THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

PREDICTING RESPONSE TO GROUP PSYCHOTHERAPY

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

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Norman, Oklahoma

1959

PREDICTING RESPONSE TO GROUP PSYCHOTHERAPY

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ACKNOWLEDGMENTS

The writer wishes to express her appreciation to Dr. Richard G. Cannicott who served as the director for the dissertation, and to the administration, the clinical staff, and the personnel and patients of Central State Griffin Memorial Hospital who generously participated in this research.

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CHAPTER I

INTRODUCTION

An increasingly widespread use of group psychotherapy as a treatment method, particularly in settings such as state mental hospitals where professional staff time is at a premium was reported as early as 1951 by Geller (1951). Considering the continued expansion of treatment facilities in mental hospitals since 1951, which was accelerated with the introduction of the tranquilizing drugs, the problem of efficient selection of those emotionally ill people who can make the most effective use of this treatment is a pertinent one. In a survey of the literature, as well as in practices in the state mental hospital in which this study was conducted, it was found that referral for this form of treatment is made most frequently on the basis of an informal assessment of the patient by a psychiatrist or by the psychotherapist himself (Bach, 1954; Foulkes, 1949; Freedman & Sweet, 1954; Furst, 1951; Harris & Christiansen, 1946; Powdermaker & Frank, 1953; Slavson, 1950). However, in some cases this evaluation is made by a psychiatric clinical team

utilizing their combined clinical judgment, perhaps with the aid of extensive clinical evaluative procedures. In most cases it is not possible to base the evaluation upon a thorough case history or psychodiagnostic examination because of the cost of such procedures. Consequently, the prescription for group psychotherapy is often made on a trial and error basis, i.e., in lieu of any alternative treatment of choice, patients are "tried out" in group psychotherapy. Obviously this practice could be quite wasteful of treatment effort.

Conceivably, such waste might be reduced or largely avoided if, first, it were established to what degree informal clinical judgments made by psychiatrists were accurate and which factors involved in these judgments were predictive of good or poor response to group psychotherapy and, second, if efficiency in prediction were improved by devising techniques to measure these factors or other factors derived from personality or psychotherapy theory. Such techniques might be developed to be administered quickly and easily to prospective group psychotherapy subjects. Also, measurement techniques previously utilized for predicting response to individual psychotherapy might be evaluated for their applicability to prediction of response in group psychotherapy.

Previous Predictive Attempts

In order to review and evaluate previous studies

concerned with prediction of success in psychotherapy, two general assumptions of the present research should be made clear. First, although previous studies will be considered under the separate headings of individual psychotherapy and group psychotherapy for the purposes of this study, the two techniques are considered comparable. A similarity in patient dynamics in both forms of treatment has been recognized by Freedman (1954), Foulkes (1949), and Sternbach (1947). Secondly, response to group psychotherapy, the dependent variable in this study, is defined for present purposes as constructive participation in the group which is conducive to the solution of the patient's personal problems. Therefore, it is here assumed that those patients who are responsive during the course of treatment would, if treatment were continued, be expected to be later rated as having achieved success or as having improved in psychotherapy.

In reviewing the pertinent literature, it is observed that in the last ten years there has been increased interest in investigations of many aspects of psychotherapy but relatively few studies devoted to discovering factors prognostic of response to psychotherapy have been reported, especially where objective evidence and standard psychological tools are employed. Of the studies on prognosis, most are concerned with individual therapy. Much of the published work concerning selection of patients for individual and group psychotherapy, while useful, is quite vague and general,

representing observations arising out of clinical experience without experimental verification (Alexander & French, 1946; Bach, 1954; Bennett & Rogers, 1941; Fenichel, 1945; Freedman et al., 1954; Gallagher, 1953a; Harris et al., 1946; Powdermaker et al., 1953; Rogers, 1942; Slavson, 1943; Slavson 1950). However, the recent trend, according to the observations of Gallagher (1953a) and of Harris and Christiansen (1946), seems to be in the direction of replacing selection on the basis of formal diagnostic types or classical psychiatric syndromes with selection on the basis of more specific personality qualities of the individual under consideration. This trend is also commented on by group therapists (Foulkes, 1949; Slavson, 1943). Slavson (1943) speaks of relying on "behavior patterns" and the "symptom picture" rather than on traditional diagnostic categories in his selective procedures. Quite possibly this development was in reaction to the use of traditional diagnostic categories and unverified selection procedures which had been found inadequate as a basis for selecting psychotherapy candidates. Thus, recently there has been instigated an experimental approach to the problem of finding objective data predictive of response to psychotherapy which is concerned more with the personality characteristics of the individuals involved.

Under the "individual" and "group" subdivisions which follow, the review of research on predictive techniques is

classified according to whether it is based on objective measures or upon clinical judgment, since these are the two major types of selective techniques the present research purports to study. The objective measure studies are divided according to whether primarily projective techniques, paper and pencil tests, or pertinent social data are employed for predictive purposes.

Predicting results of individual psychotherapy. Of the studies in which objective methods in the prediction of success in individual psychotherapy are employed, the most extensively used projective test is the Rorschach. Studies using the Rorschach as a prognostic selection instrument for individual psychotherapy have been highly variable in their results. As has been noted by Zubin and Windle (1953), the findings are dependent upon which indices of the test are used, although contradictory results have been found by different experimenters even when the same index was used. The same conclusion may be drawn from a survey of the studies in which the Rorschach was used in the review by Windle (1952) of the use of psychological tests in prognosis.

Rogers and Hammond (1952) found the Rorschach determinant M discriminating, while Roberts (1954) and Siegel (1946) found no significance in the differences between successful and unsuccessful groups on M, either by itself or in various combinations with other Rorschach indices, or on

ten other such indices considered separately. Similarly, when several other prognostic scales were developed from the Rorschach for this purpose (Harris et al., 1946; Klopfer, Kirkner, Wisham, & Baker, 1951) opposing results were obtained in different experiments in which these scales were used (Barron, 1953a; Gallagher, 1954; Mindess, 1953; Roberts, 1954).

In studies where the Rorschach was used in prediction of continuation in therapy, Kotkov and Meadow (1952) and Gibbey, Stotsky, Hiler, and Miller (1954) found indices that were prognostic of continuation in therapy, whereas Rogers, Knauss and Hammond (1951) did not find any of the formal scoring categories on the Rorschach predictive of continuation. Some authors already cited have found the Rorschach predictive of improvement when certain individual test factors were used (Bradway, Lion, & Carrigan, 1946; Dana, 1954; Rosenberg, 1954; Siegel, 1946; Siegel, 1948), while others report that the specific factor approach is not useful (Filmer-Bennett, 1952; Harris et al., 1946). Equally contradictory are the findings relating to the use of the total Rorschach record as a predictive instrument (Harris et al., 1946; Siegel, 1945; Siegel, 1946). However, Mindess (1953), Harris et al., (1946), and Pumpian-Mindlin (1953) agree in reporting that a variable they designate as "ego-strength," as measured by the Rorschach, is predictive of success in psychotherapy.

Few studies are found in which projective tests other

than the Rorschach are used as predictors for individual psychotherapy outcome. Fiedler and Siegel (1949) found the criterion of "primitiveness" in the drawing of facial features in the draw-a-person technique discriminating between improved and unimproved groups. Rosenberg (1954) found a sentence completion technique useful for prediction in combination with the Rorschach and the Wechsler-Bellevue Intelligence Scale.

The Minnesota Multiphasic Personality Inventory (MMPI) is the paper and pencil measure most extensively studied in therapy prediction. Greater agreement is reported for the predictive value of the MMPI than for the Rorschach. Although opposing results were obtained in studies in which the prognostic value of the original standard sub-scales of the MMPI were tested (Barron, 1953a; Gallagher, 1953a; Harris et al., 1946; Schofield, 1950), better success has been achieved in prediction using the MMPI with special scales made up of selected items which cut across the separate clinical scales (Barron, 1953b; Gallagher, 1953b; Gallagher, 1954; Sullivan, Miller, & Smelser, 1958). There is conflicting evidence in regard to which of the various special scales derived from the MMPI has the greatest predictive value (Barron, 1953b; Gallagher, 1954): the Taylor Manifest Anxiety Scale (Taylor, 1953), the Winne Neuroticism Scale (Winne, 1951), the Welch Anxiety Index (Welch, 1952), the Welch Internalization Ratio (Welch, 1952), or the

Barron Ego-Strength Scale (Barron, 1953b). However, on the special scales the bulk of the evidence thus far accumulated favors the conclusion that each scale is differentiating between successful and unsuccessful individual therapy outcomes. The authors of these scales list the variables which are crucial in determining the success of treatment as (a) the amount of anxiety and (b) the amount of "ego-strength." The results indicate that the greater the degree of these qualities in the individual the more likely he will improve with individual psychotherapy. Ego-strength, as defined by Barron on the basis of the differentiating items of the Barron Scale, is said to include the following characteristics described by selected MMPI items: "Physiological stability and good health, a strong sense of reality, feelings of personal adequacy and vitality, permissive morality, lack of ethnic prejudice, emotional out-goingness and intelligence" (Barron, 1953b, pp. 332-333).

Other objective criteria used in individual therapy prediction studies are intelligence and socio-economic status. Although in one experimental study intellectual level as measured by IQ scores was found to be an irrelevant factor in improvement in psychotherapy (Harris et al., 1946), in most such studies it has been reported that the more intelligent patients are more likely to stay in treatment (Gibbey et al., 1954) or to improve with treatment (Barron, 1953a; Kriegmen & Hilgard, 1944; Miles, Barrabee, &

Finesinger, 1951; Rosenberg, 1954). Higher socio-economic and education status was uniformly found to be positively related to continuation in treatment (Auld & Myers, 1954; Myers & Schaffer, 1954; Schaffer & Myers, 1954; Sullivan et al., 1958; Winder & Hersko, 1955) or to improvement (Sullivan et al., 1958).

Such measures as an ethnocentrism scale (Barron, 1953a), social history (Simon, 1953), training and experience of the therapist (Myers & Auld, 1955), age, sex, student status, and length of treatment of patients in psychotherapy (Cartwright, 1955), the Mooney Check List (Gallagher, 1953b), and a scale using the Interpersonal System of Leary and Harvey (1956), have not been as extensively studied as have the MMPI special scales, IQ test scores, and socio-economic data and have either little apparent prognostic value or have not been studied sufficiently to establish their usefulness.

Only one relatively systematic study of the effectiveness of clinical judgment for prognosis in psychologically oriented case work treatment was found in the literature (Bennet et al., 1941). In this study of 200 problem children seen in a guidance clinic it was shown that psychologists' ratings of expected success or lack of success for the children's overall treatment program were relatively accurate on the list of selected factors on which cases were rated. In several other studies in which the

findings on accuracy of clinical judgment were merely a by-product of the main questions under study, some writers observed that judgment as to degree of success in individual psychotherapy is fairly accurate for prediction purposes (Mindess, 1953), whereas others did not find this to be the case (Filmer-Bennett, 1952; Rogers et al., 1953).

Predicting results of group psychotherapy. Three studies using the Rorschach test as a predictor of progress in group psychotherapy are reported in the literature. Shaskan, Conrad, and Grant (1950) found some success in having experienced clinicians predict success in group treatment on the basis of the Rorschach, although it was not reported what indices were used in making judgments. Two other studies using the Rorschach for predicting children's improvement in activity group therapy (Nagelberg & Rosenthal, 1955; Siegel, 1944), although reported as helpful in selection, are equally vague as to how the test was used as a predictor. It was not indicated whether specific test categories were employed as measures or whether the total test record was the prognostic measure.

Ullman (1957), in a recent study using six Thematic Apperception Test (TAT) cards and the Social Perceptions Test (Ullman, 1957), found the relationships between patient's scores on these scales and their status after six months of group therapy statistically significant.

He found that sensitivity in social situations, as manifested by their test responses, was related to improvement in the group. The results of this study suggest that measures involving social awareness are closely related to response to group psychotherapy. This study also points toward a possible fruitful approach to a method of selecting patients for such treatment.

Studies utilizing the MMPI scales or other objective tests of this kind to predict outcomes in group psychotherapy were not found in the literature.

The absence of any research which systematically studies the usefulness of clinical judgment as an adequate predictor of response to group psychotherapy is well summarized in the observation of Harris concerning research in group therapy, that "Selection of patients for groups continues to be a 'wide open' area. For each article insisting that a certain type of patient is totally unsuitable for treatment, there seems to be a corresponding publication reporting a positive group experience with just such patients" (Harris, 1956, p. 139).

