Therapeutic Modality Comparisons in Day Treatment

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The deinstitutionalization of patients with chronic mental illness and shorter hospitalizations of individuals recently diagnosed as mentally ill has resulted in the establishment of an enlarged network of community mental health services. Diminished federal financial support calls for greater efficiency and accountability in the delivery of community-based mental health services. The purpose of this study was to determine whether differences in treatment approach relate to differences in outcome measures of symptom reduction, community tenure, and relapse. In a study of two day treatment centers, one offering twice as much activity therapy as verbal therapy, and the other offering twice as much verbal therapy as activity therapy, it was found that clients receiving primarily activity therapy achieved four times more symptom reduction, equivalent community tenure, and a three and a half times greater relapse rate than clients receiving primarily verbal therapy.

Psychiatric day treatment is a community mental health service that provides patients with intensive treatment as frequently as 5 days per week and up to 6 hours per day, depending on the individual patient's needs. Several different approaches to treatment can be found among day treatment programs. Some programs employ concepts from occupational therapy, with patients working directly on skill development through a task or activity approach (Angel, 1981; Howe, Weaver & Dulay, 1981; Lilly & Armstrong, 1982; Mauras-Corsino, Daniewicz & Swan, 1985). Other centers rely more on a verbal approach, with individual and group psychotherapy and an emphasis on the development of insight into the basis of the psychiatric problems (Sappington & Michaux, 1975). The relative effectiveness of the various approaches remains largely untested.

The purpose of this study was to compare the effectiveness of two different approaches to day treatment programs using a verbally oriented approach versus a program using an activity-oriented approach. Two day treatment programs were compared, one offering twice as much verbal therapy as activity therapy, the other offering twice as much activity therapy as verbal therapy.

The authors viewed day treatment effectiveness within the framework of the occupational behavior paradigm which posits that people have a vital need to master their environment in the areas of self-care, work, and play/leisure (Reilly, 1966). This drive for mastery is thought to be innate, and the resulting feeling of efficacy is intrinsically motivating (Fidler, 1981; White, 1971). Day treatment is perceived as an intervention designed to increase the patient's level of functioning in these areas through a variety of therapeutic modalities. Therefore this study looked at concrete indicators of functioning such as the reduction of symptomatology in the areas of vocational adjustment, decision-making skills, and the use of leisure time, in addition to the less tangible measure of self-esteem, the patient's community tenure or ability to remain in the community for extended periods of time, and the recidivism or readmission rate. This study did not attempt to measure change in insight development. While the occupational behavior paradigm as a framework focuses effectiveness on changes in environmental mastery, it is believed that approaches such as verbal therapy which focus on less tangible change such as insight, also assume that patients increase their ability to function in areas of self-care, work, and play/leisure.

Review of the Literature

A number of studies support the effectiveness of day treatment in symptom reduction (Fink, Longabough & Stout, 1978; Guy, Gross, Hogarty & Dennis, 1969;
One study compared different approaches within day treatment. When other methods of treatment were similar, Linn et al. (1979) found that day treatment reduces rehospitalizations or relapse rates (Edwards, Varvis & Mueller, 1979; Ettlinger, Beigi & Feder, 1972; Guy et al., 1969; Herz et al., 1971; Linn et al., 1979; Meltzoff & Blumenthal, 1966; Michaux, Chelst, Foster & Pruim, 1973; Sappington & Michaux, 1975; Wilder, Levin & Zwerling, 1966). A number of studies found that day treatment increases community tenure (Ettlinger et al., 1972; Guy et al., 1969; Herz et al., 1971; Kris, 1965; Linn et al., 1979; Meltzoff & Blumenthal, 1966; Michaux et al., 1973; Washburn et al., 1976; Wilder et al., 1966). Most of these studies compare day treatment with other forms of aftercare, whereas other studies compare day treatment with hospitalization. There is evidence suggesting that day treatment is more effective with symptom reduction than other modes of treatment. However, until now most studies have examined only single centers, and it is questionable whether these data can be generalized to larger populations.

One study compared different approaches within day treatment. When other methods of treatment were similar, Linn et al. (1979) found the following:

- Poor result centers more often used group psychotherapy and more family counseling at a highly significant level statistically. Good result centers used more occupational therapy (p < .05). (p. 1064)

Since studies evaluating the effectiveness of treatment approaches in day treatment settings do not exist, we studied the literature on treatment approaches in general, including approaches used in institutional and other community-based settings.

