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WORK AND MENTAL DISORDER, A STUDY OF FACTORS INVOLVED IN THE REHABILITATION OF THE VOCATIONALLY DISADVANTAGED FORMER MENTAL PATIENT. FINAL REPORT.

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DESCRIPTORS- *VOCATIONAL REHABILITATION, *EMOTIONALLY DISTURBED, EXPERIMENTAL GROUPS, CONTROL GROUPS, DEMONSTRATION PROJECTS, COMPARATIVE ANALYSIS, *ANCILLARY SERVICES, SOCIAL ADJUSTMENT, VOCATIONAL ADJUSTMENT, VOCATIONAL EDUCATION, INDIVIDUAL CHARACTERISTICS, PROGRAM EVALUATION, *EMPLOYMENT PROBLEMS, THERAPEUTIC ENVIRONMENT, NEW YORK CITY,

A SAMPLE OF 236 FORMER MENTAL PATIENTS WAS DIVIDED INTO (1) AN EXPERIMENTAL GROUP OF 111 CLIENTS WHO RECEIVED FROM 6 TO 12 MONTHS OF AN INTENSIVE AND GRADED SERIES OF VOCATIONAL EXPERIENCES, WITH SUPPORTING PERSONAL AND THERAPEUTIC SERVICES, (2) A CONTROL GROUP OF 40, AND (3) TWO COMPARISON GROUPS OF 63 AND 40 CLIENTS. SOME PURPOSES OF THE STUDY WERE TO (1) DETERMINE THE DEGREE TO WHICH A COMPREHENSIVE REHABILITATION CENTER CAN ASSIST THE FORMER PATIENT, AND THE RELATION OF CLIENT CHARACTERISTICS TO SUCCESS OR FAILURE, AND (2) TEST HYPOTHESES CONCERNING THE DETERMINANTS OF REHABILITATION OUTCOME. THE INNOVATED NETWORK OF SERVICES SIGNIFICANTLY INCREASED CLIENT EMPLOYABILITY BUT DID NOT AFFECT REHOSPITALIZATION OR PERSONAL AND SOCIAL ADJUSTMENT. IN GENERAL, THE FACTORS OF CLIENT YOUTH, PREVIOUS EMPLOYMENT EXPERIENCE, AND COUNSELOR JUDGMENT OF CLIENT POTENTIAL WERE MORE RELATED TO FAVORABLE EMPLOYMENT OUTCOMES THAN WAS THE PROGRAM, PER SE, AND INITIAL STAFF ASSESSMENTS WERE MORE PREDICTIVE OF REHABILITATION OUTCOMES THAN WERE THE RESULTS OF PSYCHOMETRIC TESTS. EMPLOYMENT IN THE UNPROTECTED OPEN LABOR MARKET REMAINED A SERIOUS PROBLEM FOR THE FORMER MENTAL PATIENT. FOR A CONSIDERABLE PROPORTION OF DISCHARGED MENTAL PATIENTS, VOCATIONAL REHABILITATION WILL NOT BE EFFECTIVE UNLESS IT IS ACCOMPANIED BY AND INTEGRATED WITH A SUBSTANTIAL NETWORK OF SUPPORTIVE AND THERAPEUTIC SERVICES. THE APPENDIXES, APPROXIMATELY 100 PAGES, INCLUDE STATISTICAL DATA AND REPORTS BY REHABILITATION PERSONNEL. THE STUDY IS SUMMARIZED IN VT 004 061. (JK)

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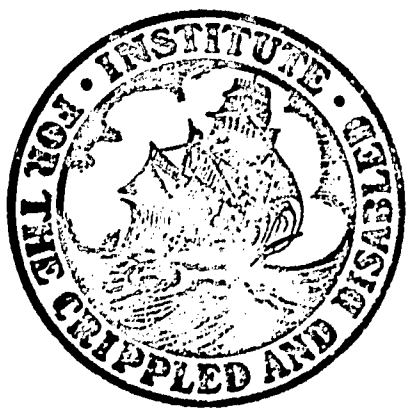


FINAL REPORT

## A STUDY OF THE FACTORS INVOLVED IN THE REHABILITATION OF THE VOCATIONALLY DISADVANTAGED FORMER MENTAL PATIENT

400 FIRST AVENUE, NEW YORK 10, N. Y.
CORNER 23rd STREET

# WORK AND MENTAL DISORDER

## A Study of Factors Involved in the Rehabilitation of the Vocationally Disadvantaged Former Mental Patient

by

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Final Report

May, 1967

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NEW YORK CITY, N. Y.

# HIGHLIGHTS

Objectives: This five year research and demonstration project had two main aims: (1) to develop an integrated network of vocational and supportive services which would facilitate the rehabilitation of vocationally disadvantaged persons with histories of emotional disorder; (2) to delineate some of the factors that are involved in the rehabilitation process.

Chief Findings: (1) The devised network of services produced a significant, although quite moderate, increase in the vocational success among a group of experimental clients, as compared to the controls; there was no difference between these groups with regard to subsequent hospitalization or personal or social adjustment; (2) As a group, the former mental patients studied constitute a highly marginal sector of the population, with grave problems in almost every life-area; (3) With regard to vocational outcome, the more successful client tended to be younger, had a better previous employment history and gave the initial clinical impression of being less egocentric, immature and timid, and more motivated for work than his less successful counterpart; (4) The more services a client received and the more staff contacts he had, the better the rehabilitation outcome; (5) Initial global clinical impressions were more predictive of rehabilitation outcome than were the results of psychometric testing.

Recommendations: (1) Effective rehabilitation of many former mental patients will require a great deal of supportive and therapeutic services, in addition to whatever vocational training is administered; (2) There is an urgent need for the establishment of alternate forms of transitional and semi-sheltered employment situations, as well as a large investment by society in various kinds of partial hospitalization.

## ACKNOWLEDGEMENTS

This study was made possible through the close cooperation of three agencies. The bulk of its considerable costs were defrayed by the Vocational Rehabilitation Administration of the United States Department of Health, Education, and Welfare. The investigators are particularly grateful to Drs. William A. Usdane and Joan Criswell, Director and Assistant Director respectively of VRA's Division of Research Grants and Demonstrations, for their continued understanding and support. The New York State Division of Vocational Rehabilitation, as an officially cooperating agency, was the referral source of all of the Project clients, opened its case files to the Project research staff and was always ready to change certain of its basic office procedures to insure the Project's success. We are also grateful to the administrative and service staffs of the Institute for the Crippled and Disabled, the site of the study, who had to cope with many onerous research demands while carrying on their usual services to the Institute clientele.

At the state level, the study was endorsed by Mr. Adrian Levy, Commissioner for Vocational Rehabilitation and by his deputy for mental health issues, Mr. Sol Richman. At the city level, the study was supported by Messrs. Nelson Voorhees and Louis Salzman, respectively the former and present District Supervisor of the New York City office of the State Division of Vocational Rehabilitation, and by Mr. Nathan Slater, who was Associate Rehabilitation Counselor in charge of the Mental Hygiene Units. The people on the firing line at the New York City DVR, who were responsible for the day-to-day activities of the Project, were Messrs. Joseph Palevsky and Owen Bernstein, the Senior Rehabilitation Counselors of the Mental Hygiene Units and, above all, the rank-and-file rehabilitation counselors of these Units: Bert Piltz, Carmen White, Jack Schuyler, Sol Siegel, Vera Douthit, David Woogen, Harriet Heilman, Catherine Milos, Lydia Lehine, Herbert Magram, Ruth Simon, Doris Maddow and Benjamin Greenblatt.

At the Institute, a basis was laid for the study by the pilot work of Drs. Harold Chenvin and Lawrence Gelb, respectively Chief Psychologist and Chief Psychiatrist of the Institute in the period before the study began. Dr. Bernard Friedlander, then a graduate student at NYU and a staff member of the Institute, was the initial pioneer at the Institute in offering intensive service to mental patients during most of the pilot phase.

During the Project proper, we are grateful to Mr. James Burrows, ICD Director, and to a number of members of the permanent ICD staff: Mr. Bernard Rosenberg, Director of Vocational Services; Mrs. Sylvia Nachmani, Chief Social Worker; Mrs. Laurice Glover, Groupwork Director; Mrs. Anna Ilson and Miss Barbara Macauley, OTs; Dr. Henry Lefkowitz, Chief Psychiatrist; Dr. Thea Spyer, then a staff psychologist and currently Director of the Social Adjustment Service.

The study was executed by a staff employed specially for the Project, who worked enthusiastically and cohesively under circumstances that were sometimes quite difficult. The Project service staff consisted of the following: Mr. David Katz, Project Social Worker; Mrs. Thelma Schmones, Messrs. Stanley Belza and Malcolm Quigley, Project Vocational Counselors, with the part-time assistance of Mr. Zoltan Eisenstadt; Dr. Carl Newman and, for a few months, Dr. Marion Lahn, were Project Psychologists.

The basic research staff, in addition to the chief investigators, were Mr. Norman Thompson, Mrs. Marcia Almquist, and Miss Aphrodite Clamar, who performed the strenuous and demanding work of carrying out the client follow-ups and major aspects of the data analyses. A number of NYU graduate students also served the Project as part-time research assistants: David Fitzgibbons, Carl Wiedeman, Martin Vigdor and Betsy Hegeman. Tina Zuckerman and Brenda Serating were statistical clerks. Mrs. Sidney Elroff served the Project as administrative secretary, and also typed the manuscript.

Special mention should be made of Dr. Jacob Cohen, Professor of Psychology at New York University, whose services were indispensible as Statistical Consultant. Dr. Cohen was able to advise the Project concerning up-to-date applications of multiple regression analysis, a methodology to which he himself is making original contributions. Dr. Cohen is not responsible, however, for any mistaken inferences the investigators may have drawn.

Finally, the investigators wish to acknowledge the patience and fortitude of their respective wives, who were at times made temporary widows by the heavy demands of the Project, particularly in its closing months.

W. S. N.

M. K.

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# CHAPTER I

## Introduction

### Work and Mental Disorder

Until quite recently, the problems faced by the mentally ill person in adapting to work have not been a matter of major concern for the mental health professional. Several circumstances, however, have combined to bring these problems to the forefront. First, starting in the mid-1950s, massive shifts were initiated in the internal management and discharge policies of the large, custodial state hospitals. Accelerated by the increasingly widespread utilization of the ataractic and tranquilizing drugs, these trends have produced new phenomena in the management of the mentally ill: greatly reduced average lengths of stay following hospitalization, sharp increases in annual discharge rates and even sharper increases in re-admission rates. A second set of pressures has arisen from the many efforts to forestall or prevent full hospitalization through the many varieties of partial hospitalization and community-based treatment. Thirdly, in the large state hospitals themselves, many programs have been installed which have the objective of preventing the desocialization of the long-term patient. Fourth, there have been a proliferation of aftercare and rehabilitative services and programs, designed to maintain the ex-mental patient in the community. The result of all these changes has been something of a shift in the mental health professions, from an exclusive focus on the treatment of disordered behavior to a larger set of questions.

One of the major questions the helping professions are now compelled to ask concerns the patient's ability to work, to find and maintain gainful employment. This issue did not arise in very sharp form so long as the psychotic spent the major portion of his life within the walls of the custodial hospital. But the policies of speedy discharge and the efforts to treat the patient in his community of origin have entailed a number of consequences. We are now faced with a situation where some 250,000 patients are annually discharged from mental hospitals and the rates of recommitment are beginning to approach the first-admission rates. The patient with a history of multiple hospitalizations is becoming the rule rather than the exception. In addition, increasing numbers of people with severe emotional disturbance are being offered various forms of community-based treatment, designed to prevent commitment to a long-term facility. Since it is generally believed, in a work-oriented society such as ours, that being employed is a good in itself, and because severe economic dependency may be a barrier to effective treatment, the issue of the work adjustment of the psychotic has become insistent. Apart from these highly practical considerations, the writers believe that we are also confronted with certain lacunae in our understanding of the nature of the psychotic disorders.

To the degree that hard evidence exists in this troublesome field, it is evident that no very clear or unequivocal relationship exists between the functional psychoses and the ability to work. It would appear that people who have been classified as functional psychotics, including those in various states of remission, represent an extremely heterogeneous population, at least with respect to the issue we are considering. There are some psychotics who are able to make a quite adequate adjustment to work, despite the persistence of frank symptomatology. Others, who might be judged to be in a better state of remission, seem unable to adapt to work at all. At the same time, it is generally recognized that the procurement and maintenance of gainful employment is one of the major problems faced by the discharged mental patient. The exact dimensions of this problem are not known, but they appear to be large. In carrying through a follow-up study of patients discharged from Massachusetts mental hospitals, Freeman and Simmons, (1963), report that less than one-third had worked regularly during a 12-month period after discharge, although approximately three-quarters of the study sample had worked at some point during the year, however briefly. The Psychiatric Evaluation Project, being carried through by the Veterans Administration in eleven of its representative psychiatric hospitals, indicates that only 15-20% of the dischargees of these hospitals were able to find stable employment (cf. Gurel, 1963). The difference between these two figures arises in part from different outcome criteria and in part from the possibility that the VA sample included larger numbers of long-term, "chronic" cases. Quite unknown as a fact, but often discussed as a probability, is the degree to which employer resistance contributes to the magnitude of these figures.

Given that a problem of some magnitude apparently exists, given secondly that a negative correlation of some magnitude exists between psychosis and employment, we are still a considerable distance from understanding the factors that contribute to it. It is generally agreed that psychotic symptoms are signals of certain gross impairments in ego functioning, but the nature and dispersion of these defects remain elusive. If we examine the very large research literature on the cognitive deficiencies of schizophrenics, we find firstly that not all schizophrenics function more poorly on cognitive tasks than do normal subjects, and secondly, that the impairments that make their appearance tend to be limited to rather circumscribed areas of intellectual functioning. It certainly cannot be maintained that a psychosis interferes with <u>all</u> of the very wide range of intellectual, motor and effective competencies which make up the total of human behavior. On the contrary, the available evidence suggests that psychotic disorders operate with a high degree of selectivity. Only certain systems of ideas and affects appear to be materially distorted or disorganized, while others appear to remain entirely uninfluenced. It is well known, for example, that paranoid schizophrenics perform as well as normals on a wide range of cognitive and motor tasks, except perhaps those that appear to be intrinsic to the central core

of their delusions. It is possible, of course, for the individual psychotic to be so obsessed and preoccupied with whatever is the content of his delusional system that he has no interest in anything else. Where this takes place, the patient may give the impression of almost total impairment. But we can assume that this kind of patient will be rare among the hundreds of thousands who are annually discharged from mental hospitals.

The theoretical point at issue relates to the manner in which the human personality is conceptualized. From one point of view, the human personality can be thought of as a single, highly integrated system, such that disturbance in one area or segment must reverberate throughout the entire system. At another extreme, personality can be conceived of as a portmanteau term through which we loosely refer to a complex set of subsystems, each of which is largely autonomous of the others. Since the state of knowledge is far from adequate, a genuinely informed choice cannot really be made as between these two alternatives. The bulk of the available evidence, however, tends to support the second alternative, at least in terms of a more plausible working hypothesis. It is abundantly clear, for example, that a person may be wholly irrational and disorganized in certain areas of his ideation, but perfectly reasonable in others. Similarly, a patient may display very severe affective disturbances but his intellectual competencies may be relatively unaffected. This is not to deny that there are individual patients who seem impaired in all aspects of their functioning. But this sort of phenomenon is neither necessary nor typical of the entire range of mental patients. If it is granted that psychotic patients exhibit wide variation in the relative autonomy of the different segments and areas of their respective personalities, then the observed variations in the work behavior of psychotics begins to be intelligible.

We cannot be satisfied, however, with an inference drawn in an entirely hypothetical manner. If we are to develop improved understanding of the relations between work and mental disorder, we need much more empirical information. Several questions at once arise. First, can it be demonstrated that hitherto unemployable psychotics can be adjusted to work, even where no perceptible alteration of the core disorder is thereby affected? What kinds of service or treatment procedures are most likely to bring this about? Second, what are the characteristics of psychotics as persons, other than the presence of the disorder per se, which make for differential adaptability to work? Thirdly, given a population of vocationally disadvantaged psychotics, is it possible to differentiate between those individuals who can move to some kind of work adjustment and those who cannot? Fourth, is it possible to demonstrate that ex-mental patients who adapt to work have, thereby, a reduced likelihood of incurring re-hospitalization? Data bearing upon these questions should begin to reduce some of the mysteries surrounding the relationships of work and mental disorder, and, at the same time, permit the administration of more rationally designed services to this extremely disadvantaged population. The present research was designed with these questions in mind.

Specific Background of the Study

The experience background which largely influenced the design of the present investigation has two major sources. First, there was the experience of the senior author in the development and operation of a unique type of rehabilitative workshop, which was specially designed to focus on the vocational problems of clients with an emotional disability (cf. Gellman, Gendel, Glaser, Friedman and Neff, 1957; Neff, 1959; Neff, 1960). Second, there was the experience of the Institute for the Crippled and Disabled (the site in which the present study was conducted) in carrying through a pilot study of the rehabilitation of psychiatric patients (Institute for the Crippled and Disabled, 1960). While it is redundant here to describe these projects in detail, these earlier efforts left several issues unresolved which the present investigation was designed to elucidate.

The rehabilitative workshop project demonstrated that individuals with severe emotional disability could tolerate a fairly intensive program of vocational evaluation and adjustment training and that a portion of those served (approximately 25%) could thereafter find their way into the labor market. While this project left a very strong impression of clinical effectiveness (it received a Presidential citation for work with the handicapped in 1957), and was designated in the same year as a national prototype facility by the then Office of Vocational Rehabilitation), several important questions remained unresolved. First, until 1960 at least, it was not possible for this project to study a comparable set of controls, so that we cannot be certain that the outcomes were an unequivocal function of the service program. Second, by design and by agreement with the referring agency, this earlier project maintained a high attrition rate (of patients who entered the program only approximately 50% completed it and only the latter were offered intensive job placement service); thus we cannot be certain that the project did more than merely act as a selection device. Third, the patients who were served were not studied in sufficient detail so that we have any certain knowledge of the characteristics that differentiated successes from failures. Fourth, this rehabilitative workshop project was aimed exclusively at assessing and improving an individual's basic ability to work; no training was offered in the area of specific work-skills. The signal and outstanding virtue of the Chicago project was that it called attention to the possibility that many mental patients have major difficulties in adapting to the general social role of the worker and that some can learn to do so if given a sufficiently imaginative exposure to a simulated work situation. This seminal idea was the guiding principle of the present investigation, which also was designed to seek answers to questions left unresolved in the earlier studies.

The present research design was also influenced by the nature of the facility in which it was carried out (The Institute for the Crippled and Disabled of New York City, or ICD) and by the experience of this agency with a 2 1/2 year pilot study of the rehabilitation of psychiatric patients. A brief description follows of these two background components.

The Institute for the Crippled and Disabled is the largest and oldest rehabilitation center in the country. Organized in 1917, as a vocational retraining center for the disabled veteran of World War I, ICD has been a pioneer in the principles and practices of what has come to be known as comprehensive vocational rehabilitation. This has involved the assembly under one roof, and the organization into a rehabilitation team, of a very wide spectrum of rehabilitation services. ICD is organized into three service departments (the Medical Department, the Vocational Services Department, and the Social Adjustment Service), the activities of which are coordinated by a central Patient Programs unit. Unlike most other rehabilitation facilities, which tend to emphasize medical restoration, the core services at ICD are vocational evaluation and vocational training. The professional staff comprises over 100 persons, including physicians of a variety of specialties, paramedical technicians and therapists, psychiatrists and psychologists, social casework and group workers, vocational counselors, remedial specialists, trade training instructors and workshop supervisors. For some years, ICD has conducted an extensive program of professional training in various aspects of rehabilitation practice, under the leadership of a full-time Director of Training. More recently, a research department has been organized under a Director of Research. ICD is a professional affiliate of New York University and serves the latter as a center for residencies, interneships and practica in a number of medical, socialwork and vocational specialties. During a typical year, the Institute serves approximately 2000 patients, largely clients with a wide range of physical disabilities. A history of the Institute and a detailed description of its facilities is available in a monograph titled Rehabilitation Trends-Midcentury (Institute for the Crippled and Disabled, 1956).

