implications of drug treatment for the social rehabilitation of schizophrenic patients*

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The psychopathology of schizophrenia, characterized by dramatic manifestations such as hallucinations, delusions, and bizarre posturing, has tended to blind us to the more prevalent and disabling psychosocial aspects of this chronic disorder. Traditional treatment, which has focused primarily on symptom modification and removal of the patient from the community, has failed to affect the patient's impaired social and vocational functioning. Schizophrenic patients released from hospitals have generally not been successful in maintaining themselves in the community.

Rehospitalization rates have indicated that between 40 and 60 percent of schizophrenic patients discharged from hospitals will be rehospitalized within 2 years (Mosher et al. 1971) and 65 to 75 percent by the end of 5 years (Anthony et al. 1972). The disruption caused by hospitalization (Fontana and Dowds 1975) may account for the fact that only between 15 and 40 percent of schizophrenic patients living in the community are able to support themselves (Anthony et al. 1972 and Mosher et al. 1971). The direct as well as indirect costs to our society for the care of the 2 to 3 million Americans carrying a diagnosis of schizophrenia have been estimated by Gunderson and Mosher (1975) "... at $11.6 to $19.5 billion annually. About two-thirds of this cost is due to lack of productivity by schizophrenic patients and about one-fifth to treatment costs" (p. 901).

Treatment emphasis on control of psychopathology cannot be considered sufficient if the goal is to make the schizophrenic patient a functioning member of society. Specific programs directed at correcting or ameliorating the patient's psychosocial handicaps must be introduced into the basic treatment of the schizophrenic. Above all, the community must "welcome" the patient and provide him with some suitable place to live and work.

While traditional treatment, with its primary emphasis on symptom modification, is not likely to affect the patient's social and vocational functioning, such treatment is a prerequisite for any program attempting to rehabilitate the schizophrenic patient. Before any rehabilitative efforts can be undertaken, elimination or reduction of psychotic disorganization must be effected in order to make the patient more suitable for, and acceptable to, the community.

The introduction of psychotropic medication in the early 1950's significantly advanced the treatment of schizophrenia. The use of medication enabled the efficient and effective treatment of large numbers of patients. Numerous studies have documented that drugs significantly reduced psychotic symptomatology within a short period of time (1 to 4 weeks). Patients so treated were able to maintain this improvement for extended periods, provided medication was taken regularly. It was now possible to treat the acute phase of the illness rapidly and avoid lengthy hospitalization. A number of well-controlled inpatient studies have shown that patients treated with active medication were released in significantly greater numbers and in shorter periods of time than comparable placebo-treated patients (see reviews by Cole and Davis 1969, Efron et al. 1968, Engelhardt 1974, Gittelman-Klein and Klein 1968, and Klein and Davis 1969).

Once the efficacy of pharmacotherapy had been demonstrated, the focus shifted to maintenance of the
schizophrenic patient in the community. Studies of the
effectiveness of antipsychotic medications in the treat-
ment of outpatient and aftercare populations have
consistently demonstrated that drugs not only reduce
the incidence of hospitalization but also increase the
length of time a patient is able to maintain himself in the
community. The hospitalization rate of drug-treated
schizophrenic outpatients is approximately one-half
that of comparable placebo-treated patients (Engelhardt
et al. 1967, Hogarty, Goldberg et al. 1973, Pasamanick,
Scarpitti, and Dinitz 1967, Rosen et al. 1968, and
Serban and Thomas 1974, among others). The overall
effect has been a radical decrease in the resident popu-
lation in public mental hospitals.

The availability of psychotropic medication has
produced far-reaching changes in our approach to the
treatment of the schizophrenic patient. The most
significant of these has been the shifting of the primary
treatment base from the mental hospital to the com-

munity. Psychiatric hospitalization, once seen as
essential for the treatment of schizophrenia, is now
generally reserved only for the treatment of the acute
phase of the illness. The community has become the
setting of choice for the long-term, maintenance phase
of treatment for the majority of schizophrenic patients.
The practice of short-term hospitalization has become
so widespread that one group of investigators compar-
ing the relative effectiveness of "long"- versus "short"-term
hospitalization defined short-term hospitalization as 1
month and long-term as 3 months of hospital treat-
ment (Glick, Hargreaves, and Goldfield 1974).

