Therapist Ratings of Achievement of Objectives in Psychotherapy With Acute Schizophrenics*

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Abstract

Therapist ratings of patients' achievement of objectives in psychotherapy were used to examine the impact of drugs on psychotherapy, to identify attributes of patients who achieve therapy objectives, and to assess the importance of the implementation of a crisis-oriented model of therapy. Patients were part of a project investigating the long-acting phenothiazine fluphenazine enanthate and crisis-oriented family therapy in a 6-week program of aftercare treatment for briefly hospitalized first admission acute schizophrenics. The 44 patients in this study were randomly assigned to the psychotherapy condition and to either a high or low dosage of phenothiazines. Therapist ratings of the achievement of therapy objectives were significantly related to independent ratings on two outcome measures, the Global Assessment Scale and the Brief Psychiatric Rating Scale (BPRS) factor Thought Disorder, at 6-month followup. Analyses of predictors of the achievement of therapy objectives revealed significant interactions between drug level and Venables and O'Connor ratings of paranoid symptomatology among good permorbid patients and between drug level and BPRS ratings of Hostility for the entire sample.

The research literature concerning the effectiveness of psychotherapy with schizophrenics is replete with contradictory and equivocal results. Recent reviews of the literature show studies to be distributed between two categories: the minority, which find psychotherapy alone or in conjunction with pharmacotherapy to be effective in reducing symptomatology, hospital stay, or readmission; and the majority, which find psychotherapy to be no more effective than drug alone or "no treatment," milieu therapy, or "regular hospital treatment." There is no clear tendency toward either of these findings. Evidence that would permit a decisive judgment concerning the effectiveness of psychotherapy with schizophrenics is not yet available.

In most of these studies psychotherapy is regarded as a homogeneous process. The diversity in the psychotherapy process found both within and across studies may account for some of the variance in findings and renders even less equivocal findings difficult to interpret. Heterogeneity in the nature of psychotherapy derives from variability in (1) attributes of the therapists; (2) the formal model, theory, or techniques of therapy; and (3) implementation of the therapeutic model in therapy interactions.

Some research designs have taken into account the first two sources of diversity in psychotherapy. Karon and VandenBos (1972) systematically varied the level of experience of the therapist and found this to be a critical variable relating to the effectiveness of

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1 The most recent review is Schooler (1978). Other comprehensive reviews are Feinsilver and Gunderson (1972), Group for the Advancement of Psychiatry (1975), Luborsky, Singer, and Luborsky (1975), and May (1975).
therapy. Whitehorn and Betz (1954, 1957) and Betz and Whitehorn (1956) identified two types of therapists, "A" and "B," which were believed to be differentially effective in treating schizophrenics. May (1974) presents a critical review of the many studies that have investigated this distinction. A recent report by Tuma et al. (1978) suggests that as yet unidentified characteristics of therapists may be related to the outcome of psychotherapy in conjunction with ataractic drugs.

Numerous studies also have been designed to compare different theories or techniques of psychotherapy (Luborsky, Singer, and Luborsky 1975). In these studies psychotherapy is assumed to be delivered in accordance with the model indicated by the formal specifications of the design or the therapist's affiliations. A search of the literature revealed only one study that monitored the therapeutic process with schizophrenic patients to determine which variables in the interaction were related to outcome. Rogers et al. (1967) recorded sessions of psychotherapy with inpatient schizophrenics. Judges, patients, and therapists rated the extent of accurate empathy, congruence, and unconditional positive regard exhibited by each therapist. The investigators hypothesized that in accordance with a client-centered model of therapy, the presence of these therapy conditions would be positively related to outcome. Although there were no significant differences between control and therapy groups, within the therapy group patients of therapists who were rated higher on accurate empathy showed greater improvement on some outcome measures.

Thus, improvement of schizophrenic patients in psychotherapy was found to be related to the effectiveness of the therapist in approximating the client-centered model of therapy.

