{R2}	Therapist 1	Therapist 2	Therapist 3	Treatment Total
IPR	1) n=5 20.6000	2) n=6 21.8333	3) n=7 14.7143	n=18 18.7222
Conventional	4) n=7 18.7143	5) n=8 15.6250	6) n=6 22.5000	n=21 18.4048
Group Total	n=12 19.5000	n=14 17.9643	n=13 18.3077	n=39 18.5513

Two of the major hypotheses were supported either by therapist or by technician ratings; therefore, a comparison of the two ratings statistically is appropriate. Tables 4.16 and 4.17 contain the pooled means of therapist and technician ratings on OF, CC and DS for the two experimental conditions over the 8 week period. The data is graphically represented in Figure 4.1.

Table 4.16. Pooled Means of Therapists' Ratings on OF, CC and DS for 2 Experimental Conditions Over 8 Weeks

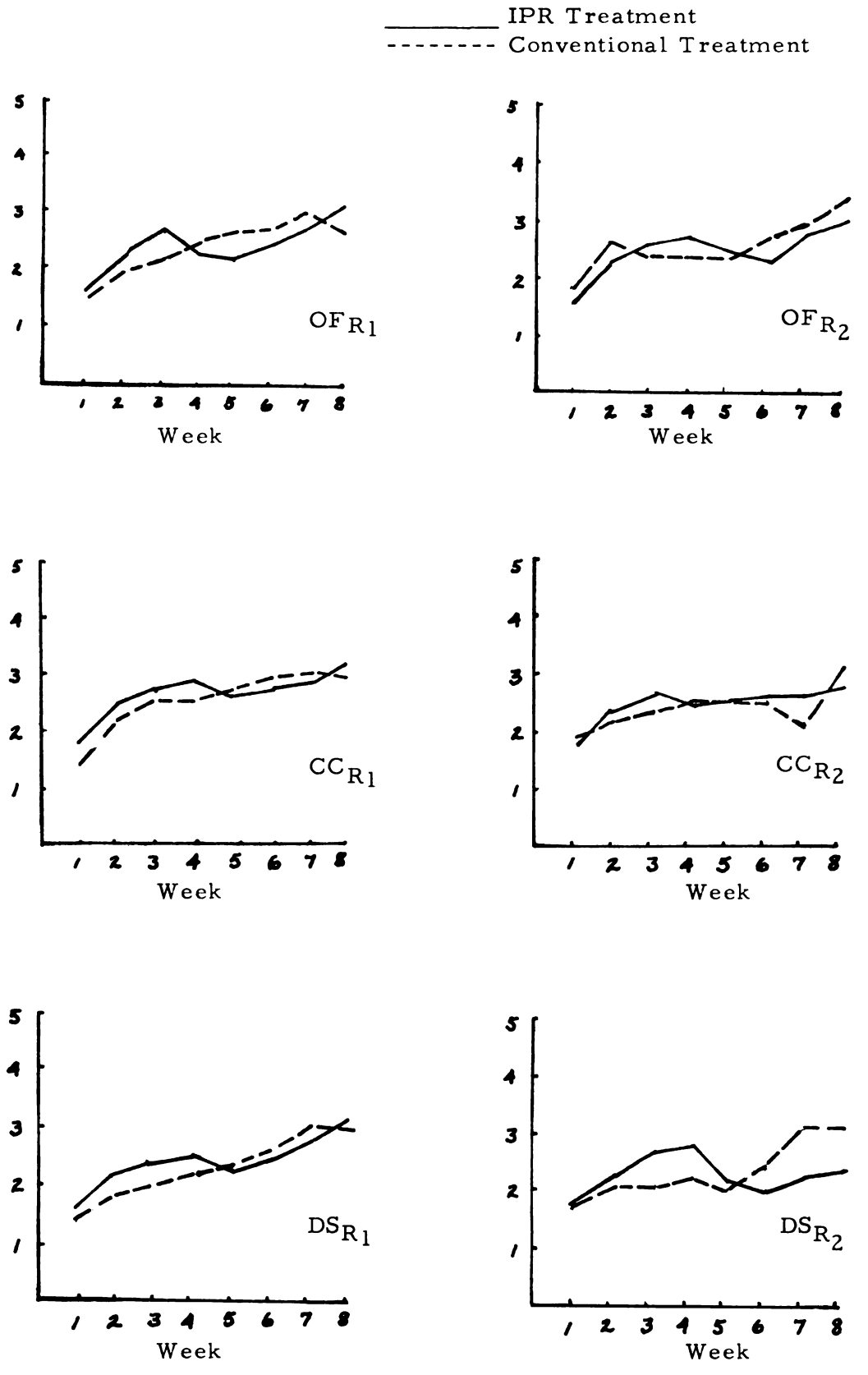
		1	2	3	4	5	6	7	8
OF	IPR	1.611	2.278	2.611	2.278	2.167	2.333	2.556	3.056
	Conv	1.429	1.905	2.143	2.381	2.476	2.524	2.952	2.667
CC	IPR	1.833	2.444	2.667	2.778	2.556	2.667	2.778	3.111
	Conv	1.429	2.143	2.429	2.429	2.571	2.810	2.952	2.905
DS	IPR	1.500	2.111	2.333	2.444	2.222	2.389	2.500	2.944
	Conv	1.381	1.810	1.905	2.048	2.238	2.476	2.762	2.714

Table 4.17. Pooled Means of Technicians' Ratings on OF, CC and DS for 2 Experimental Conditions Over 8 Weeks

		1	2	3	4	5	6	7	8
OF	IPR	1.611	2.278	2.556	2.611	2.444	2.389	2.889	2.944
	Conv	1.810	2.571	2.429	2.429	2.429	2.714	3.048	3.238
CC	IPR	1.778	2.389	2.667	2.444	2.500	2.611	2.611	2.772
	Conv	1.857	2.095	2.381	2.524	2.524	2.571	2.095	3.000
DS	IPR	1.778	2.222	2.556	2.667	2.278	2.167	2.333	2.444
	Conv	1.762	2.095	2.095	2.190	2.095	2.476	3.048	3.048

FIGURE 4.1

Figure 4.1 Graph of Therapist (R_1) and Technician (R_2) Ratings on OF, CC, and DS for 2 Experimental Conditions Over 8 Weeks.



According to therapist ratings, both the IPR and Conventional treatments resulted in similar growth levels ranging between 2.7140 and 3.110 at the end of the 8 weeks for CC and DS. On OF, the IPR treatment did slightly better with a score of 3.056 compared with the Conventional treatment score of 2.6667. All groups began at a similar level ranging between 1.381 and 1.833. Data in Figure 4.1 also indicates that the first 4 weeks of the IPR treatment resulted in faster growth rates on CC and DS. Beginning with the 5th week, however, there was a dropoff in growth rates. On OF this growth level for the IPR treatment was noted through the first 3 weeks while the 4th through the 7th weeks seemed to slacken abruptly.

Similar findings are reflected by the technicians ratings. The IPR treatment growth levels were higher on DS through the 4th week whereupon an abrupt dropoff occurred, and the Conventional treatment group scored at a 3.048 level compared with the IPR score of 2.444. On OF both treatment groups seemed to have a similar growth rate during the second week, but again the IPR treatment group had a higher growth rate on the third and fourth week. At the fifth week, growth for the IPR treatment fell off once again whereas the Conventional group proceeded upward resulting in a score of 3.238 compared with an IPR score of 2.944. On CC the IPR treatment rate was more

accelerated than the conventional treatment rate through the 3rd week, and thereafter slackened resulting in an IPR score of 2.772 compared to the conventional treatment score of 3.000. As with the therapist ratings, beginning stages for both treatments were similar, ranging from 1.611 to 1.857.

In short, on both therapist and technician ratings, growth on all dimensions of the COGS seemed to be more accelerated with the IPR treatment through the 3rd and 4th week of treatment. The simulated affect films were introduced during the second through the fourth week of treatment. As a therapeutic stimulus this phase of the IPR treatment appeared to be more effective than the Conventional therapy in getting the therapeutic process off the ground in the initial weeks of treatment. After this period the IPR treatment growth declined whereas the conventional treatment growth usually became more pronounced sometime between the 5th through the 8th week. With therapist ratings there was little difference between 8th week IPR scores and Conventional group scores. Technician ratings, on the other hand, reflected a minor difference with Conventional group scores somewhat higher than IPR scores at the end of the 8th week. There was a noted uniformity of ratings among technicians and therapists at the beginning stages of treatment. Therapist

and technician ratings for each of the six experimental groups over the eight week period appears in Appendix L.

The three main hypotheses were tested by the MANCOVA and MANOVA procedures and significant univariate dimensions among the dependent measures have been presented. Because only a few of the dependent measures were reported as significant univariate cases, it may be of interest to look at the mean change scores and mean differences between the two treatment groups for each therapist.

Table 4.18. Mean Change Scores and Mean Differences Between the Two Treatment Groups for Each Therapist on the Dependent Measures

	MMPI	OF_{R1}	OF_{R2}	CC_{R1}	CC_{R2}
T_1 IPR	4.0500	20.4000	18.8000	22.6000	20.4000
T_1 Conventional	3.0000	18.1429	19.4286	20.1429	19.1429
T_1 IPR-Conventional	1.0500	1.2571	-.6286	2.4571	1.2571
T_2 IPR	3.3750	22.0000	23.6667	23.3333	23.0000
T_2 Conventional	2.8125	20.0000	18.0000	20.2500	19.0000
T_2 IPR-Conventional	.5625	2.0000	5.6667	3.0833	4.0000
T_3 IPR	3.0714	15.1429	16.5714	17.4286	16.5714
T_3 Conventional	3.4167	16.8333	23.6667	18.3333	21.6667
T_3 IPR-Conventional	- .3453	- .6904	-7.0953	.9047	-5.0953

DS_{R1}	DS_{R2}	SCT 1	SCT 2	SCT 3	SCT 4	SCT 5
19.0000	20.6000	0.8000	7.4000	3.6000	0.4000	5.2000
17.0000	18.7143	-1.7143	-0.2857	1.8571	2.1429	1.1429
2.0000	1.8857	+2.5143	+7.6857	1.7429	-1.7429	-1.9429
22.1667	21.8333	1.8333	2.8333	1.8333	- .3333	3.0000
19.6250	15.6250	-3.7500	1.6250	-1.6250	0.7500	-2.3750
2.5417	6.2083	+5.5833	1.2083	+3.4583	-1.0833	+5.3750
15.0000	14.7143	0.8571	4.1429	- .2857	1.4286	0.7143
14.6667	22.5000	-2.8333	1.6667	1.3333	0.1667	-0.5000
.3337	-7.7857	+3.6904	2.4762	-1.6190	1.2619	1.2143

Of the 36 total comparisons on Table 4.18 for each of the 12 dependent measures across therapists, 26 mean change scores favored the IPR treatment group.* Table 4.18 indicates that 9 of the 12 mean change scores for Therapist 1 favored the IPR treatment group. For Therapist 2's groups, 11 of the 12 change scores favored the IPR treatment group. The mean scores were evenly divided for Therapist 3's groups. Therapist 3's mean change scores were noticeably different from those of Therapists 1 and 2 whose total scores leaned heavily toward the IPR treatment group. Therapist 3's scores suggested that a therapist by treatment interaction was operating, especially in therapist ratings on OF, CC and DS of the COGS. The ratings seemed biased against the IPR treatment group. Was this because Therapist 3's IPR treatment group was an especially poor group or was a therapist by treatment interaction operating? On the other hand, would a bias by Therapist 3 affect the testing for differences between the IPR treatment and the Conventional treatment? A last multivariate analysis of variance was carried out to test for treatment differences omitting both treatment groups of Therapist 3. The analysis resulted in a F ratio of 1.7410 with an alpha level of .1838 (see Appendix M for

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*Statistical analysis of this data would not be appropriate since (1) the data had been subjected to analysis by the multivariate methods, and (2) out of 36 comparisons there is a high probability that chance factors would produce at least some significant results.

complete analysis). Thus, leaving out Therapist 3's groups, differences between the IPR treatment and the conventional group treatment were not found to be statistically significant. Mean scores of the two groups dropped from the statistical analyses are included in Appendix J. The IPR group was led by Therapist 3 and the control group by Therapist 1. Again the IPR group with Therapist 3 received unusually low ratings whereas the rest of the data was without pattern when compared with the mean scores of the groups statistically analyzed.