The acceptance of psychotropic medication in the
treatment of schizophrenia is evidenced by its widespread
use in the treatment of both inpatients and outpatients.
Laska et al. (1973) reported that 88 percent of the
schizophrenic patients in a New York State mental
hospital were treated with antipsychotic medication.
Balter and Levine (1969) present survey data indicating
that 3 million prescriptions for "major tranquilizers"
were filled in private drug stores in the United States
during 1967. (The above figures do not include patients
treated in aftercare or outpatient clinics that fill their
own prescriptions.) Further evidence of the use and
effectiveness of psychopharmacological treatment is
presented in a study by Goldberg et al. (1972). They
found that the level of psychotic symptomatology of
schizophrenic patients admitted to mental hospitals
between 1968 and 1970 was significantly lower than
that of patients admitted during 1960. The authors
attribute this difference to the increased general use of
these medications at the outpatient level.

Before discussing the implications of drug treatment
for the social rehabilitation of schizophrenic patients, it
might be useful to present some of the characteristics of
the schizophrenic patient residing in the community. The
data to be presented are derived from a long-term
study of 541 schizophrenic outpatients admitted to the
Psychopharmacology Research Clinic of the Kings County
Hospital Center, Brooklyn, N. Y., from 1958 to 1963
(Engelhardt and Freedman 1965). The patients were
between the ages of 18 and 45, with a mean age of 30
and modal age of 32. Slightly more than one-half of the
sample were males. The patients were representative of
the population of the Borough of Brooklyn at the time
this sample was drawn: 73 percent were white, with the
remainder primarily black; only a small percentage were
Hispanics. Twenty-six percent were Protestant, 37
percent Catholic, and 37 percent Jewish. Seventy-six
percent of the patients were in the lower two socio-

economic classes as measured by Hollingshead's two-

factor Index of Social Position. Less than half of the
patients had completed high school, and slightly more
than half had been married at some point in their lives.
Of those married, 79 percent were living in the same
household as their children and were fulfilling, to some
extent, their parental roles.

The sample was remarkably heterogeneous with
respect to previous psychiatric treatment history: 19
percent of the patients had no previous history of
psychiatric treatment or only outpatient treatment; 31
percent had a lifetime aggregate hospitalization of less
than 3 months; 25 percent had been hospitalized for 3
to 12 months during their lifetime; and 24 percent had
been previously hospitalized from 1 to 10 years.

With regard to sources of economic support and
employment history, the picture is most disturbing.
Only slightly better than one-third of the patients
could be considered to have been functioning in
"independent" roles, being either self-supporting or
supported by their spouse. Forty-five percent were
supported by relatives, usually parents, and 19 percent
were recipients of public welfare. For those patients for
whom employment was role-appropriate (students and
housewives were excluded), only 27 percent had a
"good-to-excellent" history of employment, implying
fairly regular employment; 21 percent had a "fair-to-
poor" work history with sporadic employment; while 52 percent had rarely or never been employed. The employment history of this sample is similar to that reported in the literature (Anthony et al. 1972 and Mosher et al. 1971).

The diversity in level of functioning of the outpatient sample just described supports the view of many experts that schizophrenia is not a unitary disorder, but comprises a number of subgroups, which differ significantly with respect to treatment potential and clinical course. Defining homogeneous subgroups of schizophrenic patients with divergent characteristics and patterns of clinical course is important for the development of effective rehabilitation programs. Numerous scales have attempted to define such subgroups, for example, the Elgin (Wittman 1941), the Kantor (Kantor, Wallner, and Winder 1953), and the Phillips (1953) Scales; the Premorbid Asocial Adjustment Scale (Gittelman-Klein and Klein 1969); and the Hospitalization Proneness Scale (Freedman et al. 1967 and Rosen et al. 1972). Studies using these scales have demonstrated that levels of competence have a significant relationship to long-term course and community adjustment of schizophrenic patients. Patients with a "higher" level of competence have a lower incidence of hospitalization, spend less time in the hospital, and have a higher level of functioning while in the community than do "low" competence patients (Garmezy 1968, Garmezy and Rodnick 1959, Gittelman-Klein and Klein 1969, Herron 1962, Higgins 1964 and 1969, Huston and Pepernik 1958, and Weiner 1958).