Unfortunately, investigation of other models of psychotherapy with schizophrenics has not included assessment of the quality of therapy. In order to evaluate accurately the effectiveness of psychotherapy, the following procedures are necessary:

- Specification of the model of therapy, including explicit objectives and procedures.
- Evaluation of therapy in terms of fidelity to the prescribed model of therapy.
- Interpretation of the outcome of psychotherapy in view of the effectiveness of implementation of the prescribed model. The aim should be to identify the elements of the model that are critical in producing the observed effects.

An analogy may be drawn with the problem encountered in assessing effects of pharmacotherapy. Schizophrenics, especially outpatients, frequently fail to take prescribed dosages of oral medication, thereby confounding experimental outcomes in drug studies. Thus, it has been necessary for researchers to devise methods to assure delivery of the drug, such as the use of depot phenothiazines in the present study. Analogous measures to assure or assess the effectiveness of delivery of prescribed psychotherapy would permit more accurate appraisal of its effects.

The literature on psychotherapy with schizophrenics includes few studies of acute schizophrenics in outpatient treatment. Studies by Hogarty, Goldberg, and Schooler (1975) and Hogarty et al. (1978) of sociotherapy in the aftercare of schizophrenics examined primarily chronic patients. Claghorn et al. (1974) investigated group therapy in the outpatient treatment of schizophrenia. This study, however, is marred by methodological flaws, as discussed by Schooler (1978). Brief hospitalization followed by community-based aftercare has become a popular mode of treatment for first admission schizophrenics. Outpatient psychotherapy or sociotherapy oriented toward helping the discharged schizophrenic to readjust and cope with the stresses of life in the community is an integral part of this mode of treatment. Consequently, the effectiveness of psychotherapy with acute schizophrenics in outpatient treatment has become an important topic for investigation.

The present report is part of a larger project conducted at the Ventura Mental Health Center, Ventura, Calif. The project was designed to investigate the effectiveness of long-acting phenothiazines and crisis-oriented family therapy in the community treatment of first admission schizophrenics (Goldstein et al. 1975). It employed a 2 X 2 factorial design, including a psychotherapy factor with two levels, therapy and no therapy, and a drug factor with two levels. For the drug factor, comparison of an active phenothiazine and placebo would have been most useful for evaluating drug effects. The use of placebo was not considered feasible, however, because of ethical concerns. Thus, a compromise was made. Two levels of the drug were compared, a therapeutic dose of a phenothiazine and a lower, therapeutically mar-
ginal dose of the same drug. The present study is concerned with only a portion of this design, those patients who were seen in psychotherapy at either level of drug.

The primary aim of the present report is to determine whether a measure of the effectiveness of implementation of the family crisis therapy model is useful in predicting differential outcomes among psychotherapy patients. Six weekly sessions of family crisis therapy were provided for acute schizophrenic outpatients. The crisis orientation was reflected in the overall goals of therapy, which were to help the patient to reintegrate the psychotic experience and to reduce the stresses on significant others and on the patient during the period immediately after his release to the community following brief hospitalization.

Four specific sequential objectives were designated:

- Acceptance by patient and family that he has had a psychotic episode and achievement of consensus concerning the important precipitating stresses at the time the psychosis occurred.
- Development of strategies to prevent the occurrence of identified stresses and for coping when stress occurs.
- Evaluation of progress in implementation of prevention and coping strategies.
- Anticipatory planning to prevent future stresses and to cope with those that arise.

Therapists rated the extent to which the patient and participating family members achieved each of the four objectives.

Our hypothesis was that patients who were rated as having achieved therapy objectives would show greater improvement on ratings of symptomatology at the end of the 6-week treatment period and at the 6-month followup than patients not achieving objectives.