In publications not involving experimental procedures but simply describing current practices, lists of rather non-specific prerequisite traits are given by workers using group therapy (Freedman et al., 1954; Furst, 1951; Hinkley & Herman, 1951; Powdermaker et al., 1953; Slavson, 1950; Slavson, 1955). Other than this, the only other reported

standard selective procedure employed for placement in group therapy has been the placing of prospective group patients into "trial groups" as described by Bach (1954), Stone, Parloff, and Frank (1954), and Foulkes (1949).

To summarize the literature regarding previous research on the prediction of outcome in psychotherapy, it can be observed that, of the measures studied, most of which yielded inconsistent results, the most extensively studied and successfully used prognostic measures, of the personality type, for individual psychotherapy are certain special scales of the MMPI. In regard to group psychotherapy, it was found that an extremely small amount of research has been published regarding prediction of outcome. Although the several different projective tests which have been employed in the few studies of selection for group therapy have been found to be differentiating, the amount of research is so small as to render the evidence inconclusive as yet and to indicate the need for studying other selective techniques. These techniques could include measures found promising for individual therapy selection as well as others specially devised for group therapy prediction.

Prediction using the self-concept. Having noted how previous attempts to devise prognostic measures for the outcome of psychotherapy have yielded mostly inconsistent or inconclusive results, it would now seem useful to examine a

relevant body of theory and experimentation which would seem to offer a basis for devising a prognostic index for response to group psychotherapy. This area of study, the self-concept, represents a somewhat different approach to the problem of selection for psychotherapy than has previously been employed.

Paralleling the increased number of studies of all facets of psychotherapy during the last ten years is a comparable increase in interest shown in the concept of self. This is reflected in the growing number of articles in the literature devoted to this subject. McClelland (1951) points out that although, as Allport (1943) has observed, the concept of self is central in the study of personality, it is a difficult area to explore experimentally and much that is written on the subject is in the nature of speculation. However, the studies presented in the following sections represent, in many instances, recent attempts at the application of experimental method to the study of the self-concept.

The first group of studies is concerned with what is termed the conscious self-concept because the techniques of obtaining self-attitudes employed in these studies are based upon direct questioning of the subject as to attitudes toward himself.

Workers in the non-directive or client-centered school have emphasized the importance of the individual's self-concept to his personality structure (Raimy, 1948;

Rogers, 1942; Rogers, 1947; Snygg & Combs, 1949) and have, in terms of volume of publication, been most active in applying experimental techniques to the study of this concept at a conscious level. Part of this effort has been directed to a study of the relationship of the person's self-concept to his progress in individual psychotherapy. The work of Raimy (1944, 1948), Rogers (1951) and others (Butler & Haigh, 1954; Ewing, 1954; Lecky, 1945; Murphy, 1947) has produced evidence that an increase in positive self-attitude is correlated with success in treatment. Following this lead, a number of studies have clearly shown the relationship of self-acceptance and emotional adjustment (Calvin & Holtzman, 1953; Chodorkoff, 1954a; McIntyre, 1952; McQuitty, 1950; May, 1950; Taylor & Combs, 1952). In addition, this group has contributed much experimental evidence that self-acceptance is correlated with acceptance of others (Berger, 1952; Fey, 1954; Fey, 1955; McIntyre, 1952; Omwake, 1954; Phillips, 1951; Sheerer, 1949; Stock, 1949; Turner, 1954).

However, it is important to note that the above experimentation with attitudes toward the self has employed conscious measures exclusively, with no attempt to tap the more unconscious self-attitudes. Conceivably, it is the use of self-assessment at the conscious level that may in part explain why some experimenters have found such seemingly contradictory phenomena as neurotics scoring lower than

psychotics on indices of self-acceptance (Bills, 1953), studies in which groups of better-adjusted individuals yield higher negative self-rating scores than groups of less well-adjusted subjects (Cowen, 1954), and instances in which children who are better adjusted ascribe to themselves more traits contained in a list of derogatory statements than do more poorly adjusted children (Taylor & Combs, 1952).

In light of the anomalies noted in regard to the self-concept at the conscious level, it would now seem appropriate to review the findings with respect to unconscious self-attitudes, which, as McClelland has noted, are important in that "the conscious or symbolized self-schema is only a portion of the total self-schema" (McClelland, 1951, p. 544).

Attempts at obtaining unconscious self-attitudes are found in the work on "unrecognized self-judgment" reported by Wolff (1933, 1943) in which he found that his group of "normal" subjects reacted differently to some of their own unrecognized forms of expression (profiles in silhouette, facial identical-half photos, etc.) than they did to the same such forms of expression of people other than themselves. He also discovered that their self-judgments differed considerably when they were unaware that it was an aspect of themselves they were judging as compared to when they were aware that they were judging themselves. Huntley (1940a, 1940b), using "normal" subjects, and Epstein (1955), using

one group of "normals" and one group of schizophrenics, applying experimental controls to this area of study, produced studies in which conscious and unconscious self-judgments were compared. They concurred in their findings that unrecognized or unconscious self-judgments were more extreme in favorableness and unfavorableness than were recognized or conscious self-judgments. They both also found that their subjects gave more favorable than unfavorable unconscious self-judgments. Epstein also found that his schizophrenic group rated themselves more favorably on unconscious measures than "normals" did. On the other hand, Saunders (1953), employing a similar technique using facial segments, found his group of "normals" produced more negative than positive valenced associations to unrecognized self-picture segments.

Thus it appears that, as in the case of the conscious self-attitudes, the findings in regard to the unconscious self-concept are somewhat contradictory, at least when the unconscious level is tapped separately from the concommitant conscious attitudes. In addition, a major methodological difficulty is encountered in using the technique of disguised forms of expression of the self as a means of measuring unconscious self-attitudes, a technique employed in all of the unconscious self-concept studies. Most of the authors who have employed disguised forms of expression of the self have reported that their subjects, in spite of the disguised

nature of the materials, recognized their own forms of expression in one-third of the cases. Another difficulty in the use of this technique is that relatively unrecognizable forms of the individual's own expression are difficult to devise which will still retain enough stimulus properties to allow valid results to be inferred from them, i.e., which are not so mutilated by the disguise as to lose their meaning.

In summarizing the findings relating to self-concept, certain major generalizations emerge. One group of these studies is consistent in showing, with regard to conscious self-concept, that a high level of self-acceptance (positive self-concept) is associated with positive attitudes toward others, with a more realistic appraisal of the self, and with better overall emotional adjustment. In a second group of studies the apparently contradictory finding was reported that persons who were rated as better adjusted by others consciously attribute many negative qualities to themselves. However, the preponderance of the conscious self-concept findings favors the assumption that the individual's level of self-acceptance is theoretically a reliable index of his level of emotional adjustment. Since it is a widely accepted observation that, in general, the psychologically healthier person is relatively more amenable to therapeutic procedures than is the relatively more disturbed person, it is assumed that the individual's level of self-acceptance would be a sensitive method of assessing

his level of adjustment and hence predictive of his potential for response to treatment, in this instance to group psychotherapy. This assumption, however, omits the problem raised by the contradictory findings regarding negative conscious self-concept that have been found in some instances to be associated with good adjustment and leaves these results unaccounted for, unless it may be assumed that negatively valenced self-attitudes in well-adjusted subjects are an artifact of the conscious level at which the attitudes are elicited and that, were the unconscious self-concept tapped, the contradiction would not appear.

However, when these speculations are observed in relation to the contradictory findings as well as to the methodological difficulties involved in utilizing the unconscious self-concept alone, it is suggested that neither method, conscious or unconscious, used separately, yields a reliable index of the individual's actual self-concept.

As a result of further investigation of related literature it is suggested that a method for the assessment of both conscious and unconscious self-attitudes would be a more adequate measure of self-concept.

Rogers (1947) has observed that the individual's level of adjustment is determined by the degree to which all of his attitudes toward himself are accepted into his organized conscious concept of himself, a formulation also commented upon by Snygg and Combs who define the adequate

self as follows: "A phenomenal self is adequate in the degree to which it is capable of accepting into its organization any and all aspects of reality" (Snygg & Combs, 1949, p. 136). In an analogous observation Freedman (1955) has observed, relative to the results of his study of phenomenal and ideal self-attitudes relating to projection, that positive self-attitudes alone are not a sufficient condition for a self-accepting feeling since positive self-attitudes are found in schizophrenics. Therefore, in order to obtain an accurate index of self-acceptance in accordance with these formulations, it would appear theoretically more fruitful to obtain a measure of unconscious self-attitudes in relation to the person's degree of conscious integration of these attitudes. An investigation into the rationale underlying the projective techniques as well as experimental evidence regarding projection offers a basis for the development of such an index.

The usefulness of techniques which measure unconscious attitudes toward the environment through the medium of conscious perception is well-known, as seen in the widespread use of the projective tests. The underlying assumption of these tests is that, presented with vague or somewhat ambiguous stimuli, the individual must fall back on his own unique inner experiences and needs in order to give structure and meaning to the stimuli, thereby revealing his characteristic ways of perceiving the world. By inference, the

individual's unconscious attitudes toward the external world, therefore, indirectly reveal his self-attitudes. That this may apply to attitudes toward the self is recognized by Murray (1938) in his assumption that a person will describe himself more completely and honestly, particularly as to his uncomplimentary qualities, when he is telling a story about someone else with whom he identifies. Therefore, it would seem that a better measure of self-attitudes would be one which measures the person's attitudes toward other people. This principle underlies the structure and use of such valuable clinical techniques as the TAT, the Szondi Test, the Make a Picture Story Test, and the human figure drawing tests.

An ingenious projective method has been devised which was originally intended to obtain a measure of the individual's use of the defense mechanism, projection, which, in psychoanalytic theory, is usually defined as the attribution to others of one's own unacceptable impulses or related characteristics. This method, using a discrepancy score between a subject's self-perceptions and perceptions of him by others, has been used by Sears (1936) in one of the early experimental studies of projection. He found, in comparing discrepancies between an individual's rating of himself on certain traits and the rating given him by others on those traits, a measure of what he designated "insight." He found a greater degree of projection, used in the psychoanalytic

sense, in those who lacked insight, i.e., in those in whom there was a greater disparity between the way they saw themselves and the way others saw them. He also noted that projection was not a general tendency in this group, but rather was specific to the traits in question, i.e., different people attributed different degrees of importance to different traits.

Using a technique similar to the discrepancy score method used by Sears, Zimmer (1955) found the degree of projection related to the amount of conflict over the trait in question. However, he broadened his use of the concept of projection to include the attribution to others by the individual of self-characteristics which are either acceptable or unacceptable to himself. This definition of projection is more in line with the current notion of projection as used in projective techniques. For the purposes of his study, projection was more specifically defined as the attribution of self-acceptable traits to liked persons and of self-unacceptable traits to disliked persons.

In a related study Norman and Ainsworth (1954) found that qualities they called empathy and reality-testing were correlated more highly with adjustment than was projection defined in the psychoanalytic sense. Recently a number of authors have studied discrepancies between perceptions of the self and the ideal self (Chodorkoff, 1954a), between

perception of the self and others' perceptions of the individual (Calvin et al., 1953), and between self-perception and perception of aspects of the environment (Chodorkoff, 1954b). These authors point out that the less disparity between these measures, that is, the less projection of inner needs unrelated to reality considerations, the better the individual's adjustment.

A review of the findings derived from the various kinds of approaches to the study of self-concept listed above leads to the assumption that it is necessary to emphasize the integration of self-aspects, including both the conscious and unconscious ones, in order to obtain a valid measure of the self-concept. When this assumption is considered along with the findings indicating that level of adjustment and degree of perceptual distortion are related, the level of an individual's self-acceptance would most adequately be estimated by using a measure of projection which would indicate the extent to which unconscious self-attitudes are defended against rather than being incorporated into the conscious self-concept. Since the degree of self-acceptance has been assumed previously in this presentation to be prognostic of response to group psychotherapy, a measure of projection, used as a sensitive and inclusive index of self-acceptance, would be assumed to be predictive of response to group therapy.