Summary

The primary hypothesis testing for treatment differences between the IPR treatment group and the Conventional group therapy was not significant. Treatment differences were not indicated. According to Table 4.19 the MANCOVA procedure yielded an alpha level of .3939 and the MANOVA an alpha of .4633--both above the acceptable .05 level of significance.

Table 4.19. Summary of MANCOVA and MANOVA Data

		MANCOVA			MANOVA		
		F Ratio	DF	P	F Ratio	DF	P
Main Effect for Treatments	NON-SIG	1.1252	12/20	.3939	1.0218	12/22	.4633
Main Effect for Therapists	SIG	3.1596	24/40	.0007	2.6720	24/44	.0264
Main Effect for Treatment and Therapists	SIG	1.9692	24/40	.0283	1.9569	24/44	.0264

Of the twelve dependent measures, MSCT 1, MSCT 2 and MSCT 5 came closest to depicting treatment differences in favor of IPR, achieving significant univariate cases in both the MANCOVA and MANOVA analyses. The remaining dependent measures were greater than the .05 level of significance. The covariates-IQ and years of drinking-combined did not significantly affect scores on the dependent variables and accounted for only 4.9591 percent of the variance on the dependent measures.

Testing for therapist differences, the second main hypothesis, resulted in significance--a .0007 alpha level with the MANCOVA and .0025 with the MANOVA procedure. In essence, individual therapist differences were found to be a main effect variable on the dependent measures, thus confounding evaluation of treatment differences between the IPR treatment and the Conventional group therapy method. In the MANCOVA analysis, therapist ratings on the three COGS dimensions OF, CC and DS were the significant univariate cases. The MANOVA analysis produced only one significant case--therapist ratings on DS of the COGS, but with levels near P.05 on OF and CC. It was found that of the dependent measures, therapist ratings correlated highest with both of the covariates, -.403869 with IQ and .512852 with years of drinking. Thus, therapist differences were demonstrated by both the MANCOVA and MANOVA multivariate cases through the significant univariate cases differed slightly when IQ and years of drinking were covaried.

The third main hypothesis was on therapist by treatment interaction effects. Both the MANCOVA and MANOVA analysis yielded significant multivariate data, .0283 and .0264 respectively. It was concluded that therapist by treatment interaction was another variable influencing the dependent measures, thus preventing a simple evaluation of the IPR treatment. The same univariate cases, technician ratings on the COGS--OF_{R2}, CC_{R2} and DS_{R2}--were found to be significant in both cases. An examination of the mean scores indicated that technician ratings on the COGS dimensions followed a consistent pattern across therapists and treatments. Mean change and mean differences between the two treatment groups for each therapist (see Table 4.19) indicated that 26 of the 36 comparisons favored the IPR approach. In general, one of the three therapist's groups did slightly better with IPR, one clearly did better with IPR, and the third sometimes did better and sometimes worse. However, after eliminating data from the groups of the third therapist, a final MANOVA still did not arrive at significant treatment differences.

CHAPTER V

SUMMARY, DISCUSSION AND IMPLICATIONS

Summary

The purpose of this study was to investigate the effects of affect simulation films together with stimulated recall on the emotional and interpersonal growth of alcoholics in group psychotherapy. A group therapy program which included the use of affect simulation films and stimulated videotape recall to accelerate growth in group therapy was compared to a conventional group therapy program.

The research area is an important one. "It is estimated that there are above five million persons in the United States on whose lives drinking has an adverse effect, in one way or another. At least 12,000 alcoholics die each year from chronic alcoholism" (Noyes and Kolb, 1965). "Unlike other disorders, the increased knowledge of the nature of the dynamics of the alcoholic process and the character structure of the alcoholic patient...has not been significantly translated into increased therapeutic effectiveness" (Wallerstein, 1967). The review of the literature regarding the treatment of alcoholism supports this conclusion and reveals the paucity of controlled

investigations in this area. This present study is an attempt to implement a new technique in the treatment of alcoholism and evaluate its effectiveness compared to conventional small group psychotherapy.

The primary portion of the experimental treatment in this study is a modification of Interpersonal Process Recall (IPR). IPR is a technique using stimulated recall via videotape to accelerate client insight and change during therapy (Kagan, Krathwohl, *et al.*, 1967). The IPR technique was developed initially in one-to-one counseling relationships in which a videotape of a counseling session was replayed to the client and a recall session was conducted by a clinically trained "interrogator" who helped the client examine the underlying dynamics of his interaction with the counselor. Further use of the IPR technique led to the development of affect simulation, a technique in which clients are confronted with films which encourage them to simulate interpersonal relations, usually of an emotionally intense experience. In some cases an actor directs affection or rejection toward the viewer; in other words the actor reacts as if he had been rejected or seduced. In two controlled investigations, Schauble (1970) demonstrated the effectiveness of IPR in conjunction with the simulated affect films in accelerating positive client growth in individual counseling.

In the present study the experimental treatment program used the IPR method modified for group rather than individual client use and consisted of three sequented phases. In the first phase the group was shown the affect films. After each vignette, group reactions were discussed with the assistance of a third person who was experienced in using the films as a stimulus for group discussion. In this phase it was hoped the alcoholic would be helped to identify his own feelings and reactions to the simulated emotional confrontation. The identification and owning of feelings for the alcoholic was assumed to be an important place to begin in the therapeutic process. For at least as long as he has been drinking excessively he has denied and attempted to escape the reality of his feelings, especially with regard to emotional, interpersonal stress situations. The films provide a wide range of simulated interpersonal relations including affection, the fear of affection, hostility and the fear of hostility.

The second phase of the experimental treatment program included the videotaping of the subjects while watching the simulated affect films. After each vignette the videotape was played back and the group's videotaped behavior served as the focus for group discussion. The second phase was designed to offer the alcoholic a more confrontive penetrating awareness of himself and the others in the group; not only are reactions to the film explored but samples of their own behaviors are presented to the clients as well.

The sharing of feelings within the group during the first two phases lays the groundwork for the third phase where the focus of the session is the videotaped recall of the group in regular group therapy. Instead of the protection of a simulated confrontation, clients now were expected to begin to deal with each other in the here-and-now of their interaction, just as they eventually must deal with their families, co-workers and others in the community. As in the second phase, a recall worker ("interrogator") conducted an IPR session with the group using the videotape of their just-concluded interaction. As group members communicated about their feelings and reactions during the videotaped session, the interrogator played a less active role. In this way the focus of the group gradually shifted from recall of the videotaped session to the here-and-now of the ongoing interaction among group members. Each meeting of the IPR treatment (including Phase 1 with the simulated affect films) was followed the next day by a conventional group therapy meeting so that any unresolved material generated from the experimental session the day before could be discussed, without the constraints possibly imposed by the experimental process.

The conventional group therapy treatment consisted of the regular group therapy offered by the same three therapists used in the IPR treatment. The conventional

treatment group received no IPR intervention but was visited during group therapy by a guest "consultant" who served as a second therapist in the group and so additional help and attention was given those clients in the conventional group psychotherapy treatment. Each therapist was experienced in group treatment and was thought to be an effective therapist with alcoholics although they varied in their educational preparations--a Ph.D. in clinical psychology, a Masters degree in social work and a registered nurse. Each of the three therapists was assigned an IPR treatment group and a conventional group therapy group.*

The subjects in the study were alcoholics from the community who volunteered for an eight week treatment program at the Alcoholic Rehabilitation Unit (ARU) of a large Veterans Administration Hospital. The subjects were randomly assigned but no differences were noted in terms of age, years of drinking, intelligence, number of marriages and number of previous hospitalizations for alcoholic treatment.

For purposes of testing the research hypotheses the institutional cycle design was adapted to the rotating admissions policy of the ARU. As they volunteered for treatment, subjects were assigned to a predetermined

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*Actually eight groups were run. The data from 2 groups were randomly excluded and 6 groups were used to test for statistical significance.

schedule for therapists and type of treatment offered. The statistical analysis was carried on six experimental groups which were evenly divided among the two treatments, totaling 18 IPR treatment subjects and 21 conventional therapy subjects.

Subjects were administered the Minnesota Multiphasic Personality Inventory (MMPI) and the Michigan Sentence Completion Test (MSCT) pre and post-treatment. The Michigan Sentence Completion Test consists of five different areas: (MSCT 1) Family and Childhood - Opposite Sex, (MSCT 2) Ego Tensions - Self Evaluation - Guilt Feelings, (MSCT 3) Goals - Ambitions - Aggression, (MSCT 4) Positive and Negative Interpersonal Relations, and (MSCT 5) Unstructured.

For analysis purposes each subject's pre and post MMPI profiles were evaluated in terms of a positive to negative change scale which counted as one dependent variable. The MSCT pre and post items were rated on a positive to negative mental health scale with pre to post differences considered as an index of change. Each of the five MSCT scales represented a single dependent variable. In addition, therapists and technicians rated the subjects weekly on each of the three Characteristics of Client Growth Scale (COGS) dimensions - Owning of Feelings (OF), Commitment to Change (CC) and Differentiation of Stimuli (DS).

The COGS with two sets of raters represented six measures making a total of 12 dependent measures.

The basic hypotheses of this study were:

Hypothesis I: Subjects receiving IPR treatment within group therapy will be evaluated by objective tests and ratings of their behavior as having made more positive growth than subjects receiving group therapy alone.

Hypothesis II: There will be no main growth changes among subjects due to therapist differences.

Hypothesis III: There will be no main growth changes among subjects due to therapist by treatment interaction.