The inclusion of two drug conditions in the design of the study enabled us to examine the effects of drug levels on psychotherapy. Two types of drug interactions with psychotherapy have been postulated (Klerman 1963). One view suggests that drugs reduce severe psychotic and disturbed behavior, making the patient more accessible to psychological and social therapies. Thus, drugs may facilitate psychotherapy. The opposing view argues that the decrease in the patient's anxiety and side effects of the drug such as drowsiness and fatigue lessen the patient's motivation for insight and interfere with his capacity for social involvement. Thus, drugs may inhibit psychotherapy. Studies of drug and psychotherapy interactions in the treatment of schizophrenia have examined psychotherapy outcomes under different drug conditions. The present report represents an alternative approach. A measure of achievement of objectives in therapy is used as a criterion to assess directly the effect of different levels of drugs on the process, as well as the outcome of psychotherapy.

Numerous studies have indicated that the effect of phenothiazines may be mediated by several patient variables, including premorbid social adjustment (Evans, Goldstein, and Rodnick 1973; Goldstein 1970; Goldstein et al. 1969), paranoid status (Evans, Goldstein, and Rodnick 1973; Goldstein 1970), and sex (Hogarty, Goldberg, and Schooler 1975). Thus, in assessing the effect of drug level on achievement of objectives in psychotherapy we are concerned with the interaction of these variables with drug level. These patient variables and patients' symptomatology at admission are also of interest in themselves as potential predictors of achievement of objectives in therapy. We have examined the relationship of these variables to ratings of achievement of objectives with the aim of identifying those patient attributes that are the best predictors of the achievement of objectives in therapy.

Method

Subjects

Subjects in the larger project of which this is a part were selected from inpatient admissions to the Ventura Mental Health Center. Each patient was interviewed independently by the project psychiatrist and psychologist and rated on a 5-point scale on the probability that he was schizophrenic (Mosher, Pollin, and Stabenau 1971). Only patients who were rated as probably or definitely schizophrenic were selected for further evaluation. After several days of inpatient observation, each patient was rated independently by both clinicians on the New Haven Schizophrenia Index (Astrachan et al. 1972). Patients who received a score of 4 or higher from both independent raters were selected for participation in the study. Patients were stratified by sex and premorbid status and then randomly assigned to each of the four treatment conditions. The present report is concerned with the 51 patients assigned to the two groups that received family therapy in conjunction with either a high or low dose of a phenothiazine. The sample includes 27...
males and 24 females. Patients were young, ranging from 15 to 37 years of age (mean = 23.5, SD = 4.6). The proportion of patients who had some college education was 24 percent, another 41 percent completed high school, and 35 percent had less than a high school education. Patients were predominantly white (78 percent), with 14 percent Mexican-American, and 8 percent black. Sixty-three percent of the patients were single, 22 percent were married, and 16 percent were separated or divorced. The mean length of hospitalization before discharge to the aftercare program was 13.3 days (SD = 4.9).

The consent of patients and relatives was required for participation in the study. All patients were informed that they could withdraw from the study at any time. Five patients refused either medication or psychotherapy and were thus eliminated from the study. In addition, two male patients in the low-dose condition were rehospitalized during the 6-week aftercare period. Thus, the final sample size was 44. The distributions of patients excluded from the study and the remaining sample are presented in table 1.

### Drug Conditions

All patients were administered a long-acting depot phenothiazine (fluphenazine enanthate) within a day after admission. If the patient showed no sensitivity to a test dose of .25 ml, he was assigned to one of two drug conditions. The high-dose condition was 1 ml and the low-dose condition was .25 ml. The higher dosage represents a moderate dose compared with other studies using this drug with acute schizophrenics (Chien and Cole 1973). The lower dose is considered therapeutically marginal. During the inpatient period, the treating psychiatrist was permitted to give supplementary oral phenothiazines if he felt additional medication was needed. During the aftercare period, the depot phenothiazine was administered in three injections at 14-day intervals, with the first administered on the day of discharge. Prophylactic antiparkinsonian medication was provided routinely during both the inpatient and aftercare periods.