It would seem relevant to note here that the variable

of self-acceptance as a function of projection, or distortion, here hypothesized to be related to response to group therapy, has much in common with the two variables, "ego-strength" and "degree of overt anxiety," upon which there is most agreement as to their predictive value for outcome of psychotherapy in a number of previous studies. Ego-strength as defined by Barron (1953b), and as generally used, seems to refer to the individual's capacity for integration of all aspects of himself into conscious awareness or symbolized schema and to the individual's capacity for accurate evaluation of externals, often referred to as contact with reality. In addition, as noted above, results of experimental findings indicate that the greater the overt anxiety experienced by the individual, the better his response to psychotherapy. Thus, according to psychoanalytic theory in regard to the use of psychological defenses against anxiety (Freud, 1933; May, 1950), i.e., their use to prevent the experiencing of painful tension, it is assumed that the mechanism of projection, an almost universally used defense, is employed to bind off or avoid anxiety, thereby reducing the experiencing of it. Consequently, it might be inferred that the person who uses the defense of projection to a relatively greater degree has less tolerance for experiencing anxiety. Ample clinical evidence for this is seen in comparing the respective amounts of overt anxiety in the neurotic with that in the psychotic

individual. The latter often seems to have little if any anxiety and may often seem to be quite "comfortable" with his psychotic symptoms.

By extracting the pertinent features of this chapter, it is now possible to summarize this presentation relative to the purposes of the present study, which is prediction of response to group psychotherapy. First, although group psychotherapy is an extensively used treatment, little experimental data have been produced as to effective selective measures for such groups. Second, it has been shown that, although clinical judgment by appropriate psychiatric personnel is widely used for selection of patients for group psychotherapy, experimental evidence as to its efficiency as a predictor for this purpose is almost negligible. Third, of the various objective personality techniques used to test prognosis for treatment, certain special scales of the MMPI have been more extensively studied than have the other techniques and have yielded more consistently positive results regarding their ability to predict outcome of individual psychotherapy. However, as yet these scales have not been tested for their prognostic value for results of group psychotherapy. Lastly, from a study of the literature regarding the self-concept it is suggested that a measure of projection, from which is inferred the individual's level of self-acceptance, might be a sensitive index of the person's responsiveness to group therapy.

CHAPTER II

PROBLEM

The present study is concerned with an evaluation of the usefulness of seven measures for predicting response to group psychotherapy. These seven measures involve three different kinds of predictive techniques and hence the problem is divided into the three parts listed below.

1. Because of the extensive use of clinical judgment as a selection procedure for placement in group psychotherapy, one aspect of this study is an evaluation of the clinical judgment of psychiatrists as a predictor of response to group psychotherapy.

2. Since the usefulness of special scales of the MMPI as prognostic instruments for individual psychotherapy has been demonstrated, but such use specifically for group psychotherapy has not been investigated, and since they are a measure of the more conscious processes as contrasted to a projective technique, this study is also an attempt to evaluate the efficiency of five special MMPI scales in differentiating, prior to group treatment, those who will respond from those who will not.

3. Lastly, this study will be concerned with whether the individual's pre-treatment level of self-acceptance, as measured by the degree to which he projects--a variable which seems theoretically related to his level of adjustment and hence to his potential for response to psychotherapeutic treatment in general--is actually related to his response to group psychotherapy. Another aspect of the problem is to ascertain if the individual's level of self-acceptance, as a measure inclusive of more unconscious processes than are tapped by the MMPI, is a more sensitive index of therapeutic potential than either the MMPI or clinical judgment.

CHAPTER III

METHOD

In order to evaluate the several methods of predicting response to group psychotherapy which have been chosen for study in this research, a group of hospitalized mental patients were administered the selected measures and then placed in group therapy where their responses to group therapy was assessed. The details of these procedures are described in the sections below.

Subjects

The subjects for this study were 45 patients from the current population in the acute services of Central State Griffin Memorial Hospital, Norman, Oklahoma, a state mental hospital with patients who have been diagnosed predominantly as psychotic. Due to the make-up of the patient population on the main hospital service where the study was made, adult patients of both sexes were included in the sample.

The population from which the sample for the present study was drawn consisted mostly of patients classified as "acute," meaning that they were ordinarily in early or

active stages of their disorder where the anxiety level was relatively high. A significant percentage of these patients were suffering from a first illness and were predominantly young adults for whom the prognosis for recovery or improvement was good.

In order to obtain information on the response of patients not ordinarily referred for group psychotherapy as well as of those who are, selection of subjects was made from over the entire range of those judged potentially responsive to group psychotherapy, including those less likely to respond as well as those most likely to respond, as described in the following procedures.

A list was obtained of the usual criteria used by the psychiatrists on the acute services of the hospital for excluding patients from consideration for psychotherapeutic treatment. This was done in order to exclude from the population only patients for whom psychotherapy was definitely contraindicated. The following criteria were agreed upon by three psychiatrists associated with the services on which the study was made as being definitely contraindicative of ability to profit from psychotherapeutic treatment within the limits of practical rehabilitative goals in a state hospital setting:

1. Severe chronic mental disorders.
2. Significant organic brain damage.
3. Mental deficiency.
4. Lack of any recognizable degree of motivation to gain assistance or to "change."

5. States in which personality organization is so precarious and tenuous that psychotherapy might precipitate serious disruption of what degree of integration exists.
6. Very acutely excited and disorganized states.

The entire current patient population on the wards of the acute service was evaluated by ward psychiatrists and those patients who fell into any of the above listed categories were eliminated from the study. From those remaining, all theoretically treatable with group therapy, 25 patients were selected randomly. An additional 20 patients were later added to the study after they were admitted to the wards of the acute service and referred by the psychiatrists for group psychotherapy, making a total sample of 45 subjects. The psychiatrists' group psychotherapy prediction ratings for this group of 45 subjects formed a distribution not appreciably deviant from a normal curve, considering the small number of cases involved.

The subjects, of whom 20 were males and 25 were females, ranged in age from 17 to 63 years with a median age of 35 years. Of the total, 33 patients (73%) had been diagnosed as psychotic, while 12 (27%) had been diagnosed as non-psychotic. Of the 33 patients given psychotic diagnoses, 32 were designated schizophrenic, and 15 of these were diagnosed as paranoid schizophrenic reactions. Four of the 12 patients given non-psychotic diagnoses were termed as suffering from neurotic reactions while the remaining 8 were designated as suffering from personality disorders of various kinds.

Procedure

After having been selected as a subject, each patient was rated by his ward psychiatrist along a seven-point continuum as to his expected degree of response to group psychotherapy. This rating was made on the basis of the individual psychiatrist's routine procedures for evaluation, which vary with the psychiatrist making the evaluation and which may differ from patient to patient. Six resident psychiatrists participated in the study as raters for their individual patients. They were all in their first or second year of residency training.

Immediately following the rating, the psychiatrist was asked to write a spontaneous description of those characteristics of the patient and his reactions to the patient which he felt led him to rate the patient as he had and which formed the basis of his prediction.

As the next step in the procedure, before assignment to group therapy, subjects in the experiment were administered the MMPI in booklet form. The test was administered in small groups except in a few cases where it was necessary to administer the test individually in the card form in order to elicit the patient's understanding and cooperation.

The next step was to administer a Projection Scale to the subjects individually. Finally, each subject was placed in one of several psychotherapy groups composed of

from five to eight patients. Although these groups were relatively stable, patients could be added or removed without termination of the group. Their group therapists then rated them for response to treatment at the end of their first week of therapy and again at the end of three months, using the Palo Alto Group Psychotherapy Scale (Finney, 1954).

The therapists were six in number, two staff psychologists and one chaplain, each of whom had had from one to three years group therapy experience, plus two psychological interns and one resident psychiatrist, each of whom was in his first year of group therapy experience and was receiving supervision.

Measurement Devices

Descriptions of the various measurement devices employed in the present study are presented below in the order in which they were used in the execution of the research.

Prediction Response Scale

In order to evaluate clinical judgment as a predictor of response to group psychotherapy, a group psychotherapy response prediction scale was devised for use by the referring psychiatrist who evaluated each subject prior to his beginning psychotherapy. This scale consisted of statements representing a continuum of seven graded steps ranging from optimal to minimal expected response to group

treatment. The prediction score was the psychiatrist's rating, from one to seven, of the patient's expected response to therapy. (For the complete scale, see Appendix A.) Each psychiatrist was requested to write evaluative comments regarding the patient he was rating on the reverse side of the rating form.

In order to estimate the probable distribution of the response prediction scale scores prior to beginning the study, a pilot study was made in which prediction ratings of 19 patients who had been placed in group psychotherapy in the previous two months were plotted. The psychiatrist who had referred them for treatment was asked to rate them according to his impressions of them before the initiation of therapy. A satisfactory array of individual differences in rating scores for this scale was evident in the resulting distribution which approximated a bell-shaped curve.

MMPI Special Scales

Five special scales using selected items of the Minnesota Multiphasic Personality Inventory (MMPI) were selected as the most promising objective prognostic techniques for use in this study. These scales had been previously constructed and validated by other investigators from the 566 MMPI items in order to obtain measures of rather specific personality characteristics or patterns of response, such as overt anxiety level, ego-strength, neuroticism, etc. The special scales employed in the current study were the

Taylor Manifest Anxiety Scale (Taylor, 1953), the Winne Neuroticism Scale (Winne, 1951), the Welch Anxiety Index and Internalization Ratio (Welch, 1952), and the Barron Ego-Strength Scale (Barron, 1953b). Each scale was scored according to the regular scoring procedure for each scale.

Projection Scale

In order to evaluate an objective technique of the projective type for its predictive value for group psychotherapy response, as contrasted with the MMPI pencil and paper technique, a device to obtain a measure of self-acceptance was constructed by the experimenter. This measure was derived from measures of the individual's degree of projection in relation to measures of his self-perception. Projection is to be defined in the broader projective technique sense for the purposes of this study, following the precedent of Zimmer (1955); therefore both the attribution of self-acceptable traits to liked persons as well as the attribution of self-unacceptable traits to disliked persons were considered manifestations of projective behavior.

In general terms, the scoring involved a measure of the disparity between the self-image and the ideal image which was compared with the image the person had of others as rated on a list of traits. This was designed to provide a measure of how much the person accepts qualities in

himself according to the degree to which he unconsciously ascribes these qualities to others. By having the subject rate himself as he feels he "ought" to be or would like to be (ideal self), the relative importance of the trait to him could be established. This could then be compared with how he feels himself to be actually, with regard to the trait. How acceptant he is of himself is then revealed in the degree to which he attributes traits, which he feels himself to possess, to other persons chosen as either liked or disliked.

It might be observed that the results of a group of recent studies have indicated that trait judgments of pictures of faces elicit attribution of traits (Campbell & Burwen, 1956; Secord & Jourard, 1956), and the traits assigned to specific faces tend to be reliable on retesting (Webb & Izard, 1956). A picture technique was thus chosen for this study. Described more specifically, the technique consisted of the following procedures. The patient was first shown three pictures of persons of his (her) own sex. The pictures were presented one at a time, in a standard order, each to be rated on a list of traits along a continuum, i.e., from most to least, regarding the trait in question. The subject was asked to choose the picture most liked and the one most disliked, then asked to rate himself as he felt himself to be on each of the previously used traits, and then to rate himself as he <u>wished</u> himself to be on the

traits. A more detailed description of the development of the scale together with the scoring procedure is given below.

Selection of pictures. The pictures for the projection measure were selected from a group of 28 pictures--5 females and 23 males of equal size and similar pose--found in a ten year old issue of Life magazine (1947). The pictures were selected from an old publication so that their source would not be easily identifiable by the subjects. One of the pictures of women and 13 of the pictures of men were eliminated by the experimenter as being markedly different from the rest in overall appearance and as seeming to suggest qualities which might prejudice the subjects' judgments of them in a similar direction, e.g., several were so lighted and posed to look definitely sinister. Of the remaining pictures, three pictures of women and three of men were chosen by five judges in order to obtain the most ambiguous pictures with regard to specific personality traits. The judges consisted of five clinical psychologists who were on the hospital staff.

The judging procedure took place as follows. The four women's pictures were presented to each of the five judges in a randomized order with the following instructions:

> Rank these pictures of women in the order that you feel they show the fewest obvious specific personality traits (i.e., are ambiguous with regard to personality traits). Rank number one is to be the most ambiguous picture, number two the next most ambiguous, etc.

The rankings were tabulated and an average rank number for

each picture computed. The three pictures with the lowest average rank score were selected. Next, these three pictures, together with the ten men's pictures, were presented to the judges in a randomized arrangement. In order to have the set of women's and men's pictures roughly similar in appearance, the three women's pictures were placed above the men's and the instructions to the judges were as follows:

> Rank these pictures of men in the order that you feel they show the fewest obvious specific personality traits (i.e., are ambiguous with regard to personality traits). Rank number one is to be the most ambiguous picture, number two the next most ambiguous, etc. In addition, your ranking of the men should also take into account the degree to which the pictures of the men are similar in appearance to the set of three pictures of women placed before you.

The three most ambiguous men's pictures were determined as described above for the women's pictures. The faces used in the final scale are presented in Appendix B.