Since the service program of the present Project was developed, in large part, on services currently available at the Institute, it is necessary to describe those that were relevant. It should be stressed that the following constitute services available at ICD before the Project began; the Project also innovated certain services, which are described in a later section of this report.

1. Diagnostic Vocational Evaluation. During its development, ICD has evolved three separate units which can be utilized to assess a client's vocational potential. These three units constitute something of a set of sequential stages of increasing pressure and structure; a client may enter one or another, based on staff judgment as to his vocational readiness and work tolerance, or he may pass sequentially through all three.

   a. Occupational Therapy: The least pressured stage is a vocationally oriented occupational therapy unit, in which the client is introduced to various work tasks

under highly sheltered and protective conditions and with close medical supervision where required;

b. Sheltered Workshop; at a somewhat higher stage of pressure and structure, the client may be evaluated in ICD's sheltered workshop, in which work is performed on saleable commodities at piecework rates of payment; the work situation is considerably more realistic than that prevailing in the occupational therapy unit, but there are still no great demands for productivity or quality;

c. TOWER: the latter is an acronym for a 3 to 5 week period of work evaluation in a highly structured situation, in which the client is confronted with a graded series of worksamples, designed to provide the basis for an evaluation of the client's potential for training in a number of skilled and semi-skilled trades; in TOWER, there is close and continuous supervision and a considerable demand for productivity and quality.

2. Vocational Training. ICD maintains two levels of vocational training, one available in its sheltered workshop and the other in a series of trade training classes. In principal, clients enter one or the other, based on their performance in vocational evaluation. Should the client be judged to have little potential for skilled training, he may undergo a period of work adjustment training in the workshop with the objective of preparation for entry to unskilled occupations. Permanent employment in the sheltered workshop is also available for a limited number of clients, who are deemed unable to compete for employment in the open labor market. At a higher level, clients may receive vocational training for a number of skilled trades (optical technician, machinist, jewelry worker, leather goods fabricator, electronics technician, clerical worker). The latter classes may last up to a year's time and are designed to meet the work standards of competitive industry.

3. Vocational Counseling and Placement. In addition to staff directly involved in evaluation and training, the Vocational Services Department also provides vocational counseling and job placement services at various stages of the client's program.

4. Psychological and Social Services. The Social Adjustment Service of the Institute is a large department, staffed by psychiatrists, social workers, psychologists, group workers and remedial specialists, which is licensed by New York State as a mental hygiene clinic. The work of this department is closely coordinated with that of Vocational Services. All clients are given intake and

psychodiagnostic service by this department and, as needed, the department can provide individual and group psychotherapy, chemotherapy, supportive casework, group work, cognitive retraining and speech therapy. The Psychiatric Pilot Project (see below) was initiated and carried through by the Social Adjustment Service.

5. Medical Services. This department is headed by a specialist in Physical Medicine and has a number of other kinds of medical specialists in attendance. It supervises the physical therapy and occupational therapy programs of the Institute and provides all entering clients with a general medical examination, as well as other medical service as needed. Although it has its own core of exclusively medical patients, it also serves the medical needs of those ICD clients whose chief program is vocational.

During most of its 50 years of existence, the Institute was exclusively focused on the needs of clients with physical disabilities. Starting in 1958, however, the Institute began to experiment with the admission of patients whose sole disability was an emotional or mental disorder. What came to be known as the Psychiatric Pilot Project, was launched at the initiative of the SAS Department in close collaboration with the mental hygiene units of the New York City office of the State Division of Vocational Rehabilitation. During the next two and one-half years, 34 such clients were referred to the Institute, of whom 25 received a substantial service and nine either dropped out or were closed as unfeasible during early stages of their programs. By the end of this 2 1/2 year period, both ICD and DVR were agreed that a substantial portion of the referred clients appeared to have benefitted from the services of the Institute and there was readiness on both sides to expand ICD's services to the mental patient. There remained, however, a series of questions and practical problems:

1. Although the rate of defection and rehospitalization appeared to be lower than that of comparable patients processed through other DVR media, this result might have been entirely a function of selective factors; the need was thus indicated for a controlled study.

2. The Institute was made aware that additional staff would be required to serve this category of patient, both because the mental patient appeared to need a more intensive and longer-term service than the traditional ICD client, and because additional services might have to be innovated.

As a direct consequence of both the apparent success and the limitations of the pilot project, the Institute decided to apply to the Vocational Rehabilitation Administration of the U. S. Department of Health, Education and Welfare, for support of a large-scale study of the factors involved in the rehabilitation of the ex-mental patient. The grant request involved the establishment of a more elaborate and intensive service program than had hitherto been available at the Institute and also the construction of a complex research design to answer questions left unresolved both by the Pilot Project and by other studies of psychiatric rehabilitation. This monograph constitutes the final report of the resulting five year project, carried out with the support of the Vocational Rehabilitation Administration as RD 990-p in cooperation with the New York State Division of Vocational Rehabilitation.

Formal Identification of the Project

1. The title under which the research was funded was: A Study of the Factors Involved in the Rehabilitation of Vocationally Disadvantaged Mental Patients.

2. The chief source of funds for the Project was the Vocational Rehabilitation Administration (VRA) of the U. S. Department of Health, Education, and Welfare, as RD 990-p.

3. The grantee organization was the Institute for the Crippled and Disabled of New York City, with the New York State Division of Vocational Rehabilitation (DVR) as a cooperating agency.

4. The formal starting date of the Project was July 1, 1962 and its planned duration was five years. Except for certain remaining analyses of data, the Project was completed by December 31, 1966.

5. The Project Director was Dr. Walter S. Neff who, at the time the study was launched, was Director of Research of ICD. The Chief Investigator was Dr. Myron Koltuv, who became Project Co-Director in 1964 and succeeded Dr. Neff as Director of Research of ICD.[1]

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[1]Dr. Neff is currently Professor of Psychology, New York University. Dr. Koltuv is at present Assistant Professor in the Division of Social and Community Psychiatry at Albert Einstein College of Medicine.

## Chapter 2

## RELEVANT RESEARCH BACKGROUND

Despite the fact that federal rehabilitation legislation was amended as early as 1943 to extend vocational rehabilitation services to the mentally retarded and emotionally disordered, the actual organization and deployment of service to these two disability categories was slow in getting started. Existing rehabilitation facilities and almost all trained personnel in the field were focused on the manifold problems of physical disability. Not only did time have to pass for the reorientation of the various state rehabilitation agencies and for the procurement and training of staff, but a sufficiently large target population was not yet really available. It was not until the early 1950s that the discharge and treatment policies of the large state mental hospitals had changed sufficiently so that the problem of maintaining the ex-mental patient in the community had become insistent. It was about at this point that the Vocational Rehabilitation Administration (VRA: then the Office of Vocational Rehabilitation) of the U. S. Department of Health, Education, and Welfare, began to make large-scale grants to state rehabilitation agencies to help them meet this new problem. Some of the most productive and interesting efforts to initiate new types of service have been carried out under the grant-in-aid program of VRA's Division of Research Grants and Demonstrations, from which the present study received its support.

Hardly more than a decade, therefore, has elapsed since the first major attempts were initiated to provide vocational rehabilitation service to persons whose major disability is defined as some sort of emotional disorder. Data from these early projects began to appear in the late 1950s, largely in the form of interim reports of progress to the funding agency (VRA). During the past 5 or 6 years, a small number of monographs and books have appeared, to which we shall refer below.

In general, there have been three kinds of VRA-supported projects. First, a number of state mental hospitals have developed closely collaborative relationships with their respective state rehabilitation agencies, to prepare their more or less chronic patients for ultimate discharge and return to the world of work. Perhaps the best example of this kind of large-scale collaborative effort is the Vermont Project (Chittick, Brooks, Irons and Deane, 1961), which was funded by VRA. The second major kind of project involved the support of the efforts of a voluntary agency to develop a rehabilitative workshop program designed especially to meet the needs of the psychiatric patient (Gellman, Gendel, Glaser, Friedman and Neff, 1957); the latter project was designated as a prototype facility by VRA, which led to its establishment in several other sites around the country (cf. Vocational Rehabilitation Administration, 1965). The third kind of project has involved the support of vocationally-related procedures

in a number of halfway houses and after-care centers, which have sprung up to help the ex-mental patient maintain himself in the community (Fisher, Beard and Goertzal, 1960). Along with these developments, VRA has assisted a number of state rehabilitation agencies in developing mental hygiene units, the members of which spend part or all of their working time within state hospitals and psychiatric clinics.

During the same time period, the Veterans Administration also became increasingly interested in the relations of work and mental illness and sponsored a number of investigations and treatment innovations in its own network of mental hospitals and related institutions. The VA hospitals were early pioneers in systematically providing mental patients with supervised work assignments within the institution and the VA central administration has organized intensive follow-up studies of discharged patients.

## Relevance of Work Done by Others

For a number of reasons, few of the increasing number of psychiatric rehabilitation projects are directly relevant to the present investigation. Many of these consist of service innovations within the hospital or treatment institution and thus do not directly deal with the problems faced by the ex-mental patient in adapting to the community (cf. Fairweather, 1964). Others have provided excellent descriptive accounts of imaginative service programs, but are lacking in pertinent features of experimental design. Still others supply data on very small samples or do not utilize sufficiently adequate statistical tests of reported differences in outcome. A common problem is the difficulty of securing detailed follow-up data on both served and non-served patients, over a long enough period so that the patterns of post-service behavior can be adequately defined. It should be emphasized that these remarks do not imply criticism of the massive nationwide effort to provide rehabilitative services for the mental patient. The major initial need was for the innovation and establishment of needed programs. In effect, services had to come into existence before they could be researched and evaluated.

Thus, no effort will be made here to review the many reports and monographs which are becoming available from the various projects concerned with psychiatric rehabilitation. The central features of the present investigation are: (a) it was focused on the ex-mental patient who was already in the community; (b) the core services offered were vocational in character; (c) it was constructed as a control-group design; (d) sample sizes were sufficiently large so that adequate statistical evaluations could be carried out. Although a number of aspects of the service program were influenced by the experience of other projects (e.g., Gellman, Gendel, Glaser, Friedman and Neff, 1957; Chittick, Brooks, Irons and Deane, 1961), the relative uniqueness of the present investigation lies in its specialized service features and its research design. Not much is to be gained

by an effort to compare the results of the present investigation with programs carried on in very different settings, with very different target populations, and without the general methodological features intrinsic to the present study.

There are, however, certain recent studies which bear a somewhat closer resemblance to the present project, and they will be discussed in some detail below.

The Minnesota Project

A number of features of the study performed by the Rehabilitation Center of the University of Minnesota (Briggs and Kottke, 1963) are comparable to those of the present investigation. The target population was the ex-mental patient and the primary service focus was vocational evaluation and training. Like the present study, the Minnesota project featured a control-group design and used samples of sufficient size to permit adequate statistical tests of obtained differences. Also, as was the case in the present Project, the Minnesota investigators collected an impressive amount of demographic, psychometric and rating-scale data on their subjects, with the objective of differentiating the successful from the unsuccessful client. Another comparable feature is that face-to-face follow-up interviews were conducted with both experimentals and controls, covering a wide range of outcome criteria.

There are, of course, certain important points of difference between the Minnesota Project and our own. The chief service available to the experimental group of the Minnesota Project was vocational counseling, although a third of the clients received evaluation services in a Pre-vocational Workshop and a smaller number were reported as receiving training in the same facility. Twenty-one of the 74 Minnesota experimentals received group psychotherapy and 22 were referred to the Minnesota Division of Vocational Rehabilitation for other kinds of service. In contrast, the ICD clients were uniformly exposed to a very intensive program of coordinated work evaluation, work adjustment and work training procedures, with counseling, psychotherapy, groupwork and similar kinds of personal service organized around it. Another point of difference is that the follow-up periods in the two studies are not wholly comparable. Various portions of the Minnesota sample were followed-up either at six months, twelve months, or eighteen months after they had entered the program. In contrast, the 12 and 18 month follow-ups in the ICD project occurred after an experimental client had completed his service program; thus, behavior was being examined over the longer period since case initiation. Finally, there is a certain lack of comparability in the statistical treatments utilized in the two studies. The Minnesota Project relied largely on non-parametric treatments (chi-square), while the present Project was able to utilize the relatively more powerful techniques of factor-analysis and multiple regression.

On the whole, however, there is sufficient similarity so that the findings of the Minnesota study are relevant to our own. Two of the findings of the Minnesota Project are of major importance. First, and most striking, the Minnesota investigators were unable to find substantial differences between their experimental and controls on the many outcome criteria they studied. Thus, they were unable to demonstrate that the pattern of vocational services they evolved were of any benefit to the mental patients that comprised their sample. Second, inspection of their data indicates that the merged experimental and control groups had low levels of employability during the follow-up period. Almost half of their total sample (43%) did not work at all, while only 17% worked 60% of the time or more.

The Day Center Project

Among the current innovations of service to the mental patient are the various forms of partial hospitalization: the night hospital, the day hospital, the halfway house, etc. What they share in common is an interest in minimizing or avoiding the apparently negative effecgs of total separation from community life (cf. Stanton and Schwartz, 1954; Caudill, 1958; Goffman, 1961). One such variety of partial hospitalization is the day treatment center, which has been evolved to meet the needs of the mental patient who is unable to adapt to community living but may not be so wholly disturbed that he must be totally separated from it. As the name implies, the day treatment center is in a position to offer treatment during the daytime hours to patients who return to their homes at night. Apparently, the first efforts to develop such programs took place in the USSR and they have been widely utilized in England. Reviews of this movement and descriptions of various types of facilities are available in a few publications; (Kramer, 1962; Dobson, Clayton and Stumpf, 1961; Farndale, 1961). It is characteristic of these facilities that great emphasis is placed on resocialization as a prime treatment modality and, in some cases, work therapy is an important component.

As in the case with most recent service innovations for mental patients, the day center movement has not yet produced much in the way of rigorous research. The bulk of the available literature consists essentially of detailed accounts of the service pattern, descriptions of the behavior of patients in the program and data on service outcomes. Control-group designs have been lacking and, where comparisons are made to patients served in other ways, there usually have been inadequate precautions to ensure genuine comparability. An exception, however, is a very recently published study of a veterans hospital day treatment center in New York City (Meltzoff and Blumenthal, 1966) and we will examine certain aspects of this study which are relevant to our investigation.

The day center studied in this monograph is a part of the Veterans Administration Outpatient Clinic of Brooklyn, N. Y. and is described as "one of the oldest and most well-established of such units in the country."

Its objectives are to: (1) forestall hospitalization, (2) facilitate community adjustment and, (3) improve the patient's clinical status. The center is capable of serving 80-100 active patients at any one time, for whom a variety of recreational, supportive and vocational services are available. The service pattern appears to emphasize resocialization techniques, in which vocational restoration is regarded as a component. It is not clear from the report, however, how intensively or extensively vocational services are utilized. Mental patients enter the day center from various sources, the two main origins being the outpatient clinic and the trial-visit program of the Brooklyn VA Hospital. Although exact data are not given, it can be assumed that the bulk of the clientele of the center are veterans with a history of previous hospitalization for mental illness. The chief admission criteria are that the patient "is marginally adjusted, unemployed and judged unlikely to act out in a manner that will interfere with the welfare of the group." Excluded are patients who are "assaultive, homicidal, active homosexuals, drug addicts, gamblers and psychopaths...." By far the most frequent psychiatric diagnosis is one or another of the varieties of schizophrenia.

The research methodology to be considered here was designed to compare the relative progress over an eighteen month period of a group of patients in the day treatment center with that of a comparable group assigned to conventional outpatient treatment. Fairly elaborate precautions were taken to ensure comparability of experimentals and controls, who were assigned to a study group on a random basis at intake. Control patients received individual or group psychotherapy, chemotherapy, or any combination of "conventional" psychiatric service; experimentals received the resocialization and vocational services of the center. The data shows that the random assignment procedure was effective so that the experimental and control samples were closely comparable on a number of demographic and personal characteristics.

A limitation of this investigation is that the study samples are relatively small, with 36 cases in the control group and 33 in the day treatment center. Nevertheless, the study is unusual for the precautions taken to ensure an adequate control-group design and for the relative sophistication of its techniques of assessment, follow-up, and statistical analysis. The outcome measures of the research are described by the investigators as both "soft" and "hard," the distinction resting on whether the measure is derived from judgement or from recorded fact. The "hard" criteria were data on hospitalization (number of hospitalizations during the 18 months and duration of hospitalization) and data on employment (work-no work and time spent in employment). The "soft" data were obtained from a judgemental rating-scale developed for the study (the Outpatient Adjustment Rating Scales--OARS), which was designed to systematize staff judgements concerning eight areas of behavior: self-concept, dependency, affective control, mood, motivation, adjustment to family, interpersonal relations, and use of community facilities. The latter instrument was

developed prior to the research, through study of day center clients who were not members of the research sample. The investigators report inter-judge reliabilities for the various sections of the scale ranging from correlations of .70 to .88 and an overall scale reliability of .89. Both experimentals and controls were assessed with this instrument at 3-month intervals throughout the study, by raters drawn from a panel of five psychologists who were not affiliated with the day center or the outpatient clinic.

The overall results of the study show certain benefits for the day center patients, although the advantages appear modest. The experimental group was hospitalized significantly less frequently and for a significantly shorter total amount of time. There were also interesting differences in respective rates of hospitalization, with the cumulative hospitalization rate of experimentals tending to level off after nine months in the program, while the same datum for controls continues to increase. It is also worth noting that the day center was more effective in preventing hospitalization for patients who initially had a poorer prognosis.

The experimentals and controls also differed on the employment criterion, although work activity was very meager in both groups. Ten of the 33 experimentals and five of the 36 controls worked; the average time spent in employment, however, was only about a month for experimentals and a little more than one-half month for controls. Here, the initially better adjusted patients in both groups were more successful in finding employment, but their chances were slightly enhanced if they were in the day center program.

The Meltzoff and Blumenthal investigation is as instructive for its research methodology as for its actual results. The project constitutes an advance in the techniques of evaluative research, although the sample sizes are too small to permit much in the way of generalizability or sophisticated predictive analysis. A serious limitation of the report is that the "quantity" of the provided services is described only in very general terms and it is difficult to get a clear idea of their intensity and distribution.

## The Chicago Project

The third investigation which needs discussion was carried on by the Chicago Jewish Vocational Service, in conjunction with the Chicago State Hospital. While not wholly relevant to our own study, because its target population is the in-hospital, chronic patient, it merits examination on several counts. First, its primary focus was on intensive vocational services, as is the case in our own study. Second, the Chicago Project is marked by a rigorous control-group design, which included a well-conceived and executed follow-up study. Third, the Chicago investigators were interested, as we were, in the variables that distinguish successful from unsuccessful clients.

The formal title of the Chicago project was the Work Therapy Research Center (WTRC). It was launched by the Chicago Jewish Vocational Service in 1961 as a five year research and demonstration project, with the support of VRA (RD 641) and in cooperation with the Illinois Department of Mental Health. Its primary objectives were to determine if daily attendance at an intensive and professionally supervised rehabilitative workshop, off the grounds of the mental hospital, would (a) facilitate the discharge of the chronic mental patient and (b) help to maintain such patients in the community. All of the subjects of the study were long-term mental patients, who were still residing in the hospital at the time they were assigned to the Project and who were deemed unready for discharge by the hospital staff.