### Crisis-Oriented Family Therapy

Crisis-oriented family therapy was conducted in six weekly sessions with each patient and any members of his immediate family who were willing and available to participate. Eleven patients had at least two family members participate in some of the therapy sessions, 26 patients had one other participant, and seven patients were seen alone. In these last cases, where no family members attended, therapy was still conducted according to the guidelines of the crisis model.

### Measures

Achievement of objectives in therapy: At the completion of therapy, therapists rated each patient on a 5-point scale of the extent to which each of the four therapy objectives had been achieved. The scale included descriptions of typical patient achievements for each point on the scale for each objective. For the purposes of analysis, the four objectives were treated as a Guttman scale, with the assumption that achievement of a given objective implied achievement of all of the lower objectives. A patient was considered to have achieved an objective if he was rated 3 (moderately successful) or above. The highest objective achieved by each patient became his single score for the achievement of objectives in therapy. These scores range from 0 to 4, distributed as follows: 0 = 20.5 percent; 1 = 20.5 percent; 2 = 9 percent; 3 = 9 percent; 4 = 41 percent. For some analyses subjects were categorized as achievers or

### Table 1. Number of dropouts and patients completing therapy by drug level, sex, and premorbid status

<table>
<thead>
<tr>
<th>Sex</th>
<th>Premorbid status</th>
<th>Drug level</th>
<th>Dropouts¹</th>
<th>Completers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Good</td>
<td>High</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Male</td>
<td>Poor</td>
<td>High</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Female</td>
<td>Good</td>
<td>High</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Female</td>
<td>Poor</td>
<td>High</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

¹ Dropouts refused medication or family therapy, except two male patients (one good premorbid, the other poor premorbid; both on low dose) who relapsed and were rehospitalized during the 6-week treatment period.
nonachievers of therapy objectives, employing a median split on highest objective achieved. Thus, subjects who achieved objectives 3 or 4 were classified as achievers; those who achieved no higher than objective 2 are referred to as nonachievers.

Achievers and nonachievers did not differ significantly on the demographic variables of age, marital status, race, education, or father's education. In addition, there was no significant difference between achiever groups in the number of family members participating in therapy sessions.

Premorbid status: The UCLA Social Attainment Scale (Goldstein 1978) was used by the project research psychologist to rate data from interviews with each patient and a respondent during the first week of hospitalization. In the Goldstein (1978) study, males were rated significantly lower than females on this scale; therefore, different cutoffs were established for each sex. Males scoring 19 or above were classified as good premorbid, 18 or below as poor premorbid. For females, the criterion for good premorbid was 23 or above, with 22 or below for poor premorbid.

Paranoid symptomatology: The project psychologist also rated all patients during the first 3 days of hospitalization on the Venables and O'Connor Scale (Venables and O'Connor 1959). This scale includes four items representing paranoid symptoms and one rating of manifest hostility. Patients in the study were divided into paranoid and nonparanoid groups based on a median split, with a cutoff of 13 and below for nonparanoid and 14 and above for paranoid.

Ratings of symptomatology: All patients were interviewed and rated on the Global Assessment Scale (GAS) (Endicott et al. 1976) and the Brief Psychiatric Rating Scale (BPRS) (Overall and Gorham 1962) at admission, at the end of the 6-week aftercare program, and at the 6-month followup by the research psychologist who was blind to drug conditions. Patients were assigned to therapists on an alternating schedule from patients 1–65. After patient 65, one therapist took over as project director and ceased his therapist role. This resulted in one therapist treating more patients than the other (28 vs. 16). A comparison was made of the ratings of achievement of objectives by each therapist. Table 3 shows the distribution of patients classified as