Selection of traits. In order to compile a list of traits to be used in obtaining projection scores, a list of 35 traits was selected by the experimenter from the Thorndike-Lorge word count (Thorndike et al., 1944) on the basis of their frequency of use, their clarity in describing a definite personality characteristic, and their having the least clearly stereotyped value as a desirable or undesirable trait.

The 35 words were chosen from those words occurring at least 30 times per one million words in a variety of

printed materials. According to the authors' instructions to users of the word count, words occurring with this frequency are normally understood by third-grade level students. Thirty of the 35 words chosen occur 50 to 100 times per one million words and are familiar to first and second grade students. It was felt that words of this level would be adequately understood by all of the patient population likely to be placed in psychotherapy.

Twenty-five of the words were chosen for having the least clearly stereotyped value as a desirable or undesirable trait. The words thus selected are as follows: active, busy, careful, commanding, curious, feeling, gentle, independent, inquiring, calm, natural, obeying, observing, particular, practical, proud, quiet, serious, tender, bold, firm, eager, exact, frank, and definite.

However, because it was felt that highly emotional or morally-toned words might be equally or more useful in evoking projection, ten such words were added to the list of 25. These words were: brave, cruel, cold, good, honest, kind, awful, smart, wicked, and weak.

At this point a second pilot study was made using 17 patients (10 women, 7 men) who were currently in group psychotherapy. These subjects rated the three projection scale pictures, themselves as they felt they were, and themselves as they would like to be on each of the 35 words. Sixteen of the 35 words which elicited projection most

frequently were chosen for use in further analysis. These words were: brave, practical, active, definite, quiet, smart, careful, commanding, curious, calm, frank, weak, bold, exact, cold, and firm. The projection score for each of the 17 subjects on the 16 traits was compared with his score for all 35 traits. There was an average score difference of 2.44 which was small relative to the range of scores. Since the scores ranged from -13 to +20, a range of 36 points, on the 35-word basis, and from -9.5 to +16, a range of 25.5 points on the 16-word basis, it appeared that the 16 trait list could be used in place of the full 35 word list without the loss of much information.

Trait rating procedure. All subjects individually were given five rating forms in sequence, three copies of rating form A (one for each picture) and one each of rating forms B (self) and C (ideal self). Each form was headed by a set of instructions followed by a series of 16 graphic scales, one for rating each of the 16 previously selected traits. (Samples of the three different forms are found in Appendix C.) On the three copies of rating form A the subject was asked to make graphic ratings for all 16 traits, using one copy of rating form A for each of three pictures of people of his own sex. One copy each of forms B and C were given to the subject for the purpose of rating himself on the 16 traits according to what best described himself

and what best described how he would like to be, respectively.

The pilot study indicated that on the rating of traits subjects invariably marked over a descriptive statement rather than at intermediate points all along the continuum. For this reason the ratings were scored by using the scale value of the statement closest to the check mark. The ratings were scored from one through five, reading from left to right. For example, a check mark placed on or closest to "Unusually_____" was scored one, "Very_____" scored two, etc.

Utilizing the ratings of pictures and of the self, a projection score for each subject was computed as described in the following.

For each trait the subject's self rating ("I am a person who is _____") was compared with his ideal self rating ("I would like to be a person who is _____"). Through this comparison an index of the direction of the value the trait had for the subject was obtained, that is, whether it was desirable in his opinion to have more or less of the characteristic in question. The ideal self rating was used only for this comparison and was not used in any further computation. His self rating was then compared with his rating of the Liked person and then with that of the Disliked person. In the comparison with the Liked choice, if there was a difference in points this arithmetic difference was

designated plus if the Liked choice was rated in the same direction from the self rating as the ideal self diverged from the self rating. The score was zero if there was no difference in points between the self and the ideal self ratings, or if there was no differences in rating scale points between the self and the Liked choice. The difference in points was designated minus if the Liked choice was rated in a direction opposite from that in which the ideal self diverged from the self rating in order to correct for that part of the subject's rating behavior which could not be ascribed to projection. The scores thus derived on all traits were summed algebraically to give the subject's total score of projection with respect to the Liked photos. The same operation was performed for the comparison of self ratings with the Disliked choice except that, in this case, the point difference between them was designated plus if the Disliked choice was rated opposite to the direction of the ideal self rating from the self rating and minus if the Disliked choice was rated in the same direction that the ideal self rating diverged from the self rating. The summation of these differences on all traits then gave a total score of projection with respect to the Disliked photo. The algebraic sum of the projection scores for the Liked and Disliked photos then was the subject's total projection score which was used as the measure for prediction of response to group psychotherapy. A sample scoring appears below for

trait No. 1, "brave."

	Rating Score	Psychological Meaning
Self Rating	5	I am a person who is almost never brave
Ideal Self	2	I would like to be a person who is very brave
Liked Photo	1	This person is unusually brave
Disliked Photo	3	This person is moderately brave

In the sample above the projection score for the Liked photo would be +4 and the projection score for the Disliked photo would be -2. The total projection score would be +2. In this instance the subject attributes the desired trait to the Liked person four points beyond his self rating in the direction of his ideal self rating but he also attributes a greater degree of the desired trait to the Disliked person than he does to himself which is not considered projection. His total score is therefore a summation of his tendency to project corrected for his tendency to make his rating on the basis of some other determinant than projection.

This formula for computing an individual's projection score on each trait is actually equivalent to the computation of the difference between the values given Liked and Disliked photos, a more parsimonious procedure. However, it was essential to obtain a plus or minus valence for each of the self-photo comparisons and hence required the inclusion of the self rating for this purpose. Also, by

utilizing only the difference in rating values of the Liked and Disliked photos for each trait the over-all rationale of the role of self-perception in relation to other-person perception would have been lost.

In the pilot study conducted as mentioned above, the projection scores of 17 subjects, computed as described in the preceding paragraph for the 16 selected traits, ranged from -9.5 to +16, indicating that individual differences in this variable could be obtained by this scoring system. The plot of the scores indicated a slight negative skew in the distribution but did not represent a radical departure from a normal distribution.

On the basis of the findings of the pilot studies it was suggested that projection scores derived according to this scoring procedure could be expected to measure individual differences in the variable under question and to approximate a normal distribution.

It was felt that it might be desirable to see how distributions based on other possible scorings of projection would appear. Therefore, the ratings were rescored simply on the basis of the difference in rating scale points in the expected direction without deducting (i.e., adding algebraically) minus scores. This was done for projection scores based on Liked photos, projection scores based on Disliked photos, and for the two combined. The distributions based on these scorings revealed an extreme positive skew

both in the case of projection scores based on Disliked photos and when both kinds of projection scores were totaled. A bi-modal distribution was observed when only projection scores based on Liked photos were plotted.

A third pilot study was made in order to ascertain some measure of validity of the Projective Scale since such an evaluation was not reported by Zimmer (1955) and since the present scale represented a major modification of the Zimmer method using different trait names, different pictures, and a change in the scoring procedures to include consideration of the subject's self picture relative to his ideal self with regard to the traits. The Projection Scale was administered to each of eight male and eight female patients who were selected randomly from a group of 41 patients for whom raters were available. Then each subject was rated by the three team members who knew him best--his ward psychiatrist, his therapist, and his nurse--on a single-question scale regarding his degree of projection and on a similar scale regarding his level of self-acceptance. The instructions to the raters and the scales appear in Appendix D.

The rank order correlation between the Projection Scale scores and the means of the three staff members' ratings on projection was rho=+.88 which, by Pearson's Conversion formula for converting rho into r (Guilford, 1936, p. 341), is equivalent to r=+.89. This value is beyond

the 1% level of significance, a coefficient of .62 being needed for significance at this level (Lindquist, 1940, p. 212).

In order to test the assumption made earlier that level of self-acceptance is correlated with degree of projection, a rank order correlation was run between the means of the three staff members' ratings of projection and the means of their ratings of the same patients on self-acceptance. Rho was found to be +.92, which, when converted into r by Pearson's conversion formula, would yield an r of +.91 which again would place this value beyond the 1% level of significance.

In order to test the reliability of the ratings of the three raters, a multiple correlation technique devised by Horst (1949) was used. The reliability coefficient for their ratings on projection was +.43 and +.23 for their ratings on self-acceptance. Neither of these are significant, although the r of +.43 closely approaches significance at the 5% level. The low reliability for the raters may in part be due to the differing levels of experience of the raters (some were relatively new personnel in the field of psychiatry while others have had several years experience) and to the different kind of roles in relation to the patient (the patient's therapist would have a different role and hence different experiences in relation to the patient than the ward nurse, for example).

Although the moderate to low rater reliability coefficients may be considered as resulting from the introduction of error in the correlations between the projection scores and the projection ratings, and between the projection ratings and the self-acceptance ratings, in view of the highly significant relationships obtained, the Projection Scale was considered to have sufficient value for use in the study as an index of the subject's degree of projection.

Psychotherapy Response Scale

The scale chosen for use by the therapists to evaluate the subjects' responses to psychotherapy was the Palo Alto Group Psychotherapy Scale (Finney, 1954) (See Appendix E).

This scale is described by Finney, its originator, as "a scale designed to be a sensitive, discriminating measure of the changes in interpersonal behavior which group therapy aims to achieve" (Finney, 1954, p. 52), and he further states that it "was developed to meet the need for a sensitive, reliable and valid measure of treatment success in group psychotherapy" (Finney, 1954, p. 52).

The scale consists of 88 items describing behavior covering a wide range of levels of interpersonal relationships from the very primitive ("Smiled at another member of the group") to those reflecting a high level of integration ("Talked in a realistic, sensible way of getting out of the hospital").

It was felt that this scale would serve as an adequate criterion of the patient's response to psychotherapy in this experiment because the variable of interpersonal relationships is intimately related to the degree of adjustment. That the scale has relevance above and beyond the group therapy situation is suggested by Finney's observation that "the group therapy situation offered a particularly revealing sample of interpersonal behavior and could thus provide a good opportunity to evaluate the over-all changes in interpersonal relationships and emotional adjustment which are the goal of the therapeutic process" (Finney, 1954, pp. 52-53). Related to this is Ullman's conclusion from his study on selection of patients for group psychotherapy in which he stated, "it may be said that the patient who is likely to respond favorably to group therapy is the one who can express appropriate interpersonal motivations and feelings" (Ullman, 1957, p. 280).

In constructing and validating this scale Finney selected the 88 most discriminating items from lists of items submitted by 30 group leaders derived from their therapy notes compiled on about one hundred patients. When the scale was scored for 18 groups of patients and correlated with over-all ratings of level of interpersonal relationships by group leaders, a rank order correlation coefficient of +.84 was obtained. Finney also found, comparing another group of patients, that the relationship

between the ratings by ward personnel of the adequacy of patients' interpersonal relationships and their scores on the group therapy scale yielded a rho of +.80.

Ullman's experiment using this scale yielded biserial correlations which were significant between the .05 and .01 levels of significance when the scale scores were correlated with the criterion of hospital status six months after the beginning of group therapy. Ullman observed, in regard to his use of the scale, that it "offers a way of quantifying patient behavior in therapy groups in terms which are meaningful within the framework of group interaction and within the larger context of the hospital" (Ullman, 1957, p. 278). It would seem, therefore, that this scale cannot only be considered a valid measure of the level of social adjustment in group therapy, but is also an index of adjustment in other contexts.

The score representing response to therapy was obtained from the rating on the Palo Alto Scale for each patient as follows: The percentage of all items scorable for the patient which were marked in a way indicating "good" interpersonal relationships was computed for each time of rating. This score was the raw score used in statistical analysis.

CHAPTER IV

RESULTS

After having administered seven selected pre-therapy measures to 45 mental patients and assessed their response to group psychotherapy at the beginning and after three months of treatment, the data obtained were subjected to analysis, yielding the following results.

Subjects' Responses to Group Psychotherapy

The Palo Alto Scale scores obtained at the beginning of psychotherapy were compared with the scores on the same scale obtained at the end of the three month experimental period. The group mean for the Palo Alto scores at one week was 42.64, while the group mean of the scores at three months was 57.02. In order to see if the difference between the two means was significant, a *t* test for related measures was applied to the group means, yielding a value of 4.42, which is significant at beyond the .001 level of confidence. Since the Palo Alto scale is a measure of the individual's level of adequacy of interpersonal behavior, the significantly higher group mean after three months of group therapy reveals that the group evidenced a significant improvement

in their interpersonal behavior and thus are adjudged as having responded positively to group therapy.