Two forms of the multivariate analyses of variance procedure were used to test the hypotheses using all criterion measures: the MANCOVA (with covariates of IQ and years of drinking and the MANOVA (without covariates.) The MANCOVA and MANOVA results did not support Hypothesis I: IPR treatment was not found to be more effective overall, than the conventional group treatment. Although a significant overall multivariate was not obtained, of the 12 dependent measures, MSCT 1, MSCT 2 and MSCT 5 came closest in demonstrating that the IPR treatment was more effective than the conventional group therapy treatment.

Both the MANCOVA and MANOVA procedures obtained significant results for Hypothesis II. Individual differences among Therapist I, Therapist 2 and Therapist 3 were a main effect variable influencing client growth as indicated by

the entire group of dependent measures. Therapist ratings on the three COGS dimensions, OF, CC and DS, were the significant univariate cases with the MANCOVA analysis. The MANOVA analysis, however, produced only one significant univariate case--therapist ratings on DS of the COGS. It must be noted, though, that findings on the MANCOVA and MANOVA were actually quite parallel. The MANOVA analysis resulted in P levels = .10. In noting the differences between the significant univariates of the MANCOVA - OF_{R1}, CC_{R1} and DS_{R1}--with the single univariate of the MANOVA-DS_{R1}--the effects of the covariates intelligence and years of drinking were analyzed. The covariates accounted for only 4.9591 percent of the variance on all the combined dependent variables; however, both covariates correlated highly with therapist ratings on the COGS measures.

The third main hypothesis tested for therapist by treatment interaction effects. Both the MANCOVA and MANOVA analyses yielded significant multivariate cases. It was concluded that a therapist by treatment interaction effect significantly influenced the outcome on the dependent variables. Technician ratings on the COGS dimensions--OF, CC and DS--were found to be significant univariate cases in both the MANCOVA and MANOVA analyses.

Discussion

In discussing the conclusions from the results of this study, it is appropriate to consider the specific dependent measures in conjunction with each of the main hypotheses.

1 IPR in Conjunction with Group Therapy Was Not More Than Conventional Group Therapy in the Treatment of Alcoholics

Treatment differences were not found when all the dependent measures (MMPI, MSCT and COGS ratings by therapists and technicians) were analyzed together by the MANCOVA and MANOVA procedures.

When considering the mean change scores (pre to post-therapy) of all the dependent measures and differences between the two treatment groups for each therapist, the differences seem to favor the IPR group. Of the 36 possible comparisons (see Table 4.16) 26 mean change scores were greater for the IPR groups than the conventional therapy groups. Evidently the differences were not great enough to obtain statistical significance across all the variables, but examination of the data lends support to the IPR treatment theory. This interpretation of the findings assumes that some of the criterion measures are not appropriate for measuring the kinds of gains IPR treatment produces.

Of all the dependent measures, three of the five Michigan Sentence Completion Test areas resulted in

significant univariate cases (see Tables 4.1 and 4.2). This suggests that if overall measures differences between the two treatments were demonstrated, MSCT 1, MSCT 2 and MSCT 5 would be the most effective of the dependent measures in depicting such differences. Such findings corroborate Wolfson's conclusions (1966) that in evaluating alcoholic treatment programs, the Sentence Completion Test reflects change more effectively than other psychological tests. The investigation of needs and attitudes by the MSCT is an integral part of the IPR treatment program as the alcoholic is helped to gain access to, communicate and fully experience his feelings. By means of the affect films the alcoholic is exposed to a wide range of simulated interpersonal situations in which he is helped to identify and explore his thoughts and feelings. The self-exploration stimulated by the affect films and videotape playback within group therapy should lead to a change in needs and attitudes. Previous research using one-to-one IPR treatment obtained significant acceleration of therapy findings using the COGS only. Perhaps MSCT would also have been significant had it been used in those earlier researches.

The three areas of the MSCT in which the IPR treatment group did significantly better than the conventional therapy group were:

a. MSCT 1, Family and Childhood - Opposite Sex
b. MSCT 2, Ego Tensions - Self Evaluation - Guilt Feeling

c. MSCT 5, Unstructured items - General Views Toward Life

The results imply that the IPR group developed healthier views in terms of social adjustment, such as with wives, children, mothers and members of the opposite sex. A significantly higher score on MSCT 2 suggests that the IPR group developed a more positive self-concept. With the improved self-evaluation, guilt feelings which often perpetuate the vicious circle of alcoholism were minimized. A higher score on MSCT 5 indicates a generally more optimistic orientation toward life including such areas as love and death. Taken by themselves the three areas of the MSCT--MSCT 1, MSCT 2 and MSCT 5--suggest that the IPR treatment group developed a more positive and healthier orientation toward themselves, others and life in general than did the conventional group therapy subjects.

A graph of therapist and technician ratings on OF, CC and DS of the COGS reflects no significant difference between the two treatments at the end of the eight-week period. However, examination of Figure 4.1 indicates that both therapists and technicians consistently rated the IPR treatment higher than the conventional therapy treatment from the second through the fourth week of treatment. The simulated affect films were introduced during the second week and lasted through the fourth

week. As a therapeutic stimulus this phase of the IPR treatment appeared to be more effective than the conventional therapy in getting the therapeutic process off the ground in the initial weeks of treatment. To illustrate, the following is taken from a tape recording of one of the IPR treatment groups in the second week of treatment.

Film - Lady hesitantingly says, "Okay, you can come and try it...if you aren't too busy...if you think you can stick it out..."

Client 1: She didn't say where to come.

Interrogator: What kind of feelings do you have about what she's saying to you?

Client 2: I felt that she really didn't want me to come...She was putting up a false face, but you could see right through it...had no interest in me whatsoever...and she preferred to see me a long way from there.

Client 3: It seems to me she was looking right by me instead of right at me.

Client 4: She wasn't even interested in me...she had that hesitation.

Interrogator: How does it make you feel when somebody approaches you this way?

Client 1: Like I'd go through the floor.

Client 5: That's the initial feeling; feel kind of small, not wanted, but afterwards I would have preferred not to have been there.

Interrogator: Completely avoid it?

Client 5: Yeah.

Interrogator: Kind of hurts!

Client 5: Oh, yeah.

Interrogator: How do you typically react when you get hurt?

Client 3: Feel belittled.

Interrogator: How do you react when you feel belittled?

Client 3: Just feel hurt.

Interrogator: Keep it inside.

Client 3: Right.

Client 2: In that particular situation I'd feel hurt and I'd also feel that lady...had a feeling of superiority over me and I wouldn't react violently--I'd hold that back--But I think it would be a recurring thing--It would come back to me later on--I'd think about it and I probably wouldn't like it any more then.

Interrogator: Feeling kind of nags you.

Client 2: Yeah, a grudge, I guess you'd call it.

Interrogator: How do you take care of it?

Client 2: Well, I suppose I'd stay away from it..I'd see myself as a better person than her.

Client 1: I would voice off--put her in her place.

Interrogator: Does that make you feel better?

Client 1: Yes, it does.

Client 2: I'd react differently if I were drinking--I'd say something back.

Interrogator: What's the difference if you have a few or don't have a few (drinks)?

Client 4: I wouldn't suppress my feelings...because alcohol gives you a false feeling of superiority or something.

Client 5: Generally get in a depression and after so long there's an outburst.

Client 6: It's not you talking, it's the booze.

Client 7: I'd spout off, five minutes after I said it I wouldn't remember what I said.

Client 2: I hold so many things back if you say something to me when I'm sober and I don't like it, I'll turn around and walk away from you, but the next time I see you and I've been drinking I'm going to tell you about it--builds my courage up. I suppose--I still think about things in my childhood and high school and I regret not saying something.

Interrogator: Why don't we defend ourselves?

Client 2: Maybe I lack confidence in myself.

In this interchange, group members begin to identify and "own" feelings regarding the simulated encounter.

Within the group therapy session the interrogator facilitates the exploration of similar reactions and thoughts including those experienced in everyday life. Of major importance is the communication and sharing of feelings with others as the alcoholic learns to interact at more than his previously dissatisfying superficial level.

Of course, not all of the groups were as open and communicative as the one above. Many of the subjects were very guarded about their reactions. The following is an example of how one of the locked-in alcoholics responded to the film.

Client: That guy doesn't do a thing to me. It's just a film on the screen.

Interrogator: Well, if you could imagine yourself in a situation like that, how do you think you might react?

Client: In the first place, nobody has a right to talk to me like that; my old man never even talked to me like that.

This interaction began with the typical alcoholic denial followed by a recognition of feelings which seemed to bring up thoughts regarding his father. The material generated by the stimulus film and facilitated by the interrogator laid the groundwork for further exploration. Previous research with IPR has indicated that the technique has

value in various stages of therapy (Kagan, Krathwohl and Miller, 1963; Woody, Kagan, Krathwohl and Farquhar, 1965; Resnikoff, Kagan and Schauble, 1970) but according to the weekly ratings on the COGS in this study it seems especially useful in the initial weeks of treatment with alcoholics in group therapy.

After the fourth week of treatment the IPR group quickly lost momentum. The abrupt dropoff may have been a function of the research design. Week 4 in the IPR treatment program introduced the videotaped recall of the subjects while watching the simulated affect films. One of the main reasons that the films and videotape were not used at the onset of treatment was because of the intense potency in combining the films and the videotape. With the films the subjects could react to a simulated interpersonal situation without having to face the consequences of their reactions as in real life. Though anxiety arousing, the films were in reality a relatively safe experience. The videotape recall tends to force one to look at his own and the reactions of each group member to the actor on the film, for the videotape was yet another variable on which to have to concentrate. The group became less involved in individual self-exploration. Seeing themselves on videotape brought about a wide range of personal reactions which seemed to revolve around two basic questions: how do I look to myself? How do I look to others in the

group? In individual videotape recall of the affect stimulus the subject usually is concerned with "What did I feel and how do I look?" which leads to further self-exploration. In a group situation the concern becomes more complex and includes a great deal of concern about being seen favorably by not only himself but other group members, the interrogator and the therapist as well. Group members then become involved in reacting to the simulated affect films while attempting to maintain a satisfying videotape image. This often leads to defensiveness and denial. The dropoff at the fourth and fifth week then may be a result of the defensiveness and caution generated by the potency of the films and videotape used simultaneously in the group situation. It appears that the alcoholic patient is not ready for such intense self-exploration in the third to fourth week of treatment and may have done better with more film sessions prior to introduction of the additional stimulus of videotape.

In summary, statistically, the IPR treatment method did not enhance outcome results any more than the conventional group therapy treatment. On the other hand, a closer inspection of the dependent measures indicates a trend for mean score changes from pre to post-treatment to favor the IPR group. In addition, significant univariate cases on three of the five Michigan Sentence Completion Test areas is suggestive of greater need and

attitude change by the IPR treatment group. Therapist and technician ratings reflected agreement in evaluating the IPR subjects as more advanced in the initial weeks of treatment than the conventional treatment subjects. The data thus appears to offer trends in favor of the IPR treatment.