| Table 2. Brief Psychiatric Rating Scale factor structure |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| **Hostility (23.5%)** | **Anxious-Depression (17.2%)** | **Withdrawal (10.9%)** | **Thought Disorder (9.6%)** |
| Scale | Loading | Scale | Loading | Scale | Loading | Scale | Loading |
| 2. Hostility | .83 | 2. Depression | .69 | 2. Blunted affect | .74 | 2. Unusual thought content | .51 |
| 4. Tension | .53 | 4. Grandiosity | — .43 | | | | |
in order to predict the attain-
ment of objectives as rated by the
family therapists? In these analyses,
the ratings of objectives were used as
a dependent variable. Second, does
the variance in ratings of objec-
tives predict differential patient
course over the 6-week controlled
trial or the 6-month followup
period? Here, the rating of objectives
was treated as an independent or
predictor variable. After considering
these findings, we examined alterna-
tive hypotheses with regard to possi-
ble confounding of the effects found
in these analyses. The data are ex-
amined separately for each issue.

Ratings of Achievement of
 Objectives as a Dependent
 Variable
First, we examined whether factors
observed before the initiation of
aftercare family therapy could pre-
dict therapists' perceptions of the
level of objectives achieved. The
variables used were the individual
difference measures of sex, premor-
bid status, paranoid status, GAS
level ratings at admission, and BPRS
factor scores at admission and dis-
charge. For the quantitative vari-
ables, a median split was used to
subdivide groups. In addition, we
examined whether assigned drug
evel (high vs. low) was associated
with greater success in delivering
the therapy model.

Main effects: Neither the individual
difference variables nor drug levels
were found related to therapist rat-
ings of patients' achievement of
objectives in therapy.

Interaction: Next, interactions be-
tween individual difference variables
and drug level were examined to
determine whether the combination
of certain patient attributes and as-
signed drug level could predict the
therapists' perceived success in at-
taining the four levels of therapy
objectives.

Previous studies by Goldstein
(1970) and Goldstein et al. (1969)
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patients on several outcome mea-
ures. These findings suggested ex-
amining the interaction among these
three variables in relation to the
achievement of objectives in therapy.

Table 3. Number of patients
rated as achieving higher
objectives by therapist

<table>
<thead>
<tr>
<th>Therapist</th>
<th>Non-achievers</th>
<th>Achievers</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Y</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

\( \chi^2(1) = 9.82, p < .005. \)

achieves or nonachievers for each
therapist. The association between
therapist and ratings of patient's
achievement of objectives is signifi-
cant \( \chi^2(1) = 9.82, p < .005 \). Ther-
pist Y rated a significantly greater
proportion of his patients as having
achieved higher therapy objectives.

Results

Two general issues were examined:
First, what factors, observed before
treatment, could predict the attain-
ment of objectives as rated by the
family therapists? In these analyses,
the ratings of objectives were used as
a dependent variable. Second, does
the variance in ratings of objec-
tives predict differential patient
course over the 6-week controlled
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An analysis of variance revealed
near significance for the three-way
interaction (drug X premorbid X
paranoid status, \( F(1,36) = 3.62, p < .07 \))
and the two-way interaction
between drug and paranoid status
\( (F(1,36) = 3.87, p < .06) \).

Goldstein (1970) also reported
previously that the sharpest differ-
ences in drug response were found
within the good premorbid sample
when divided by paranoid status.
This was also found in the present
study when the rating of therapy
objective was used as the dependent
variable. Within the good premor-
bid sample, a highly significant inter-
action between drug level and para-
noid status was found \( (F(1,21) = 10.60, p < .005) \).

Table 4 depicts this interaction and indicates that
good premorbid/paranoid patients
were rated as achieving more of the
therapy objectives when on high
dose than low. The opposite was
true for good premorbid/nonpara-
noid patients who were rated as
achieving more objectives when on
the low dose. A similar analysis
within the poor premorbid patients
revealed no significant effects.