The Selected Measures as Response Predictors

The subject's change score, i.e., the difference between his score on the initial Palo Alto Scale rating and his score on the three-month rating, was used as the criterion for his response to group therapy. Table 1 shows the values of Pearson product moment correlations between the patients' change scores and the seven originally chosen predictive measures: psychiatrists' ratings, Projection Scale scores, Welch Anxiety Index, Welch Internalization Ratio, Barron Ego-Strength Scale, Winne Neuroticism Scale, and the Taylor Manifest Anxiety Scale. As may be seen, none of the correlations are high enough for statistical significance, which would require an r value of +.29 at the .05 level of confidence.

Because 15 of the subjects had validity scores (F, K, and L) beyond the recommended limits on the over-all MMPI scale, their special scale scores were considered to be of doubtful validity. Consequently, correlations comparing the five MMPI special scales with the change scores were calculated for the remaining 30 subjects whose MMPI's were known to be valid. These results, which also appear in Table 1, likewise fall short of significance.

Table 1

Correlations between Prediction Measures and Palo Alto Total Scale Change Scores

Prediction Measure	Value of Pearson r	
	Total sample N=45[a]	Sample with invalid MMPIs removed, N=30[b]
Psychiatrists' ratings	-.02	
Projection Scale	+.07	
MMPI special scales		
Welch Anxiety Index	-.05	-.06
Welch Internalization Ratio	+.13	+.08
Barron Ego-Strength Scale	-.02	+.01
Winne Neuroticism Scale	+.11	+.17
Taylor Manifest Anxiety Scale	-.03	-.01
Psychiatrists' ratings, Net Value Statements	+.19	
Palo Alto Scale, initial rating	-.18	

Note.--The data given in this table are extracted from Appendix F which gives intercorrelations for all prediction and criterion measures.

[a] $r = \pm .29$ required for significance at .05 level.

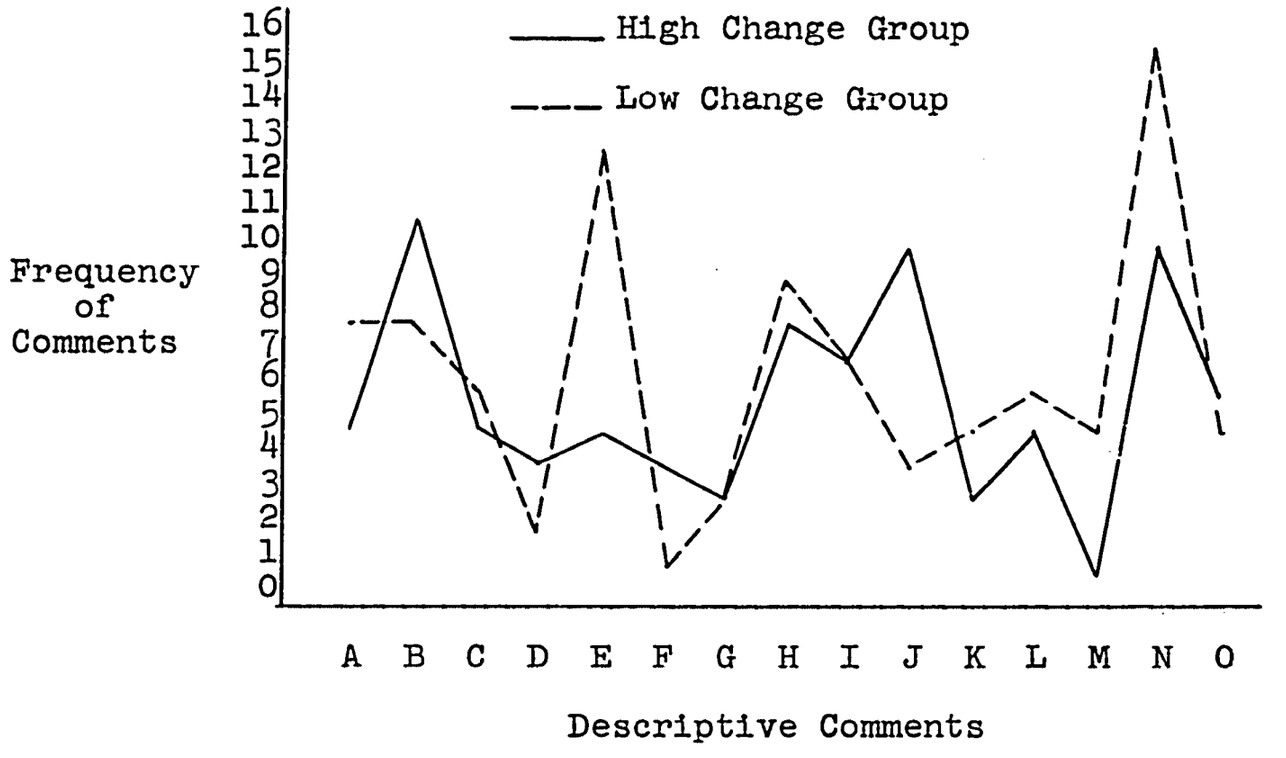
[b] $r = \pm .35$ required for significance at .05 level.

Other Measures as Predictors of Response

Since, as has been observed in the previous section, none of the seven chosen predictive measures yielded significant correlations with the change scores, attempts were made to discover variables in the data collected which

were related to the subjects' significant behavioral change in group therapy. The first of these variables to be further investigated was the psychiatrists' spontaneous patient descriptions which had been made in conjunction with their predictive ratings. The descriptive statements covered such a wide variety of behaviors and attributes that they were grouped under 15 general headings. The 45 subjects were divided into two groups by the median value of their change scores, making a high change group and a low change group. Figure 1 shows the number of times each of the 15 traits was ascribed to subjects in the high change group in comparison with subjects in the lower change group.

As may be seen, several factors seemed to have some discrimination value in dividing the patients who change more from those who change less. Thirteen of the 18 patients in the low change group were described as "delusional," "confused," "perplexed," "preoccupied," "psychotic," etc., whereas only five of the high change group were so described. Ten of 14 patients in the high change group were described as "desires help," "is motivated for help," "wants group psychotherapy," "is working on self," etc., whereas such attributes were mentioned for only four of the low change group. Sixteen of 26 patients in the low change group were described as possessing some negative defense or symptom, such as "manipulative," "dependent," "rigid," "passive," etc., whereas ten of the



Legend for Descriptive Comments:
- A = Shy, retiring, uncommunicative, withdrawn, etc.
- B = Extroverted, socializing, "reaching out," etc.
- C = Average or "fair" intelligence.
- D = "Low" intelligence.
- E = Delusional, confused, perplexed, psychotic, etc.
- F = Not delusional, in remission, non-psychotic, etc.
- G = Has insight.
- H = No insight, unintegrated insight, blames others.
- I = Previous "breaks," chronic, has had (extensive) shock therapy.
- J = Desires help, motivated for help.
- K = Lack of motivation, negativism, rebellion.
- L = Prediction of positive response within three months.
- M = Prediction of lack of response within three months.
- N = Negative defense or symptom mentioned.
- O = Positive factor mentioned.

Fig. 1. Number and kind of descriptions given patients in high and low change groups by psychiatrists.

high change group were so described. In other categories, however, the patients of the two groups were described by the same attributes about equally.

A further analysis of the psychiatrists' comments was made when it was observed that their descriptions of the patient in their spontaneous comments did not appear to agree in many instances with their over-all rating of the patient's predicted response to group therapy. In order to study this further, the psychiatrist's spontaneous patient descriptions were divided as nearly as possible into discrete units and then scored by the experimenter as having either positive or negative value tone. A score known as the Net Value Predictive Statement Score was derived by subtracting the total number of negative statements from the total number of positive statements given each subject by the psychiatrist rating him. These scores were then correlated with the change scores. The value of *r* for these two variables was +.19 which does not reach statistical significance (see Table 1).

It appeared from inspection of the data that the psychiatrists' predictions, based on the Net Value scores, were differentiating of the extremes on the change continuum. The change score continuum was divided into quartiles and the Net Value Scores in the four quartiles, from most change (Quartile 1) to least change (Quartile IV), were evaluated by means of simple analysis of variance. This analysis yielded an *F* value of 2.91 which is significant at the .05 level of confidence. A *t* test for significance between the means of Quartiles I and IV did not yield a

significant value for *t* although the difference between the means of Quartiles I and III was significant at the .05 level. Differences between other quartile means were non-significant.

An attempt was made to ascertain if the psychiatrist's amount of experience was related to his accuracy of prediction. Inspection of the data revealed no consistent difference in predictive efficiency of the different psychiatrists as a function of the amount of training they had received.

The Palo Alto Scale itself was next evaluated for its value as a predictive device. As a first step the initial Palo Alto Scale scores were correlated with the Palo Alto Scale change scores. This yielded an *r* value of -.18 which fell short of significance. Even though the correlation between initial scores and change scores was not significant, it was felt that certain items of the scale might be sufficiently correlated with change in total score to have some predictive value. An item analysis of the individual behavior items on the Palo Alto Scale was made (see Appendix E for copy of Palo Alto Scale). Although a true-false dichotomous scoring was used (Does Not Apply answers omitted), the behavior dimensions were assumed to be continuous and normally distributed, making the tetrachoric *r* statistic appropriate. The data for each Palo Alto Scale item were set up in a two-by-two table with high change and low change groups forming the columns, and

the two possible answers, True and False, forming the rows. Since values of r_t have been referred to as highly unstable with high probable errors by a number of statisticians (Guilford, 1936; Hayes, 1943; Hayes, 1946; Lindquist, 1940; McNemar, 1955), only those Palo Alto items with moderately high r_t values, and those in which the distribution of both variables was not greatly skewed, were considered differentiating. The resultant values of tetrachoric r for all of the Palo Alto Scale items are shown in Table 2 with the largest reliable values of r_t indicated with an asterisk. Only 19 items appear to have both a substantial and reliable relationship to total scale change scores and thereby have possible value for differentiating subjects who change most in group therapy from those who change least. In Table 3 is listed each of the 19 items preceded by the rating T or F (True or False) which is associated with high change scores.

The patients' official hospital diagnoses, the number of times each had been hospitalized, and the total number of months each had been hospitalized prior to starting group therapy were examined to see if they would offer any consistent predictive information differentiating the high from the low change groups. The scatter plots for these three variables, each in relation to the change scores, were essentially rectilinear in shape and did not appear to justify statistical treatment.

Table 2

Correlation between Palo Alto Scale Items and Total Scale Change Scores

(Total Sample, N=45)

Item[a] Number	Value of r_t	Item Number (cont'd)	Value of r_t (cont'd)	Item Number (cont'd)	Value of r_t (cont'd)
1	-.32	30	+.11	59	-1.00
2	+.40*	31	+.33	60	- .95
3	+.05	32	+.10	61	- .11
4	+.35*	33	+.32	62	+ .54*
5	+.13	34	+.38*	63	- .10
6	0	35	+.13	64	+ .43*
7	+.10	36	+.10	65	+ .10
8	+.10	37	+.10	66	+ .10
9	+.10	38	-.10	67	+ .14
10	+.25	39	+.25	68	0
11	+.10	40	+.10	69	+ .97
12	-.34	41	-.41*	70	+ .19
13	+.10	42	-.10	71	+ .46*
14	+.60*	43	+.10	72	- .34
15	+.13	44	+.54	73	- .25
16	-.22	45	-.18	74	+ .36*
17	-.33	46	+.60*	75	+ .36
18	+.25	47	+.10	76	+ .10
19	-.12	48	+.10	77	- .47
20	-.14	49	-.10	78	+ .62*
21	+.19	50	-.11	79	+ .49
22	-.10	51	-.10	80	+ .13
23	-.10	52	+.46*	81	- .63*
24	+.31	53	+.43*	82	0
25	+.31	54	-.17	83	+ .27
26	-.20	55	+.39*	84	+ .36*
27	+.36*	56	+.10	85	- .14
28	+.25	57	+.10	86	+ .27
29	+.26	58	+.30	87	0
				88	+ .37*

[a]See Appendix E for statement of items.

*Largest reliable values.