The design of the project was as follows. From specified wards of the Chicago State Hospital, three matched groups of subjects were generated and assigned, on a randomized basis, to three different procedures. The first group (experimentals) were bussed daily to a rehabilitative workshop some three miles from the hospital, where they worked under professional supervision for a three to six hour shift. This workshop was modelled closely on the Chicago JVS Vocational Adjustment Center (cf. Gellman, Gendel, Glaser, Friedman and Neff, 1957): work was done on genuine commodities, wages were paid, supervision was supplied by professionals who played the foreman-role, conditions of work could be systematically varied, etc. Clients could remain in this workshop from 9 to 12 months. A second matched group (controls) attended daily sessions for recreational and occupational therapy at the Chicago Mental Health Center, which was also some distance from the hospital. The third group (also controls) remained in the hospital and were involved in whatever ameliorative and vocational services the hospital could offer. All Ss were followed up for at least a 12 month period after the experimental group clients had completed their respective tours in the rehabilitative workshop. Data were obtained from each subject on a range of demographic variables, staff assessments of client progress were periodically made and there was also an active testing program.

The design of this study permits an evaluation of an out-of-hospital program which is heavily vocationally oriented compared to an out-of-hospital service which is largely oriented toward recreation and socialization. Both of these out-of-hospital services can also be compared to ordinary in-hospital services for the same time period. The chief point at issue is whether the work therapy offered to the experimental subjects would lead to higher discharge rates and to more effective maintenance in the community, particularly in relation to securing gainful employment after discharge. The first control group provided a check for a daily program out of the hospital, while the second control group provided a base against which both of the out-of-hospital services could be compared. It was also possible to examine the data to determine who succeeded and who failed in the three types of settings.

The Final Report of this project is not yet public. We are grateful to its Project Director (Dr. William Gellman) and to its Research Coordinator (Mr. Asher Soloff) for access to a preliminary version (Gellman, Soloff, et al., 1967). A number of the findings of the Project are of considerable interest. First, it is evident that the project was, in fact, dealing with the "hard-core" mental patient. The typical patient in all three groups was about 40 years old when he entered the study which was about 10 years after he had first entered a mental hospital. He had spent 7 to 8 years in mental hospitals during that period, involving two or three admissions. Before entering, or while in the community between hospitalizations, he had two to three years of irregular employment. He was typically unmarried and most likely to have been diagnosed as a schizophrenic. It is clear that the Project set itself no easy task in attempting to move these long-term patients into the community.

The findings of the Project indicate that the work therapy procedure led to a statistically significant increased discharge rate over in-hospital services although there was only a non-significant trend in favor of the work therapy group over the recreational therapy group. On seven of the remaining eight outcome criteria (relating to such issues as proportion of time in community and employment), this general picture was supported, although only in terms of statistical trends rather than statistically significant differences between groups.

The results were very modest throughout, although the severe problems of the target population should be kept in mind. Only 57% of 55 work therapy clients made any progress at all toward community involvement, as compared to 43% of 37 recreational therapy clients and 30% of 55 in-hospital clients. Twenty-four percent of the work therapy clients were able to enter competitive employment, as compared to 16% of the recreational group and 9% of the in-hospital group. Across the three groups, only 8 of the 24 persons who entered competitive employment were able to maintain it for more than six months.

The Chicago Project also made an effort to distinguish successful from unsuccessful patients within the three kinds of service programs. Eleven demographic variables were studied: sex, age at intake, marital status, race, years of total hospitalization, length of current hospitalization, age at first hospitalization, number of hospitalizations, percent time hospitalized since first admission, amount of prior work experience, and stability of previous work experience. None of these variables significantly predicted success for either the work therapy program or the recreational program. However, four of these overlapping variables significantly predicted success in the in-hospital service: less than 5 years in mental institutions, less than 2 years of current hospitalization, early first admission (before 25 years of age), and less competitive work experience. It might be noted that the Chicago Project did not attempt to analyze these data through any form of multiple

regression analysis, so that the reciprocal effects of these variables on each other, or their combined effects on the criteria, remains unknown.

It many respects, the Chicago Project is an ambitious investigation of the difficult problem posed by the chronic hospital patient. It is a matter of some importance that the study suggests that this kind of work therapy program may be of some benefit to some long-term and highly disturbed mental patients. While the results are suggestive rather than conclusive, there is more than enough here to merit further development along these lines. At the same time, we are left with the sobering thought that the massive problems of the chronic mental patient are still a considerable distance from solution.

## Chapter 3

## RESEARCH DESIGN

The study to be reported had two major aspects, which were of equal importance but require separate discussion. In its first aspect, the Project involved the innovation of a coordinated network of services to ex-mental patients (See Chapter 4). This network of services was organized around a common core of procedures designed to improve the employability of people who had been deemed relatively unemployable by reason of an emotional disorder. The second aspect of the study consisted of the carrying out of a series of research objectives. Four such objectives were stated in the research proposal which provided the rationale for the contemplated study (Neff, 1961). They were as follows.

(1) To study the degree to which a comprehensive rehabilitation center can assist the vocationally disadvantaged mental patient to procure and maintain gainful employment and remain in the community without rehospitalization.

(2) To study the characteristics of mental patients who benefit (or do not benefit) from the services of a comprehensive rehabilitation center.

(3) To formulate and test a series of hypotheses concerning the determinants of rehabilitation outcome.

(4) To study the criteria through which a state rehabilitation agency allocates mental patients to various rehabilitative services and programs.

Early in the course of the five year study, certain of these research objectives were modified to accord with the realities of case-finding and service. The alterations are specified below.

### The Target Population

The individuals who were served and studied by the Project constitute a carefully designed set of samplings of the population of persons with a history of emotional disorder who applied to the New York State Division of Vocational Rehabilitation for vocational help between 1962 and 1964. It should thus be clear that the findings of this study cannot be generalized to the entire population of persons with emotional disorders, or even to the entire population of dischargees from mental hospitals. Although the bulk of the subjects of the study were, in fact, people with a history of institutionalization, there is good reason to believe that the study sample cannot be representative of mental hospital dischargees in general. In order for a person to enter the study sample, a number of selective factors had to operate which were not under the control of the

investigators. First, he had to be unemployed or, in some cases, he had to feel the need for assistance in improving his employability. Second, he had to be sufficiently well-motivated and informed to find his way to the appropriate public agency (the DVR) and endure the necessary appointments, waiting periods and interviews which qualified him for service. Third, he had to reside in the New York City area, since it was the city office of the state agency which was the primary source of referral. Fourth, the specific individuals who constitute the experimental and control subjects of the study were selected for referral to the Project by a dozen or so vocational counselors who made up the Neuropsychiatric Units of New York City's DVR; it can be assumed that an indeterminate range of both professional and idiosyncratic issues may have influenced the particular choices made.

## The Selection Process

In addition to these sources of sample selection, a number of selection criteria were explicitly instituted by the study design. Subjects were to enter the study from the active caseload of the Neuropsychiatric Units of the city DVR, which was estimated to have an open file, at the time of study initiation, of approximately 4000 cases. Second, a number of minimal screening criteria were imposed to provide the sample with some measure of homogeneity and to insure the absence of employment handicaps other than those of a psychiatric nature: (a) no physical disability or hard signs of central nervous system damage; (b) no severe language handicap; (c) a minimum of tested dull-normal intelligence; (d) no evidence of addiction to drugs or alcohol; (e) a minimum age of 17 and a maximum age of 50. Third, since it was desired to study a representative sample of the DVR caseload, a selection process had to be devised which substantially reflected a number of different ways in which the state agency characteristically served its clients.

From the beginning, the investigators were committed to a control-group design. In its initial form, this design represented something of a compromise between the demands of rigor and the limits set by the ongoing practices and policies of the referring agency (DVR). Before the actual service and research project began, a selection process was worked out which had to meet certain conflicting requirements. First, it was considered neither desirable nor practical to change the ordinary referral and feasibility procedures of the state agency in any material way. Second, initially at least, the state agency was understandably reluctant to deny appropriate services to clients who might need them or to arbitrarily assign clients to services which might be inappropriate for their needs. Both of these considerations were inconsistent with a truly randomized procedure, through which every $x$th client who entered the doors of the state agency was referred to the Project and every $y$th client was assigned to a control group. At the same time, the investigators were aware that genuinely randomized experimental procedures, in instances where the subjects are essentially "free agents"

in the community, are only approximations of the controlled laboratory research model. Although non-institutionalized human beings can be initially assigned to treatments in the identical randomized sense in which chemicals are assigned to different agricultural plots, the similarity ends there. The person may, for a host of reasons, not complete the treatment to which he was assigned or, if experimentally not assigned to a particular treatment condition, he may obtain that same treatment or a very similar one, by going to another community resource. Given these considerations, an experimental design was devised which met the manifold problems of providing a useful service for human subjects and yet included certain control features.

The design, upon which the Project was initially based, involved studying four groups of patients assumed to be present within the caseload of a state agency. Two groups were the experimental subjects, and the other two were controls. The groups specified in the research proposal (Neff, 1961) were as follows:

Group A: Experimentals; 50 successive clients referred to the Project by DVR Mental Hygiene Unit counselors in the normal course of their work; these were to be ex-mental patients whose vocational problems were sufficiently complex that they were deemed to require an elaborate and long-term service program.

Group B: Controls; 50 clients selected at random from those mental patients in the DVR caseload who received other-than-Project services during the same time period as Group A; typically, these were patients who were sent to non-professional trade schools for vocational training.

Group C: Experimentals; 50 clients selected at random from those that the DVR counselors deemed unfeasible and recommended for closure. Instead, these individuals would be referred to the Project for services.

Group D: Controls; 50 clients selected at random from those recommended for closure. These individuals would not be referred to the Project, but actually would be closed in accordance with the DVR Counselor's recommendations.

## Modification of the Initial Research Design

The first Group A client entered the Project on schedule in October, 1962, and the Project staff simultaneously engaged in an intensive study of DVR records to form a pool of candidates for Groups B, C and D. In these initial months, a number of things became evident. First, the available client pool for the formation of Groups C and D was quite small.

DVR Codes 12 to 22 (See Appendix A), which permitted closure on grounds of "unfeasibility", were used so sparingly by the DVR counselors (as determined by a 6-month sampling of closures who did not violate Project criteria) that it was unlikely that Groups C and D would reach the required size during the Project intake period. Second, the available pool of clients who could meet Group A intake criteria was found to be quite large. Third, it was disclosed that about one-third of the potential client pool are persons who apply for DVR services and then terminate contact with DVR very early in the service process, usually during the planning phase. These clients are usually closed by DVR as "failing to respond" or "not interested in DVR services". (see Codes 8 and 17 of Appendix A).

Following these findings, a series of meetings was held with the DVR personnel, which resulted in significant improvements in the initial research design. It was agreed to eliminate Groups C and D as impractical and unnecessary. Second, since the available pool of potential Group A clients was quite substantial, it was agreed to double the size of this experimental group from 50 to 100 clients. Third, it was agreed that it was now possible to form a genuine control group for A, by referring 150 clients to the Project, from which the Project staff would randomly accept 100.[1] Fourth, it was agreed that the Project would undertake to follow-up a sample of early DVR drop-outs, in order to study the reasons why these clients broke off contact with the state agency. Fifth, Group B of the initial research design was retained as a comparison group and was increased to 75 clients to make it more comparable in size to Group A.

The final form of the study groups and their approximate Ns were as follows:

Group A: Experimentals: 100 mental patients referred to the Project, who are deemed by DVR to require comprehensive rehabilitation services.

Group B: Controls: 50 clients from the same client pool from which Group A originates, rejected by the Project and referred back to DVR for other disposition.

Group C: Comparisons; 75 mental patients selected from the cases who were sent by DVR for vocational training in trade school settings.

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[1] Since only 100 clients could be accepted by ICD for service in any case, this procedure did not imply denial of service, but simply provided an unbiased selection from a comparable subject pool.

Group D: Comparisons; 50 mental patients selected at random from those individuals who applied to DVR for rehabilitation services, but who discontinue contact with the state agency prior to development of a service plan.

This modified research design constituted an improvement over the initial research proposal in two important respects. First, it was now considerably closer to a genuine control-group design, with better guarantee of comparability between experimentals and controls (Groups A and B). Secondly, the new design presented the possibility of a more representative sampling of the various kinds of mental patients actually served by the state agency.

## Construction of the Specific Research Groups

It was necessary to further subdivide and equate the various subject groups in accordance with the specific foci of the research. Procedures were introduced and precautions taken to avoid biasing the data and to provide meaningful comparisons between subgroups.

### Groups $A_B$ and B

The modified research design was not installed until after 30 Group A clients, who met the minimal admission criteria (See Page 19) had been referred to the Project. A decision was made to exclude these initial clients from the experimental group that would be compared to Group B. This action was taken since it was not known whether DVR counselors would in some way modify their referral policies when faced with the possibility that some of their clients would be randomly rejected by the ICD program.

Beginning with the 31st referral, Group B was recruited by randomly rejecting approximately one-third of the referrals that each of the DVR counselors submitted to the Project. When the Project staff determined, on the basis of the referral material, that a particular client was eligible for entrance into the program, a table of random numbers was used to determine whether this individual was to be accepted or rejected by this program and referred back to the counselor for other disposition. This random rejection procedure was stringently adhered to in all instances, so that if a client was slated for Group B he could not enter any ICD program until the expiration of the Project follow-up period. This rejection procedure was governed by each DVR counselor's referral flow since there were probable differences in the nature of the caseloads among counselors, e.g. some were located in state hospitals, some in private institutions, others worked more with clients who had never been hospitalized, etc. Group $A_B$, therefore, consisted of those members of the experimental group for whom Group B clients are contemporaneous controls.

Groups $A_C$ and C

Both the initial design and its modification incorporated an exploration of the criteria by which the state agency allocates mental patients to various rehabilitative programs, as well as the outcomes associated with these programs. After careful consideration of this issue, it was decided to focus this research on a comparison between DVR clients who are referred to and enter a vocational training sequence within a comprehensive rehabilitation program with those who are sent into vocational training at a non-professional trade school.

As is more fully described in Chapter 4, the ICD program essentially consisted of a seven week evaluation period allotted to all entering clients, followed by a longer period of vocational training for those clients who were deemed promising on the basis of the evaluation. Thus, the evaluation phase of the program served as a screening device for subsequent training. Analyses of the process by which DVR counselors referred individuals to trade schools for training indicated that in most instances, screening evaluations were also used. Thus, clients typically would be sent to one or more trade schools for brief evaluations, and for psychological testing and psychiatric assessment to determine whether they should be sponsored for trade training.

These considerations gave rise to the following method for constructing the two training groups. Group $A_C$ comprised only those Project clients who entered ICD training upon completion of their evaluation. Group C was formed from the pool of DVR clients who were sent into trade school training and who did not possess employment handicaps other than a psychiatric disability. For each Group A client that entered training under Project auspices, a Group C client was randomly chosen from the caseload of that A-client's DVR counselor. A numbered list was prepared of eligible clients that the DVR counselor had sponsored for trade training during the same month that the A-client had entered ICD training, and a C cohort for the A client was chosen by referring this list to a table of random numbers.[1]

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[1] Part-way during the referral process, an arrangement was made with the White Plains Unit of DVR and the school unit of N.Y.C. DVR that permitted these groups to refer clients with psychiatric disabilities to the Project. In all, ten eligible referrals were sent by these two units, and these referrals contributed to A, $A_B$ and B samples. Six of the clients received vocational training under Project auspices. However, these individuals were excluded from Group $A_C$ because of the time-consuming difficulties that would be involved in obtaining C cohorts for them.

Group A

Group A contained all clients referred to the Project who met the minimal admission requirements and had not been randomly assigned to the control group. The screening for secondary handicapping conditions was initially performed on the basis of the referral material that the DVR counselor submitted to the Project staff (e.g. medical report, DVR survey interview). Upon determining that a client was acceptable for entrance into the program, he was sent an appointment by letter to see the Project social worker. Approximately one to three weeks transpired between the Project staff's receipt of the DVR referral material and the social worker interview. One week after this interview, the client entered the program on a daily basis. In three instances, clients who entered the program were found in their early weeks to possess secondary handicapping conditions which were not indicated in the referral material. Although the Project staff continued to work with these individuals, they were excluded from the formal research sample.

Three categories of referrals who were accepted by the ICD program did not receive substantive services from the Project. The first of these groups consisted of 14 individuals who, although prepared by the DVR counselor for entrance into the service program, did not appear for their interview with the social worker. The second category was made up of three individuals who saw the social worker but did not return for the further service that had been scheduled for them. Finally, four clients entered the service program, attended sporadically for less than two weeks, and then dropped out. These 21 individuals, who essentially were "no shows", constitute subgroup $A_{ns}$ while the remaining clients who entered the program comprise subgroup $A_p$. Those Group $A_{ns}$ individuals who had previously been randomly assigned to Group $A_B$ were kept in this experimental sample. Individuals from Group $A_{ns}$ did not contribute to the pool of Group AC subjects since the criterion for membership in this group was participation in Project vocational training services.

It was decided that the $A_{ns}$ study sub-sample would be compared to subgroup $A_p$ on background characteristics and outcome indices to explore differences between clients who do and do not appear for scheduled rehabilitation services. Subgroup $A_p$, comprised of those individuals who received substantial ICD services, constituted the main sample for the testing of various hypotheses concerning the reasons why individuals succeed or fail in a comprehensive rehabilitation program.

Group D

The members of Group D were recruited from the DVR pool of administrative records for individuals who were closed by the state agency primarily as "failed to respond" or "not interested in DVR services." Typically, these persons formally registered with DVR, received one or two interviews with the DVR counselor, and then terminated their contact with the state agency despite periodic efforts by the counselor to re-involve.

them in the vocational planning process. In terms of the DVR administrative nomenclature, they were finally closed officially from "referred" or "pre-service status", indicating that, at most, they participated with the counselor in evolving a vocational plan. However, they did not attain an "in-service status" involving some implementation of their plan.

The DVR operating procedure was such that clients who initially failed to respond or were uninterested in services were not immediately closed by the state agency. Instead, line counselors followed the practice of keeping such individuals in their active caseloads for periods from a few months up to two years. In this way, counselors could readily resume working with clients who subsequently changed their minds to return for substantive services, and thus bypass the administrative burden, for client and agency, involved in formally re-opening the case.

For the current research, these closure practices necessitated the development of a special procedure for collecting the Group D sample. It was not meaningful to govern the intake of Group D clients in accordance with Group A intake since up to two years may have elapsed between the client's last contact with his counselor and his official closure by the state agency. Instead, Group D was formed from the pool of clients obtained from the official DVR closures, without regard to the date of the client's last contact with the state agency. All DVR closures were surveyed by the Project staff for a three month period at the beginning of the Project intake phase and for five months near the end of intake. A pool of 275 individuals was formed, consisting of all persons who were closed from "referred" or pre-service status" and who did not possess handicapping conditions other than a functional psychiatric disability. A random sample constituting Group D was then drawn from the pool of eligible subjects.

Summary of Intake Timetable

It was necessary that most of the groups enter the study at comparable time periods in order to control for between group differences that might arise from changes in labor market conditions, client attributes, or agency practices. This desirable feature was directly attainable in all instances, with the exception of Group D where it was least necessary.

The accumulation of clients into Groups B and C was essentially governed by the rate at which Group A clients were admitted into the Project. The first Group A admission occurred in October of 1962. Beginning in March of 1963, after 30 Project referrals had been made, a special randomization procedure was instituted for assigning approximately one-third of all subsequent acceptable Group A referrals to a control group (Group B). Group C was formed by randomly recruiting individuals from a pool of DVR clients who were referred to trade training programs during the same time period that Group A clients were entering vocational training at ICD.