Symptom Reduction

Five studies found day treatment to be more effective in symptom reduction than the mode of treatment being contrasted (Guy et al., 1969; Herz et al., 1971; Kris, 1965; Linn et al., 1979; Washburn et al., 1976). Michaux et al. (1972), however, found full time hospitalization to be more effective than day treatment in symptom reduction on severe cognitive and affective scales. Yet at a 1-year follow-up the groups were essentially the same. One study (Fink et al., 1978) found little difference in symptom reduction comparisons, another (Michaux et al., 1973) found that day treatment patients were more intrapunitive and that hospitalization seemed to provide symptomatic relief more quickly than day treatment.

Relapse

Of nine studies examining relapse data, only one (Sappington & Michaux, 1975) provided significant evidence that day treatment patients relapse less often. This study compared one group of patients receiving day treatment as an aftercare treatment with a group of patients receiving conventional aftercare treatment, including individual counseling, medication, and psychotherapy, but not day treatment. The study findings showed that the day treatment group relapsed half as often as the groups receiving conventional aftercare. Two studies (Herz et al., 1971; Edwards et al., 1979) provide evidence that relapse rates were lower for day treatment clients, but these studies did not treat the data statistically. Five studies found no statistically significant difference in relapse between day treatment patients and patients receiving other forms of treatment (Guy et al., 1969; Linn et al., 1979; Michaux et al., 1972; Sappington & Michaux, 1975; Wilder et al., 1966). Ettlinger et al. (1972) found no significant differences in the number of rehospitalizations but did find evidence that the greatest effect of partial hospitalization may be in preventing rehospitalization during the 2-month period immediately following discharge from the hospital.

Community Tenure

In contrast to relapse data, which are simply a measure of the number of rehospitalizations, the community tenure measure relates to the number of days during a specified period of time that the patient was not an inpatient in a psychiatric hospital. Relapse data are less indicative of success since lower rates of relapse may in fact reflect lengthy hospitalizations and fewer days in the community. A treatment that increases a patient's community tenure, however, would suggest a more successful treatment. It can be argued that day treatment reduces the likelihood of chronic social breakdown and subsequent institutionalization and should therefore result in lower rates of relapse. However, this argument has been contradicted by two studies, which found no significant difference in relapse data, but did find increased community tenure for day treatment patients (Guy et al., 1979; Wilder et al., 1966).

Several studies examined community tenure. One found that remission in day treatment lasted as long as remission achieved with hospitalized patients but did not take as long to achieve (Kris, 1965). Another found that day treatment patients spent only half as many days in the hospital as those patients receiving conventional aftercare (Sappington & Michaux, 1975). Several studies reported day treatment patients to have spent more days in the community than patients receiving other forms of aftercare treatment (Guy et al., 1969; Herz et al., 1971; Michaux et al., 1973; Washburn et al., 1976; Wilder et al., 1966). One study with Veterans Administration (VA) patients found no statistically significant difference between groups (Linn et al., 1979).
Methods

The purpose of this study was to test the hypothesis that there are differences in patient outcome measures between a day treatment center using primarily an activity-oriented approach and a day treatment center using primarily a verbally oriented treatment approach.

Subjects

Data were gathered on patients in two adult psychiatric day treatment programs in western New York. Both centers were administered by the same not-for-profit community mental health agency, although each center was under the direction of its own program director. Both centers received county, state, federal, and private funds. Both centers were functioning under approved operating certificates granted by the New York State Office of Mental Health.

Subjects included 122 patients who were admitted to either of the two day treatment centers during the 29-month study period, or who were already on the rolls of one of the centers at the start of the study. This total did not include subjects who did not receive at least 10 full days of treatment or who were not on the rolls for at least 30 days. It was thought that patients unable to meet these criteria would not accurately represent the population being studied. Table 1 summarizes the demographic data collected.

The average age of patients in the activity center was 37.8 years; 44% of the patients were male, and 56% female (n = 89). Patients with chronic illness made up 51%, and patients with an acute illness made up 49% of the activity center sample. Only 26% of the patients in this group were married or living with an intimate other; 74% were single, widowed, or divorced. The primary diagnosis for individuals in both centers was chronic schizophrenia, and all patients were Caucasian.