Hostility and Suspiciousness are
important components of the con-
figuration of symptoms represented
by ratings of paranoid status. There-
Table 4. Mean achievement of objectives by paranoid status, premorbid status, and drug level

<table>
<thead>
<tr>
<th>Premorbid status</th>
<th>Drug level</th>
<th>Paranoid</th>
<th>Nonparanoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>High</td>
<td>2.78 (9)</td>
<td>1.33 (6)</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>1.50 (6)</td>
<td>4.00 (4)</td>
</tr>
<tr>
<td>Poor</td>
<td>High</td>
<td>2.20 (5)</td>
<td>1.67 (3)</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>2.75 (4)</td>
<td>2.29 (7)</td>
</tr>
</tbody>
</table>

Notes.—Numbers in parentheses indicate the number of patients in each group. F(1,36) for drug × paranoid × premorbid = 3.62, p < .07; F(1,36) for drug × paranoid = 3.89, p < .06; F(1,21) for drug × paranoid among good premorbid = 10.60, p < .005.

Therefore, we examined the relationships among ratings on the BPRS factor Hostility, rated at discharge (the period immediately before the initiation of family therapy), drug level, and the level of therapy objectives attained. For this analysis patients were classified as high or low on Hostility, based on a median split. The interaction between drug level and Hostility at discharge, depicted in figure 1 was highly significant Figure 1. Mean ratings of highest objective achieved in therapy

![Graph](graph.png)

(R1,36) = 9.25, p < .005). This figure indicates that when a patient showed considerable hostility, suspiciousness, and uncooperativeness at discharge, therapists felt that they could achieve the majority of their therapy objectives only when the patient was on the high dose. However, the inverse effect was noted for patients below the median on BPRS Hostility at discharge. Attainment of therapy objectives was more likely for patients assigned to the low-dose condition. This interaction is indeed similar to that found for paranoid status; however, unlike the previous finding, it holds for both good and poor premorbid patients. No other BPRS factor score interacted with drug level in predicting level of therapy objective attained.

Ratings of Achievement of Objectives as a Predictor Variable

After examining some of the variables that affect ratings of patients’ achievement of objectives in therapy, we next determined whether the variance in these ratings related to clinical status at 6 weeks and at the 6-month followup period. For these analyses, patients were divided on the basis of a median split on the Guttman scaling of the ratings of achievement of objectives. Patients below the median achieved no higher than objective 2 and are referred to as nonachievers. Patients above the median achieved objective 3 or 4 and are referred to as achievers.

GAS: First, we examined the patient’s total level of social functioning as reflected in the ratings on the GAS scale. This measure weights both symptomatology and social adaptation on a scale ranging from 0 to 100.

A repeated measure analysis of variance using GAS ratings at admission, 6 weeks, and 6 months indicates a large improvement for both groups (F(1,36) for linear trend = 201.5, p < .005). However, a significant difference in the slope of the GAS scores was found for achievers and nonachievers of therapy objectives (F(2,42) = 5.10, p < .01). As figure 2 indicates, patients who were rated as achieving therapy objectives showed greater improvement than patients who did not achieve objectives. GAS scores were also analyzed separately for each period. There were no significant differences between these groups at admission or at the end of the 6 weeks, but patients who achieved therapy objectives were rated significantly higher at 6-month followup (F(1,36) = 4.65, p < .04). It appears that the two groups were similar at admission and at the end of treatment. Between the end of the controlled treatment period and the 6-month followup, patients who were rated as having achieved therapy objectives continued to improve markedly on independent ratings of functioning, while patients who did not achieve higher therapy...
Figure 2. Mean Global Assessment Scale (GAS) ratings

![Figure 2. Mean Global Assessment Scale (GAS) ratings](image)

1 Ratings were made at admission, 6 weeks, and 6 months for achievers and nonachievers of therapy objectives.

Objectives improved little during this period.

BPRS: Analyses of the BPRS factor ratings at 6 weeks and 6 months were carried out to identify the specific symptom clusters that contributed to the greater improvement of patients rated as having achieved therapy objectives. Of the four factors, only Thought Disorder revealed clear differences between achievers and non-achievers. There was no difference between these groups at 6 weeks, but achievers displayed significantly less Thought Disorder at 6 months ($F(1,36) = 8.13, p < .01$). Figure 3 indicates that patients who were rated as achieving therapy objectives continued to show decreases in Thought Disorder, while patients who did not achieve therapy objectives displayed a tendency for Thought Disorder to return to past levels.