Group A intake was terminated in May, 1964 by which time 116 DVR referrals had been accepted by the Project. The last 86 of these comprised the experimental Group $A_B$. During the time that Group $A_B$ was recruited, 42 cases were accmulated in Group B.

Of the total Group A membership of 116, 95 Ss actually entered the service program (Group $A_p$), while 21 referrals who were accepted by the program did not show up (Group $A_{ns}$). Sixty-eight members of Group $A_p$ received vocational training services following their evaluation and constitute Group $A_C$. As Group $A_C$ clients entered vocational training programs at the Institute, their Group C cohorts were selected in accordance with a randomization procedure from the pool of clients sponsored by DVR in trade training schools.

A sample of 40 Group D subjects was obtained by random selection from the pool of DVR clients who dropped out from the State agency prior to receiving substantive vocational services. A list of the eligible members for this study group was obtained from surveys of DVR closures at two points during the Project intake phase.

Thus, the study design permitted the following comparisons:

(1) The degree to which ICD can assist the clients referred to it (Group $A_B$ vs. Group B);

(2) A comparison of clients who receive training at ICD with those who receive training at commercial trade centers (Group $A_C$ vs. Group C);

(3) A comparison of referred clients who appeared at ICD vs. those who did not (Group $A_p$ vs. Group $A_{ns}$);

(4) A comparison of "successes" vs. "failures" (a within-group study of Group $A_p$ as a whole);

(5) A descriptive study of clients who break off contact with DVR before a service plan is implemented (Group D).

The initial Project plan was predicated on an intake phase of 18 months duration. Indicative of the close and smooth working relationship between Project and DVR personnel is the fact that the intake phase of the program required only 20 months, despite the complexity of the research design.

## Follow-Up Design

The objectives of the current research required the assessment of the subsequent community functioning of the various study groups. Specifically, the following dependent variables were chosen to determine the effectiveness of the different "treatment conditions": (a) employment, (b) hospitalization,

(c) personal adjustment, (d) general social functioning.

To accomplish these research aims, it was necessary to devise a set of procedures for equating the various study groups, as well as subjects within groups, for the follow-up time intervals which were employed to generate the different outcome data. A scheme was developed whereby the follow-up periods for the various research samples were governed by the time spans used with the members of the $A_p$ group.

Follow-up of Group $A_p$

This group consists of the referrals who received "substantial" Project services. The program varied in length from approximately three weeks to sixteen months, and clients were scheduled for an initial follow-up twelve months after leaving the program. The actual range for this initial follow-up was 11 to 16 months, with an $\bar{X}$ of 13 months.

The comprehensive schedule used for this 12 month interview required approximately two hours to administer and was designed to yield full information concerning the S's job and hospitalization history since leaving ICD. The schedule also made provision for obtaining data relevant to the individual's personal and social functioning during the month prior to the interview.

A briefer schedule was developed for use six months after the initial follow-up was performed. This 18 month interview could be conducted over the phone or face-to-face, and it was designed to update the individual's work and hospitalization history. The actual range for this second follow-up was 5 to 8 months after the initial follow-up, with an $\bar{X}$ of 7 months. The combination of the two follow-ups yielded post-service follow-up periods ranging from 16 to 24 months, with an $\bar{X}$ of approximately 20 months.

The time spans used to develop the various criterion indices for Group $A_p$ were as follows:

(1) Employment indices were based on the 16 to 24 months that elapsed between the termination of services and the second community follow-up. To equate Ss on amount of follow-up time, a percentage of employment score was computed. This time period relevant to employment is referred to as the post-service time span (PSTS).

(2) Hospitalization outcome was derived for the time period between the Project's acceptance of the client for service and the second follow-up interview. Unlike the perior used for assessing employment outcome (PSTS), the hospitalization time interval includes the time spent by the client in the service program.

Since the ICD program varied in length from three weeks to 16 months and the PSTS varied from 16 to 24 months, the combinations of these two periods ranged from 18 to 40 months, with an $\bar{X}$ of 27 months. This 18 to 40 month period, from referral acceptance to the second follow-up, constitutes the total time span (TTS). Here again Ss were equated with regard to elapsed time by using a percentage-of-time hospitalized score.

(3) The indices of personal and social adjustment employed in the research were incorporated in the initial 12 month interview, and thus were obtained 11 to 16 months after Group $A_p$ clients left the ICD program.

Follow-Up of Group $A_{ns}$

This study group is composed of the individuals who were designated to enter the ICD program, but failed to appear. The follow-up times for this group were determined by randomly matching each of these individuals to an $A_p$ client who was referred at approximately the same time. Each $A_{ns}$ subject was then followed up in the community on two separate occasions, with the length of time intervals defined by his Group $A_p$ counterpart.

The employment outcome for members of Group $A_{ns}$ was computed for the same period of time as for the corresponding $A_p$ subject. The hospitalization criterion was developed for the total time span, which extended from the point of referral acceptance to the final community follow-up (TTS). This latter point was also determined by the length of the TTS for the corresponding $A_p$ client. Finally, the personal and social adjustment measures were obtained from an $A_{ns}$ subject at the first follow-up interview, with the date of this interview determined by the corresponding $A_p$ client.

Follow-Up of Groups $A_B$ and B

As indicated earlier, Group $A_B$ contained those referrals who were accepted by the ICD program, beginning with the thirty-first successive client. Since this sample was composed of Group $A_p$ and $A_{ns}$ members, the definitions of the various follow-up time spans accorded with those devised for the latter two groups as described previously.

The individuals who were rejected at referral and placed in the control condition constitute Group B. In order to determine the two follow-up dates, members of this group were assigned to $A_B$ clients who had been referred at the same time. They were then interviewed in accordance with the time schedule devised for the corresponding $A_B$ subjects. As indicated below, some subjects in this sample were interviewed a third time to permit necessary adjustments in the time span used to define employment outcome.

Initially, the PSTS for generating the employment criteria in Group B was governed by the time that the corresponding $A_B$ clients were available for employment. By using this time-matching procedure, it was possible not only to equate the two groups with regard to amount of elapsed time, but it also resulted in both groups facing the same labor market conditions. However, Group B was referred back to DVR for other disposition, and as was expected, approximately half (N = 22) received moderate amounts of alternative services sponsored by the state agency. In following the careers of these individuals, it was noted that varying amounts of time were required for the state agency to arrange for the new services, and that these individuals appeared to be out of the labor market during this time and during the subsequent time when they were engaged in the service programs. Thus, it became possible that any differences in employment outcome (the primary criterion of the research) favoring Group $A_B$ might reflect these circumstances, rather than any intrinsic value of the ICD program. This factor created greater concern as it became evident that there were low levels of employment present in both groups so that this artifact might readily tip the scale in favor of the $A_B$ sample.

It was decided that a more adequate comparison of employment outcomes in Groups $A_B$ and B entailed the use of a PSTS for B subjects that excluded the influence of their unavailability for employment. Of the 22 individuals who received alternate DVR services, 15 received service during the time that their $A_B$ cohorts were in the ICD program. It was thus unnecessary to modify their PSTS, since they were available for employment for 16 to 24 months. The remaining seven subjects, who were left with less than the desired amount of follow-up time, were interviewed again with the 18 month schedule to obtain additional employment history. The PSTS for the 20 B-subjects who did not enter other service programs remained fixed by the corresponding intervals of their $A_B$ counterparts.

The TTS used in defining hospitalization outcome for members of Group B, and the point at which the personal and social adjustment indices were obtained, corresponded in elapsed time to the intervals used with the matching $A_B$ subjects.

The methods used in equating Groups $A_B$ and B yielded similar follow-up time spans for the two samples. The average TTS for the experimental group was 26.6 months and for the controls 26.7 months, while the means of the PSTS were 19.4 and 19.6 months, respectively.

Follow-Up of Groups $A_C$ and C

Clients who completed the Project evaluation and entered vocational training constitute Group $A_C$. For these individuals, the PSTS and the point at which the personal and social functioning data were gathered correspond to the procedures developed for Group $A_P$, the superordinate group to which these individuals belong. However, the TTS commences with

their entrance into training, rather than their acceptance for entrance into the ICD evaluation program. Since the evaluation phase usually consisted of seven weeks, the duration of the TTS for the $A_C$ subject is seven weeks shorter than his corresponding TTS as an $A_P$ subject.

Group C is composed of DVR clients who entered trade training schools during the same month as their $A_C$ counterparts entered ICD training. Members of this group were followed up in the community on the two occasions that were defined by their corresponding $A_C$ matches. Thus, the TTS and the personal and social functioning data for the two study groups were equated with regard to the time that elapsed from the point that their training began.

To define the PSTS, a procedure was used which equated the two groups with regard to amount of post-training time, since this constituted the time span that they were theoretically available for employment. Those Group C subjects who possessed sufficient post-training time on the basis of the second follow-up were coded on employment for a 16 to 24 month period following the termination of their training. The ten Group C subjects left with less than the desired amount of post-training time were interviewed again with the 18 month schedule in order to provide them with 16 to 24 month PSTS.

These procedures defining the follow-up times produced similar time spans for the two study groups. The average TTS for Groups $A_C$ and C were 25.9 and 26.7 months respectively, while the PSTS were 19.6 and 20.0 months.

Follow-Up of Group D

Group D, consisting of DVR clients who dropped out of the state agency prior to the implementation of a vocational plan, was not intrinsically tied into the current research design on a time-relevant basis. As was described earlier, varying amounts of time elapsed between a D subject's last contact with the DVR counselor and his official closure by the state agency, at which point his name became available to the Project staff.

Members of this study group were scheduled for follow-up at the convenience of the Project staff. It was unnecessary to interview these subjects more than once since in all instances the interval between the client's last contact with the state agency and his community follow-up provided enough elapsed time to make the TTS and the PSTS equivalent to that of the major study groups. The TTS coded for this group consisted of an average of 25.3 months from the point of drop-out, while the PSTS was developed to yield an average duration of 20.4 months.

Follow-Up Effectiveness

An intensive and elaborate network of procedures was devised to obtain reliable follow-up data on all subjects. These efforts were highly effective in radically reducing the kind of sample attrition often experienced in follow-up research. During the course of the project, five interviewers, who had M.A.'s in psychology or rehabilitation counseling, conducted follow-ups of subjects in the community. Special training for this function was provided by the Project Co-Director and where necessary, practice interviews were arranged.

One month before a subject was scheduled for follow-up, an individually typed introductory letter was sent to him. (Appendix A)[1]. Approximately one week later, an interviewer contacted him by phone, or, if there was no phone, sent a second letter listing alternate appointments for an interview. In many instances it was necessary for the interviewer to encourage participation in the study by additionally elucidating its goals and patiently attempting to diminish the S's anxiety. A $5.00 fee was paid to interviewees for their participation in the two or three hour initial interview, as an additional incentive. When the individual's cooperation could not be enlisted, or when he could not be located, a relative was contacted with the request that he furnish the necessary information. Finally, in the event that the relative refused to cooperate or could not be found, the Project staff turned to the records of community agencies, state hospitals and DVR. Where possible, the data obtained through the client and relative interviews were checked for factual accuracy against the records of these community resources.[2]

Approximately 84 percent of the Ss used in the study were personally interviewed by Project staff members, with only minor variations in this category across study groups. An additional 11 percent are represented in the Project data via the information obtained from relatives. For the remaining 5 percent, records of agencies and hospitals provided the only relevant information.

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1 Arrangements were made for letters to bear the letterhead of the University with whom the Project Director is associated. This device was deemed desirable since portions of the schedule required the subject to evaluate his service program and it was thought that identification of the follow-up with DVR or ICD might inhibit him.

2 The cooperation of the Social Service Exchange of the New York City Community Council, the New York State Dept. of Mental Hygiene, and the New York City Dept. of Welfare, helped to materially reduce sample attrition, and insure the adequate reliability of the Project data.

The composite of the various follow-up strategies produced highly satisfactory results for the main study groups involving A, B, and C subjects. Only four members from these groups were dropped from the research because of the unavailability of follow-up material.[1] Group D, as would be anticipated from knowledge of the reasons for their closure, was generally a more difficult sample to locate, so that it was necessary to omit 13 cases from this sample.

Analysis of the follow-up data indicated that Group C and Group D each contained three individuals who possessed additional employment handicaps other than their psychiatric disability.[2] These subjects were dropped from the research since they did not meet the Project's minimal screening criteria, which was established to reduce an undesired source of subject heterogeneity.

An additional modification in the composition of the study groups was necessitated by a consideration of the realistic factors which removed an individual from the "availability for employment" category. Four female subjects who married early in the follow-up period indicated that they were no longer interested in industrial, competitive employment, and three additional individuals were out of the labor force for most of the follow-up period due to protracted physical illnesses.[3] By completely dropping these seven subjects from the research, it became possible to avoid later data analytic problems.

In terms of all of these considerations, the final sizes of the various subdivisions of the total study sample are as follows:

| | | |
|---|---|---|
| Group A | - | N = 111 |
| Group $A_p$ | - | N = 92 |
| Group $A_{ns}$ | - | N = 19 |
| Group $A_B$ | - | N = 82 |
| Group B | - | N = 40 |
| Group $A_C$ | - | N = 66 |
| Group C | - | N = 63 |
| Group D | - | N = 22 |
| Total | | 236 |

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[1] Two subjects held joint membership in Groups $A_B$ and $A_{ns}$. Groups B and C each lost only one subject.

[2] In each of these groups, two individuals had physical disabilities, and the other was over the age of 50.

[3] Two members of Group $A_p$, both of whom also belonged to Group $A_C$, and one of whom also belonged to $A_B$, and one member of Group B were dropped due to physical illness. A member of Group $A_p$ who also belonged to $A_B$, a member of Group C and two members of Group D married and dropped out of the labor force.

## Sources of Research Data

Two major sources were used to generate the data required for the research. The first of these consisted of the comprehensive 12 month interview schedule, together with the briefer 18 month form. For Groups $A_{ns}$, B, C, and D, the initial interview schedule, used in conjunction with the records of community agencies and hospitals, provided demographic and other background information about the subject, as well as the indices of his community functioning during the follow-up period.

The second main source of data is applicable only to Group $A_p$ and was used for the "success-failure" study. During the early weeks that clients were present in the ICD program, a variety of psychometric, observational, and interview data were gathered by the Project staff. These subjects were also subsequently interviewed in the community to assess their post-program functioning.

### Follow-Up Schedules

Both schedules were designed to trace the subject's job and hospital history during the follow-up period. In addition, a number of self-report measures, incorporated in the initial interview, were obtained from individuals who were not residing in hospitals at the time of the interview (Appendix B). These instruments were:

(1) Index of Social Participation: an objectively administered and scored questionnaire designed by the Project staff, to provide a quantitative estimate of the subject's social contacts. A total score is derived by weighting each of a number of social activities in accordance with its frequency during the month prior to the interview, and then summing these weighted components. Lower scores indicate greater amounts of social activity.

(2) Index of Leisure Time Activities: also constructed by the Project staff. This objectively administered and scored questionnaire consists of a range of activities that constitute meaningful engagements with the external world. By weighting each of these activities in accordance with its frequency, and summing the weighted items, a total score can be derived which roughly indexes the individual's involvement in leisure time pursuits. The scoring system is such that lower scores are indicative of greater involvement.

(3) Index of Self-Satisfaction: constructed by the Project staff to yield an overall estimate of an individual's satisfaction with his circumstances and himself. This instrument consists of a series of self-referential questions, each of which is answered by the subject on a six point scale (from "very satisfied" to "very dissatisfied"). The individual's score consists of the sum of his self-rating across items with higher scores indicating greater personal dissatisfaction. The internal consistency (reliability) of this measure obtained by the Alpha (α) (Cronbach, 1951) is .94.

(4) Anomie Scale: requires the subject to answer a series of questions concerning his personal beliefs (Reimans and Davol, 1961). Lower scores on this instrument represent greater feelings of alienation from the societal structure and its norms.

Research Instruments Used with Group $A_D$

The present research included an extensive set of investigations with Group $A_D$ subjects which were designed to explore the factors associated with program success and failure. To implement this feature of the research, a number of special instruments were devised or adopted by the Project Directors in consultation with the Project staff members. Most of these instruments were administered during the client's early weeks at the Institute and provided predictors whose effectiveness was assessed against the outcome measures.

The following standard tests and questionnaires were chosen for use with all clients:

1. Wechsler Adult Intelligence Scale
2. Gates Reading Test
3. MMPI
4. Attitude Toward Physical Disability Scale (Yuker, Block and Campbell, 1960)
5. Research Dogmatism Scale ( Rokeach, 1960)
6. Opinions About Mental Illness Scale (Struening and Cohen, 1963)
7. SRA Survey of Interpersonal Values (Gordon, 1960).

The following interview schedules were specifically devised for the collection of demographic and other life history data:

1. A social work intake schedule
2. An initial vocational intake schedule
3. A comprehensive vocational history schedule.

The following assessment devices were used by service staff members to independently describe clients early in the program:

1. A coping style rating form constructed by the Project staff (Appendix C)
2. A set of rating scales constructed by the Project staff (Appendix C)
3. An adjectival Q-sort devised by Block (1962)
4. A simple rating, form submitted by the DVR counselor with each client's referral material (Appendix C).

## The Statistical Analyses

After careful deliberation, correlational statistics and multiple regression analyses were chosen as the primary data analytic methods. A number of interlocking factors led to this decision, of which the most important considerations are the following:

The usual analyses employed in outcome-oriented research involve statistics such as *t*-tests and *F*-ratios which index the statistical significance of the observed differences between the sample means of interest. These tests of mean differences lead the investigator to either accept or reject the null hypothesis. In those instances where the null hypothesis is rejected, the researcher infers that the obtained differences are very probably non-chance phenomena, and he then goes on to discuss his findings. Rarely does he systematically scrutinize the magnitude of these differences, since the *t* value or *F* ratio do not directly index the magnitude of strength of relationships. The level of significance (alpha) merely indexes the probability that the observed differences are "non-chance".

The correlation coefficient (*r*) on the other hand, can be tested for statistical significance and, in addition, can readily be transformed into a numerical form which expresses the magnitude of the relationship implicit in the difference between means. The square of the obtained *r*, which indexes the variance shared in common by the two variables in question, reflects the strength of this relationship. This desirable feature of the correlation coefficient not only pertains to the Pearson product-moment *r*, involving two continuous variables, but is equally applicable in instances where one of the variables is dichotomous as in the above discussion, or where both variables are dichotomous. Both the phi coefficient and the point-biserial correlation are comparable product-moment correlation coefficients and also provide indices of magnitude of relationships. Furthermore, they can be used with the Pearson *r* in multiple regression analysis.[1]

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[1] See Cohen (1966) for further discussion of the features of tau and rho statistics.

Although traditionally, multiple regression analysis has been applied chiefly to psychometric issues, it represents a flexible and general system of data analysis. The primary features which make this mode of analysis desirable for the present research are as follows:[2]

(1) The magnitude of the Multiple R reflects how much of the phenomenon represented by the dependent variable is accounted for by the combined power of a set of independent variables. The set of independent variables can include study-group membership, by coding this factor dichotomously. By combining the group membership variable with others, that are chosen judiciously for their potential relationship with the criterion, the investigator can generate a statistic which essentially indexes how well the criterion is "understood" in the particular sample.

Since the Multiple R is a biased statistic that overestimates the corresponding population value, a corrected R (Shrunken Multiple R) can be computed. This latter value represents the best estimate of the correlation value for the population.

(2) As well as providing a composite index of correlation, the multiple regression system permits the delineation of those independent variables which make unique contributions to the Multiple R. The beta weight for each of the predictors represents that variable's distinctive contribution. The beta weight's statistical significance reflects the probability that its influence on the R is not a chance occurrence.