II Therapist Differences and Therapist by Treatment Interaction Were Main Effects Preventing a True Evaluation of the IPR Treatment

The primary hypothesis regarding treatment differences was not supported. Examination of the other main hypotheses (a test for therapist differences and test for therapist by treatment interactions) helps explain what took place during the research that inhibited a clear cut treatment difference. These two hypotheses were controls for the research design. Since therapist differences and therapist by treatment interaction effects were evident, a clear evaluation of the IPR technique in conjunction with group therapy was not possible. To explore this idea further, the implications of these two hypotheses will be discussed.

In an attempt to control for therapist differences, each of the three therapists was assigned an IPR treatment group and a conventional treatment group. In this way, overall treatment effects could be evaluated, since the same therapist was used for both treatments. What influence did therapist differences have? Did treatment

bias exist? Mean scores of therapist ratings on the COGS showed considerable disparity between therapists. Therapist 1 seemed to rate both groups equally as well while Therapist 2 rated the IPR group somewhat higher. Therapist 3, on the other hand, rated his conventional treatment group far higher than his IPR group. Such ratings may well have been reflections of treatment preferences. Toward the end of the research project one of the therapists commented about having his routine interrupted by the demands of the research, giving the impression that the project may have been just another burdensome duty. This time demand in reality added responsibility to an already overtaxed schedule since all the therapists were full time employees of the ARU. Another therapist reported often feeling angry after the IPR treatment when much material was generated without sufficient time to deal with it, the matter losing importance by the next day.

Each of these concerns could have affected therapists' behavior in biasing the treatment or ratings toward the less frustrating style of treatment; but it is also true that adherence to the treatment plan in the interest of a research design did remove much freedom of choice from the therapist. He had to add videotape by session 5 whether he though the group was ready or not. Too, the stimulus material and videotape were new to all

three therapists and they may have reacted negatively to the complexity and newness. Certainly all three were more "at home" with conventional treatment.

There are other factors to be considered aside from therapist attitude toward treatment. Powdermaker *et al.* (1953) comments that each group has its own unique characteristics and thereby sets its own therapeutic atmosphere. In the present study, although therapists were controlled for in terms of treatment groups, there was no control for types of groups formed. It is possible that regardless of the therapist or the treatment used, a group, because of its uniqueness, may still be of therapeutic benefit to group members. Conversely, regardless of the therapist treatment, because of the group characteristics, therapeutic progress may be impeded from the start. It is possible that by chance Therapist 3's IPR group was not as motivated as the other groups. This argument gains plausibility when one notes that Therapist 3 did not do unusually well with the conventional treatment group, but rather did unusually poorly on most measures with the IPR group.

It is of interest to note that of the dependent variables, therapists seemed to be most influenced by intelligence and the number of years the subject drank. The more unsightful, verbal or seemingly intelligent the subject, the more positive were the therapists' ratings.

Such data is in agreement with Stieper and Wiener's (1965) findings regarding higher intelligence as being a necessary characteristic of successful therapy. However, in this study intelligence did not correlate significantly with any of the dependent measures excepting therapist ratings. This disparity might be interpreted that therapist ratings were the most accurate of the dependent measures; therefore, intelligence would be a basic characteristic for success in this study. In contrast, the high correlation between intelligence and therapist ratings may be indicative of a strong biasing effect. The more verbal or intelligent a subject, the more therapist partiality might be conveyed not only in terms of higher ratings but in group therapy treatment as well. A high correlation between therapist ratings and years of drinking raises similar questions of a potential biasing effect. If the number of years a subject drank influenced therapist ratings, how did it affect his treatment of the subject in group therapy? As covariates, intelligence and years of drinking did not significantly affect the dependent variables (when taken together). However, they did appear to play a significant role in therapist ratings, thus possibly biasing the treatment evaluation by confusing chronicity and intelligence with therapeutic gain.

Therapist ratings on the COGS dimensions were the significant univariate cases depicting therapist

differences. Certainly any combination of the above factors may be involved in arriving at therapist differences. However, one explanation may be that therapists rated differently over the eight week period. Although there was more than reasonable agreement among therapists during the initial part of the study, (see Table 3.11) there was no control for rating consistency over the eight week period. A team of objective raters rating all subjects across therapists may be the best control over such possible rating inconsistencies.

The significance of a therapist-treatment interaction effect is strong evidence that certain therapists functioned more effectively with IPR than others. As noted earlier, therapists did not perform in a consistent fashion either with the IPR approach or the conventional approach. Therapist 1 did almost equally as well with both approaches. Therapist 2 did better with the IPR treatment and Therapist 3 did markedly poorer with the IPR treatment while obtaining average scores with the conventional treatment. The lack of adequate therapist training may have been a factor. Although some therapist preparation was offered, it was evident during the research project that therapists could have used more understanding and experience in using the techniques of the IPR method. In this way frustrations such as feeling the research project was another duty might have been alleviated.

Training for dealing with the material generated by the IPR sessions would have been helpful. Kagan *et al.* (1967) found that the therapist must actively participate if the IPR method is to be effective. In the present study this implies that not only must the therapist be present and active during the IPR session, but also they must be thoroughly trained in the theory and procedure of IPR to participate effectively in the treatment program.

Of course, it is also quite possible that IPR and simulation simply are not effective with groups or with groups of alcoholics.

Implications for Further Research

Because of the significance of therapist differences and therapist by treatment interaction effects, a true evaluation of IPR in conjunction with group therapy was not obtained. These and other facets of the study raise questions which suggest the need for further investigations. The following seem to be the most obvious implications:

1. Therapist differences and therapist by treatment interaction effects prevented a true evaluation of the IPR procedure. However, with noted trends in the data favoring the IPR approach, ongoing studies should be continued to provide more substantial evidence as to whether the technique results in accelerated

movement in group therapy. A thorough therapist training program might be an initial step in eliminating undesirable main effects; however, it is possible that IPR will work well only for certain types of therapists. It might be worthwhile to control for therapist level of functioning in future research.

2. As an extension of this study a follow-up study will be done providing a true assessment of treatment effectiveness in actual behavior outside of therapy. For the alcoholic, sobriety and current job picture will be the main criteria for success in this follow-up. Longitudinal studies examining such criteria will also provide data on the long range effectiveness of the traditional approach.

3. Observations regarding client growth in the first through the fourth week of treatments indicated that the IPR treatment group advanced in a positive direction more so than the conventional therapy group. Future research might investigate the effectiveness of IPR at different stages of the group therapy process. It might also be worthwhile to extend Phase I of the IPR model based on the findings of this study.

4. The use of the Michigan Sentence Completion Test (MSCT) appears to be a useful tool for depicting

treatment differences. As an indices of attitude and need change the MSCT might be found a valuable tool in evaluating therapeutic effectiveness and seems to be especially responsive to the kinds of changes IPR effects.

5. There were differences in results between previous IPR research with one-to-one therapy and the present study. Future research should consider if IPR methods, successful in individual therapy, can be effective in group therapy. Should or can IPR methods or sequences of methods be devised uniquely for group therapy?

6. The covariates IQ and years of drinking were not significant in this study and one questions further the value of using these factors as covariates in future research.

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APPENDICES

APPENDIX A

Role and Training of Interrogator

Role and Training of Interrogator

Generally, prospective interrogators are recruited from among competent clinicians. They are given the following experiences: First, after the rationale, function and techniques of interrogation are explained various videotaped interviews are played. The interrogator is asked to identify places in the interview where he might encourage a subject to stop (assuming that the subject did not stop at those points by himself). He is asked to explain why he chose to stop at that point and what he might ask the subject at that point. Efforts are made to develop the trainee's sensitivity to specific cues which assist the interrogator in recognizing verbal and nonverbal communication which might be effectively used in the interrogation session. They are taught that: abrupt shifts in theme during the interview; shifts in body posture; changes in voice level, tone or pace; use of vocabulary which describes intense affect; changes in visual focus (especially glances at the counselor after the client has made a statement); instances in which either person clearly misinterpreted the other or appeared to not hear the other; possible use of metaphoric communication (e.g., "my counselor at school gets me angry"); inappropriate affect, such as a laugh following a serious comment; and similar cues may be indicative of heightened underlying emotionality and so are often productive times to stop the playback.

Next, each interrogator-trainee is shown films and videotapes demonstrating various interrogation sessions. He is encouraged to critique the tapes. He is then videotaped in a counseling session with a client of his own and is interrogated by one of the IPR staff. After another counseling session, he is given the opportunity to watch a member of the project staff conduct an interrogation with his client. Finally, the interrogator-trainee is paired with a second trainee and acts as an interrogator for this trainee's counseling sessions. They then discuss the interrogation sessions with one of the project staff. Throughout the training process, attention is called to the underlying assumptions of interrogation discussed above.

The above is taken from Studies in Human Interaction (Kagan, Krathwohl *et al.*, 1967). In addition to the above interrogator training procedure, each of the interrogators used in this study were experienced in using the interrogation procedure in a group setting as well.

APPENDIX B

Therapists' Description of Goals, Means and Theory in Group Therapy

Therapists' Description of Goals, Means and Theory in Group Therapy

(Registered Nurse)
Therapist I summarized:

Goals: "Attempt to help subjects obtain increased self awareness and help them with a greater ability to feel and express emotions. In addition, develop greater skills in interpersonal relationships and problem solving techniques. Ultimate goal would be toward a meaningful, happy sobriety."

Means - "In group therapy use a confrontation approach in getting men to assume responsibility for their own feelings, actions and lives. Emphasis on clarification of feelings and the thoughts that go along with them. Stress on encouraging group interaction."

Theory - "By having a positive experience in group therapy helping others, examining feelings and situations and sharing reactions with others, the subjects will develop a variety of ways of dealing with stress and anxiety. Through these satisfying experiences self-confidence and a positive self-image will be established. Resultingly, change in the maladaptive behaviors occurs."

Appendix B (Cont'd)

(ACSW Social Worker)
Therapist 2 summarized:

Goals - "In group therapy the goals would be to discuss specifically the relevant factors associated with alcoholism:

1. cultural, ethnic and religious backgrounds.
2. biological and physiological factors.
3. life experience factors.

All of the above is to work toward the ultimate goal of sobriety in a productive life in the community."

Means - "All subjects are given an opportunity to conduct the group therapy meetings. Any relevant material not mentioned by group members is presented by the therapist. Therapist helps group consider economic, spiritual and philosophic aspects of adjusting to life. Stress is on didactic and educational regarding the causes and consequences of alcoholism in addition to positive alternatives for the future. Specific problems such as marital discord, jobs, half-way houses are discussed."

Theory - "Help subjects to understand their specific problems. Emphasis on re-education and relearning about themselves and the environment around them."

Appendix B (Cont'd)

(Ph.D. Clinical Psychologist)
Therapist 3 summarized:

Goals - "Look at the behavior which has led to the feelings and behavior that is maladaptive resulting in alcoholism. Help subjects learn new ways in problem solving, learn a more satisfying way of relating to people and learn to turn to people rather than booze when problem solving stresses become great."