Table 3

Palo Alto Scale Items having Highest Correlations with Total Scale Change Scores

Rating[a] Score		Item
T	2.	Said "Thanks" when something was done for him.
T[b]	4.	Did not respond when something was said to him.
T[b]	14.	Frequently started talking about something very different from what had just been said.
T[b]	27.	Frequently it is hard to get the point of his remarks.
T	34.	Said something which showed he openly agreed to having some experience or opinion in common with another member.
F[b]	41.	Directly asked for leader's opinion or advice.
T	46.	Got the other members interested in what he was talking about.
T	52.	In an argument he was able to admit openly the other fellow had some points on his side.
T	55.	Openly and clearly showed and expressed understanding of how the other members were feeling.
T	62.	Introduced a subject for discussion.
T	64.	Explained to the group why he did or said something.
T	71.	Kidded and joked in a friendly way with the leader.
T	74.	Talked to the leader about the meeting afterwards.
T[b]	77.	Never said that he was wrong in any discussion.
T	78.	Said something that showed he saw the source of some of his troubles is within himself.
T	81.	Remarks showed that he was trying to get a better understanding of himself and his problems.
T	84.	Talked in a realistic, sensible way of getting out of the hospital.
T	88.	Directly asked for another member's opinion or advice.

[a]T or F indicates direction of behavior associated with high change scores.

[b]Items where direction of rating found to be related to positive change in present study is contrary to Palo Alto Scale scoring norms.

In addition to the results reported in this chapter, the remaining possible intercorrelations between all of the prediction and criterion measures were computed. These values are given, together with those reported in Table 1, in Appendix F. Statistically significant relationships were discovered between the Projection Scale Scores and the final (three months) Palo Alto Scale scores (r=-.28) and between the initial Palo Alto Scale scores and the final Palo Alto Scale scores (r=+.53). The five special MMPI scales were also found to be significantly intercorrelated.

CHAPTER V

DISCUSSION

The significant difference between means for the first and last Palo Alto Scale administrations revealed that the group improved over the three month period in their level of interpersonal relationships. That is, as a group they showed a positive response in group psychotherapy, a constructive participation in the group which is conducive to the solution of personal problems. A significant change on the criterion measure thus allowed a comparison of patient's change scores with other prediction measures. Of course not all patients had a similar amount or quality of response. This resulted in variations of change scores which could be compared with the prediction measures.

What were the implications of the changes in psychotherapy response? It does not necessarily follow that the observed improvement was due to psychotherapy alone. On the contrary, the observed improvement cannot be attributed solely to the group psychotherapy variable. Other factors in the mental patient's hospital life were not controlled, such as tranquilizers, occupational therapy, recreational

therapy, and contacts with other patients and personnel. Any or all of these may have been contributing factors. However, the problem is not one of what produced the changes, but one of whether the changes that appeared in the patient's response in group therapy could be predicted.

Neither does it necessarily follow that the behavior changes observed in the psychotherapy setting were limited to that setting. If, as is generally assumed, better socialized behavior is associated with more adequate personal adjustment, then the patients as a group also may be considered to have achieved a higher level of personal adjustment which was apparent in their behavior outside group therapy. The results of an earlier study using the Palo Alto Scale (Finney, 1954) indicated that ratings by ward personnel of patients' interpersonal relationships on the ward correlated highly (rho=+.80) with the patients' scores on the Palo Alto Scale.

Having determined that changes took place in the criterion variable, each of the originally selected prediction measures was individually evaluated for its prognostic ability. Following this, several other measures were extracted from the data collected and evaluated for their usefulness as predictors.

The findings on each of these predictive measures will be discussed in the following sections.

Psychiatrists' Predictive Ratings

One of the primary types of predictive procedures chosen for study was the psychiatrist's judgment. What kind of accuracy did the psychiatrist exhibit in predicting patients' response to group psychotherapy? The lack of a significant correlation between the psychiatrists' ratings on the seven-point psychotherapy response scale and the amount of change in Palo Alto Scale scores suggests that the current methods of selection of candidates for group psychotherapy may not be very efficient when based upon the ward psychiatrist's informal assessment alone. It should be mentioned, however, that the use of the rating scale introduced a somewhat artificial procedure not ordinarily associated with the assessment of group therapy prospects. This was further suggested by the fact that when the psychiatrists' informal descriptive comments about the patient were correlated with the change scores a Pearson r of +.19 was obtained in contrast with an r of -.02 between the rating scale and the change scores. Thus, the descriptive comments were perhaps somewhat more useful than the ratings in predicting patients' response, although neither was statistically significant.

In spite of the finding that the predictive power of both the single rating and the net valence of patient descriptions is very low, the results suggest that selection of patients for group therapy might be more efficiently

based on a check-list kind of evaluation of the prospective group therapy patient, comparing his assets to his liabilities, rather than a single global judgment of his potential to make use of group psychotherapy.

The data on psychiatrists' predictions suggest that further study is needed to determine how clinical judgment might be used more effectively or implemented. In such a study the efficiency of clinical judgment for a more complete course of treatment should also be examined since conceivably the three-month period results might not accurately reflect the patient's status or amount of change at the end of their total psychotherapy experience, which is usually longer. That this latter factor might be an important one is suggested by the fact that the present findings are in contradiction to the one somewhat related study reported by Bennett and Rogers (1941). They found in a study which covered a range of two years during which children received a case work type of planning and treatment program that the clinicians were able to predict the children's general progress at a statistically significant level.

From the analysis of the psychiatrists' descriptive comments themselves (Fig. 1) it would appear to be useful to judge a good group therapy prospect as one who, among other attributes, expressed directly or indirectly a desire for help with his difficulties. A poor group therapy risk, on the other hand, would be one who, among other things, presented

symptoms of gross disturbance of thought processes and who impressed the psychiatrist as possessing one or more quite obvious maladaptive symptoms or defenses. Further study of the capacity of these factors to differentiate good from poor response to group therapy should be useful.

It should also be recognized that the psychiatrists used as predictors of patient response in the present study were still in training (first and second year residents) and consequently the generalizations that may be made are limited at best to psychiatrists with a similar level of training and experience. It is entirely possible that board-accredited psychiatrists who have completed their training would show greater accuracy in prediction of patient response to group therapy. But again, it is frequently the resident psychiatrist in a hospital setting who has the immediate responsibility for assigning patients to this form of treatment, while the board-accredited psychiatrist is in an administrative or supervisory position.

The MMPI Special Scales

In contrast to the findings of other experimenters that the special scales of the MMPI are discriminating for responsiveness to individual psychotherapy (Barron, 1953b; Gallagher, 1953b; Gallagher, 1954; Sullivan *et al.*, 1958), none of these scales were found to have such predictive potential for group therapy in the present study.

In light of the finding that one-third of the 45 subjects' MMPI's were of questionable validity and the difficulty that was encountered in eliciting minimum cooperation from many patients in administering the test, the question arises as to the validity of using this test with mental hospital patients. It is perhaps relevant to note that the previous experimentation using these special scales of the MMPI as psychotherapy prognostic measures was conducted almost entirely with psychoneurotic patients. Because of the lower socio-economic and educational opportunities associated with state mental hospital populations, the lack of experience such patients have with the type of questions and answer sheets used in the booklet form of administering the MMPI, and the errors which might be introduced by a self-administered paper and pencil test due to the patient's mental disturbance, the validity of the MMPI's use with this kind of population might be questioned. This is presented as one factor which may have been responsible for the poor correlation of the MMPI scales with change scores in this study as opposed to the success of other studies using these scales to predict responses in individual psychotherapy.

Another possible explanation of negative findings is that efficient predictors of response to individual psychotherapy may not necessarily coincide with those which would predict response to group psychotherapy, even though an assumption of similarity between the two forms of therapy

was made for the purposes of this study. However, the attributes or qualities presumably measured by these special scales--amount of overt anxiety, internalization of feeling, ego-strength, neurotic or maladaptive traits, etc.--are each among the factors mentioned by group therapists as important, and are so considered in the experimenter's experience.

Of possible relevance here is the fact that, although each special MMPI scale was published as a measure of a different variable, all were found in this study to be highly intercorrelated. Hence, it is not strange that all were similar in not being able to predict this variable. Perhaps also the frequently leveled criticism of paper and pencil personality tests--that they measure only superficial personality characteristics--is a factor responsible for the lack of positive findings. Thus, the position based on the present data is favored that either the scales do not measure the variables they purport to measure or the present tests were not useful with hospitalized mental patients as opposed to neurotic patients. Further experimentation would be required to give any conclusive information on which factor is operating.

The Projection Scale

In contrast to the expectations based on the theory developed in the Introduction and Statement of Problem,

self-acceptance, as measured by the Projection Scale employed in this experiment, was not correlated with response to treatment as measured by Palo Alto Scale change scores. However, it is interesting to note that the Projection Scale scores did have a significant negative correlation with the Palo Alto scores at the beginning of treatment (r=-.32) and just met the minimum value for a significant correlation with the Palo Alto Scale scores taken at the end of three months treatment (r=-.28). This would seem to suggest that some, albeit low, negative relationship exists between level of self-acceptance and the patient's level of interpersonal relationships, as measured by the Palo Alto Scale, both at the beginning of group therapy and at the end of three months of therapy. The fact that level of self-acceptance (projection scores) did not correlate with the change scores reveals that the patient's initial level of self-acceptance did not indicate the degree of improvement he would make in his interpersonal relationships over three months of group psychotherapy.

The relationships between the Projection Scale scores and the first and last Palo Alto Scores are so low as to suggest that the Projection Scale has little usefulness in its present form. Also it should be noted that the correlations were negative, indicating that projection scores increase with higher Palo Alto Scale scores. This is directly opposite to the expectation that higher scores on

the Projection Scale indicate a poorer self-concept and reality-testing and, consequently, poorer adjustment. It would appear from the present findings that less self-acceptance (high projection scores) indicates better adjustment. From this it may be said that the Projection Scale as now constructed very likely does not measure the kind of projection it was intended to measure, i.e., the propensity for so distorting reality as to extensively project unaccepted traits to persons disliked and accepted traits onto liked persons. However, if the Palo Alto Scale is accepted as a valid criterion, the present Projection Scale would appear to be measuring some other personality variable, perhaps empathy or ability to project the self into others (or at least into pictures of others).

Since the present Projection Scale was modified slightly from that used by Zimmer (1955) by the addition of a self as well as an ideal-self rating and by using different pictures and trait names, perhaps it is not surprising that the present findings with regard to this scale are different from Zimmer's results in a study of conflict and internalized demands in projection where he obtained clear evidence that this scale was a measure of projection.

Further study of the technique of attempting to measure self-attitudes through expressed attitudes toward pictures of others is necessary if this seemingly promising projective technique is to be developed. Also, a definitive

study as to whether projection as here defined is in fact related to the self-concept, as supported by pilot work and later assumed for the purposes of this experiment, would seem to be useful in deciding whether or not this or some other technique would more accurately measure level of self-acceptance.

The Palo Alto Group Psychotherapy Scale

When it was observed that the measures originally selected for prediction of response to group psychotherapy were not effective predictors of such response, the question arose as to whether or not the Palo Alto Scale itself might not be a useful predictor since it is conceivable that persons with different levels of interpersonal relationships might, through group socialization, improve differentially in this respect. Since the kinds of behaviors it includes could be rated in contexts other than in group therapy, such as on the ward and in other group activities such as occupational and recreational therapy, it might be a practical predictive device to use. However, from the results on the present sample, predictions of patient change made on the basis of initial ratings on this scale would not be of value. There is evidence, however, of a significant relationship ($r=+.53$) between initial and final Palo Alto Scale Scores, i.e., persons initially higher on the continuum of Palo Alto Scores will tend to remain in the high range

of scores on later administrations, and persons starting lower will remain in the lower range of scores on subsequent administration of the scale. Since there was a significant increase in scores between the first and final administrations of the scale, the relationship between first and final scores suggests a fairly consistent increase in scores for the patients irrespective of where they were initially along the continuum of Palo Alto scores. Thus, although the Palo Alto scale does not effectively predict how much change a patient is likely to make during three months of psychotherapy, it measures where a given patient is initially, in terms of his level of interpersonal relationships, and thus roughly at what level he is likely to be at the end of three months of psychotherapy where the whole treatment setting is similar to that in which the present study took place. These observations tend to support what is generally recognized--that the patient who is better adjusted is more likely to end up at a higher level of adjustment after treatment than is a patient who is less well adjusted, because he started at a higher level originally. Although a patient's initial score on the Palo Alto Scale would not be useful as a predictor of amount of improvement expected in his level of interpersonal relationships, it would appear that the Palo Alto Scale remains a useful device for objectively stating the level of a patient's interpersonal relationships at any given time.

It might be added in support of this possible use of the Palo Alto Scale that Ullman's study (1957) revealed that the Palo Alto Scale scores were significantly related to his criterion of improvement which was hospital status six months after administration of the scale. It should be noted that, of all measures used, the initial Palo Alto Scale scores yielded one of the two significant correlations with the patients' terminal level of interpersonal relations (final Palo Alto Scale scores). Of all the originally selected predictive measures, only one, the Projection Scale, showed a significant correlation ($r=-.28$) with these final scores.