This feature of multiple regression analysis provides conceptual clarification when there is redundancy present in the set of independent variables, as evidenced by their intercorrelations. For example, one might find that the background variables of age and length of previous hospitalization are both negatively correlated with the criterion of subsequent employment, and positively correlated with each other. The question then arises whether these independent variables are truly related to the criterion in an independent fashion or share this relationship by virtue of their correlation with each other. Perhaps past hospitalization is criterion-related because of its relationship with age, since older individuals have had more time in which to be hospitalized. In this type of circumstance, the beta weights for the two predictors indicate whether either or both make stable and separate contributions to the employment criterion.

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[2]See Guilford (1965) and Cohen (1967) for a more detailed discussion of multiple regression analysis. Professor Cohen served the study as statistical consultant.

(3) Finally, multiple regression analysis provides an element of statistical control over systematic undesired sources of variation. This type of control is usually achieved in experimental studies through the random or systematic assignment of subjects to the various experimental conditions. In naturalistic situations, where the experimenter is unable to exercise this option, multiple regression is a useful method for controlling multiple initial differences between groups, in order to assess the separate effects of the treatment conditions alone.

For example, Groups AC and C in the current research were not randomly derived, and the background differences between these groups were a subject of study. However, another purpose of the research was to determine whether the setting in which vocational training was obtained had a demonstrable effect upon an individual's outcome. Through multiple regression analysis, it was possible to control statistically for the influence of initial group differences on the criterion, and thereby determine whether group membership <u>per se</u> was independently related to the criterion.

## Chapter 4

## THE SERVICE PROGRAM

The service program for Project clients was based on service components already available at ICD, but it was planned to intensify, systematize and, in some instances, to prolong these existing elements. It was also supposed that the special problems of mental patients might require certain new services. The grant request, therefore, included funds for a Project service staff, in addition to a research staff. This service staff was composed of a clinical psychologist, a psychiatric social worker and two vocational counselors, (increased to three at a later date.) These individuals worked under the supervision of the Project Director and Chief Investigator and had no other major duties than serving Project clients. In addition, the Project clients had available the direct and indirect services of the permanent professional staff of the Institute. The Project service staff, however, was able to supply their clients with more personal supervision and consultation than the ordinary procedures of the Institute permitted.

The Project staff as a whole consisted of the Project Director, the Chief Investigator (later Project Co-Director), a research assistant, an administrative secretary, a statistical clerk, together with the service staff described above. The Chief Investigator doubled in brass as coordinator of the service and research programs. The various counselors of the DVR Psychiatric Units must also be counted as active members of the service staff, since they participated in the Project staff meetings, where their particular cases were considered, and continued their customary services to their clients during the entire period.

### Intake

Ordinarily, a number of different objectives are served by the formal intake process in the typical service agency. In addition to acquainting the potential client with the functions of the agency and carrying out a preliminary assessment of the nature of the presenting problem, the agency may also make a determination that the client should not be accepted for service. Each social agency has its own criteria of "unfeasibility," which influence the size and composition of its characteristic caseload. At ICD these criteria bear on the client's potential to benefit from rehabilitative services so as to become employable in the open labor market. In the ordinary ICD case, the admission requirements include an intake interview conducted by an ICD social worker, a physical-medicine general examination carried out by a member of the Institute medical staff, review of these materials by relevant department heads of the Medical, Vocational and Social Service Departments, psychological testing where indicated, and a full scale staff meeting by all of the interested parties at a weekly Admissions Conference. For the bulk of referrals, this process eventuates

in a concrete service plan; for some 10-20% of referrals, however, the outcome of the intake process is a decision that the client is "not feasible" for rehabilitative services.

For several reasons, Project intake was designed to differ from ordinary ICD intake in a number of important respects. First, it was decided that all referred clients who met the Project minimal admission criteria (see P. 19) would be accepted for service, since the rehabilitation potential of the client with an emotional disability was still largely unknown. This, in fact, was one of the issues that the Project was to investigate. Second, a physical-medicine examination was unnecessary, since by selection, clients would be free of any complicating physical disability. In practice, medical examinations were given to a few Project clients, where there was some question about brain damage, or other physical defect or illness. Third, no major recommendations as to further service (or termination of service) would be made until <u>after</u> the patient was available at the Institute for a period of several weeks of continuous observation. Again, the reasoning was that too little was known about the rehabilitation problems of the mental patient to permit early decisions concerning feasibility. An understanding was reached with the referring agency (DVR), which permitted the Project client to come to the Institute with an authorization for a minimum of 7 weeks of diagnostic and evaluative service. In order to implement this process, the referring agency was willing to tolerate certain basic changes in its own decision-making process, for which the Project is grateful.

Briefly, the Project intake process was as follows. During the first two weeks of the client's stay at the Institute, he was seen for a total of approximately eight hours by members of the Project service staff: the social worker collected the basic life-history information; the vocational counselor investigated the client's work background and interests; the clinical psychologist administered a range of psychological tests. The client was also interviewed by a psychiatrist on the staff of the Institute's SAS Department. A feature of this process was that one of the Project vocational counselors was assigned permanently to each entering client, to coordinate all of the client's activities, orient him to various program features, and to be continuously available to meet the problems and questions the client might have.

At the end of the second week, the impressions of the various professionals were pooled in the first of a series of staff meetings and an initial plan for service was worked out. It should be stressed that during this entire period of intake, the client was actively engaged in the first stage of a seven week period of work evaluation (see below) and was continuously available to the intake staff for informal contact and observation. The result was an unusually rich picture of the client's history, problems and present behavior. While not all of this voluminous material was ultimately coded for use as data, all of it was available as a guide for the planning of alternative kinds of service.

## The Vocational Evaluation Process

One of the central features of the Project service program was an intensive process of work evaluation, organized to last seven weeks (with an option for three to five additional weeks, where required), and arranged into three stages. Each of the stages was set up to include more intensive work demands and observations of a wider range of work-relevant behaviors than the preceding stage. In part, this graded series of work environments was instituted in order to gauge the individual's level of work tolerance. Although generally adhered to, the sequence within this evaluation period could readily be modified to suit the particular needs of a given client.

1. The client's first two weeks at the Institute were spent in the Occupational Therapy Department. The work activities offered by this department were somewhat different than traditional O.T., as evidenced by the fact that over 35 work-sampling tasks were available in this setting. The function of this department was primarily to prepare the clients for later intensive work evaluation procedures, and it could flexibly adapt itself to the client's skill and personality needs.

2. The third and fourth weeks of the client's seven-week evaluation were spent in ICD's Industrial Workshop. In this actual work setting, the client was required to work seven-hour days and confront work demands involving punctuality, production rate, quality of production, etc.

Since ICD's Industrial Workshop was staffed by a minimal number of industrially trained supervisors, whose time was almost wholly taken up by the mechanical details of production, the Project staff felt that this portion of its evaluative activity needed strengthening. As a partial solution, one of the Project's vocational counselors spent a minimal amount of his time in the Workshop observing and working with the Project clients. However, this procedure was of limited usefulness because of the multiple demands on the counselor's time. For this reason, the Project requested, in 1963, the appointment of an additional staff member (a vocational counselor) to function as a workshop supervisor for those Project clients who entered the Industrial Workshop for either evaluation or training. The intention was to introduce into the Project the kinds of intensive observation and manipulation of the client that had been developed by the Vocational Adjustment Center of Chicago's Jewish Vocational Service (Gellman et. al., 1957).

With VRA support, it became possible in September of 1963, to develop a Workshop Evaluation Unit, staffed by a Project vocational counselor and an O. .T.. provided by the Institute.

A revised evaluation program was instituted whereby the remaining 50 clients admitted to the Project would spend the entire first four weeks of their evaluation in this work setting. The quality of the assessment of a client's work deficiencies and strengths, as well as of his ability to profit from future work conditioning and/or training, was greatly improved by this innovation.

The Workshop Evaluation Unit was also used, in individual cases, for extensive work conditioning programs, personal adjustment training, and direct training. Some of the techniques used in this unit were derived from the work of the Chicago Jewish Vocational Service, while others were developed in accordance with the needs of the Project clients. (See Appendix D for a description of the operation of this unit).

3. The final three weeks of the evaluation period took place in TOWER. The TOWER system at ICD (Rosenberg and Usdane 1963) involves the evaluation of an individual's skills in any of 13 broad occupational areas by means of objectively administered and scored work-samples. The occupational areas in which a client's work potential was assessed were chosen by the Project vocational counselor on the bases of his own understanding of the client and the information he obtained from other staff members.

Vocational Training

At the conclusion of the seven week period of work evaluation, the Project staff, in consultation with the client's DVR counselor, selected the type and kind of vocational training sequence that might be required to improve the client's work skills. Several types of training were available and several kinds of recommendations could be made. At one extreme was the recommendation for closure because the client showed no potential for any kind of work training and was unlikely to benefit from further Project service. This kind of recommendation was made quite infrequently. At another level, the judgement might be made that the client required an extensive period of work adjustment training before attempting to improve his repertory of work skills; in these cases, the client would undergo some weeks or months of exposure to ICD's Sheltered Workshop and the ultimate plan might be entry into some unskilled occupation. At a higher level, and this was the typical Project case, it would be recommended that the client be enrolled in one of the trade training classes available at the Institute, in which he could continue for as long as 50 weeks. In a few cases, it was felt that the client could tolerate trade training outside of the more or less protective setting of the rehabilitation center and in trade areas not available at ICD.

During the entire period of training, whether inside or outside of the Institute, the client was seen regularly by the Project vocational counselor to whom he had been assigned, and continued to receive whatever ancillary services (see below) had been deemed appropriate in his particular case.

Ancillary and Supportive Services

In this Project, the prevailing philosophy was that core of the program was made up of the vocational services described above. All clients were to receive these vocational services and all other services were organized on a satellite and an as-needed basis. A majority of the clients of the Project received one or more of these additional services.

a. Individual and Group Psychotherapy

Approximately half of the Project clients became engaged in individual and/or group psychotherapy, either with qualified members of the Project staff or with staff members of ICD's SAS Department. The decision to provide such treatment was typically made at the close of the initial period of assessment, and treatment could continue through both evaluation and training. Where possible, the treatment process was focused to help the client make gains in his vocational programs.

b. Group Vocational Counseling

Group vocational counseling was instituted during the Project's second year in an explora or, vein. Our impressions were that this form of intervention was a promising adjunct to the rehabilitation process. The group interaction served as a vehicle by which the client's interpersonal difficulties became manifest and were somewhat ameliorated. Also, the opportunity (frequently the first opportunity) for the client to compare his feelings, attitudes and knowledge about work with others in his shoes provided distinct advantages, as compared to the use of individual counseling alone.

c. Informal Supportive Contact

Early experiences indicated that therapy or casework conducted in the professional's office at a specified time each week was effective with few of the clients. A number of clients directly rejected these ancillary services out of fear of committing themselves to a relationship. Others "froze" when they entered the professional's "formal" office, producing frustrating and unproductive sessions. Still others seemed more able to discuss their difficulties at times when they were troubled by them, rather than at their scheduled sessions.

To meet this contingency, an arrangement was instituted whereby many clients were encouraged to approach the therapist at times when they felt they needed his services, rather than being scheduled for a formal weekly session. At such times, the therapist continued seeing the client until the crisis was abated or resolved.

In addition, the Project social worker began using the technique of developing informal relationships with a number of clients by visiting them in the lunchroom, at the workshop bench, in the training class, etc. The informality of these meetings, the fact that the professional reached out to the client, and the minimal formal commitment to the relationship initially required of the client, appeared to make this treatment more productive for some clients than formal, scheduled therapy. In addition, these visits by the social worker were a chief means by which the client was encouraged to see the therapist when problems arose.

d. Social Groupwork

An improved groupwork program was instituted during the second Project year. In the early phases of the Project, the psychiatric patients had available to them, on an informal basis, the same social groupwork services that were offered to all ICD patients by the ICD groupwork staff. However, in the Fall of 1963, the Project was able to establish a program with the supervisor of a student groupwork unit at the Institute (established in cooperation with the Columbia School of Social Work), which brought about the initiation of certain special groupwork procedures with the mental patients. These procedures were aimed at some of the common problems which psychiatric patients share and which were not identical with those faced by other categories of rehabilitees. Of course, the general ICD groupwork programs were still open to the Project clients.

e. Family Casework

An arrangement was made with a community agency for the referral of families of certain of the Project patients for family casework. The home visits of a social worker (made possible by VRA support in the second year budget) made us particularly aware of the need for such treatment for a number of families. Their role in adversely influencing the rehabilitation process of the client became quite evident in certain cases.

f. Medical and Remedial Therapies

The Director of the Institute's SAS Department, a psychiatrist, was always available to the Project. As a licensed psychiatrist, he could arrange recommitment where required or recommend changes in the tranquilizing medications which many patients were taking under the supervision of state after-care centers. The psychiatrist was also active in the supervision of the individual psychotherapy which certain ICD staff members provided to the Project clients. In individual cases, Project clients also needed ordinary medical care or remedial action (e.g. vision correction, speech therapy, training in basic verbal or numerical skills, etc.) all of which were available on request from permanent members of the ICD professional staff.

g. Post-Training Services

All Project clients were eligible for certain post-training services for the six month period after leaving the ICD program on a daily basis. These services consisted mainly of continuations of placement endeavors (where necessary), vocational counseling, individual and/or group psychotherapy, and social group work. For those individuals who were employed, special evening hours were arranged. This feature of the Project program was specifically instituted to aid the client in his transition from the relatively sheltered atmosphere of the rehabilitation center to the more demanding outside community environment.

The Decision-Making Process

Provision was made for periodic staffing of clients at Project Staff meetings. At these meetings, the Project Staff functioned as an evaluation team, with each member presenting information and impressions that derived from the approach fostered by his discipline. However, these multi-disciplinary evaluations of the client were specifically geared to the problem of vocational rehabilitation. Thus, the client was discussed primarily in terms of those attributes which facilitated or hampered the rehabilitation process.

The client's DVR counselor participated in the Project staff meetings, and the vocational recommendations made were then presented at ICD's case conference for discussion and approval. Generally, a client was discussed at the end of the second, fourth, and seventh week of his evaluation and after every sixth week of his training program:

a. At the initial conference, staff members presented their independently arrived at impressions of the client, and in the ensuing discussion, some rudimentary aspects of a rehabilitation and evaluation plan were formulated. If warranted, a decision

was made to change the sequence of the usual evaluation program and/or to provide particular social adjustment services. During this meeting, as well as in later meetings, the Project's clinical psychologist and social worker systematically discussed, with the vocational counselors, the most suitable method of working with the client. This plan was also relayed by the Project staff to other ICD personnel who worked with the client.

b. At the fourth-week conference, the client's functioning at the Institute was carefully reviewed and, in some cases, a recommendation was made to bypass the third stage of evaluation (TOWER) and place the client in a work evaluation setting more suitable to his level of functioning. The client's need for adjunctive vocational services, such as casework, intensive psychotherapy, group work, etc., was again considered, and such services were provided, where necessary.

c. The seventh-week staffing was the usual point at which the issue of a vocational training program for the client was considered. On the basis of the O.T., Workshop, TOWER, and Intake assessments, one of the following recommendations was made: termination of services, training in a particular trade area, training in unskilled work activities, or direct placement.

d. If the client entered a training program, his progress was reviewed at the Project staff conference at six week intervals. At these times, changes in the client's rehabilitation program could be recommended.

The Roles of the Service Staff

A number of principles guided the Project Directors in organizing the service program and in supervising the work of the Project service staff. First, it was established that the vocational services were to be regarded by all concerned as the core Project program, with all other services revolving around it as supportive and contributory to vocational development. This was regarded as a necessary departure from more traditional patterns of service to mental patients, in which direct treatment of the disorder usually occupies the central position. The Project clients were encouraged to perceive the Project vocational counselor as the person chiefly responsible for their welfare, with the other staff members seen in helping roles. Second, everything was done to focus the attention of the client on solution of his vocational problems. This is not to say that the manifold emotional problems of these ex-mental patients were ignored, but rather that they were usually dealt with directly where they were major impediments to vocational progress. Thirdly, insofar as it was possible and practical, the various professional staff members were encouraged to modulate the separateness of their professional identities and to deal with aspects of behavior that lay somewhat out of the realm of their

particular professional competencies. There was no intention here to underplay the importance of professional skills, but rather to underline the point that the problems of the patient are highly interrelated. All of the Project service staff found this orientation to be something of a challenge and strenuous efforts were made to meet it. Toward the end of the Project, the service staff was encouraged to write accounts of their particular service roles in the Project. Brief versions of these extended reports are available as Appendix D of this Final Report.

Program Statistics

As was described previously the Project service program consisted of a basic seven week evaluation, with the possibility of a three week extension where necessary, followed by a vocational training period of approximately three to twelve months duration. It was arranged that clients would not be administratively terminated before the end of the basic evaluation period. Table A presents a breakdown of the type of disposition (program completion, dropping out, or administrative termination) by program phase (evaluation or training) at which the 92 Group A clients left the Project. Examination of the Table indicates the following.

Relatively few referrals were viewed by the Project staff as capable of going directly to work without substantial services; only 4% required just evaluation. There was some attrition during the evaluation period, with 8% of the group dropping out of the program, despite strong efforts by the staff to retain these clients. Five percent dropped out after evaluation, and before training; in most of these instances, the client left the program because he did not accept the training recommendations made by the Project staff. Here too, extensive counseling efforts were made to reconcile the client to the more realistic and modest vocational goals proposed on the basis of his performance during evaluation. Only 9% of the clients were administratively terminated as "unfeasible" after evaluation. These individuals were seen as possessing such severe vocational impairments that they were unlikely to work, even after extensive services were provided.

During the training phase of the program, there was some additional attrition, with a 16% drop-out rate and 17% administrative terminations. In total, approximately one quarter of the sample (29%) dropped out of the Project program at some point, and another quarter (26%) were terminated by the Project staff. A little less than half (45%) of all entering clients managed to complete their assigned programs.

TABLE A

Type of Disposition by Program Phase at which Clients Left the Project (N = 92)[1]

| Comp. Eval. | Comp. Train. | D-O During Eval. | D-O After Eval. | D-O During Train. | Term. After Eval. | Term. During Train. |
|---|---|---|---|---|---|---|
| 4 | 37 | 7 | 5 | 15 | 8 | 16 |
| (4%) | (40%) | (8%) | (5%) | (16%) | (9%) | (17%) |

| Program Drop-Outs | Program Terminations |
|---|---|
| 27 | 24 |
| (29%) | (26%) |

| Program Completers | Program Non-Completers |
|---|---|
| 41 | 51 |
| (45%) | (55%) |

Additional analyses of the Project service program indicate the following:

1. For 77 Ss (84%), a work sample assessment of their job skills (TOWER)was seen as a relevant vocational issue. Of the 15 individuals who were not given TOWER evaluations, 13 were judged by the Project staff as limited in their vocational skill potential and/or too fragile and anxious to undergo what was essentially a testing procedure; the remaining two clients did not require TOWER since it was decided that they would receive refresher training in job areas in which they had been previously employed.

2. Twenty-eight Ss (30%) were given three week extensions of evaluation, following the basic seven week evaluative period. Their vocational problems were complex enough so that the additional time was deemed necessary to obtain an adequate picture of their potential.

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[1] Percentages total more than 100 due to rounding.