Potential Confounding Variables

These findings support the hypothesis that patients who were perceived by their therapists as achieving therapy objectives show greater improvement on independent and blindly rated outcome measures. Before we accept this as evidence for the predictive validity of these ratings, we must consider alternative hypotheses that might account for these findings. It is possible that some bias, entirely independent of the therapy process, entered into therapist ratings, confounding the relationship between the independent variable, therapist ratings of the patient's achievement of therapy objectives, and the various outcome measures. Were therapists biased by characteristics of the patient that are in themselves related to outcome, instead of rating solely on the basis of their perception of the therapy process? The patient's level of disturbance is the most likely confounding variable in this regard. If this were the case, we would expect to find a relationship between patient symptomatology before or concurrent with therapist ratings of achievement of objectives.

Analyses indicate that independent ratings on the BPRS and GAS at admission and at 6 weeks (when therapists made their ratings of the achievement of objectives) were not related to therapist ratings either as main effects or in interactions with sex or premorbid status. The only individual difference variables related to ratings of achievement of objectives, paranoid status at admission and Hostility at discharge, interacted with drug level. Therapists were blind with respect to drug level, and thus could not have been influenced by these effects when rating therapy outcome. Thus, there is no evidence to suggest that therapists' ratings represent an artifact of their perception of the severity or form of patient symptomatology at any point from admission to the 6-week rating point.

Therapist ability: Were differences in outcome at 6 months primarily a
The Brief Psychiatric Rating Scale was administered at discharge, 6 weeks, and 6 months for achievers and nonachievers of therapy objectives. The results of the present study provide evidence for the predictive validity of therapist ratings of their patients' achievement of objectives in crisis-oriented family therapy. Patients who were rated higher on the achievement of objectives showed less disturbance on GAS and Thought Disorder ratings at 6-month followup. This finding suggests that treatment outcome, as indicated by ratings of adjustment at 6 months, is in part determined by the effectiveness with which the crisis-oriented therapy was implemented. Particularly encouraging support for the crisis-oriented model of family therapy is found in the observation that the achievement of therapy objectives is related to improvement in overall functioning, indicated by GAS ratings, 4½ months after the end of treatment. A primary goal of this model of therapy is to improve the patient's ability to cope with stresses that might arise as he readapts to life in the community.

The major differences in outcome were found when the sample was divided into two groups, those who achieved objective 3 or 4 of the crisis-oriented therapy model and those who were unable to go beyond objective 2. Steps 3 and 4 in the model represent the objectives that are most oriented to the future, involving implementation of coping strategies and anticipatory planning.
Thus, these findings indicate that patients who were able to achieve these future-oriented objectives in therapy exhibited greater improvement in symptomatology and social adaptation over a longer time period, as indicated by the 6-month followup data.

If the major ratings on the GAS can be taken as an indication of achievement of this goal, then the goal appears to be achieved more frequently when the model of therapy is perceived as being implemented effectively. The additional finding of lower Thought Disorder is also encouraging. It suggests that not only can the overall level of functioning be affected by the achievement of therapy objectives, but the cluster of symptoms believed to reflect the core schizophrenic disturbance can be affected as well.

Clearly, there is a need for more specific information about what therapist and patient behaviors contribute to the achievement of these critical objectives. Further investigations are now in process using audiotaped recordings of the therapy sessions. Therapy interactions are being analyzed to isolate the critical variables in the implementation of crisis-oriented therapy with acute schizophrenic patients in aftercare treatment.

In a comparison of the outcomes for the therapy and no therapy groups in the larger study (Goldstein et al. 1978), the greatest therapy effects were found for the BPRS factors Withdrawal and, to a lesser degree, Anxious-Depression. These effects were more evident at 6 weeks than at 6 months. In comparing patients who achieved or did not achieve therapy objectives, the present study found no differences for Withdrawal or Anxious-Depression.