In a further attempt to discover measures among the data which would predict response to group psychotherapy an item analysis of the 88 Palo Alto items was made. The aim of this analysis, since the total scale was not correlated with change scores, was to isolate items related to response in group therapy whose predictive efficiency could subsequently be tested in further research. Nineteen such items were found to have an acceptably high correlation with Palo Alto change scores (see Table 3). Further experimentation with these items would be needed to see if these items as a group, or in some combination, would predict degree of response to group therapy in another sample. It is interesting to note then an analysis of the behaviors described in the 19 items associated with high change scores

revealed that five of these behaviors (items) were at variance with what the Scale norms regard as "good" or well-socialized. In other words, certain apparently "wrong" or poorly socialized behaviors were positively associated with high change scores.

This finding from the item analysis, that patients who made the most change during group therapy did not, at least initially, exhibit entirely well-socialized or group-oriented behavior, suggests that some questions regarding the Palo Alto Scale may be raised. Although it was assumed that responsiveness to psychotherapy was intimately related to the individual's level of interpersonal relationships, it appears possible that the kinds of items on the Palo Alto Scale, purporting to measure the adequacy of the individual's interpersonal relationships, may have more to do with a superficial level of socialization. The therapists in this study who employed the scale in rating their group therapy patients all expressed a vague dissatisfaction with the scale as a measure of their patients' progress and development. It is suggested that a scale which has more relevance to therapeutic processes and one which allows for more of the therapist's training and experience to operate in the evaluation of the patient might yield more information about the patient's progress in group psychotherapy.

Other Prognostic Indices

As presented in the Results chapter, no relationship was obtained between change scores and being psychotic or non-psychotic, between the number of months of hospitalization prior to starting group therapy and change scores, or between the number of times a patient was committed to a mental hospital and change scores. These findings are contrary to the widely accepted belief that the less severe the illness and the shorter the course of the mental disturbance the more benefit the patient gains from treatment. However, these findings coincide with the recent trend away from reliance on classical diagnostic syndromes as relevant to treatment potential, as reported by a number of workers in the field (Foulkes, 1949; Gallagher, 1953a; Harris et al., 1946; Slavson, 1943).

The results with this sample would seem to suggest that perhaps the factor or group of factors which relate to response to group psychotherapy have yet to be identified. Certainly in the experience of the experimenter such a simple, one-to-one relationship between formal diagnosis, length of illness and change does not seem to exist in many cases.

CHAPTER VI

SUMMARY AND CONCLUSIONS

With the growing importance and utilization of group psychotherapy as a treatment tool in the mental hospital setting, there is an increasing need for criteria on the basis of which persons who will make use of it can be selected for this type treatment.

The psychological literature contains exceedingly few reports of research on factors predictive of patients' response to group psychotherapy. In contrast to this, a number of studies in recent years have been devoted to discovering prognostic indices for success in individual psychotherapy. It is conceivable that these indices might be applicable to group psychotherapy as well. Although clinical judgment has been widely used as a selective technique for placing individuals in group and individual psychotherapy, almost no systematic study of its effectiveness as a selective method has been reported. Considering another approach, there has been sufficient theorizing and research in recent years to indicate that measures of self-concept and self-acceptance hold great promise for

personality description and prediction. Therefore, on the basis of clinical practice, previous research, and theoretical formulations about the role of self-attitudes in psychotherapy, the present study was designed to evaluate the usefulness of several measures which might serve as predictors of the response of patients to group psychotherapy in an intensive treatment service of a state mental hospital. The plan of the study involved a comparison of measures obtained on patients at the start of group psychotherapy with patient response in group therapy during a three month period of such treatment.

Forty-five subjects, 20 females and 25 males, ranging in age from 17 to 63 years with a median age of 35, most of whom had been diagnosed as psychotic, and most of whom came from the intensive treatment wards of Central State Griffin Memorial Hospital, Norman, Oklahoma, comprised the present sample. Excluding only patients on whom there was psychiatric agreement that they would not, under almost any circumstances, be placed in group therapy, the 45 subjects were selected from the total remaining acutely ill population of the intensive treatment service of the hospital, which included the poorer as well as the better candidates, according to the psychiatrists' pre-treatment ratings. The distribution of the psychiatrists' predictive ratings for the group of 45 patients approximated a normal distribution.

The predictive measures selected for use in this

study were a rating by the patient's psychiatrist, five special scales derived from the Minnesota Multiphasic Personality Inventory (MMPI), and a specially devised Projection Scale. The psychiatrist's rating was made on a seven-point graphic scale containing statements regarding the patients' anticipated response, ranging from consistent therapeutic use of the group to consistent failure to make therapeutic use of the group. Five special scales, each using items from the MMPI, were selected on the basis of their prior reported success in predicting response to individual psychotherapy. These scales were the Barron Ego-Strength Scale, the Taylor Manifest Anxiety Scale, the Winne Neuroticism Scale, the Welch Anxiety Index, and the Welch Internalization Ratio. The Projection Scale, used as a measure of self-acceptance, was patterned after that devised by Zimmer and consisted of an index derived from the patient's ratings of three relatively neutral pictures of people, ratings of himself as he regarded himself, and ratings of himself as he would like to be, on a list of 16 previously selected traits.

For the criterion measure of response to group psychotherapy the Palo Alto Group Psychotherapy Scale, a scale measuring the level of the patient's interpersonal relationships, was employed.

The seven selected measures were evaluated as to their ability to predict response to group therapy in the

following manner. The subjects, before beginning group therapy, were rated by their ward psychiatrist on a rating scale. The psychiatrist then wrote a descriptive psychological appraisal of the patient and his expectation for him in treatment. In small groups, the patients were next administered the MMPI in booklet form. Finally, the patients were individually administered the Projection Scale. The subjects were then placed in one of several existing, small, on-going, intensive psychotherapy groups where each was rated by his group therapist on the Palo Alto Group-Psychotherapy Scale at the end of one week in the group. After three months of group treatment for each patient, his therapist made a second rating of him on the Palo Alto Scale.

The specific criterion score for degree of response to group therapy was the difference between the patient's Palo Alto Scale score at one week and his score on the same scale at the end of three months (change score). The criterion for response, in behavioral terms, then, was the amount of change in the patient's level of interpersonal relationships.

A *t* test for related groups was the statistic employed to evaluate the difference in means between the total experimental group's initial Palo Alto Scale Scores and their three months scores on this same scale.

The Pearsonian *r* technique was employed to evaluate the relationship between each of the initial predictive

measures and the Palo Alto Scale change scores. The results of the statistical evaluation are as follows:

1. The value for t between the group mean on the initial Palo Alto Scale scores and the mean of the three month scores was 4.42 which is significant at beyond the .001 level.

2. No statistically significant correlations were obtained between any of the seven originally selected predictive measures and the Palo Alto Scale change scores.

3. A statistically significant correlation was not obtained between the measure derived from the psychiatrists' descriptive comments (Net Value Statements) and the change scores, although this correlation was higher than that between the psychiatrists' rating scale scores for the subjects and their change scores.

4. The initial Palo Alto Scale scores, when employed as a predictive measure for response, did not yield a statistically significant correlation with the change scores.

5. Statistically significant correlations were obtained between the Projection Scale scores and the final Palo Alto Scale scores (r=-.28, significant at the .05 level) and between the initial Palo Alto Scale scores and the final Palo Alto scores (r=+.53, significant at beyond the .01 level).

6. An analysis of the Palo Alto Scale items yielded fairly large and reliable correlations between the initial

score on 19 of the items and the Palo Alto Scale change scores for the scale as a whole.

Conclusions based on these results may be summarized as follows.

1. Although a significant degree of response during a three-month period of group therapy occurred, interpreted as an improvement in the level of interpersonal relationships, such response to group therapy could not be predicted through the use of any of the seven originally selected measures.

2. The use of psychiatrists' clinical judgment is highly questionable as a predictive measure in selecting candidates for group therapy, at least as it is currently employed in the local hospital in which the present study took place. There was observed, however, a tendency for the psychiatrists' predictions of response to be more accurate when based on an ennumeration of the pro's and con's regarding the patient's possible use of group therapy than when based on a single global judgment (rating).

3. The five special scales of the MMPI did not prove to be useful for selection of group therapy candidates. However, since questions of the validity of the use of the MMPI with the present sample has been raised by the examination of the data, and since the present findings are contradictory to results of several studies involving prediction for individual psychotherapy, further

experimentation would be required in order to rule out these scales as effective devices for group therapy prediction with neurotic or non-hospitalized group therapy candidates.

4. On the basis of the Projection Scale scores not only could good and poor group therapy candidates not be differentiated in terms of degree of change, but the correlations were negative, i.e., in opposition to the hypothesized relationship between self-acceptance as measured with a projection device and response to group therapy. Therefore, further study with this type of projection measure is suggested since in both the pilot work for this study and in Zimmer's study of projection using a similar measure it was found that degree of projection was positively related to pathology.

5. On the basis of the results it is suggested that the use of the Palo Alto Group Psychotherapy Scale as a measure of patients' level of interpersonal relationships prior to group therapy would yield a reliable estimate of his relative level of interpersonal relationships after three months of group therapy treatment, although through its use the amount of change during psychotherapy with regard to this variable could not be predicted. Thus, from the present results, together with Ullman's findings that this scale was significantly related to patient status, it is suggested that further study might be fruitful as to the Palo Alto

Scale's usefulness for evaluating patients in a mental hospital setting.

6. Nineteen items of the Palo Alto Scale were found to be individually highly correlated with the patient's degree of response to group therapy. The combined use of these items as a scale in itself was suggested for further research as a possible predictive scale for group therapy response.

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APPENDIX A

RATING OF PREDICTED RESPONSE TO GROUP PSYCHOTHERAPY

RATING OF PREDICTED RESPONSE

TO GROUP THERAPY

Instructions: Please circle the number of one of the statements below which most closely describes your conception of how the patient will respond to group psychotherapy. Make your prediction on the basis of how he (she) will respond within the first three months of therapy.

In the statements below the phrase "make use of group psychotherapy" is here defined as constructive participation in the group which is conducive to the solution of the patient's personal problems.

1. Patient will fairly consistently make use of group psychotherapy.
2. Patient will make some definite attempts to make use of group psychotherapy.
3. Patient will make use of group psychotherapy to a somewhat greater degree than he will not make use of it.
4. Patient will make use of group psychotherapy about as much as he will not make use of it.
5. Patient will not make use of group psychotherapy to a somewhat greater degree than he will make use of it.
6. Patient will make few definite attempts to make use of group psychotherapy.
7. Patient will fairly consistently fail to make use of group psychotherapy.

APPENDIX B. PROJECTION SCALE PICTURES

1. Pictures of men.

2. Pictures of women.


2


4


15


10


28


22

APPENDIX C. PROJECTION SCALE RATING FORMS

1. Rating Form A.
2. Rating Form B.
3. Rating Form C.

RATING FORM A

INSTRUCTIONS. Each line below represents how often the personality characteristic in the sentence above the line is shown.

You are to place a check mark on each of the lines below at the point which best describes the person in the picture.

You can place your mark anywhere along the line.

1. This is a person who is brave

Almost always	Very often	Moderately often	Not Very often	Almost never

2. This is a person who is practical

Almost always	Very often	Moderately often	Not Very often	Almost never

3. This is a person who is active

Almost always	Very often	Moderately often	Not Very often	Almost never

4. This is a person who is definite

Almost always	Very often	Moderately often	Not Very often	Almost never

5. This is a person who is quiet

Almost always	Very often	Moderately often	Not Very often	Almost never

6. This is a person who is sma

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM A (cont'd)

7. This is a person who is careful

Almost always	Very often	Moderately often	Not Very often	Almost never

8. This is a person who is commanding

Almost always	Very often	Moderately often	Not Very often	Almost never

9. This is a person who is curious

Almost always	Very often	Moderately often	Not Very often	Almost never

10. This is a person who is calm

Almost always	Very often	Moderately often	Not Very often	Almost never

11. This is a person who is frank

Almost always	Very often	Moderately often	Not Very often	Almost never

12. This is a person who is weak

Almost always	Very often	Moderately often	Not Very often	Almost never

13. This is a person who is bold

Almost always	Very often	Moderately often	Not Very often	Almost never

14. This is a person who is exact

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM A (cont'd)

15. This is a person who is cold

Almost always	Very often	Moderately often	Not Very often	Almost never

16. This is a person who is firm

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM B

INSTRUCTIONS. Each line below represents how often the personality characteristic in the sentence above the line is shown.