Recent studies have indicated that patient competence may also have an important function in mediating the effectiveness of psychiatric treatment. Saenger (1970) studied the outcome of a diagnostically mixed group of 882 treated and 305 untreated patients who had applied for treatment at mental health clinics in New York State. The study found that treated patients who were not considered well suited for psychotherapy—that is, patients with low levels of competence defined in terms of education, work history, and marital status—improved to a significantly greater extent in employment rate, social adjustment, marital adjustment, and symptomatology than did comparable patients who did not receive treatment. On the other hand, for high competence patients, treatment did not seem to make a difference. In this group the rate of improvement was essentially similar to that in those not receiving treat-

The effect of drug therapy on vocational rehabilitation remains unclear. The few controlled studies of the effect of psychotropic medication on the vocational performance of schizophrenics have tended to yield equivocal results. Esser et al. (1965) and Esser (1966) studied the productivity of 12 schizophrenic inpatients working in a sheltered workshop. The patients were assigned to three drugs and placebo in a double-blind crossover design. The results indicated that "although active medication did not bring about changes in production averages it did seem to diminish variation in industrial output. Shop attendance and time records show that, in general, patients receiving active medication are more regular in coming and more consistent in staying with the job" (Esser et al. 1965, p. 48).
Gardos, Finnerty, and Cole (1970) compared the effectiveness of thiothixene and trifluoperazine in a double-blind study of 40 chronic schizophrenic inpatients. In order to evaluate work performance, the patients were asked to participate in a step system in which different levels of rewards were given based on the type of work performed and the number of hours worked. Results indicated that patients receiving thiothixene maintained a consistently higher step level than patients receiving trifluoperazine.

DiMascio and Demirgian (1972) compared thiothixene with other major tranquilizers in a study of productivity in a group of 42 schizophrenic inpatients who participated in a sheltered workshop program. Before the study began, all the patients had been receiving a variety of major tranquilizers. For this study, the patients were randomly assigned to receive either thiothixene or to continue on their previous medication. While the study was not double blind, the assessment measure, work output, was objective in nature. Work output was recorded by the production supervisor, who was unaware of the patient's drug assignment and of the purpose of the study. The results of this study also indicated that the thiothixene-treated patients exhibited significantly higher productivity than did the other patients.

Pasamanick, Scarpitti, and Dinitz (1967) studied the community adjustment of two groups of schizophrenic patients. The first group of patients had applied and been accepted for admission to a mental hospital. Approximately two-thirds of the patients, however, were not admitted and were randomly assigned to outpatient treatment. A second group consisted of patients residing in the community who had applied or were referred to the outpatient program for treatment. Both outpatient groups were randomly assigned to either chlorpromazine or placebo and were treated under double-blind conditions for up to 30 months. Although the results indicated a significantly lower hospitalization rate for the chlorpromazine-treated groups, there was no evidence of any differential change with regard to employment or domestic performance between the drug and placebo groups. The case histories of these patients indicate that the best predictor of work performance during treatment was the patient's work performance before treatment, underscoring the relevance of patient competence. Pasamanick, Scarpitti, and Dinitz's results are not unexpected when one considers that they made no attempt to provide vocational training or job placement for their patients.

While drug treatment is important in controlling symptomatology and maintaining the patient in the community, thus making him more available and suitable for employment, pharmacotherapy, by definition, cannot provide the patient with the motivation, skills, and opportunities necessary to obtaining and maintaining employment. When the schizophrenic patient is supplied with an appropriate setting and support, his community functioning can be materially improved. This proved to be the case in an innovative experiment performed on the West Coast by Fairweather et al. (1969). The experiment involved the establishment of an autonomous residence or “lodge” for discharged mental patients. In addition to providing living arrangements, the lodge also established a business: a janitorial and gardening service. The lodge was designed so that no professional people were regularly present on the grounds. All professionals acted as consultants rather than as supervisors responsible for the behavior of the participants, and steps were taken so that all professional help was gradually withdrawn until a complete state of patient autonomy existed. While there were many initial mishaps, a social structure did develop, and the janitorial and gardening business was organized and flourished.

Drawing from a heterogeneous group of hospitalized patients, a sample of 334 subjects evolved in the Fairweather et al. study. Patients on an open ward were told of the residential program and asked if they wished to volunteer. Volunteers were matched on age, diagnosis, and length of hospitalization, and pairs were established. The patients in each pair were then randomly assigned to either traditional community care or to the lodge community program. In addition, in order to study the possible effects of volunteering, a matched group of nonvolunteers was also followed up. The lodge program, besides providing self-government and work opportunities, also emphasized medication usage. A system was set up to insure that all residents took their medication as prescribed. This was done by the use of peer supervision. When, after 30 months, the investigators closed the lodge, the remaining members found new quarters and continued on a completely independent basis.

The results of a 40-month continuing followup indicated that lodge members showed significantly more full-time employment, the median ranging from 40-70 percent, than did either the volunteer nonlodge members.
or the nonvolunteer controls, whose median incidence of full-time employment was approximately 2 percent at all time periods. The cost of maintaining the members in the lodge, even when professional consultation was used and the members’ earnings were not used to defray expenses, was still one-half of that of the State hospital. When the professionals were withdrawn and member income was used to defray expenses, the cost fell to only $3.35 per patient per day. In addition, the lodge members spent significantly more time in the community. The median, at various time periods, ranged from 80 to 100 percent for the lodge members, while it averaged about 20 percent for the nonlodge groups.