The average age of patients in the verbal center was 40 years; 67% of the patients were male, and 33% female (n = 33). Patients with chronic illness made up 54% of the sample in this group, whereas patients with an acute illness made up 46%. Only 15% of the patients in this group were married or living with an intimate other, whereas 85% were single, widowed, or divorced. There were no statistically significant differences in the groups on any of the demographic variables.

Treatment Approach

The independent variable, the treatment approach, was determined by examining treatment schedules for each of the centers for a 29-month period. Treatment groups were categorized on the basis of the goals and objectives of the treatment group, and the format with which it was carried out. All treatment groups on the schedules were assigned to one of the following five categories: activities, verbal, social/

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Note. All subjects were Caucasian.

leisure, social skills/activities of daily living, and other. The intent and method of each of the categories are listed in Table 2.

Total average treatment time per week per category was calculated. The center using primarily activity-oriented therapy scheduled an average of 4.21 direct treatment hours per week in activity groups and 2.17 direct treatment hours per week in verbal groups. The center using primarily verbally oriented therapy scheduled only 1.75 direct treatment hours per week in activity groups and 3.16 direct treatment hours per week in verbal groups. Both centers provided virtually equal amounts of treatment in the other three treatment group categories. In summary, patients receiving treatment from the activity-oriented
day treatment center received twice as much activity therapy as verbal therapy, whereas the verbally oriented day treatment center provided patients with twice as much verbal therapy as activity therapy.

**Control Variables**

Two control variables were included in this study: attendance rate and length of stay in the treatment program. Attendance rate was included because it was thought that the patient's actual participation in the program, represented by the number of days he or she attended treatment, would influence the study outcome measures. The patient's length of stay in the treatment program was also included as a control variable because it was thought that patients treated for longer periods could be expected to demonstrate higher levels of functioning and have a longer community tenure than those treated for shorter periods.

**Outcome Measures**

The dependent variables in this study included symptom reduction, relapse, and community tenure. Symptom reduction was defined as the difference between the level of psychiatric symptomatology present at the end of treatment and the level present at the beginning of the study or the beginning of treatment as measured by the Comprehensive Mental Health Assessment (CMHA), a quarterly assessment used at both centers. The CMHA was administered by the patient's primary day treatment therapist rather than by an outside investigator. It was thought that the continuity and integrity of the total assessment process would be better maintained by not introducing a new variable, that is, an individual foreign to the patient. The assessment reports current functioning in 16 life areas and uses a 5-point rating scale to derive a score for each area evaluated. A score of 1 indicated the lowest level of symptomatology in that area, a score of 5 reflected the highest level of symptomatology. A narrative report summarized the patient's progress since the last assessment. Ratings from six life areas were used to derive symptom scores for this study. The areas included were vocational/occupational adjustment, decision making, leisure time use, lethality to the self, lethality to other, and self-esteem. The initial symptom scores were obtained from the CMHA completed nearest to the start of the study.

Relapse was the number of times an individual was hospitalized in a psychiatric facility during the course of the study. Community tenure was the number of days during the 29-month period that the patient remained in the community. It was calculated by subtracting the number of days the individual was an inpatient from the total number of calender days in the time period studied for each patient.

### Table 3

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<th>Treatment Approach</th>
<th>Symptom Reduction</th>
<th>Community Tenure (in days)</th>
<th>Relapse (%)</th>
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<td>Activity</td>
<td>1.81</td>
<td>383.21</td>
<td>.67</td>
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<tr>
<td>Verbal</td>
<td>-52</td>
<td>374.42</td>
<td>.18</td>
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<tr>
<td>Total Mean</td>
<td>1.18</td>
<td>380.83</td>
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Data were analyzed using descriptive statistics. Since this was a two-center study, generalizations cannot be made, and thus inferential statistics are not appropriate. This study was meant to be suggestive rather than definitive.

**Results**

The hypothesis of this study was that there would be meaningful differences in outcome measures between a day treatment center offering primarily an activity-oriented treatment approach and a center offering primarily a verbally oriented approach.