You are to place a check mark on each of the lines below at the point which you feel best describes you.

You can place your mark anywhere along the line.

1. I am a person who is brave

Almost always	Very often	Moderately often	Not Very often	Almost never

2. I am a person who is practical

Almost always	Very often	Moderately often	Not Very often	Almost never

3. I am a person who is active

Almost always	Very often	Moderately often	Not Very often	Almost never

4. I am a person who is definite

Almost always	Very often	Moderately often	Not Very often	Almost never

5. I am a person who is quiet

Almost always	Very often	Moderately often	Not Very often	Almost never

6. I am a person who is smart

Almost always	Very often	Moderately often	Not Very often	Almost never

7. I am a person who is careful

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM B (cont'd)

8. I am a person who is commanding

Almost always	Very often	Moderately often	Not Very often	Almost never

9. I am a person who is curious

Almost always	Very often	Moderately often	Not Very often	Almost never

10. I am a person who is calm

Almost always	Very often	Moderately often	Not Very often	Almost never

11. I am a person who is frank

Almost always	Very often	Moderately often	Not Very often	Almost never

12. I am a person who is weak

Almost always	Very often	Moderately often	Not Very often	Almost never

13. I am a person who is bold

Almost always	Very often	Moderately often	Not Very often	Almost never

14. I am a person who is exact

Almost always	Very often	Moderately often	Not Very often	Almost never

15. I am a person who is cold

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM B (cont'd)

16. I am a person who is firm

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM C

INSTRUCTIONS. Each line below represents how often the personality characteristic in the sentence above the line is shown.

You are to place a check mark on each of the lines below at the point which best describes how you would like to be.

You can place your mark anywhere along the line.

1. I would like to be a person who is brave

Almost always	Very often	Moderately often	Not Very often	Almost never

2. I would like to be a person who is practical

Almost always	Very often	Moderately often	Not Very often	Almost never

3. I would like to be a person who is active

Almost always	Very often	Moderately often	Not Very often	Almost never

4. I would like to be a person who is definite

Almost always	Very often	Moderately often	Not Very often	Almost never

5. I would like to be a person who is quiet

Almost always	Very often	Moderately often	Not Very often	Almost never

6. I would like to be a person who is smart

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM C (cont'd)

7. I would like to be a person who is careful

Almost always	Very often	Moderately often	Not Very often	Almost never

8. I would like to be a person who is commanding

Almost always	Very often	Moderately often	Not Very often	Almost never

9. I would like to be a person who is curious

Almost always	Very often	Moderately often	Not Very often	Almost never

10. I would like to be a person who is calm

Almost always	Very often	Moderately often	Not Very often	Almost never

11. I would like to be a person who is frank

Almost always	Very often	Moderately often	Not Very often	Almost never

12. I would like to be a person who is weak

Almost always	Very often	Moderately often	Not Very often	Almost never

13. I would like to be a person who is bold

Almost always	Very often	Moderately often	Not Very often	Almost never

14. I would like to be a person who is exact

Almost always	Very often	Moderately often	Not Very often	Almost never

RATING FORM C (cont'd)

15. I would like to be a person who is cold

Almost always	Very often	Moderately often	Not Very often	Almost never

16. I would like to be a person who is firm

Almost always	Very often	Moderately often	Not Very often	Almost never

APPENDIX D. PILOT STUDY SCALES

1. Instructions to Personnel for Rating Patients on a Projection Scale.

2. Instructions to Personnel for Rating Patients on a Self-Acceptance Scale.

Instructions to Personnel for Rating Patients on a Projection Scale

You are to rate the patients whose names will be given to you by placing a check mark on the line above the words which most closely describe the degree to which the patient uses projection.

The degree of projection is defined here as the extent to which a patient attributes to other people the qualities that he himself (herself) possesses when these qualities do not appear to you to be obvious in the other person.

This kind of projection can refer to qualities either liked or disliked by the patient. For example, a patient may say or act as if another person is "selfish," a quality the patient dislikes, when observers would probably say that the other person does not exhibit such a quality. In addition, a patient may do the same thing regarding a quality he likes, attributing it to another person when, to observers, this quality is not obvious in the other person.

_____ is a person who uses projection according to the definition given,

Almost constantly	Frequently	Moderately	Infrequently	Almost never

Instructions to Personnel for Rating Patients on a Self-Acceptance Scale

You are to rate the patients whose names will be given to you by placing a check mark on the line above the words which most closely describe the degree to which the patient is self-accepting.

The degree of self-acceptance is defined here at the extent to which the patient seems to like himself (herself) and to accept himself, including a realistic recognition on his part both of his characteristics which he may consider positive ("good") and of those he may consider negative ("bad").

_____ is a person whose level of self-acceptance, according to the definition given, is:

Extremely high	High	Moderate	Low	Extremely low

APPENDIX E. PALO ALTO GROUP PSYCHOTHERAPY SCALE

PALO ALTO GROUP PSYCHOTHERAPY SCALE
(Seventh Revision 2/9/54)

If the person showed the behavior described at least once in four meetings or in the case of items reading "Usually" or "Frequently," did it more than half the time, score True by marking an X over T.

Score False by marking an X over F.

Note: Never score a D simply because a patient did not talk. Thus the item "Drifted off the subject as he talked" would be scored F if the person never talked. (D means does not apply.)

1. Questions, comments, or gestures show that he had some general idea about what the other members or leader was talking about. T.F.D.
2. Said "Thanks" when something was done for him. T.F.D.
3. Usually did not seem to talk to anyone but the leader. T.F.D.
4. Did not respond when something was said to him. T.F.D.
5. Made faces and strange movements that did not make sense. T.F.D.
6. Broke basic cleanliness taboo, such as spitting on floor, using shirt for handkerchief. T.F.D.
7. Laughed or smiled when something amusing was said in the group. T.F.D.
8. Did not look directly at anyone when he talked. T.F.D.
9. Made some kind of a mess; cigarettes, coffee, paper, etc. T.F.D.
10. Posture and expression usually showed social withdrawal. T.F.D.
11. Kept bringing up a topic no one else was interested in. T.F.D.
12. Was generally silent except for "yes" and "no" answers. T.F.D.

13. Did not respond or rejected an attempt by another member to be friendly. T.F.D.

14. Frequently started talking about something very different from what had just been said. T.F.D.

15. Became psychotic and delusional when he talked about something that stirred up strong feelings. T.F.D.

16. Smiled a lot to himself without any sensible reason. T.F.D.

17. Never spoke without encouragement. T.F.D.

18. Said something that showed he had not been following what had just been said in the group. T.F.D.

19. Questions, comments, or actions showed he clearly understood what had been said in the group. T.F.D.

20. Smiled at another member. T.F.D.

21. Talk seemed mainly determined by his own peculiar ideas. T.F.D.

22. Remarks had a clear and sensible relationship to what someone else had said. T.F.D.

23. Talked on a subject another member introduced. T.F.D.

24. Some of his remarks are not sensible. T.F.D.

25. Did some strange or peculiar act while in the group. T.F.D.

26. He and another member talked back and forth to each other, showing by their replies they understood what the other person said. T.F.D.

27. Frequently it is hard to get the point of his remarks. T.F.D.

28. Tried to be friendly to another member. T.F.D.

29. Openly showed friendly feelings toward another member. T.F.D.

30. Remarks were mostly on the subject being talked about. T.F.D.

31. Usually talked to both the leader and to the other members. T.F.D.

32. Asked another member a direct question. T.F.D.

33. Said he agreed with what another member said. T.F.D.

34. Said something which showed he openly agreed to having some experience or opinion in common with another member. T.F.D.

35. Frequently told other members things but didn't listen to what they said. T.F.D.

36. Broke in on another member to talk about something entirely different. T.F.D.

37. Openly and clearly showed friendly feelings or attitudes toward the group. T.F.D.

38. When he talked he looked right at other members. T.F.D.

39. Commented with humor on something. T.F.D.

40. Openly and clearly showed that he wanted to understand what other members were saying. T.F.D.

41. Directly asked for leader's opinion or advice. T.F.D.

42. Usually talks about things that will be of interest to most of the group. T.F.D.

43. Openly and clearly showed interest and awareness of how other members were reacting to what he said. T.F.D.

44. Took an active part in making some group decision. T.F.D.

45. Directly answered the question of another member. T.F.D.

46. Got the other members interested in what he was talking about. T.F.D.

47. Spoke with enthusiasm. T.F.D.

48. Usually talked freely and sensibly. T.F.D.

49. Addressed another member by name. T.F.D.

50. Talked about another member by name. T.F.D.

51. Added to the discussion of emotion by talking about his personal feelings and relationships. T.F.D.

52. In an argument he was able to admit openly the other fellow had some points on his side. T.F.D.

53. Drifted off the subject as he talked. T.F.D.

54. Usually stopped talking when he had made his point. T.F.D.

55. Openly and clearly showed and expressed understanding of how the other members were feeling. T.F.D.

56. Said something that openly showed he was interested in what the other members thought about something. T.F.D.

57. Said something like "us," "we," or "our" that showed he saw himself as part of the group. T.F.D.

58. In a sensible, moderate way, said he did not agree with someone. T.F.D.

59. Asked about an absent member. T.F.D.

60. There were some members he did not seem to talk to. T.F.D.

61. Usually only talked about neutral, impersonal, unemotional subjects. T.F.D.

62. Introduced a subject for discussion. T.F.D.

63. Talked about something that happened or was said at some other meetings. T.F.D.

64. Explained to the group why he did or said something. T.F.D.

65. Criticized other members in an indirect way. T.F.D.

66. What he said usually depended more on his own feelings than what had been talked about by other members. T.F.D.

67. Openly asked the other members if they understood what he was saying. T.F.D.

68. Openly asked the other members if they understood what he was saying. T.F.D.

69. Clearly and openly tried to smooth over the hostility between two other members. T.F.D.

70. Taled about personal, emotional problems with sensible, genuine feeling. T.F.D.

71. Kidded and joked in a friendly way with the leader. T.F.D.

72. Broke in on another member to give his opinion. T.F.D.

73. Kidded and joked with another member. T.F.D.

74. Talked to the leader about the meeting afterwards. T.F.D.

75. Usually tried to keep the discussion going and on the general subject. T.F.D.

76. Steered the group into a good discussion. T.F.D.

77. Never said that he was wrong in any discussion. T.F.D.

78. Said something that showed he saw the source of some of his troubles is within himself. T.F.D.

79. Asked another member to explain what he meant. T.F.D.

80. Gave advice in a friendly, helpful way. T.F.D.

81. Remarks showed that he was trying to get a better understanding of himself and his problems. T.F.D.

82. Stayed after meeting and kept on talking with the other members. T.F.D.

83. Said he did not understand what another member had said. T.F.D.

84. Talked in a realistic, sensible way of getting out of the hospital. T.F.D.

85. Praised or admired the behavior or belongings of another member. T.F.D.

86. Clearly and openly encouraged another member to talk. T.F.D.

87. Openly and clearly tried to set another member at ease. T.F.D.

88. Directly asked for another member's opinion or advice. T.F.D.

APPENDIX F

INTERCORRELATIONS BETWEEN ALL PREDICTION AND CRITERION MEASURES

Intercorrelations between All Prediction and Criterion Measures

(Total Sample, N=45[a])

Measures	Value of Pearson r								
	Prediction Measures						Criterion Measures		
	PS	AI	IR	B ES	WN	T MA	PA,1	PA,2	PA,3
PR	-.27	-.12	-.07	-.12	-.16	-.09	-.10	-.08	-.02
PS		+.17	+.10	+.09	+.05	+.12	+.33*	+.28*	+.07
AI			+.85*	-.66*	+.74*	+.79*	+.10	+.02	-.05
IR				-.75*	+.77*	+.77*	+.01	+.11	+.13
B ES					-.74*	-.81*	+.05	+.03	-.02
WN						+.86*	-.02	+.07	+.11
T MA							+.17	+.08	-.03
PA,1								+.53*	-.18
PA,2									+.74*
PR,NV									+.19

Legend for Measures:

PR = Psychiatrists' ratings
PS = Projection Scale
AI = Welch Anxiety Index
IR = Welch Internalization Ratio
B ES = Barron Ego-Strength Scale
WN = Winne Neuroticism Scale
T MA = Taylor Manifest Anxiety Scale
PA,1 = Palo Alto Scale, initial rating
PA,2 = Palo Alto Scale, final rating
PA,3 = Palo Alto Scale, change scores
PR,NV = Psychiatrists' ratings, Net Value Statements

[a] $r = \pm .29$ required for significant at .05 level.

*Statistically significant at the .05 level.