Means - "Means varies with group and individual. With organics and schizophrenics a very directive approach is used. Sociopathic subjects are made to look at the consequences of their behaviors with corresponding sanctions. 'What will happen to me if I goof?' With the neurotic, encourage group interaction and the caring for each other, being supportive yet letting them know they are not unique with their problems. In all cases the group is considered the primary vehicle of relating the above messages. Therapist encourages this through her own example and positively reinforcing group interaction."

Theory - "Alcoholics have not learned adaptive ways in relating to people. They have resorted to alcohol to relieve their anxiety with regard to themselves and their relationships with others."

APPENDIX C

Complete Breakdown of MSCT Items in the Five Areas

Michigan Sentence Completion Test Breakdown for
Area 1 - Family and Childhood - Opposite Sex

1. 2. The thing about my home
2. 6. Most women are
3. 12. The difference between mom and dad was
4. 16. The girls are nicer than boys
5. 20. Home
6. 22. As a youth my greatest trouble
7. 26. The most important quality a man looks for in a woman is
8. 30. A sister
9. 32. Mother was all right, but
10. 34. As a youth, my greatest emotional need was
11. 42. The rest of the family felt that mom and dad
12. 46. She was happiest when I
13. 52. I sometimes hated father because
14. 62. Because of mom I
15. 76. Although her husband loved her, she
16. 82. The nicest experience of my youth
17. 86. He felt better when she
18. 90. A brother
19. 92. I liked dad when
20. 96. After he had been married for a few years he

Appendix C (Cont'd)

Michigan Sentence Completion Test Breakdown for Area II - Ego Tensions - Self Evaluation - Guilt Feelings

1. 5. I pity
2. 7. It is wrong to make people
3. 17. I used to feel bad about
4. 35. I am
5. 39. I cannot control myself when
6. 43. When I get down in the dumps, I like to
7. 47. We tend to forget the type of experiences which
8. 53. I suffer most from
9. 58. When I saw that others were doing better, I
10. 63. People get upset when
11. 65. I am afraid
12. 67. One must never
13. 68. When criticized for my behavior, I
14. 73. It makes me nervous
15. 80. I failed when
16. 83. My greatest fault
17. 84. I was frustrated when
18. 85. If I only
19. 87. Sexual lust
20. 93. I may get blue when

Appendix C (Cont'd)

Michigan Sentence Completion Test Breakdown for
Area III - Goals - Ambitions - Aggression

1. 3. I sometimes wondered whether
2. 4. People would do anything in order to
3. 8. A friend can get in your hair when
4. 9. What makes me angry is
5. 13. I get distracted when
6. 15. I despise
7. 19. When people make fun of me
8. 24. Most of all, I wanted to
9. 29. I feel like cursing when
10. 33. I dream
11. 44. I used to daydream about
12. 45. I hope
13. 49. I feel like smashing things when
14. 59. When he struck me in the face
15. 64. I often wished
16. 69. I could murder a man who
17. 74. My personality would be much better if
18. 79. I boil up when
19. 94. My greatest ambition is
20. 99. When people push me around

Appendix C (Cont'd)

Michigan Sentence Completion Test Breakdown for
Area IV - Positive and Negative Relations

1. 11. I like children who are
2. 18. I can work best when my supervisor
3. 25. Most people are
4. 28. I would like the men under me to
5. 31. When the boss says, "You can do it." I
6. 36. She disliked him when he
7. 38. The type of teacher I disliked most was
8. 41. I like people at parties who
9. 48. The kind of people who irritate me
10. 51. The thing I want most in my closest friend
11. 56. He often argued with her because
12. 57. The dirtiest thing a woman can do to a man
13. 61. The type of teacher I like best was one who
14. 66. He sometimes hated her because
15. 71. I feel very close to people who
16. 77. The worst thing a man can do to a woman
17. 88. To get along well in a group, you have to
18. 89. I could hate a person who
19. 91. The kind of people I like most are
20. 98. When the boss says I can't do it, I

Appendix C (Cont'd)

Michigan Sentence Completion Test Breakdown for
Area V - Unstructured

1. 1. When people are praised they
2. 10. Freedom
3. 14. What meant most to me was
4. 21. My idea of a mature adult is one who
5. 23. I cannot understand what makes me
6. 27. When I think back
7. 37. A white man who has intercourse with a black woman
8. 40. God
9. 50. Sin
10. 54. I couldn't get along without
11. 55. Love
12. 60. Relatives
13. Discipline
14. 72. The most significant things about my school experience
15. 75. Death
16. 78. When people are criticized, they
17. 81. When praised for my behavior, I
18. 95. I was happiest when
19. 97. People should tell lies when
20. 100. Authority

APPENDIX D

Characteristics of Client Growth Scales (COGS)

Characteristics of Client Growth Scales (COGS)

Patient Observation Sheet

Group No._____
Subject_____
Week No._____
Rater_____

Three characteristics of client growth are described below. Please indicate at what level you see this person functioning at this time.

1. The client owns his feelings. The client admits that he is unhappy or that he has feelings of discomfort. He begins to see that these feelings are not general but are tied to specific concerns, fears, people, or other definite sources of discomfort he feels, he accepts it as his own.

   He is functioning at level 1 2 3 4 5

2. The client commits himself to change. The client decides that he wants to change and says so. Since he wants to change, he cooperates with the counselor rather than resisting the counseling efforts. The client faces his problem directly (because of his desire to change) rather than avoiding it or changing the subject, and he is willing to face the consequences of changing.

   He is functioning at level 1 2 3 4 5

3. The client differentiates stimuli. Rather than reacting in general ways to everything and everyone around him, the client comes to realize that people and events are individual and he learns to respond to them as such. For example, he may learn that his problems are only with certain people or only on certain occasions, he learns that he himself is a unique person, and he learns that society is composed of many distinct people and events to which he can respond in many different ways.

   He is functioning at level 1 2 3 4 5

Appendix D (Cont'd)

Owning of Feelings in Interpersonal Processes: A Scale for Measurement

Level 1

The patient avoids accepting any of his feelings. When feelings are expressed, they are always seen as belonging to others, or entirely situational and outside of himself.

Example: The patient avoids identifying or admitting to any feelings by either remaining silent or denying he feels anything at all.

In summary, the patient seems to believe he is not a part of the world of feelings.

Level 2

The patient may express feelings vaguely, but they are not really accepted as coming from within. Feelings are not tied to himself or specific interactions but seem to pervade his life. In general he shows little involvement with his feelings.

Example: The patient discusses or intellectualizes about feeling in an abstract, detached manner and gives little evidence of knowing the origin of his feelings.

In summary, any expression of feeling appears intellectualized, distant, and vague.

Level 3

The patient can usually identify his specific feelings and their source but tends to express what he feels in an intellectualized manner.

Example: The patient seems to have an intellectual grasp of his feelings and their origin but has little emotional proximity to them.

In summary, the patient usually ties down and owns his feelings in an intellectual manner. Level 3 constitutes the minimal level for gain.

Level 4

The patient almost always acknowledges his feelings and can express them with emotional proximity but at times he has difficulty in connecting the feelings to their source.

Appendix D (Cont'd)

Example: The patient shows immediate and free access to his feelings but has some difficulty in understanding these feelings or their connection to people or concerns in his life.

In summary, the patient owns his feelings fully but seems to have some difficulty in linking them to specific things in his life.

Level 5

The patient clearly embraces his feelings with emotional proximity, and at the same time shows awareness that his feelings are tied to specific behavior of his own and others.

Example: The patient is completely in tune with his feelings, expresses them in a genuine way, and is able to identify their origin.

In summary, the patient clearly owns his feelings and accurately specifies their source.

Appendix D (Cont'd)

Commitment to Change in Interpersonal Processes: A Scale for Measurement

Level 1

The patient shows no motivation for change. He is resistive to attempts by the group or therapist to accomplish change or explore the desirability of change. This may take either the form of complete passivity or defensive hostile behavior.

Example: The patient may question the efficacy of the helping process and the helpfulness of the group to an inappropriate degree: i.e., he seems to be attacking the change process, or he is totally unreceptive and uncooperative to the efforts of the group.

In summary, the patient gives no verbal or behavioral evidence of a desire to change.

Level 2

While the patient expresses the desire to change, his commitment is noticeably questionable. The patient seems to resist the impact of the helping process, and is passive or evasive in his interaction with the group.

Example: The patient seems more involved in reationalizing or defending his behavior than he is in working on changing it. He may communicate the importance or necessity of change, but there is little behavioral evidence of cooperation or real commitment to the change process.

In summary, there is some verbal commitment to change but no behavioral evidence of that commitment.

Level 3

The patient vacillates between an overt desire and/or commitment to change, and the desire to resist or evade change in order to avoid pain. He may express the desire to change and attempt to confront his feelings but varies in his maintenance of motivation to change.

Example: The patient deals with the feelings which are centrally involved with his problem, but there is some tendency to rationalize his behavior or move from topic to topic.

In summary, the patient expresses the desire to change, but vascillates in his commitment to change and cooperates with the group. Level 3 is the minimal level for change to take place.

Appendix D (Cont'd)

Level 4

The patient expresses a desire to change, and while at times is reluctant to experience painful feelings involved in exploring his behavior, actively tries to cooperate with rather than resist the second person's (group's) efforts.

Example: The patient continually returns to the task of understanding his behavior and his role in it, although he experiences (and may overtly express) hesitancy in dealing with his painful feelings.

In summary, the patient wants to change, and he cooperates with the change process in a verbal and a behavioral manner.

Level 5

The patient expresses a clear desire to change. He actively cooperates with the group in a group process, even to the point of accepting painful feelings accompanying the exploration of his problems. The patient is deeply involved in confronting his problems directly, and makes no attempt to evade or resist the experiencing of feelings and behaviors.

Example: The patient pursues the exploration of his feelings and behavior, attempting to gain a better understanding of his behavior in order to change. He faces his problem directly rather than avoiding it or changing the subject.

In summary, the patient clearly expresses verbally and behaviorally a desire and commitment to change his behavior.

Appendix D (Cont'd)

Differentiation of Stimuli in Interpersonal Processes: A Scale for Measurement

Level 1

The patient seems unable to identify or differentiate his problems, feelings, or concerns and is unwilling or unable to move in this direction.

Example: The patient may show either no grasp of his feelings or problems or he seems to respond to everything in very much the same way.

In summary, the patient seems totally unable or unwilling to make discriminations between his feelings or the people and events in his life.

Level 2

The patient may talk about different feelings and problems, but he shows little grasp of real differences among them or of their effect on him as an individual.

Example: The patient may respond in a rehearsed manner to people and events as if his reactions were pre-determined by stereotyped expectations.

In summary, the patient seems to differentiate between his feelings, people, or events at only a superficial level.

Level 3

The patient vacillates between discussing different stimuli and their effect on him (as a unique person) and responding in a general unclear fashion.

Example: The patient may initially make clear differentiations about his world, but he is unable to productively maintain this behavior and lapses into hazy generalizations which do not seem to have immediate meaning to him.

In summary, the patient clearly differentiates between discrete stimuli, but is unable to develop his perceptions or use them effectively. Level 3 constitutes the minimal level of differentiation for growth.