The study clearly indicates that given the proper structure and professional support, mental patients can function socially as well as vocationally in the community. The successful continuation of the program by the patients after the investigators withdrew, to the extent that the members found a new site and continued their business for a number of months with no increase in recidivism, is most impressive.

It is difficult to ascertain the contribution of pharmacotherapy to the success of this program. By insuring that all patients continued taking their drugs while they were in the lodge, the investigators inadvertently manipulated two variables at once—lodge membership and treatment. Thus, the failure of the nonlodge patients may have been due to lack of medication taking, rather than to the lack of participation in the program.

While the implications of this study with regard to the work and social adjustment of mental patients are clear, there is much left to be desired with regard to its implications for drug treatment. It is clear, however, that this type of program does provide a suitable setting for determining the impact of pharmacotherapy on the work adjustment of mental patients. It is only in a naturalistic setting, and one in which all patients can work, that it becomes possible to determine whether medication enhances work performance—and whether there is a differential effect between drugs.

While there have been many attempts in the United States to institute vocational rehabilitation programs for psychiatric patients, by and large these efforts have met with little success (Anthony et al. 1972 and Dincin 1973). On the whole, these vocational rehabilitation programs have been sequestered within their own program facilities and have had little relationship to the demands of the marketplace. Neff (1968) has pointed out that to successfully study and treat the problems of work adjustment of psychotic patients, the “clinic” must be located within the place of employment, so that inappropriate behavior can be assessed and treated while it is actually taking place. The integration of treatment programs with industry would require, however, a positive change in attitude toward the employability of the mentally ill on the part of management (Hartlage and Roland 1971).

Although the emphasis in the United States has shifted recently from hospital-based to community-based treatment, this shift has not been matched by a comparable shift toward social and vocational rehabilitation as a prime target area. In Europe, on the other hand, it has long been accepted that social and vocational rehabilitation are critical dimensions in the overall treatment of the chronic schizophrenic. This is especially characteristic of the Scandinavian and Soviet bloc nations, who successfully train and return to productive work a sizable percentage of their schizophrenic patients.

The contribution of modern pharmacotherapy to their success is hard to evaluate, since successful results in this area were evident in Europe before the introduction of the new neuroleptic agents. Astrup, Fossum, and Holmboe (1962) conducted a followup study of 1,102 functional psychotics treated in Gaustad Hospital in Norway between 1938 and 1950, before the advent of treatment with antipsychotic drugs. The results of this study indicated that 64 percent of their chronic schizophrenic group, the poorest functioning group living outside the hospital, were employed, compared to 91 percent of the improved, and 100 percent of the “recovered” schizophrenics. Of the entire group of schizophrenic patients who were living in the community at the time of the followup, 86 percent were employed. The 64-percent employment rate of the lowest functioning group living outside the hospital, were employed, compared to 91 percent of the improved, and 100 percent of the “recovered” schizophrenics. Of the entire group of schizophrenic patients who were living in the community at the time of the followup, 86 percent were employed. The 64-percent employment rate of the lowest functioning group living outside the hospital, were employed, compared to 91 percent of the improved, and 100 percent of the “recovered” schizophrenics. Of the entire group of schizophrenic patients who were living in the community at the time of the followup, 86 percent were employed. The 64-percent employment rate of the lowest functioning group living outside the hospital, were employed, compared to 91 percent of the improved, and 100 percent of the “recovered” schizophrenics. Of the entire group of schizophrenic patients who were living in the community at the time of the followup, 86 percent were employed.
effects of institutionalization, further handicaps the schizophrenic in job seeking as well as work performance. The effects of these developmental deficiencies have been fully recognized in Communist countries (Allen 1973 and Walls, Walls, and Langsley 1975) which, because of their ideological orientation, have long had a major commitment to the vocational rehabilitation of the schizophrenic patient.

Walls et al. (1975), discussing psychiatric practice in the People’s Republic of China, state:

The Chinese social structure appears to be very supportive of the mentally ill . . . The duties of the psychiatrist seem oriented toward enabling the patient to regain his position in his family and his job. [p. 126]

Allen (1973) cites the commitment of Soviet society to the principle of employment of the mentally ill patient:

. . . Recommendations (prescriptions) made for the patient, such as changing his job or place of residence, are binding on social institutions . . .