3. Of the 68 clients who entered training, 46 (68%) of this sub-sample) received a systematic sequence of skill training in a specific vocational area, while 22 (32%) were mainly given personal adjustment training (PAT) or training in unskilled work activities (industrial workshop, porter-maintenance, and cafeteria work). Ten of the 46 individuals who received specific skill training were sent to outside trade schools, while regularly returning to the Project for vocational counseling and ancillary services. These individuals were seen as not requiring the relatively sheltered atmosphere of the rehabilitation center, and were trained in areas not offered by ICD (e.g. autobody repair, air conditioning and refrigeration, drafting, photography). Of the 36 clients who received skill training in one of the Institute classes, approximately half were given some kind of clerical training (mostly women), and one quarter were trained in optical mechanics (mostly men); the remainder were scattered among jewelry, electronics, and machine shop operations.

# Chapter 5

# RESULTS: I

## THE EFFECTIVENESS OF COMPREHENSIVE REHABILITATION SERVICES (GROUPS $A_B$ and B)

One of the primary objectives of this investigation is the assessment of the effectiveness of a comprehensive rehabilitation program. The exploration of this issue requires a systematic set of comparisons between Groups $A_B$ and B (see Chapter 3 for designations of study groups).

An analysis of the method by which these groups were constructed indicates that the critical distinction between them is the availability or non-availability of comprehensive services for their members. Subjects were assigned to the experimental or control group at referral, rather than at actual program entrance, with the consequence that some experimental subjects never actually appeared for services. They were not dropped from the research, however, since such a procedure would reduce the comparability of the two samples. In addition, there is a conceptual issue involved which justifies the inclusion of such subjects in the experimental group.

In all service programs which rely on the client's willingness to be served, it is necessary to distinguish between the actual provision of service and its "availability". An adequate evaluation of program effectiveness entails pooling individuals who actually receive services, with those who choose not to do so. Otherwise, the evaluation of the program is restricted to that sub-category of persons who actually enter it, and its general effectiveness as a community resource, for the broader category of clients for whom it was designed, is not being assessed. Perhaps this distinction can best be grasped through the use of a contrived example. Imagine an excellently conceived service program which only two percent of the referrals choose to enter. Even if it produced exceptional results with these individuals, this service venture is restricted in its utility for the broad category of individuals for whom it was initially established.

A second issue imbedded in the current research design concerns the definition of the control group. This group does not constitute a pure "no service" condition, defined in the experimental laboratory sense. It can be questioned whether such a condition is ever obtained in the community when an individual is turned away from a particular service program. It is by now well recognized that, in these instances, some clients are likely to receive some type of help, governed by what is available in the community at the time.

The distinction between the experimental and control group in the current research lies primarily in the number of clients who were actually served and in the intensity and comprehensiveness of the services received. The service phase of the Project was conducted at a time when there were very few specialized resources in the community for the psychiatric patient. One of the demonstration features of the ICD project was to show the effectiveness of such a specially constructed program. Its effectiveness could best be demonstrated by comparing its results with those obtained on a comparable group of subjects who did not have access to this program, and instead were processed in the alternate ways available in the community.

While 55% of Group B eventually received some kind of vocationally-oriented program elsewhere, 85% of Group $A_B$ was served in the ICD program. The median program length for the 70 Group $A_B$ subjects actually served by the Project was 5.2 months, while the median for the 22 served B subjects was 2.4 months. Only three of the served Bs found their way to programs designed specifically for the psychiatric population, and another three attended part-time programs. Finally, agency records indicate that 14% of the served Bs managed to complete their assigned programs, while the corresponding percentage for Group $A_B$ was 40%. In summary, more members of the experimental group received the specially designed services, and the length and complexity of these services were greater for the experimental group, and the experimental program managed to retain more of its subjects.

## Attributes of the Typical Referral

The randomization method used in constructing the experimental and control groups was successful in equating them with regard to a variety of background characteristics. Examination of Table I in Appendix E indicates that the zero-order correlations between group membership and a number of pertinent demographic attributes are generally trivial. Since there are no pre-program differences between these groups, a description of the typical DVR referral to the Project has been derived for the combined samples.[1]

Of the 122 subjects (Groups $A_B$ and B), 75% were males. The median age for the total group was 27, and the median education was high school completion. Approximately 12% of the individuals were married at the time of referral. About half of the sample was Jewish, one third was Catholic, and the remainder were Protestants. Twelve percent were Negro or Puerto Rican. In terms of the Hollingshead Social Class scheme, 70% belonged to Class III or IV.

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[1] See Appendix F for frequency distributions of demographic variables.

The onset of psychiatric symptoms for these individuals characteristically occurred in early or middle adolescence. Only 15% were never hospitalized. For the 85% who had been hospitalized, the median number of hospitalizations was two, and the median length of in-hospital time was approximately 22 months. Eighty-five percent had been diagnosed as schizophrenic, at one time or another. For subjects who possessed a hospital history, the median length of time from hospital release to referral was approximately five months.

With "job" defined as remunerative employment for 30 or more hours per week for at least one week, it was found that one-fifth of the group had never worked, and another fifth had worked for a total of less than six months. For the 80% who had worked, the median percentage of time that they were employed since the termination of their education (excluding time spent in the hospital) was 30%. Approximately a third of the group had previcusly received vocational rehabilitation services sponsored by DVR. At the point of referral, the DVR counselors judged that 80% of the group belonged to the most difficult half of their respective caseloads.

In summary, the typical client referred to the Project, although not characteristically the long-term back-ward hospital patient, possessed a relatively chronic psychiatric impairment that had begun in adolescence. He tended to be characterized by an inability to marry, an impoverished and unstable work history, and had spent a significant portion of time in the hospital. In terms of current labels, this individual would probably be classified as a process-schizophrenic.

## Variables Studied

The basic research strategy employed in contrasting Group $A_B$ and B involved systematically relating sets of independent variables (predictors) to each of a series of outcome criteria by means of multiple regression equations. The independent variables included group membership, selected demographic and personal history characteristics and some specially devised variables representing the interactions of group membership with each of a small series of demographic attributes. In generating the correlational matrix from which the multiple regression equations were derived, the Pearson $r$ was employed when both variables were continuous, the point biserial correlation ($r_{pbi}$) was used when one of the variables was dichotomous, and the phi coefficient was used when both variables were dichotomous. All tests for the statistical significance of the correlations are two tailed, and are reported for the .01 and .05 significance levels.

### Criterion Variables

The general derivations of the outcome criteria used in this study have been discussed in some detail in Chapter 3. The specific coding for each of the outcome criteria is as follows:

1. Employment during follow-up period. The definition of work in this study corresponds to the usual labor market definitions of gainful, competitive employment. However, part-time employment of a minimum of 15 hours per week, as well as full-time work, is counted. The primary reason for the inclusion of part-time work was that some of the female subjects in both groups had come to DVR seeking part-time employment because of other obligations.

   a. Time employed. For each subject, the time employed was computed as a percentage of the 16 to 24 month post-service time span. This percentage-of-work score was then subjected to an arcsin transformation, to compensate for the loss in scalar differentiation that normally occurs at either end of a distribution of percentage scores.

   b. Employed vs. not employed. Each S was given a coded score of one (1) if he worked at a job for at least one week during the post-service time span, and a coded score of zero (0) if he did not work during this period.

   c. Employed at end of follow-up. Individuals who were working at the end of their post-service time span were coded one (1), while those who were unemployed at that time were coded zero (0).

2. Hospitalization during follow-up period. At the point of referral, 12 $A_B$ subjects and 8 B subjects were residing in psychiatric hospitals. Thus, if the calculation of the length of hospitalization during follow-up commenced at the beginning of the total time span, a slight advantage would accrue to the experimental group. This advantage would stem from the minor sampling fluctuation which resulted in the fact that a larger proportion of the control group (20% as compared to 15% in the experimental group) began accruing hospitalization scores at the beginning of the time span.[1] Also, eleven of the twelve $A_B$ subjects who were hospitalized at referral were discharged within two months, while only four of the eight B subjects were discharged

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[1] This sampling fluctuation would influence the comparison between the groups on the hospitalization criteria because of the critical point at which it occurred. However, the total study groups did not differ with regard to the length of time from last hospital discharge to referral. The $r_{pbi}$ between group membership and this latter variable was -.03. See Table I of Appendix F for coding of this variable.

within that length of time.[1]

A stringent procedure was invoked to remove the bias emanating from the initial group differences. The four control group subjects and the one experimental subject who remained hospitalized for more than two months after referral were excluded from the hospitalization analyses. For the remaining 15 individuals, who were hospitalized for less than two months after referral, this initial hospitalization time was excluded in computing their criterion scores.

a. Time in hospital during follow-up period. The percentage of time each subject spent in the hospital during his total time span was computed. Here again this percentage score was arcsin transformed.

b. Hospitalized vs. not hospitalized. Subjects hospitalized during their total time span were coded one (1) and those not hospitalized were coded zero (0).

3. Personal and Social Adjustment during Follow-Up. Four questionnaires were administered at the first follow-up interview. A desc iption of these instruments was provided in Chapter 3. They were:

a. An index of self-satisfaction, in which lower scores represent greater satisfaction.

b. A measure of anomie, in which lower scores represent greater feelings of alienation.

c. An index of social participation, in which lower scores represent greater amounts of social activity.

d. An index of leisure time activities, in which lower scores represent greater amounts of activity.

Independent variables

In order to study the accumulative effects of independent variables, they were arranged into three sets of progressively increasing size. The

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[1] It is our belief that this difference in discharge rate is accounted for by the tendency of hospitals to discharge an individual only after arrangements have been made in the community to aid him in his re-integration.

first set consisted of group membership, together with seven background variables that the investigators chose on an a priori basis for their presumed strong relationship with the criteria. The second set consisted of these eight variables, together with eight additional ones which were judged as potentially criterion-relevant. The third set included the 16 variables derived from step two, together with a series of five interactional terms, each of which represented an exploration of the joint influence on the criteria of group membership and a given background characteristic.[1] The selection of the specific interactions for study was generally governed by the hypothesis that those experimental subjects possessing more effective backgrounds would profit most from the ICD program. It was the investigators' belief that the social and vocational demands of an active service program required a certain readiness in the client for the program to be effective. This readiness to profit from a network of intensive and demanding services was expected to operate in a favorable direction for individuals with better pre-program functioning and in an unfavorable direction for the more maladapted clients.

Table I of Appendix F describes the specific coding procedures that were used with some of the independent variables. The independent variables that were employed and their directionality are listed below:

1. The initial set of variables is:

   a. Group Membership, with the higher score assigned to the experimental group.

   b. Sex, with the higher score assigned to males.

   c. Age, log transformed.

   d. Education, consisting of the number of years of schooling.

   e. Marital Status, with the higher score assigned to the currently married individual.

   f. Diagnosis, with the lower score assigned to schizophrenics and the higher score assigned to all others.

   g. Length of time between last hospital discharge and referral (Last Hosp.). High scores indicate more recent hospitalization.

   h. Months employed full-time prior to referral (Prev. Employ.) This variable was log transformed.

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[1] In the multiple regression framework, these interactions are parallel to the first order interactions obtained in 2 x 2 analysis of variance (Cohen, 1967).

2. The second set of independent variables consisted of the above group, together with the following:

   i. Rating by DVR counselor (DVR rating). A higher score indicates that the individual is judged as having better rehabilitation potential.

   j. Religion - Jewish. A lower score was assigned to Jews, with a higher score assigned to others.

   k. Religion - Protestant. A lower score was assigned to the Protestants on this variable.

   l. Religion - Catholic. A lower score represents this faith.

   m. Race. Negroes and Puerto Ricans were coded with the same lower score.

   n. Social Class. An individual's score was computed by means of the Hollingshead Two Factor Index of Social Position (Hollingshead). Lower scores indicate higher social class standing.

   o. Previous Rehabilitation Services (Prev. Rehab. Serv.) A lower score was assigned to individuals who had previously been sponsored by DVR in vocational programs.

   p. Number of months hospitalized prior to referral (Prev. Hosp.) This variable was log transformed.

3. The final set of independent variables contained the above group, together with the following interactions:[1]

   q. Group membership by Education

   r. Group membership by Last Hosp.

   s. Group membership by Prev. Employ.

   t. Group membership by DVR Rating

   u. Group membership by Prev. Rehab. Serv.

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[1]Each interactional term consisted of the cross-product of its two components. In order to maximize the orthogonality between the interaction and the components from which it was derived, the component variables were rendered into deviation score form prior to the computation of the cross-products.

## Findings Relevant to Employment Outcome

Table I presents the multiple regression analyses of the employment outcomes. Essentially, this table depicts the relationships of each of three sets of predictors with each of three employment criteria. The first predictor set consists of the eight variables judged as basic by the investigators and includes group membership; the second set incorporates the first set and contains eight additional background variables; the third set contains the 16 previously used variables, augmented by five interactional terms. Two of the outcome criteria (time employed and employed vs. not employed) are alternate methods of scoring employment during the follow-up period, while the third criterion represents the subjects' employment at the end of the follow-up period.

The body of Table I consists of the beta weights of the three different predictor combinations for each of the criterion indices. All of the betas share in common an initial decimal point which has been dropped from the table. Near the bottom of the table are listed the Multiple Rs and Shrunken Multiple Rs for the predictor sets. The decimal points for these correlations have also been dropped.

The statistical significance of the beta weights and the Multiple Rs are reported at the .01 (**), .05 (*) and .10 (#) levels of significance. Generally, isolated .10 level findings will not be interpreted except in those instances where there is additional statistical support for the relationship in question.

Our results indicate that there are statistically significant employment difference between the experimental and control groups, with Group $A_B$ consistently exhibiting signs of greater employability during follow-up. Although the zero-order correlations involving group membership and two of the three employment indices are significant at .10 level, the beta weights for group membership in all instances are significant at the .01 or .05 level.[1] This slight discrepancy between the zero-order correlations and beta significances is evidence of the statistical power of multiple regression analyses for this kind of data. Although there are trivial and non-significant relationships between group membership and the other predictors, the relationships that exist have a slight suppressive effect on the correlation between group membership and the employment criteria. In the multiple regression system, this suppression is removed by simultaneously partialling out the influence of these other predictors on both group membership and employment outcome.

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[1] See Table I of Appendix E for zero order intercorrelation matrix of predictors and criteria.

TABLE I

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS AB and B: THE RELATIONSHIPS OF THREE SETS OF INDEPENDENT VARIABLES AND EMPLOYMENT OUTCOME DURING FOLLOW-UP (N = 122)

| | INDEPENDENT VARIABLE SET | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Beta Weights for Set 1 | | | Beta Weights for Set 2 | | | Beta Weights for Set 3 | | |
| Independent Variable | Time Employ. | Employ. vs. not Employ. | Employ. at end of F-U. | Time Employ. | Employ. vs. not Employ. | Employ. at end of F-U. | Time Employ. | Employ. vs. not Employ. | Employ. at end of F-U. |
| 1 Group membership | 17* | 22** | 18* | 20* | 24** | 20* | 20* | 24** | 21* |
| 2 Sex | 09 | 07 | 00 | 10 | 09 | 03 | 08 | 10 | 02 |
| 3 Age | -57** | -55** | -57** | -39* | -38* | -31# | -43** | -40* | -33* |
| 4 Education | 09 | -01 | 19* | 07 | -01 | 16 | 10 | -02 | 19# |
| 5 Marital status | -01 | -12 | 02 | 00 | -07 | -04 | 02 | -07 | -02 |
| 6 Diagnosis | 00 | 01 | -05 | -02 | -02 | -11 | 00 | 01 | -10 |
| 7 Last hosp. | -13 | 02 | -13 | -10 | 01 | -03 | -11 | 02 | -03 |
| 8 Prev. employ. | 42** | 30* | 40** | 25# | 14 | 22 | 33* | 19 | 26# |
| 9 DVR rating | | | | 25* | 24* | 14 | 26* | 21** | 13 |
| 10 Jewish | | | | 23 | 38 | 22 | 28 | 41 | 25 |
| 11 Protestant | | | | 27 | 43** | 41# | 31 | 45** | 43# |
| 12 Catholic | | | | 38 | 40 | 30 | 42 | 45 | 33 |
| 13 Race | | | | -02 | -03 | -29** | -07 | -07 | -31** |
| 14 Social class | | | | 09 | 06 | 02 | 10 | 08 | 03 |
| 15 Prev. rehab. serv. | | | | 00 | -06 | 03 | 00 | -04 | 03 |
| 16 Prev. hosp. | | | | -11 | -06 | -21# | -09 | -04 | -21# |
| 17 1 X 4 | | | | | | | -13 | -12 | -02 |
| 18 1 X 7 | | | | | | | -04 | -05 | -03 |
| 19 1 X 8 | | | | | | | -06 | 12 | -02 |
| 20 1 X 9 | | | | | | | -20** | -15# | -13 |
| 21 1 X 15 | | | | | | | 09 | 06 | 06 |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | | | | | |
| | 44** (37) | 48** (42) | 44** (37) | 53** (42) | 56** (46) | 52** (40) | 58** (45) | 60** (47) | 54* (38) |

How large is the difference in employment outcome that is attributable to experimental group membership? One way of answering this question involves analyzing the amount of criterion variance associated with group membership. The Multiple $\underline{R}^2$ represents the total amount of criterion variance that is accounted for by the composite predictor set. It is possible to compute the reduction in the Multiple $\underline{R}^2$ that results from the omission of a single predictor.[1] This reduction represents the amount of variance that is contributed to the prediction system by the omitted variable. By omitting the group membership variable in the current instance, it was possible to obtain the percentage of variance associated with this factor. This variance was then subtracted from the $\underline{R}^2$ to obtain the percentage of variance accounted for by the other predictors. Since these other predictors mainly represent background characteristics of the subjects, the variance attributable to them indicates the strength of the influence on the employment criteria of the person's demography and personal history.

Tables 2 and 3 present the variance contributions of the group membership variable and the composites of the remaining predictors, respectively. Examination of these tables indicates that approximately four percent of the criterion variance derives from group membership, with approximately 25% deriving from the background predictors. Thus, not only does experimental group membership have a modest absolute influence on the person's work outcome [illegible] the contribution of the individual's pre-program background [illegible] approximately six times as great an influence.

It is important to note that the total amount of criterion variance attributable to the combinations of group membership and the background predictors (Multiple $\underline{R}^2$) ranges from 19 to 36 percent, depending on the particular predictor set-employment index combination. The variance that is accounted for is statistically significant (see Multipe $\underline{R}$s in Table 1) but represents minority portions of the total criterion variance. Since the variables in the system are objective and reliable phenomena, the measurement error is likely to be inconsequential in the degree of attenuation it produces in the $\underline{R}$s. Some reduction in the magnitude of the $\underline{R}$s occurs because the variables in the system do not share the same distribution shapes. However, it is likely that most of the unexplained variance is not attributable to these technical features of the data, but accurately depicts the modest influence of these kinds of predictors on the employment criteria. It is quite probable that there are other major sources of variance (e.g. motivational, value system, psychopathology) that account for larger segments of the criteria. In Chapter 7, data are presented on such additional sources of variance.

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[1] See Cohen (1967) for a discussion of the technique involved.

TABLE 2

PERCENTAGES OF EMPLOYMENT CRITERIA VARIANCE ACCOUNTED FOR BY GROUP MEMBERSHIP

| | INDEPENDENT VARIABLE SET | | |
|---|---|---|---|
| Employment Criterion | Set 1 | Set 2 | Set 3 |
| Time Employ. | 3 | 4 | 4 |
| Employ. vs. not Employ. | 5 | 5 | 5 |
| Employ. at end of F-U. | 3 | 4 | 4 |

TABLE 3

PERCENTAGES OF EMPLOYMENT CRITERIA VARIANCE ACCOUNTED FOR BY SUBJECT'S BACKGROUND

| | INDEPENDENT VARIABLE SET. | | |
|---|---|---|---|
| Employment Criterion | Set 1 | Set 2 | Set 3 |
| Time Employ. | 16 | 24 | 30 |
| Employ. vs. not Employ | 18 | 26 | 31 |
| Employ. at end of F-U. | 16 | 23 | 25 |

Another method of depicting the magnitude of the differences between the experimental and control groups involves an examination of the time that each group was employed (time employ. criterion in Table 1). On the average, a subject in Group AB worked 33.2% of the follow-up period, while the average control subject worked 20.4%. This difference of 12.8% obtained in a direct comparison of the two groups, becomes slightly enlarged (14.7% to 16.8%) when derived by the multiple regression equations, because of the slight suppressive effect that the other predictors have on the group membership variable.[1] The average length of the post-service time span is 19.4 months and, using the largest percentage difference between the groups (16.8%) emanating from the regression analyses, it is found that on the average Group AB subjects worked 3.3 months more than their controls. The average length of employment for the controls was 3.4 months, and the corresponding average for the experimental subjects was 6.7 months.