Appendix D (Cont'd)

Level 4

The patient is almost always aware of the differences between stimuli in his world, and he responds to them in a differential manner. He actively attempts to become more aware of his various emotions and their sources.

Example: The patient may show a strong desire to understand himself as a unique and complex person and he attempts to differentiate and identify the distinct people and events in his world.

In summary, the patient is actively involved in a successive differentiation of his feelings and events in his world.

Level 5

The patient always perceives the different stimuli in his world and reacts to them in a variety of differential ways. He is fully aware of his own unique affect on the discrete stimuli around him.

Example: The patient may clearly differentiate among his characteristics and those of others. He shows immediate awareness of his own unique characteristics, and the reactions he stimulates in others.

In summary, the patient recognizes individuality in himself and in others, and responds in an appropriate manner.

APPENDIX E

MMPI Ratings

MMPI RATINGS

	Rater 1			Rater 2		
	Time 1	Time 2	$\bar{M}$	Time 1	Time 2	$\bar{M}$
2	5	5	5	5	5	5
3	4	4	4	4	4	4
5	4	4	4	5	5	5
6	4	4	4	5	5	5
7	3	3	3	4	4	4
9	3	3	3	4	4	4
10	3	4	3.5	4	4	4
11	2	1	1.5	1	2	1.5
12	4	4	4	2	2	2
13	2	1	1.5	3	3	3
16	4	4	4	5	5	5
17	2	1	1.5	2	2	2
18	4	4	4	4	4	4
20	4	4	4	4	4	4
21	1	1	1	1	1	1
23	2	2	2	1	1	1
24	5	5	5	4	5	4.5
25	4	4	4	5	5	5
26	1	1	1	1	2	1.5
27	3	2	2.5	4	4	4
28	4	3	3.5	4	4	4
29	2	1	1.5	1	1	1
30	4	4	4	4	4	4
31	3	3	3	4	4	4
32	1	1	1	2	3	2.5
33	3	3	3	3	4	3.5
35	1	1	1	2	3	2.5
36	5	5	5	5	5	5
38	1	1	1	1	1	1
39	2	2	2	2	2	2

MMPI Ratings (Cont'd)

	Rater 1			Rater 2		
	Time 1	Time 2	$\bar{M}$	Time 1	Time 2	$\bar{M}$
41	3	1	2	3	3	3
42	4	4	4	4	5	4.5
43	1	1	1	1	1	1
44	4	4	4	4	4	4
45	3	3	3	4	3	3.5
46	4	4	4	5	5	5
47	1	1	1	1	1	1
49	3	3	3	3	3	3
50	3	2	2.5	4	4	4

APPENDIX F

Instructions and Examples for MSCT Raters

Instructions and Examples for MSCT Raters

RATE EACH OF THE 100 ITEM RESPONSES ON EACH MSCT PROTOCOL IN THE FOLLOWING MANNER:

5 = very positive
4 = somewhat positive
3 = neutral
2 = somewhat negative
1 = very negative

The 1 to 5 rating of each response is an evaluation of mental health in terms of negative or positive

Positive mental health responses may reflect an assortment of themes including: a healthy self concept, a capacity to enjoy and cope with life, a good degree of openness and honesty or general satisfying relationships with others. Basically, the response reflects a positive aspect of the respondent.

The following are examples of #4 and #5 responses:

MY IDEA OF A MATURE ADULT IS ONE WHO...
1. ... can handle problems logically and conclusively.
2. ... adjusts to situations and can reach a happy medium.
3. ... can cope with life in general.
4. ... can understand himself and other people.
5. ... accepts himself as he is and others as they are.

HOME...
1. ... is security, love, togetherness.
2. ... a place of security and warmth.
3. ... a place to go for rest and peace of mind.
4. ... where the people I love are.
5. ... should be an understanding place for all.

I COULDN'T GET ALONG WITHOUT...
1. ... trust.
2. ... my wife.
3. ... friends in this world.
4. ... love and companionship.
5. ... knowing I am trying to do good for myself.

Negative mental health responses reflect the same type of themes as positive responses but in an unhealthy direction, for example: self-deprecating statements, a poor adjustment to life, defensiveness and closed mindedness, or general dissatisfying relationships with others. Basically, the response denotes a negative aspect of the respondent.

Appendix F (Cont'd)

The following are #1 and #2 response examples:

MY IDEA OF A MATURE ADULT IS ONE WHO...
1. ... is not like me.
2. ... can take a drink.
3. ... is definitely the master of his home.
4. ... can get everything he wants in life.
5. ... can fight for his rights.

HOME...
1. ... was a rotten experience.
2. ... something I lost.
3. ... can't remember too much about it.
4. ... is to live in but I ain't got one.
5. ... what home?

A neutral response does not reflect either positive or negative mental health.

The following are examples of a #3 response:

MY IDEA OF A MATURE ADULT IS ONE WHO...
1. ... behaves.
2. ... looks good.
3. ... nice.
4. ... is mature.
5. ... acts like one.

HOME...
1. ... life.
2. ... a place to call your own.
3. ... is home.
4. ... sweet home.
5. ... a man's castle.

I COULDN'T GET ALONG WITHOUT...
1. ... money.
2. ... women in this world.
3. ... my job.
4. ... some enjoyment.
5. ... food.

APPENDIX G

MSCT Ratings at Time 1 and Time 2

Subject 1

MSCT Ratings at Time 1 and Time 2

	Time 1	Time 2		Time 1	Time 2		Time 1	Time 2		Time 1	Time 2
1	3	3	28	3	3	57	3	3	86	3	3
2	4	4	29	3	3	58	4	4	87	4	4
3	3	3	30	3	4	59	2	3	88	3	3
4	3	3	31	3	3	60	1	2	89	3	3
5	1	1	32	4	4	61	3	3	90	3	3
6	3	3	33	3	3	62	4	4	91	3	2
7	3	3	34	3	3	63	3	3	92	3	3
8	3	3	35	4	4	64	2	2	93	3	3
9	3	3	36	3	3	65	3	3	94	3	3
10	3	3	37	3	3	66	3	3	95	5	5
11	3	3	38	3	3	67	3	3	96	2	2
12	3	3	39	3	3	68	3	3	97	3	3
13	3	3	40	3	3	69	3	3	98	2	3
14	4	3	41	3	3	70	3	3	99	2	3
15	3	3	42	3	3	71	4	3	100	3	3
16	3	3	43	3	3	72	4	3			
17	2	2	44	3	3	73	3	3			
18	2	2	45	3	3	74	3	3			
19	3	3	46	2	2	75	2	2			
20	4	4	47	3	3	76	2	2			
21	3	3	48	3	3	77	3	3			
22	3	3	49	3	3	78	3	3			
23	3	3	50	4	3	79	3	3			
24	3	3	51	3	3	80	1	2			
25	4	4	52	3	3	81	4	4			
26	4	5	53	3	2	82	4	4			
27	2	2	54	5	5	83	2	1			
			55	4	4	84	3	3			
			56	3	3	85	2	2			

Appendix G (Cont'd)

Subject 2

MSCT Ratings at Time 1 and Time 2

	Time 1	Time 2		Time 1	Time 2		Time 1	Time 2		Time 1	Time 2
1	3	3	28	3	3	57	3	3	86	3	3
2	2	3	29	3	3	58	5	4	87	4	4
3	2	1	30	4	5	59	3	3	88	3	3
4	3	2	31	2	1	60	3	3	89	3	3
5	2	1	32	3	3	61	3	3	90	4	5
6	3	3	33	4	3	62	3	3	91	3	3
7	3	3	34	3	3	63	1	1	92	4	4
8	3	3	35	4	3	64	2	1	93	3	3
9	3	3	36	2	2	65	2	2	94	3	3
10	3	3	37	3	3	66	3	3	95	1	4
11	3	3	38	3	3	67	3	3	96	4	4
12	3	3	39	1	1	68	3	3	97	3	3
13	3	3	40	3	3	69	3	3	98	3	3
14	5	5	41	3	3	70	3	3	99	3	3
15	3	3	42	4	4	71	3	3	100	3	3
16	3	3	43	3	3	72	3	3			
17	2	2	44	3	3	73	3	3			
18	2	2	45	1	1	74	3	2			
19	2	1	46	1	2	75	1	1			
20	2	2	47	3	3	76	2	2			
21	5	4	48	3	3	77	3	3			
22	3	3	49	3	3	78	3	2			
23	3	3	50	3	3	79	3	3			
24	4	5	51	3	3	80	1	2			
25	2	2	52	3	3	81	1	1			
26	3	3	53	3	3	82	3	4			
27	3	1	54	5	4	83	1	2			
			55	4	3	84	3	3			
			56	2	3	85	2	2			

Appendix G (Cont'd)

Subject 3

MSCT Ratings at Time 1 and Time 2

	Time 1	Time 2		Time 1	Time 2		Time 1	Time 2		Time 1	Time 2
1	2	3	28	3	3	57	3	3	86	2	3
2	4	4	29	1	1	58	5	5	87	1	1
3	1	2	30	4	4	59	3	3	88	3	3
4	3	3	31	1	1	60	3	3	89	3	3
5	1	1	32	3	3	61	3	3	90	4	4
6	3	3	33	3	3	62	3	3	91	3	3
7	3	3	34	2	3	63	3	3	92	2	3
8	3	3	35	3	3	64	3	2	93	3	3
9	3	3	36	2	2	65	3	3	94	2	2
10	3	3	37	3	3	66	3	3	95	2	2
11	3	3	38	3	3	67	2	3	96	2	1
12	3	3	39	2	1	68	3	3	97	3	4
13	3	3	40	3	3	69	3	3	98	3	3
14	4	5	41	3	3	70	3	3	99	3	3
15	2	2	42	3	3	71	3	3	100	3	3
16	3	3	43	1	1	72	3	4			
17	1	1	44	1	1	73	3	4			
18	2	2	45	3	3	74	2	2			
19	3	3	46	2	3	75	3	3			
20	4	4	47	3	3	76	2	2			
21	1	1	48	3	3	77	3	3			
22	3	3	49	3	3	78	3	3			
23	2	1	50	2	3	79	3	3			
24	2	3	51	3	3	80	3	3			
25	4	4	52	3	3	81	4	4			
26	3	3	53	3	3	82	3	3			
27	2	2	54	2	3	83	3	3			
			55	3	3	84	3	3			
			56	3	3	85	3	3			

Appendix G (Cont'd)