. . . If the nature of his illness permits outpatient therapy, the patient will not lose his job. If hospitalization is required, the patient is guaranteed a job upon discharge . . . [p. 1335]

Wortis (1950, pp. 183-185), in an earlier but more comprehensive survey of Soviet psychiatry, describes both the framework and structure of Soviet rehabilitation programs. Based on a “fundamental, theoretical conviction of Soviet psychology that activity really changes mental functions,” work therapy and vocational placement are considered essential elements in the psychiatric treatment of both inpatients and outpatients.

Soviet psychiatrists emphasize

. . . the distinction between work therapy and vocational placement. The former is a temporary therapeutic measure, carried out in the clinic, in which no special demands are placed upon the patient, and for which he receives no pay. The latter involves permanent arrangement for work . . . under conditions suitable to the special needs of the case, but with normal arrangements for regular pay. [Wortis 1950, p. 185]

Recognizing that no uniform or stereotyped approach could deal with the varied “needs, skills, and preferences of the patient,” a graded system of programs has been developed in the U.S.S.R. that might serve as a model for programs in this country. Sheltered workshops are set up for the “prepsychotic” under psychiatric supervision with emphasis on the “social life of the patient.” For the more severely handicapped, initial emphasis is on helping the patient regain old skills at a day center attached to a clinic. While the patient is expected to put in a normal workday, work therapy is essentially therapeutic, and the patient receives no pay. For the less handicapped patient capable of productive work, a full range of employment from paid piecework at home to work in clinic-supervised “industrial shops” to “actual placement in industry” is provided.

To summarize, the European experience has amply demonstrated that the majority of chronically ill mental patients are employable provided job opportunities exist and effective rehabilitation programs are instituted. The Fairweather study cited earlier, as well as the work of Howard (1975), demonstrates that comparable success can be achieved in the United States with ex-hospitalized mental patients. Such rehabilitative programs require a high degree of flexibility to insure that both work therapy and job placement are individually tailored to suit the motivation, skills, and handicaps of the patient. Above all, the development of such programs requires a cooperative effort between mental health professionals and the community, including management and labor, and a commitment to provide the technical, physical, and financial resources necessary.

The role of drug therapy in the social rehabilitation of schizophrenic patients needs further elucidation. Pharmacotherapy plays an important indirect role in furthering the vocational rehabilitation of the schizophrenic patient by modifying psychopathology, reducing the incidence of hospitalization, and extending the period the patient is able to remain in the community. The overall effect is to make the patient more available and accessible to the rehabilitative process permitting greater time and effort for job training and on-the-job experience. Evidence for a direct effect of pharmacotherapy on the work performance of schizophrenic patients is so far lacking. Research is needed to establish the extent to which pharmacotherapy enhances the schizophrenic patient’s work performance in terms of greater stability, quality of performance, and upward mobility in the labor market.

The psychosocial handicaps of the schizophrenic patient represent perhaps the most serious aspect of the
patient’s illness. Because of the complex nature of these disabilities, treatment strategies for dealing with the patient’s social and vocational problems, both in conception and execution, have lagged far behind those concerned with understanding and modifying the patient’s psychopathology (Neff 1968). While schizophrenic patients have been spending less time in hospitals and exhibiting diminished levels of symptomatology, the quality of their lives and their productivity have changed very little. Only one out of five schizophrenic patients in the community is considered to function at what might be termed an adequate social and vocational level.

In discussing the place and meaning of work in contemporary American society, Kreps (1973) introduces her article with a quote from Freud’s Civilization and Its Discontents, which stresses the importance of work and deserves to be quoted more frequently: “No other technique for the conduct of life attaches the individual so firmly to reality as laying emphasis on work; for his work at least gives him a secure place in a portion of reality, in the human community.”

References


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**pre-schoolers workshop professional conference**

A Pre-Schooler’s Workshop professional conference for colleagues in the fields of special education, mental health, and language disorders will be held on Thursday, December 9, 1976, from 8:30 A.M. to 4:00 P.M. at the Salisbury Restaurant, Eisenhower Park, East Meadow, N.Y. The conference, entitled “Reaching and Teaching the Young Child at Risk,” will feature a keynote address by Burton L. White, Ph.D., of Harvard University on “The Development of Human Abilities in the First Three Years of Life.” Among the activities scheduled are workshops on helping families through the critical period of first identification; evaluating language and cognition in the difficult-to-test child; classroom techniques dealing with disruptive, defiant, and destructive behavior; recent research in special education; parents speak out; medication and management in the preschool-age child; and neurological examination for identification of high risk in infancy.

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