Differences in Thought Disorder and GAS appeared only at 6 months. These data suggest that there may be two levels of therapy effects. Nonspecific therapy effects are the consequence of maintaining a relationship with the patient, but do not require achievement of specific therapy objectives. These effects may be reflected in decreases in Withdrawal and Anxious-Depression. Specific therapy effects require achievement of specific therapeutic objectives, such as the objectives of the crisis-oriented model used in the present study. The data suggest that achievement of these specific objectives is not necessary for improvement in Withdrawal and Anxious-Depression, although it is necessary for improvement in Thought Disorder and general functioning as indicated by GAS ratings. These specific effects also appear later, at 6-month followup, than the nonspecific effects, which were strongest at the termination of therapy.

It is clear that the therapy model was not implemented uniformly for all of the patients in this sample. The ratings of achievement of objectives at the end of treatment predict subsequent outcomes. In clinical use, however, it is more important to identify characteristics of patients that can be observed at admission and that predict differential responses to treatment. In examining the results of the present study, it is striking that so many variables found to be related to treatment outcomes in other studies with schizophrenic populations, including sex, premorbid status, and severity of disturbance, are not related to the achievement of therapy objectives. The drug factor did prove to be a critical one, but only in interaction with certain dimensions of symptomatology. The drug × paranoid interaction suggests that good premorbid/paranoid patients are unlikely to achieve therapy objectives unless they receive higher dosages of phenothiazines. On the other hand, good premorbid/nonparanoid patients are actually less likely to achieve therapy objectives on the higher dose.

Studies by Goldstein (1970) and Goldstein et al. (1969) found greater vigilance for threat and decreased cognitive adequacy among good premorbid/paranoid patients on placebo. Good premorbid/nonparanoid patients on placebo displayed greater comprehension and less perceptual defense than nonparanoids receiving phenothiazines. These findings suggest one possible explanation for the drug × paranoid interaction found in the present study for good premorbid schizophrenics. It appears that drugs improve cognitive functioning and reduce paranoid vigilance among good premorbid/paranoid patients, which may enable them to participate more effectively in psychotherapy. For good premorbid/nonparanoid patients, higher dosages of phenothiazines either have no effect or a slight detrimental effect on cognitive processes. Thus, nonparanoids are more likely to achieve therapy objectives on the low dose.

Hostility and paranoid symptomatology ratings reflect overlapping symptom clusters. Thus, the drug × Hostility interaction may in part represent the same phenomenon as the drug × paranoid interaction. The finding for Hostility suggests that the symptoms which load on this factor, uncooperativeness, manifest hostility, and suspiciousness, may be the critical symptoms involved in the paranoid effect. Other
aspects of the paranoid syndrome that are included in the Venables and O'Connor Scale, such as grandiosity or delusions that others control one's thoughts or behavior, may be of less importance in determining the drug × paranoid interaction. The lower probability of extreme paranoid scale scores within the poor premorbid sample (see Goldstein 1978) may account for the failure to replicate the paranoid × drug interaction within that group.

The paranoid × drug and Hostility × drug interactions have important implications for the use of drugs in combination with psychotherapy with acute schizophrenics in an aftercare treatment. These findings indicate that higher dosages of phenothiazines may inhibit the achievement of therapy objectives with schizophrenics who manifest no paranoid or hostile symptoms. With hostile or paranoid patients higher dosages appear necessary to facilitate crisis-oriented family therapy. Replication of this study and tests of these relationships for other models of therapy are essential before these findings may be used as guidelines for the selection of dosage levels for acute schizophrenics in psychological therapies.

The present study demonstrates the utility of assessing the effectiveness of implementation of a crisis-oriented model of family therapy with acute schizophrenic outpatients. Assessment of the achievement of specific therapy objectives as well as outcomes of therapy provides a tool for evaluating the specific components of the therapy model and for identifying which patients under what drug conditions are most likely to benefit from psychotherapy.

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