Subject 4

MSCT Ratings at Time 1 and Time 2

	Time 1	Time 2		Time 1	Time 2		Time 1	Time 2		Time 1	Time 2
1	4	4	28	4	4	57	3	3	86	3	3
2	5	5	29	3	3	58	5	4	87	4	4
3	4	3	30	3	3	59	3	3	88	3	3
4	4	3	31	3	3	60	4	4	89	3	3
5	3	3	32	3	3	61	3	3	90	4	5
6	3	4	33	3	3	62	4	4	91	3	3
7	3	3	34	3	3	63	3	3	92	3	3
8	3	3	35	4	4	64	3	3	93	3	3
9	3	3	36	3	3	65	3	2	94	2	2
10	3	3	37	3	2	66	3	3	95	3	3
11	3	3	38	3	3	67	3	3	96	3	3
12	3	3	39	3	3	68	5	5	97	4	4
13	3	3	40	3	3	69	3	3	98	3	3
14	5	5	41	5	4	70	3	3	99	3	3
15	3	3	42	4	4	71	4	4	100	3	3
16	3	3	43	3	4	72	4	4			
17	2	2	44	3	3	73	3	3			
18	3	3	45	2	2	74	3	3			
19	3	3	46	2	2	75	3	3			
20	4	4	47	3	3	76	2	2			
21	4	3	48	3	3	77	1	2			
22	3	3	49	3	3	78	3	3			
23	1	2	50	3	3	79	4	3			
24	4	3	51	3	3	80	3	3			
25	4	4	52	3	3	81	1	1			
26	3	3	53	3	2	82	3	3			
27	3	3	54	3	3	83	1	1			
			55	3	4	84	1	3			
			56	3	3	85	2	2			

Appendix G (Cont'd)

MSCT Intra-Rater Reliability Using Pearson Correlation

$N = 400$

$EX = \underline{1169}$ $EY = \underline{1172}$ $EX^2 = \underline{3692}$

$EY^2 = \underline{3685}$ $EXY = \underline{3638}$

$$r = \frac{400\,(3638) - (1169)\quad(1172)}{\sqrt{[400\,(3692) - (1169)^2]\quad[400\,(3685) - (1172)^2]}}$$

$$r = \frac{1{,}455{,}200 - 1{,}370{,}068}{\sqrt{[1{,}476{,}800 - 1{,}366{,}561]\quad[10{,}474{,}000 - 1{,}373{,}584]}}$$

$$r = \frac{85{,}132}{\sqrt{(110{,}239)\quad(100{,}416)}}$$

$$r = \frac{85{,}132}{\sqrt{11{,}069{,}759{,}424}} = \frac{85{,}132}{105{,}218} = \underline{.809}$$

32,206

APPENDIX H

Kendall Coefficient of Concordance For Therapists and Technicians on the COGS Scales

INTERRATER RELIABILITY BY

KENDALL COEFFICIENT OF CONCORDANCE
For Therapists and Technicians on the COGS Scales

	Score	Rank	OF					Score	Rank	CC				
Tech 1	3	2	2	1	4	3		2	1.5	2	1.5	5	3	
Tech 2	2	1	3	2.5	3	2.5		3	2.5	2	1	3	2.5	
Tech 3	3	2	1	1		3		3	2	1	1	4	3	
		5		4.5		8.5			6		3.5		8.5	
		-1		-1.5		2.5	S= 9.50		0		-2.5		2.5	S=12.50
		1		2.25		6.25	W= .527		0		6.25		6.25	W= .694

	Score	Rank	OF					Score	Rank	CC				
Therp 1	2	2	1	1	4	3		3	2	2	1	4	3	
Therp 2	3	2	1	1	4	3		3	2	1	1	4	3	
Therp 3	3	2.5	1	1	3	2.5		2	2	1	1	4	3	
		6.5		3		8.5			6		3		9	
		+5		-3		2.5	S=15.50		0		-3		-3	S=18.00
		.25		9		6.25	W= .861		0		9		9	W= 1.00

Formula Used:

$$W = \frac{S}{1/12\ K^2\ (N^3 - N)}$$

Appendix H (Cont'd)

	Score	Rank	DS				
Tech 1	2	1.5	2	1.5	5	3	
Tech 2	3	2.5	2	1	3	2.5	
Tech 3	3	2	1	1	4	3	
		6		3.5		8.5	S=12.50
		0		-2.5		2.5	W= .694
				6.25		6.25	

	Score	Rank	DS				
Therp 1	2	2	1	1	5	3	
Therp 2	3	2	1	1	4	3	
Therp 3	3	2.5	1	1	3	2.5	
		6.5		3		8.5	S=15.50
		+ .5		-3		2.5	W= .861
		.25		9		6.25	

APPENDIX I

Statistics For Regression Analysis With 2 Covariates

Statistics For Regression Analysis With 2 Covariates

	Variable	Square Mult R	Mult R	F	P Less Than	Step Down F	P Less Than
1.	MMPI	0.0230	0.1516	0.3647	0.6974	0.3647	0.6974
2.	OFR1	0.2961	0.5441	6.5186	0.0044	6.5680	0.0044
3.	OFR2	0.0903	0.3004	1.5379	0.2308	2.2659	0.1219
4.	CCR1	0.2629	0.5127	5.5285	0.0089	0.9142	0.4125
5.	CCR2	0.1043	0.3229	1.8040	0.1816	0.1138	0.8929
6.	DSR1	0.4233	0.6506	11.3765	0.0002	4.8470	0.0163
7.	DSR2	0.1733	0.4163	3.2497	0.0524	0.2521	0.7792
8.	SCT1	0.0078	0.0884	0.1220	0.8856	0.2972	0.7457
9.	SCT2	0.0342	0.1849	0.5488	0.5832	0.3450	0.7118
10.	SCT3	0.0276	0.1661	0.4398	0.6482	0.2899	0.7512
11.	SCT4	0.0442	0.2102	9.7163	0.4965	0.4019	0.6741
12.	SCT5	0.0781	0.2795	1.3137	0.2834	0.8284	0.4513

Degrees of Freedom for Hypothesis = 2
Degrees of Freedom for Error = 31

CHI square for Test of Hypothesis of no association between dependent and independent variables - 29.0013

D,F, = 24 P Less Than 0.2201

Square Correlation = 0.5951

Accounts for 4.9591 percent of variation in dependent variables.

APPENDIX J

Table of Means for the Dependent Measures

Table of Means for the Dependent Measures

Table of Means for the MMPI

MMPI	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 4,0500	6) 3,2500	2) n=6 3,3750	3) n=7 3,0714	n=18 3,4444
Conv	4) n=7 3,0000	5) 3,9500	5) n=8 2,8125	6) n=6 3,4167	n=21 3,0479
Group Tot	n=12 3,4375		n=14 3,0535	n=13 3,2307	n=39 3,2307

Table of Means for OF Therapist Ratings

OF_{R1}	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 20,4000	6) 15,3333	2) n=6 22,0000	3) n=7 15,1429	n=18 18,8889
Conv	4) n=7 18,1429	5) 23,8000	5) n=8 20,0000	6) n=6 16,8333	n=21 18,4762
Group Tot	n=12 19,0834		n=14 20,8571	n=13 15,9231	n=39 18,6667

Appendix J (Cont'd)

Table of Means for CC Therapist Ratings

CC_{R1}	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 22,6000	6) 15,1666	2) n=6 23,333	3) n=7 17,4286	n=18 20,8333
Conv	4) n=7 20,1429	5) 26,6000	5) n=8 20,2500	6) n=6 18,3333	n=21 19,6667
Group Tot	n=12 21,0667		n=14 21,5714	n=13 17,8462	n=39 20,2051

Table of Means for DS Therapist Ratings

DS_{R1}	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 19,0000	6) 14,0000	2) n=6 22,1667	3) n=7 15,0000	n=18 18,5000
Conv	4) n=7 17,0000	5) 23,6000	5) n=8 19,6250	6) n=6 14,6667	n=21 17,3333
Group Tot	n=12 17,8333		n=14 20,7143	n=13 14,8462	n=39 17,8718

Table of Means for OF Technician Ratings

OF_{R2}	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 18,8000	19,3333	2) n=6 23,6667	3) n=7 16,5714	n=18 19,5556
Conv	4) n=7 19,4286	22,2000	5) n=8 18,0000	6) n=6 23,6667	n=21 20,0952
Group Tot	n=12 19,1667		n=14 20,4286	n=13 19,8462	n=39 19,8461

Appendix J (Cont'd)

Table of Means for CC Technician Ratings

CC_{R2}	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 20,4000	19,3333	2) n=6 23,0000	3) n=7 16,5714	n=18 19,7778
Conv	4) n=7 19,1429	21,8000	5) n=8 19,0000	6) n=6 21,667	n=21 19,8089
Group Tot	n=12 19,6667		n=14 20,7143	n=13 18,9231	n=39 19,7949

Table of Means for DS Technician Ratings

DS_{R2}	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 20,6000	19,8333	2) n=6 21,8333	3) n=7 14,7143	n=18 18,7222
Conv	4) n=7 18,7143	23,0000	5) n=8 15,6250	6) n=6 22,5000	n=21 18,4048
Group Tot	n=12 19,5000		n=14 17,9643	n=13 18,3077	n=39 18,5513

Table of Means for MSCT 1

$MSCT_1$	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 ,8000	4,2500	2) n=6 1,8333	3) n=7 ,8571	n=18 1,1667
Conv	4) n=7 -1,7143	2,5000	5) n=8 -3,7500	6) n=6 -2,8333	n=21 -2,8095
Group Tot	n=12 - ,6667		n=14 -1,3571	n=13 - ,8461	n=39 - ,9743

Appendix J (Cont'd)

Table of Means for MSCT 2

$MSCT_2$	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 7,4000	7,2500	2) n=6 2,8333	3) n=7 4,1429	n=18 4,6111
Conv	4) n=7 - ,2857	5,7500	5) n=8 1,6250	6) n=6 1,6667	n=21 1,0000
Group Tot	n=12 2,9166		n=14 2,1428	n=13 3,0000	n=39 2,6667

Table of Means for MSCT 3

$MSCT_3$	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 3,6000	2,0000	2) n=6 1,8333	3) n=7 - ,2857	n=18 1,5000
Conv	4) n=7 1,8571	5,7500	5) n=8 -1,6250	6) n=6 1,3333	n=21 ,3809
Group Tot	n=12 2,5833		n=14 - ,1429	n=13 ,4615	n=39 ,8974

Table of Means for MSCT 4

$MSCT_4$	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 ,4000	4,000	2) n=6 - ,3333	3) n=7 1,4286	n=18 ,5556
Conv	4) n=7 2,1429	4,000	5) n=8 ,7500	6) n=6 ,1667	n=21 1,0476
Group Tot	n=12 1,4167		n=14 ,2857	n=13 ,8693	n=39 ,8205

Appendix J (Cont'd)

Table of Means for MSCT 5

$MSCT_5$	Therp 1	Omitted Groups	Therp 2	Therp 3	Trtmnt Tot
IPR	1) n=5 5,2000	2,0000	2) n=6 3,0000	3) n=7 ,7143	n=18 2,7222
Conv	4) n=7 1,1429	4,0000	5) n=8 -2,3750	6) n=6 - ,5000	n=21 - ,6667
Group Tot	n=12 2,8334		n=14 ,0714	n=13 ,1538	n=39 ,8974

APPENDIX K

Sample Correlation Matrix

Sample Correlation Matrix - (Within Cells)