Table 3 presents the group means for the outcome measures of symptom reduction, community tenure, and relapse. Patients receiving activity therapy experienced greater gains in symptom reduction, which translates to one or more of the following: increased self-esteem, better decision-making skills, clearer cognitive processing, improved use of leisure time, greater awareness of feeling states and their impact on functioning, and decreased potential for self-injurious behaviors and/or harm to others. Patients receiving verbal therapy showed more symptomatology, indicating that during the treatment period studied, patients receiving this therapy showed lower functioning in the areas listed.

Community tenure means were essentially the same for both groups. Relapse rates were three and a half times greater for patients receiving activity therapy, although the mean length of stay per hospitalization was much shorter for this group. Patients in this group relapsed an average of .67 times during the study with a mean length of stay of 9.75 days per hospitalization. Patients in the verbal therapy group relapsed an average of .18 times with a mean length of stay per hospitalization of 26.15 days. This difference in length of stay accounts for much of the similarity in community tenure rates between groups.

The control variables, attendance and length of stay in treatment, showed that patients receiving activity therapy had a 7.4% higher attendance rate for scheduled treatment days, but a 12% shorter length of stay in treatment.

**Discussion**

Comparison of group means for symptom reduction showed that the clients receiving activity therapy achieved a four times greater symptom reduction.
This translates to increased independent functioning in the areas of self-esteem, decision making, and others as discussed earlier. Therefore, clients receiving activity therapy may have improved four times as much in, for example, independent decision making. However, because of the inclusion of several categories of symptoms or symptom clusters, it is impossible to identify the specific categories of functioning in which the patients achieved greater independence; rather, we can only say that functioning in those areas has improved in a general sense. These data support the assumption that patients receiving activity therapy are more involved in their treatment program, attend treatment sessions more regularly, and therefore achieve treatment goals more quickly. The control variable of attendance, which was 7.4% greater for the patients in the activity group, and the variable of the length of stay in treatment, which was 12% shorter for that same group, support that notion. It is possible then, that activities and the process of "doing," as is inherent in occupational therapy treatment, do in fact facilitate the patient's faster return to higher or more adaptive levels of functioning than do verbal therapy techniques.

Community tenure means were essentially the same between groups. Relapse rates were three and a half times greater for patients receiving activity therapy, although the mean length of stay per hospitalization was only one third of that for patients receiving verbal therapy. These data may suggest that through the use of activities patients achieve treatment goals via their alterations of the environment. These experiences in therapy allow patients to demonstrate some level of competence and mastery of the environment that over time reduces the feelings of helplessness and hopelessness characteristic of patients with chronic mental illness. It is a fairly well accepted notion that patients approaching recovery and/or wellness experience fears related to the increased responsibility they need to assume to return to independent functioning in the community, and this may result in increased hospitalizations. However, through the use of activities, the patients' motivation to return to the community may be higher because of their previous successful interactions with the environment through therapy, and this may lead to shorter hospitalizations.

Summary and Conclusions

Since the results of the study may have been influenced by uncontrolled variables, the outcomes cannot be generalized to other populations. However, the following statements can be made about the relationship between therapeutic approach and the outcome measures of symptom reduction, community tenure, and relapse, found for the two centers in this study.

1. Overall, patients receiving activity therapy achieved a much greater reduction in symptomatology, and this symptomatology translates to increased levels of independent functioning in community living skills.
2. There was little overall difference in length of community tenure between patients receiving activity therapy and patients receiving verbal therapy.
3. Patients receiving activity therapy were hospitalized significantly more often than those receiving verbal therapy, but these hospitalizations were for shorter durations than for verbal therapy patients.

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References


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**AJOT Seeks Software Reviews**

Because more and more occupational therapy personnel are using microcomputers in their practice settings and because of the tremendous expense associated with software, AJOT has decided to institute a software review column. To make this column a success, we need your participation! If you regularly review software or are currently using a computer program you would like others to know about, that has been particularly beneficial, we would like you to review it for us. We are interested in both management and clinical software.

To assist you in doing the review, Software Review Guidelines have been drawn up. They are available from the Software Review Editor, *American Journal of Occupational Therapy, c/o AOTA, 1383 Piccard Drive, PO Box 1725, Rockville, MD 20850-4375*.

For questions regarding this new column, contact Carol Gwin in the Practice Division at AOTA.