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[1]Predicted group averages can be obtained by using the regression coefficients (b weights), the coded values assigned to group membership, and the means of the remaining predictors. (See Cohen, 1967).

Although Group $A_B$ fared relatively better, their absolute status on the employment criterion is still relatively poor. Approximately 30% of its membership did not work at all, and only 18% worked at least 80% of the available time. This latter category probably best represents the traditional definition of full employment, in that it makes allowances for the seasonal nature of some jobs.

Further analyses of our data indicate that the difference between the groups stems primarily from the dichotomous "work vs. no work" distinction rather than from the higher levels of employment experienced by Group $A_B$. Thus, only 30% of the experimental clients did not work at all, while 50% of the controls were unemployed for the entire period. At the other extreme, approximately 18% of both groups worked at least 80% of the time (see Table 2 of Appendix F for frequency distributions). Furthermore, for those subjects who did work, there is no statistically significant difference between the two groups in the percentage of time employed. The 57 workers in the experimental sample averaged 48% employment, while the 20 employed controls averaged 41%. The $r_{pbi}$ was .09, between group membership and the percentage of time employed for those who worked.

In general, what predictors other than group membership relate to a subject's employment outcome? Examination of the Shrunken Multiple R values in Table I indicates that the basic set of eight predictors accounts for the major portion of the explained criterion variance. Only minor additional information resides in the variables added in Set 2 and essentially no new information accrues from the interactions taken as a group (Set 3).

A discussion of the specific predictor influences on the criteria follows. The reader should be reminded that in the multiple regression system, each statistically significant beta weight for a predictor represents its distinctive contribution and excludes its criterion-relevant overlap with all other predictors.

While sex is not criterion-relevant in any of the instances examined, age represents a relatively potent force, with younger people consistently showing better employment outcomes. There is some evidence that higher levels of education influence an individual's long range employment outcome (employ. at end of F-U.) although this characteristic is not associated with employment during the F-U period. Certain findings frequently reported in the literature, that marital status and diagnosis are strong prognosticators of various outcomes, are not replicated here. This result may originate in part from the fact that both of these variables are restricted in range in our sample, with few subjects married and most diagnosed as schizophrenic.

In the regression analyses, neither length of time since last hospital discharge, nor amount of time previously hospitalized, are notably associated with the employment criteria. Since these two predictors correlate highly with each other ($r$ = .53), the zero-order correlation matrix was examined to determine whether penalization for their criterion-relevant overlap accounted for the non-significance of their respective betas.

The rs between length of time since last discharge and the three employment indices are of trivial magnitude (around .05) while only one of the rs involving amount of previous hospitalization is significant (r of -.19 with employ. at end of F-U.) Thus, it is unlikely that the magnitude of the betas for either of these predictors would be greatly augmented if the other were dropped from the system. On the whole, the evidence accumulated in this analysis suggests that the individual's previous hospital history has little determinative effect on his subsequent employment.

The individual's previous employment history appears to have some influence on his subsequent work performance. In the first set of predictors, this variable has significant betas in relation to all three outcome criteria. In the second and third predictor sets, it loses some of its impact, mainly because of its overlap with the new variables in predicting the criteria. It is difficult to determine the sources of the overlap from inspection of the intercorrelation matrix. It appears, however, that the DVR rating is a major competitor of the employment history variable in its criterion-relevance.

It is noteworthy that the DVR counselor's rating provides a unique source of criterion variance for two of the employment indices. Thus, the counselor's assessment of the client makes a statistically significant contribution to the criterion, over and above that which would emanate from demography alone. Furthermore, the counselor's beta-weight contribution is not attributable to his accurate linear use of the client's demography, but rather represents some integrative, judgemental process on his part.

Examination of the religion-race-social c ass complex of predictors reveals only sporadically significant beta weights, which are difficult to interpret. Protestants as compared to other religions, are found to fare worse on two of the employment outcomes, but since this group constitutes only nine percent of the total sample, this result may be due to sampling error. Similarly, the finding that Negroes and Puerto Ricans are more likely to be employed at the end of follow-up, may reflect a sampling fluctuation since this group of subjects constitutes only 12% of the total sample.

The general non-significance of the beta weights for the interactions, and their minimal contribution to the Multiple Rs, indicate that, generally, group membership did not differentially relate to the employment outcomes as a function of other client characteristics. Only the interaction involving group membership and the DVR rating was significantly associated with subsequent employment. This finding stems from the fact that the correlation between the DVR rating and time employ. for Group B ($r = .48$) is larger than for Group $A_B$ ($r = .24$). Thus, in the experimental group, there was a smaller outcome difference between clients assessed favorably by DVR and those viewed unfavorably, while in the control group the more favorably assessed individuals fared better.

## Additional Findings Relevant to Employment

An attempt was made to explore whether the employment differences between the experimental and control groups were present over the full range of the follow-up period. The investigators had hypothesized that Group $A_B$ would show greater employability immediately following the ICD program, but would lose their initial advantage over time. The rationale for this hypothesis was partly based on the expectation that the six months of post-program services that were provided to experimental subjects would help them maintain their employment. In addition, it was assumed that there would be the normal vitiation, over time, of the program's impact.

The post-service time spans (PSTS) for all subjects were divided into three approximately equal segments in the following manner. The first time block consisted of the initial six months of the PSTS for each subject. The second time block consisted of the time remaining until the first follow-up interview (approximately 6 months) and the third block encompassed the time that transpired between the first and second follow-ups (also approximately six months). For each time block, the subject was scored one (1) if he worked during that time period or zero (0) if he did not work. A 2 X 3 split plot analysis of variance was performed on these data.[1] Examination of Table 4, which presents the results of this analysis, indicates that the only statistically significant factor is group membership. Thus, there is no evidence that the experimental group differed from the controls in variation of employment over time.

TABLE 3

ANALYSIS OF VARIANCE FOR GROUPS (A) BY TIME BLOCK (B), ON EMPLOYMENT STATUS DURING FOLLOW-UP

| Source | df | ms | F |
|---|---|---|---|
| Between Ss: | | | |
| A | 1 | 2.30 | 4.5* |
| Error (between) | 120 | .51 | |
| Within Ss: | | | |
| B | 2 | .05 | <1 |
| A X B | 2 | .05 | <1 |
| Error (within) | 240 | .11 | |

*Significant at .05 level.

[1] The results from this test represent an approximation, since there are some assumption failures. Formally, the fixed model analysis of variance assumes, among other things, equality of variance among the cells and equal co-variances between columns. It is unlikely that our data fit these assumptions. However, the analysis of variance model appears robust enough to provide an adequate approximation (See Cohen, 1966).

Comparisons were made between Groups AB and B on a number of qualitative aspects of the longest held jobs and on the subject's reported functioning on this job. Trivial and non-significant differences between the groups were found, so that the brief descriptive material appearing below is based on the pooled sample.

For the 77 Group AB and B subjects who were employed during the PSTS, the median weekly salary for their longest held job was $57.00. Forty-two percent of the workers held clerical or sales jobs, 12% held skilled jobs, 20% held semi-skilled jobs and the remaining 26% worked in unskilled occupations. Thirty-six percent of these respondents viewed their performance on the job as "very good", 42% as "a little better than average", 17% as "just average", and only 5% as "not very good". Considering the low levels of job tenure exhibited, it seems likely that the subjects' reports of their own performance are unrealistically high. In a similar vein, 88% reported that they got along well with their work supervisors and 86% that they got along well with their co-workers.

Approximately 30% reported that their employers knew of their past history of emotional problems, 14% weren't sure whether the employer knew, and 56% indicated that the employer did not know. On the other hand, only 14% reported that some of their co-workers were aware of their past difficulties, and 80% indicated that their co-workers did not know.

## Findings Relevant to Hospitalization Outcome

Table 5 presents the multiple regression analyses concerning hospitalization during the follow-up period. Our results do not indicate that there is a statistically significant association of group membership with either time in hospital or the hospitalized vs. not hospitalized distinction. The beta weights for the group membership variable in all six instances, and the two corresponding zero order correlations, are non-significant and trivial in magnitude.

Fourteen of the 36 control subjects (39%) and 28 of the 81 experimental subjects (35%) were hospitalized during the TTS.[1] The hospitalized controls spent an average of 23% of the follow-up time institutionalized, while the corresponding figure for the experimental subjects was 32%. For these hospitalized clients, the $r_{pbi}$ between group membership and percentage of time institutionalized is .16 ($p < .10$). Examination of the points at which the hospitalizations occurred indicates that there is no significant difference between the groups with regard to how early in the TTS they were

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[1] As was indicated earlier, four subjects from the control group and one experimental subject were omitted from the hospitalization analyses because they were hospitalized at the beginning of the TTS. (See P.52).

hospitalized. In summary then, this study produces no evidence that the ICD service program was an effective agent in reducing subsequent hospitalization for Group AB.

Inspection of the Multiple Rs in Table 5 indicates that all three composite sets of predictors are significantly related to the criteria. However, the independent variables account for only a minor portion of the criterion variance, suggesting that factors other than demography are more potent in their influence on hospitalization. The values of the Shrunken Rs indicate that the added background variables in Set 2 make a moderate contribution to the predictive ability inherent in the basic demographic characteristics (Set 1), and the interactions of group membership X demography (Set 3) provide essentially no new criterion-relevant information.

Among the interlocking predictor variables, sex and amount of previous hospitalization make distinct contributions to the criterion of time in hospital. The statistically significant zero-order correlations of time in hospital with diagnosis (-.19*) and with length since last discharge (.33**) are not significant in the regression system due to their criterion-relevant overlap with amount of previous hospitalization.

The only significant interaction present in the data is that between group membership and length since last discharge, in relation to the hospitalized-not hospitalized criterion. Further analysis indicates that length since discharge and subsequent hospitalization correlate .07 for Group B, and that the corresponding correlation for Group AB is .45. These findings suggest that recently discharged individuals are more likely to be re-hospitalized when subjected to an intensive vocational program. Perhaps the fairly rigorous demands made in this type of program are more than can be tolerated by the recent dischargee. He may require a period of nurturant support and transition, such as can be provided in a day hospital, prior to commencing a vocational program.

Findings Relevant to Personal Adjustment and Social Functioning

The total network of services that constituted the ICD program was characterized by a major vocational emphasis. However, elements of this network were devoted to serving the client along lines that were not directly or solely vocational in nature. Among other things, the typical ICD client appeared to be an isolate, who was alienated from others, and had limited social skills. He had few or no external interests, and spent much of his time in rumination and inactivity. Much of his daily experience was permeated with profound feelings of personal misery and unhappiness. Since these characteristics represented significant hindrances to his eventual employability and made re-hospitalization an imminent

TABLE 5

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS $A_B$ AND B: THE RELATIONSHIPS OF THREE SETS OF INDEPENDENT VARIABLES AND HOSPITALIZATION OUTCOME DURING FOLLOW-UP (N = 117)

| | INDEPENDENT VARIABLE SET | | | | | |
|---|---|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | | Beta Weights for Set 3 | |
| Independent Variables | Time in Hospital | Hosp. vs. Not Hosp. | Time in Hospital | Hosp. vs. Not Hosp. | Time in Hospital | Hosp. vs. Not Hosp. |
| 1 Group membership | 00 | -02 | 00 | 01 | 01 | 02 |
| 2 Sex | -18** | -06 | -20** | -08 | -20** | -07 |
| 3 Age | 18 | 23# | 00 | 18 | 01 | 20 |
| 4 Education | 04 | 05 | 17# | 15 | 17# | 12 |
| 5 Marital status | -02 | -05 | -06 | -11 | -07 | -14 |
| 6 Diagnosis | -11 | -15# | -04 | -09 | -04 | -10 |
| 7 Last hosp. | 29* | 28* | 15 | 20# | 14 | 21# |
| 8 Prev. employ. | -09 | -02 | 00 | -05 | -04 | -08 |
| 9 DVR rating | | | -10 | -01 | -07 | 02 |
| 10 Jewish | | | -14 | 36 | -18 | 30 |
| 11 Protestant | | | -27 | -04 | -31 | -09 |
| 12 Catholic | | | -29 | 30 | -35 | 22 |
| 13 Race | | | -07 | -06 | -03 | -02 |
| 14 Social class | | | 01 | -07 | -01 | 04 |
| 15 Prev. rehab. serv. | | | 05 | 04 | 05 | 05 |
| 16 Prev. hosp. | | | 36* | 21# | 35* | 21# |
| 17 1 X 4 | | | | | 11 | 05 |
| 18 1 X 7 | | | | | 11 | 17** |
| 19 1 X 8 | | | | | -07 | -04 |
| 20 1 X 9 | | | | | 09 | 14 |
| 21 1 X 15 | | | | | -09 | -10 |
| | MULTIPLE R AND SHRUNKEN MULTIPLE R (in parenthesis) | | | | | |
| | 40** (32) | 42** (35) | 53** (42) | 54** (43) | 57** (42) | 59** (46) |

possibility, an array of ancillary services was provided to reduce the extent of these problems. Approximately half of the ICD sample received some form of psychotherapy, and 40% received intensive group work services. Many of the interventions by vocational personnel, particularly the Project vocational counselors, revolved around these types of difficulties.

At the initial community follow-up a series of four instruments were administered to both experimental and controls, in order to evaluate the impact of the ICD program on the personal and social functioning of the clients. These instruments, which were described earlier (See Chapter 3) were as follows: (1) an index of social participation; (2) an index of leisure time activities; (3) an index of self-satisfaction; (4) a measure of anomie. The scoring direction is such that lower scores in the first three measures denote greater amounts of the quality, while lower scores on the anomie measure are indicative of greater alienation.

Tables 6 and 7 present the multiple regression analyses for the data on personal and social functioning. Only the first two sets of predictor variables are employed. The third set, consisting of the interactions, are omitted because of drop in sample size (N = 74) and the consequent loss in the degrees of freedom. The 24 control and 50 experimental subjects included in these analyses are those who (1) were not hospitalized at the time of the interview, (2) were seen face-to-face, and (3) provided a reasonably coherent set of responses.[1]

Examination of the relevant data indicates that there is no evidence that the ICD program influenced subjects' subsequent personal adjustment or social functioning. The beta weights and the zero-order correlations between group membership and the criteria are non-significant in all instances. Secondary findings are as follows:

1. In general, levels of social participation and leisure time involvement are not significantly related to demography.

2. There is evidence that older individuals and individuals with poorer work histories are more dissatisfied with their general status.

3. Higher levels of anomie are present: (a) when the individual is older; (b) when he is non-schizophrenic; (c) when his last hospital discharge is more remote; (d) when he has received previous rehabilitation services. The anomic subject seems to be the non-schizophrenic, older individual, who has not

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[1] As would be expected, these 74 subjects are not representative of the defined population of interest. In general, they had more adequate past histories and showed greater levels of employment during F-U, as compared to the sub-sample of omitted subjects. This restriction in range probably had a deleterious effect on the magnitude of the investigated relationships.

TABLE 6

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS $A_B$ and B: THE RELATIONSHIPS OF TWO SETS OF INDEPENDENT VARIABLES AND MEASURES OF SOCIAL AND LEISURE TIME ACTIVITIES (N = 74)

| | INDEPENDENT VARIABLE SET | | | |
|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | |
| Independent Variables | Social Particip. | Leisure Time Activ. | Social Particip. | Leisure Time Activ. |
| 1 Group membership | -03 | 16 | -08 | 14 |
| 2 Sex | -11 | 03 | -10 | 02 |
| 3 Age | 50* | 26 | 31 | 16 |
| 4 Education | -13 | -22# | -13 | -26 |
| 5 Marital status | -07 | -15 | -06 | -11 |
| 6 Diagnosis | -05 | 01 | -04 | 04 |
| 7 Last hosp. | -22# | 09 | -28# | 06 |
| 8 Prev. employ. | -22 | -14 | -07 | -06 |
| 9 DVR rating | | | -20 | -10 |
| 10 Jewish | | | 06 | 04 |
| 11 Protestant | | | 00 | 00 |
| 12 Catholic | | | -05 | 16 |
| 13 Race | | | 14 | 11 |
| 14 Social class | | | -09 | 07 |
| 15 Prev. rehab. serv. | | | -12 | -06 |
| 16 Prev. hosp.. | | | 14 | 04 |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | |
| | 44# (31) | 30 (00) | 55# (32) | 35 (00) |

TABLE 7

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS $A_B$ and B: THE RELATIONSHIPS OF TWO SETS OF INDEPENDENT VARIABLES AND MEASURES OF SELF-SATISFACTION AND ANOMIE (N = 74)

| | INDEPENDENT VARIABLE SET | | | |
|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | |
| Independent Variables | Self Satis. | Anomie | Self Satis. | Anomie |
| 1 Group membership | 04 | 02 | 07 | 02 |
| 2 Sex | -06 | 00 | -06 | 04 |
| 3 Age | 43** | -40** | 51** | -28 |
| 4 Education | 18 | 21# | 17 | 11 |
| 5 Marital status | -05 | 20 | 03 | 08 |
| 6 Diagnosis | -21# | -21# | -20 | -28** |
| 7 Last hosp. | -12 | 24** | -12 | 38** |
| 8 Prev. employ. | -40** | 13 | -45** | 09 |
| 9 DVR rating | | | 23# | -19 |
| 10 Jewish | | | 07 | 05 |
| 11 Protestant | | | 18 | 17 |
| 12 Catholic | | | 04 | 13 |
| 13 Race | | | -16 | -15 |
| 14 Social class | | | 05 | 02 |
| 15 Prev. rehab. serv. | | | -18 | 27** |
| 16 Prev. hosp. | | | -11 | 21 |
| MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | |
| | 44# (31) | 47* (35) | 51 (24) | 59* (40) |

been recently hospitalized, but has not been able to make a vocational adjustment despite previous attempts to do so.

Comparison Between "Served" and "Non-Served" Group B Subjects

As was indicated earlier, approximately half of the Ss in Group B were referred by the state agency to other vocational programs, after the Project rejected these individuals in order to form the control group. An exploratory study was conducted to see whether there were any differences between served and unserved Ss in Group B. Correlations of group membership (scored dichotomously) with the previously used predictors,

and with the employment and hospitalization indices, were computed.

Using the .10 level of significance, the following tentative picture emerges. The "non-served" individuals were more likely to be married, went to work after being rejected by the ICD program, and were more likely employed at the end of follow-up. The state agency gave further service to those individuals whom they had initially rated as more "difficult to rehabilitate".

Summary of Findings

The results of this portion of the study are as follows:

1. It has been demonstrated that a vocationally oriented network of services to emotionally disabled clients in a comprehensive rehabilitation center results in an increase in their subsequent employability, as compared to a group of control clients who were served in less intensive ways. While statistically significant, the advantage of the experimentals over the controls was moderate in magnitude, and is largely attributable to the fact that a greater proportion of controls remained totally unemployed during the follow-up.

2. While the comprehensive rehabilitation center program had a positive effect on employability, no such effect was observable with respect either to rehospitalization or to personal and social adjustment during follow-up.