	1 MMP1	2 OFR1	3 OFR2	4 CCR1	5 CCR2	6 DSR1
1. MMP1	1.000000					
2. OFR1	-0.091243	1.000000				
3. OFR2	0.081650	0.645945	1.000000			
4. CCR1	-0.000375	0.889060	0.494842	1.000000		
5. CCR2	0.036068	0.645340	0.792814	0.509597	1.000000	
6. DSR1	-0.049338	0.927345	0.571768	0.910998	0.624484	1.000000
7. DSR2	-0.098898	0.752529	0.759738	0.628095	0.781203	0.776521
8. SCT1	-0.112256	0.050431	0.103482	0.001393	0.077693	0.066872
9. SCT2	-0.206615	0.034510	-0.028298	-0.026210	-0.012822	0.067113
10. SCT3	-0.081680	-0.072036	0.358275	-0.107019	0.146881	-0.040421
11. SCT4	-0.139530	-0.157230	-0.181586	-0.205406	-0.157608	-0.025925
12. SCT5	0.033746	-0.024265	0.088094	-0.192726	0.098728	0.052122
13. CHRON	0.058938	-0.405366	-0.006690	-0.323785	-0.141279	-0.437344
14. IQ	0.120619	0.452431	0.292575	0.465664	0.316369	0.575391
15. COGR1	-0.051702	0.972260	0.594170	0.958735	0.616567	0.976310
16. COGR2	0.006078	0.737790	0.917700	0.589577	0.933584	0.713105

Appendix K (Cont'd)

	7 DSR2	8 SCT1	9 SCT2	10 SCT3	11 SCT4	12 SCT5
1. MMP1						
2. OFR1						
3. OFR2						
4. CCR1						
5. CCR2						
6. DSR1						
7. DSR2	1.000000					
8. SCT1	0.194024	1.000000				
9. SCT2	0.099161	0.292458	1.000000			
10. SCT3	0.105165	0.241867	0.314147	1.000000		
11. SCT4	-0.124456	0.141576	0.115264	0.084738	1.000000	
12. SCT5	0.170966	0.416742	0.269164	0.129131	0.248041	1.000000
13. CHRON	-0.218042	-0.006493	-0.179434	0.163339	-0.119850	-0.273664
14. IQ	0.397769	-0.083738	0.087961	-0.069889	0.197850	0.123251
15. COGR1	0.745969	0.042511	0.028022	-0.074263	-0.132048	-0.050852
16. COGR2	0.917574	0.134847	0.021126	0.216384	-0.166982	0.129313

Appendix K (Cont'd)

	13 CHRON	14 IQ	15 COGR1	16 COGR2
1. MMP1				
2. OFR1				
3. OFR2				
4. CCR1				
5. CCR2				
6. DSR1				
7. DSR2				
8. SCT1				
9. SCT2				
10. SCT3				
11. SCT4				
12. SCT5				
13. CHRON	1.000000			
14. IQ	-0.248938	1.000000		
15. COGR1	-0.403869	0.512852	1.000000	
16. COGR2	-0.134622	0.363833	0.706749	1.000000

APPENDIX L

IPR and Conventional Mean Group Ratings on the COGS by Therapists and Technicians Over the 8 Week Treatment Program

IPR and Conventional Mean Group Ratings on the COGS by Therapists Over the 8 Week Treatment Program

		W_1	W_2	W_3	W_4	W_5	W_6	W_7	W_8
	T_1	2.000	2.000	3.000	2.200	2.200	2.800	2.600	3.600
	T_2	1.667	3.000	3.000	3.000	2.833	2.500	3.000	3.000
	T_3	1.286	1.857	2.000	1.714	1.571	1.857	2.143	2.714
	IPR Tot	1.611	2.278	2.611	2.278	2.167	2.333	2.556	3.056
OF									
	T_1	1.571	1.857	1.857	2.143	2.429	2.571	3.000	2.714
	T_2	1.375	2.250	2.500	2.625	2.750	2.875	3.250	2.375
	T_3	1.333	1.500	2.000	2.333	2.167	2.000	2.500	3.000
	C Tot	1.429	1.905	2.143	2.351	2.476	2.524	2.992	2.667
	T_1	2.200	2.400	2.200	2.800	2.800	3.200	3.200	3.800
	T_2	1.667	3.167	3.333	3.333	3.000	2.833	3.000	3.000
	T_3	1.714	1.857	2.429	2.286	2.000	2.143	2.286	2.714
	IPR Tot	1.833	2.444	2.667	2.778	2.556	2.667	2.778	3.111
CC									
	T_1	1.571	2.143	2.286	2.143	2.571	3.000	3.143	3.286
	T_2	1.500	2.375	2.625	2.625	2.750	2.875	3.125	2.500
	T_3	1.167	1.833	2.333	2.500	2.333	2.500	2.500	3.000
	C Tot	1.429	2.143	2.429	2.929	2.571	2.810	2.952	2.905

Appendix L (Cont'd)

	T_1	1.600	2.000	2.000	2.000	2.200	2.600	2.800	3.600
	T_2	1.667	3.000	3.000	3.000	2.833	2.669	3.000	3.000
	T_3	1.286	1.429	2.000	2.286	1.714	2.000	1.857	2.429
IPR	Tot	1.500	2.111	2.333	2.444	2.222	2.389	2.500	2.914
DS									
	T_1	1.429	1.571	1.571	1.857	2.429	2.571	2.714	2.857
	T_2	1.500	2.375	2.500	2.375	2.375	2.875	3.125	2.500
	T_3	1.167	1.33	1.500	1.833	1.833	1.833	2.333	2.833
C	Tot	1.381	1.801	1.905	2.048	2.238	2.476	2.762	2.714

IPR and Conventional Mean Group Ratings on the COGS
by Technicians Over the 8 Week Treatment Program

		W_1	W_2	W_3	W_4	W_5	W_6	W_7	W_8
		1.600	1.800	2.400	3.000	2.400	2.000	2.600	3.400
		1.833	3.000	3.333	3.167	2.667	3.000	3.500	3.333
		1.429	2.000	2.000	1.857	2.286	2.143	2.571	2.286
	IPR Tot	1.611	2.275	2.556	2.611	2.444	2.389	2.789	2.944
OF									
		2.143	2.571	2.143	2.286	2.286	2.429	2.857	3.143
		1.500	2.000	2.500	2.625	2.250	2.375	2.875	3.000
		1.833	3.333	2.667	2.333	2.833	3.500	3.500	3.667
	C Tot	1.810	2.571	2.429	2.429	2.429	2.714	3.048	3.238
		1.600	2.000	2.400	2.600	2.600	2.600	3.200	3.400
		2.000	3.000	3.333	3.000	2.667	3.333	2.667	2.833
		1.714	2.143	2.286	1.857	2.286	2.000	2.143	2.143
	IPR Tot	1.778	2.389	2.667	2.444	2.500	2.611	2.611	2.722
CC									
		2.143	2.143	2.143	2.429	2.143	2.286	2.857	3.000
		1.625	1.750	2.250	3.000	2.625	2.750	2.750	2.625
		1.833	2.500	2.833	2.000	2.833	2.667	3.500	3.500
	C Tot	1.857	2.095	2.381	2.524	2.524	2.571	3.000	3.000

Appendix L (Cont'd)

	1.600	1.600	2.000	3.200	3.000	2.200	2.800	2.800
	1.833	3.000	3.000	3.167	2.500	2.833	2.667	2.833
	1.857	2.000	2.286	1.957	1.571	1.571	1.714	1.857
IPR Tot	1.778	2.222	2.556	2.667	2.278	2.167	2.333	2.444
DS								
	2.143	2.000	2.000	2.143	1.857	2.286	3.000	3.286
	1.375	1.625	1.750	2.125	2.000	2.125	2.625	2.500
	1.833	2.833	2.867	2.333	2.500	3.167	3.667	3.500
C Tot	1.762	2.095	2.095	7.109	2.095	2.476	3.048	3.048

APPENDIX M

MANOVA Test for Treatment Differences Omitting Both Treatment Groups of Therapist 3

MANOVA Test for Main Effects of Treatments

F-Ratio for Multivariate Test of Equality of Mean Vectors = 1.7410

D.F. = 12 and 11.0000 P Less Than 0.1838

	Variable	Between Mean Sq	Univariate F	P Less Than
1.	MMP1	4.0978	2.4374	0.1328
2.	OFR1	28.5620	0.7156	0.4067
3.	OFR2	40.0023	2.3169	0.1423
4.	CCR1	48.3778	1.7831	0.1955
5.	CCR2	43.5564	1.8935	0.1827
6.	DSR1	32.5074	0.9068	0.3514
7.	DSR2	103.2485	4.6419	0.0425
8.	SCT1	103.3396	3.0699	0.0937
9.	SCT2	124.6668	4.4572	0.0464
10.	SCT3	42.6341	2.4763	0.1299
11.	SCT4	12.5879	0.9789	0.3333
12.	SCT5	140.2080	5.4543	0.0291

Degrees of Freedom for Hypothesis = 1
Degrees of Freedom of Error = 22

Appendix M (Cont'd)

MANOVA Test for Therapist Main Effects

F-Ratio for Multivariate Test of Equality of Mean Vectors = 6.1480

D.F. = 12 and 11.0000 P Less Than 0.0026

	Variable	Between Mean Sq	Univariate F	P Less Than
1.	MMP1	1.0685	0.6356	0.4339
2.	OFR1	19.9962	0.5010	0.4865
3.	OFR2	19.9962	1.1581	0.2936
4.	CCR1	1.5009	0.0553	0.8163
5.	CCR2	10.5403	0.4582	0.5056
6.	DSR1	54.9381	1.5324	0.2288
7.	DSR2	4.3377	0.1950	0.6631
8.	SCT1	1.0216	0.0303	0.8633
9.	SCT2	9.3809	0.3354	0.5684
10.	SCT3	41.3696	2.4029	0.1354
11.	SCT4	7.5985	0.5909	0.4503
12.	SCT5	47.4906	1.8475	0.1879

Degrees of Freedom for Hypothesis = 1
Degrees of Freedom for Error = 22

Appendix M (Cont'd)

MANOVA Test for Therapist by Treatment Interaction Effects

F-Ratio for Multivariate Test of Equality of Mean Vectors = 0.8520

D.F. = 12 and 11.000 P Less Than 0.6082

	Variable	Between Mean Sq	Univariate F	P Less Than
1.	MMP1	0.0865	0.0515	0.8227
2.	OFR1	0.3462	0.0087	0.9267
3.	OFR2	61.5385	3.5642	0.0723
4.	CCR1	1.3846	0.0510	0.8234
5.	CCR2	12.4615	0.5417	0.4695
6.	DSR1	0.0000	0.0000	1.0001
7.	DSR2	44.4615	1.9989	0.1715
8.	SCT1	24.0385	0.7141	0.4072
9.	SCT2	47.1154	1.6845	0.2078
10.	SCT3	13.8846	0.8065	0.3789
11.	SCT4	0.9615	0.0748	0.7871
12.	SCT5	13.8846	0.5401	0.4702

Degrees of Freedom for Hypothesis = 1
Degrees of Freedom for Error = 22