3. Certain personal characteristics of the subjects, particularly age, previous employment history and initial DVR prognosis, were more strongly related to employment outcome than was program impact, per se. In general, clients who were younger, who had some history of previous employment, and who were judged by their DVR counselors to have better potential for rehabilitation, tended to have more favorable employment outcomes.

4. Although program effectiveness did not differentiate experimentals and controls with respect to either hospitalization or personal and social adjustment, certain background characteristics of the subjects were related to these criteria. Generally, for Groups $A_B$ and B combined, women spent somewhat more of the follow-up time span in the hospital than did men, and clients with greater previous hospitalization history were subsequently hospitalized more. Also, the more recently an individual has been discharged, the greater the probability that he will be re-hospitalized if subjected to a comprehensive rehabilitation program. Finally, older clients, who have poor histories tend to be both more anomic and more dissatisfied with their lot.

# CHAPTER 6

# RESULTS: II

## A COMPARISON BETWEEN TRADE SCHOOL TRAINING AND TRAINING OBTAINED WITHIN A COMPREHENSIVE REHABILITATION PROGRAM (GROUPS $A_C$ and C)

A series of comparisons was made in which clients who were referred directly to trade schools by their respective DVR counselors (Group C; N = 63) were contrasted with that sector of the ICD sample which entered a vocational training program under Project auspices (Group $A_C$; N = 66). These investigations were designed to answer the following questions:

1. What differences exist between those clients referred by DVR to the Project for training and clients referred directly by DVR to trade schools?

2. Is there evidence that one kind of training is generally more effective than the other kind? Are there particular kinds of clients who fare better in one type of program than in the other?

3. Whatever the source of the training, can the more successful trained client be distinguished from the less successful client by any personal or background characteristics?

### Description of Training Programs

The network of vocational training services that was available to the Group $A_C$ clients is described in Chapter 4. In summary, it consisted of classroom training programs in clerical, skilled or semi-skilled occupational areas, and workshop training in unskilled activities. Supplementary to the training were a variety of ancillary services, given by specialists who worked directly with the clients and also consulted with the training instructors and workshop personnel. The result was a highly integrated program, in which clients not only received vocational training but also were provided with counseling, groupwork, and psychotherapy.

The training programs that the Group C clients received consisted mainly of the skill-training proper, provided by a trade school, with little in the way of ancillary service. The typical trade school program was not specifically designed with the psychiatric patient in mind, but instead was geared to meeting the skill needs of the general community (school drop-outs, the physically disabled, housewives seeking to return to work, returning veterans, etc.) In all, 35 different trade schools in the New York City area supplied vocational services to the Group C clients, with the most frequently used center receiving eight referrals.

Table 8, which presents a breakdown of training areas by study sample, indicates that C clients were most frequently trained in clerical occupations, and that none were provided with adjustment training for unskilled work. On the other hand, $A_C$ clients were more equally distributed over training areas, with approximately one-third in the semi-skilled or unskilled category. In general, it appears that trade school subjects as a group received higher level programs.

TABLE 8

CLASSIFICATION OF TRAINING AREAS FOR GROUPS $A_C$ AND C

| Area | Group $A_C$ | Group C | Combined Groups |
|---|---|---|---|
| Clerical | 23 | 43 | 66 |
| Skilled | 22 | 14 | 36 |
| Semi-skilled | 11 | 6 | 17 |
| Unskilled | 10 | 0 | 10 |

To some extent, the differences in orientation and emphases of the two types of training programs are reflected in the evaluations that subjects provided at the first follow-up interview. At that time they were asked a series of questions concerning their training experience. The respondent sample for this survey consisted of the 54 $A_C$s and 56 Cs who were interviewed face-to-face. Examination of Table 9 indicatees the following:

1. The two study groups essentially did not differ in their overall evaluation of the helpfulness of their respective training programs.

2. The 89 individuals who said that they found their program helpful were open-endedly asked to specify how it was helpful. Inspection of the responses led to the development of a six category scoring scheme, with each subject permitted to contribute up to two different responses. While almost all the Cs indicated that the specific vocational skill training was the most helpful ement, the ICD subjects gave more scattered reasons. A number selected the work conditioning and work routine aspects of the program, while others indicated program elements that led to improved personal and social adjustment.

TABLE 9

CLIENTS' EVALUATION OF THEIR TRAINING PROGRAMS

1. "How helpful was (training program attended)?"

| Rating Category | Group Ac (N = 54) N | Group Ac (N = 54) % | Group C (N = 56) N | Group C (N = 56) % | Combined Groups (N = 110) N | Combined Groups (N = 110) % |
|---|---|---|---|---|---|---|
| "Helped you very much" | 18 | 33 | 18 | 32 | 36 | 33 |
| "Helped you somewhat" | 28 | 52 | 25 | 45 | 53 | 48 |
| "Didn't help" | 4 | 7 | 12 | 21 | 16 | 15 |
| "Set you back" | 4 | 7 | 1 | 2 | 5 | 5 |

2. "What was helpful? How was it helpful?"[1]

| Category | Group Ac(N = 46) No. of Mentions | Group Ac(N = 46) % of Sample | Group C (N = 43) No. of Mentions | Group C (N = 43) % of Sample | Combined Groups(N = 89) No. of Mentions | Combined Groups(N = 89) % of Sample |
|---|---|---|---|---|---|---|
| Good vocational skill training. | 19 | 41 | 38 | 88 | 57 | 64 |
| Placement activities. | 3 | 7 | 3 | 7 | 6 | 7 |
| Work conditioning and routine. | 18 | 39 | 3 | 7 | 21 | 24 |
| Improved social adjustment. | 7 | 15 | 0 | 0 | 7 | 8 |
| General personality improvement. | 8 | 17 | 1 | 2 | 9 | 10 |
| Increased self confidence. | 11 | 24 | 3 | 7 | 14 | 16 |

3. "Was there a particular person at (training program attended) who you feel helped you?"

| Category | Group Ac (N = 54) No. of Mentions | Group Ac (N = 54) % of Sample | Group C (N = 56) No. of Mentions | Group C (N = 56) % of Sample | Combined Groups (N = 110) No. of Mentions | Combined Groups (N = 110) % of Sample |
|---|---|---|---|---|---|---|
| No one. | 12 | 22 | 25 | 45 | 37 | 34 |
| Classroom Instructor. | 18 | 33 | 25 | 45 | 43 | 39 |
| Training Center Administrator | 0 | 0 | 4 | 7 | 4 | 4 |
| Vocational Counselor | 25 | 46 | 2 | 4 | 27 | 25 |
| Psychiat., Psychol. or Social Worker. | 15 | 28 | 0 | 0 | 15 | 14 |

[1]Percentages do not total to 100 since each respondent could contribute up to two codeable responses.

3. Twenty-two percent of the $A_C$s indicated that there was no one in particular at the training center that helped them, while the corresponding figure for the C clients was 45%. This difference between the groups is statistically significant ($\chi^2 = 6.19$, $p < .05$). Almost all of the trade school clients who did select someone, named their instructor, who was usually the only institutional staff member with whom they were in contact. On the other hand, approximately one-quarter of the ICD subjects selected Social Adjustment Service personnel, and almost half chose their Project vocational counselor.

## Variables Studied

Comparisons between Groups $A_C$ and C were effected by means of correlational and multiple regression analyses. The independent and dependent variables, and the statistical procedures employed, are basically the same as those used in the comparisons between Groups $A_B$ and B reported in Chapter 5. A brief summary of the variables follows.

For the outcome criteria, the three indices of post-service employment were the same as in Chapter 5: (1) Time employed; (2) Employed vs. not employed, with the higher code score assigned to the employed; (3) Employed at end of the follow-up. Also, the same hospitalization criteria were used: (1) Time in hospital during TTS; (2) Hospitalized vs not hospitalized, with the higher score assigned to the hospitalized category.[1] As in the $A_B$ vs. B study, the personal and social adjustment indices were: (1) Self-satisfaction, with lower scores representing greater satisfaction; (2) Anomie, with lower scores representing more alienation; (3) Social participation, with lower scores representing greater participation; (4) Leisure time activities, with lower scores representing greater participation; (4) Leisure time activities, with lower scores representing greater activity.

In addition, two new criteria were used: (1) Length of training program; (2) Completion of training program vs. non completion, with the higher score assigned to the program completers.

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[1] Inspection of the subjects' hospitalization status at the point of training program entrance indicated that six Group $A_C$ clients and 13 Group C clients were residing in the hospital at the time. In order to remove the influences of the initial status on the TTS hospitalization scores, a procedure similar to the one used with Groups $A_B$ and B was employed (see Chapt. 5). The two $A_C$s and the five Cs who remained in the hospital for more than two months were dropped from this analysis, and for the remaining twelve individuals, this initial hospitalization time was excluded in computing their criterion scores.

The independent variables were again arranged into three sets of progressively increasing size.[1] The basic set, which corresponds to the one used in the $A_B$ vs. B analyses, consisted of: (1) Group membership, with the higher score assigned to Group $A_C$; (2) Sex, with the higher score assigned to males; (3) Age; (4) Education; (5) Marital status, with the higher code assigned to married individuals; (6) Diagnosis, with the lower score assigned to schizophrenics and the higher score assigned to all others; (7) Length of time between last hospital discharge and referral (Last hosp.), with the higher scores indicating more recent hospitalization; (8) Months employed full-time prior to referral (Prev. employ.)

The second set of independent variables is parallel with the corresponding set employed in the $A_B$ vs. B analyses, except for exclusion of the DVR Counselor's rating, which had not been obtained for Group C subjects. It consisted of the above group, together with (9) Jewish, with a lower score assigned to Jews, and a higher score assigned to others, (10) Protestant, with a lower score assigned to this religion; (11) Catholic with the lower score assigned to it; (12) Race, with the lower score assigned to Negroes and Puerto Ricans; (13) Social class, obtained with the Hollingshead Index in which lower scores indicate higher class standing; (14) Previous rehabilitation services, with the lower score assigned to individuals who had had previous programs; (15) Number of months hospitalized prior to referral (Prev. hosp.).

The final set of independent variables consisted of the above group, together with six interactions. Since the investigators had not formulated any hypotheses concerning the differential effectiveness of the two programs, the selection of the interactions for study was governed by specific, but diverse, expectations. The interactions chosen were: (16) Group membership by Sex; (17) Group membership by Age; (18) Group membership by Education; (19) Group membership by Last hosp.; (20) Group membership by Prev. employ.; (21) Group membership by Prev. rehab. serv.

## Initial Differences Between Groups

In what ways do individuals who are sent to trade training schools differ from those who enter training in a comprehensive rehabilitation program? The examination of this question focuses upon some of the information that is readily available to the DVR counselor at the time when he is considering referrals. Table 10 presents the zero order correlations of type of DVR-sponsored training program with demographic and personal history characteristics of the subjects.

The data indicate that referral directly to a trade school rather than to the Project is associated with being female, married, diagnosed as non-schizophrenic, having a more adequate work history, belonging to

[1] See Table 1 of Appendix F for specific coding procedures that were used to scale the variables.

the Protestant faith, being Negro or Puerto Rican, having lower social class standing, and less previous hospitalization history. The abstraction that presents itself is that of the less impaired, married, Negro woman, who typically has lower socio-economic status and who has been capable of more adequate premorbid functioning.

TABLE 10

CORRELATION OF GROUP MEMBERSHIP WITH DEMOGRAPHIC AND PERSONAL HISTORY VARIABLES
(N = 129)

| | |
|---|---|
| Sex | 33** |
| Age | -08 |
| Education | 00 |
| Marital status | -17* |
| Diagnosis | -17* |
| Last hosp. | -09 |
| Prev. employ. | -18* |
| Jewish | -13 |
| Protestant | 21* |
| Catholic | 05 |
| Race | 28** |
| Social class | -18* |
| Prev. rehab. serv. | -05 |
| Prev. hosp. | 17* |

One can speculate that this kind of client is thought not to require a comprehensive rehabilitation program in order to be vocationally rehabilitated. Since her problems and pathology appear less severe than those of the $A_C$ client, it is considered more likely that she can profit from the application of skill training alone. Furthermore, recent studies of the poverty sub-culture, particularly that of the urban Negro lower class, suggest that the typical Group C client may perceive the complex services of a comprehensive rehabilitation program as irrelevant to her needs. She is likely to attribute her work problems simply to a lack of marketable skill (perhaps accurately so). By defining her difficulty in this way, she may have reason to accept an array of services that are not, on their face, connected with her presenting problem.

Length of Program and Program Completion

There were no zero-order differences between the study groups with regard to length of training program or completion of program. The median training time for each group was approximately five months. Thirty-three of the $A_C$ subjects (50%) and 34 (54%) of the Cs managed to complete their assigned programs.

TABLE 11

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS $A_C$ and C: THE RELATIONSHIPS OF THREE SETS OF INDEPENDENT VARIABLES WITH PROGRAM COMPLETION AND LENGTH OF PROGRAM (N = 129)

| | INDEPENDENT VARIABLE SET | | | | | |
|---|---|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | | Beta Weights for Set 3 | |
| Independent Variables | Prog. Complet. | Length of Prog. | Prog. Complet. | Length of Prog. | Prog. Complet. | Length of Prog. |
| 1 Group membership | 01 | 03 | 03 | 03 | 02 | 00 |
| 2 Sex | -13 | -11 | -15 | -12 | -14 | -11 |
| 3 Age | -23# | -24# | -24 | -27# | -21 | -22 |
| 4 Education | -13 | 05 | -10 | 07 | -15 | 05 |
| 5 Marital status | 00 | 04 | -01 | 05 | -04 | 01 |
| 6 Diagnosis | -09 | -13 | -09 | -15 | -13 | -22* |
| 7 Last hosp. | -22** | -31** | -22# | -33** | -20# | -33** |
| 8 Prev. employ. | 34** | 12 | 33* | 13 | 35* | 11 |
| 9 Jewish | | | 04 | 05 | 06 | 07 |
| 10 Protestant | | | -02 | -03 | -01 | -01 |
| 11 Catholic | | | 02 | -02 | 03 | -03 |
| 12 Race | | | 08 | 04 | 07 | 04 |
| 13 Social class | | | 10 | 05 | 07 | 04 |
| 14 Prev. rehab. serv. | | | 12 | 03 | 08 | 01 |
| 15 Prev. hosp. | | | 00 | 06 | 02 | 09 |
| 16 1 X 2 | | | | | 08 | 01 |
| 17 1 X 3 | | | | | -04 | -03 |
| 18 1 X 4 | | | | | -17# | -06 |
| 19 1 X 7 | | | | | 16 | 28** |
| 20 1 X 8 | | | | | 06 | -01 |
| 21 1 X 14 | | | | | 01 | 10 |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | | |
| | 35* (26) | 30 (17) | 38 (17) | 31 (00) | 43 (15) | 41 (08) |

length of program and program completion were employed as dependent variables in multiple regression analyses to explore the following issues:

1. To some extent, the length of an individual's training program and his ability to complete the program are influenced by his personal characteristics. Since there were some systematic differences between the study groups with regard to these background characteristics, multiple regression could be used to partial out these differences and study the independent effect of group membership on length and completion of the program.

2. This mode of analysis would also permit specification of those client characteristics which influence the dependent variables.

3. Through appropriate interaction variables, it would be possible to see whether predictors relate differently to outcome as a function of group membership.

Examination of Table II shows that the study groups do not differ on the dependent variable of program completion, holding all other predictors constant.[1] The ability to predict whether an individual will complete his assigned training program, from a composite of his background attributes, is generally weak. The specific features that play a significant role appear to be his status on last hospitalization and his previous employment; the more recent dischargee and the individual with a poorer prior work history areless likely to complete training. There is no evidence that one type of program is better able to retain specific kinds of clients than is the other. (See interactions).

Analysis for length of program also indicates that there is no difference between study groups, when all other influences are partialled out. This variable is not readily determinable from knowledge of an individual's background. There is some suggestion that younger clients, clients who carry a diagnosis of schizophrenia, and those who were discharged a longer time ago tend to receive lengthier programs. There is one statistically significant interaction; for Group $A_C$ the correlation between time since last discharge and program length is .03, while the corresponding $\underline{r}$ for Group C is -.40. This finding signifies that the more recent dischargees in Group C receive shorter training programs. It is difficult to interpret this result. Since the regression system partials out all other influences that are included as predictors, one cannot appeal to these particular attributes in explaining this finding. Whatever its meaning, it appears to be a function of some variable outside of the system that was employed.

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[1] As was indicated earlier, significance levels for beta weights, Multiple $\underline{R}$s, and Shrunken Multiple $\underline{R}$s are reported for the .01 (**), .05 (*), and .10 (#) levels in all tables.

Employment Outcome

The zero-order correlations between group membership and each of the three employment indices show essentially no differences between the ICD-training group and the trade school group.[1] Twenty-two $A_C$ (33%) and 17 C (27%) subjects were unemployed for the entire PSTS, while 11 $A_C$ (17%) and 12 C (19%) subjects manifested what can be considered high levels of employment (i.e. worked at least 80% of the follow-up period). At the end of the follow-up span, 23 $A_C$ (35%) and 22 C (35%) individuals were working.

The results of the multiple regression analyses pertaining to employment are supplied in Table 12. The non-significant beta weights for group membership indicate that there are no employment differences between the two types of training programs, when background differences between study groups are held constant.

The Multiple Rs generated in all nine predictor set-employment index combinations are statistically non-significant. These findings are at variance with the results obtained in the Groups $A_B$ vs. B analyses, where all of the corresponding Multiple Rs are significant. Inspection of the mean values and standard deviations of the predictor variables used in the two analyses indicates that there are no substantial differences in the levels and variances of the predictors that would account for this discrepancy. In part, the dissimilar results are attributable to the contribution that group membership makes to the criterion variance in the earlier analysis, a contribution that is not forthcoming in the current instance. In part also, the current predictor sets do not include the DVR counselor rating which was available in the $A_B$ vs. B analyses, and provided significant criterion-relevant variance there. However, it would seem, in general, that demographic and personal history characteristics are not effective predictors of employment outcomes, in samples that have been provided with vocational training.

The two specific factors which are related to employment outcome are: (1) age, with younger clients tending to work more, and (2) previous rehabilitation services, with the new DVR clients having better employment outcomes.

Two of the interactions are statistically significant and provide some clues regarding the differential effectiveness of the two types of training. Analysis of the interaction involving length since hospital discharge ( I X 7) suggests that trade school programs are relatively less effective with recent dischargees insofar as subsequent time worked is concerned; for Group C,

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[1] See Table 3 of Appendix E for zero-order correlation matrix of independent and dependent variables. Table 2 of Appendix F provides frequency distributions for all independent and dependent variables.

TABLE 12

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS $A_C$ AND C: THE RELATIONSHIPS OF THREE SETS OF INDEPENDENT VARIABLES AND EMPLOYMENT OUTCOME DURING FOLLOW-UP (N = 129)

| | INDEPENDENT VARIABLE SET | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Beta Weights for Set 1 | | | Beta Weights for Set 2 | | | Beta Weights for Set 3 | | |
| Independent Variable | Time Employ. | Employ vs. Not Employ | Employ at end of F-U | Time Employ. | Employ. vs. Not Employ. | Employ at end of F-U. | Time Employ. | Employ. vs. Not Employ. | Employ. at end of F-U. |
| 1 Group membership | -09 | -05 | 04 | 0506 | -07 | 09 | -09 | -09 | .05 |
| 2 Sex | 01 | 03 | -07 | -01 | -05 | -07 | 01 | -02 | -05 |
| 3 Age | -29* | -36* | -29* | -25# | -47** | -21 | -17 | -44** | -16 |
| 4 Education | 02 | -06 | 02 | 05 | -02 | 04 | -01 | -07 | 03 |
| 5 Marital status | -02 | 03 | 08 | -06 | 11 | 01 | -10 | 09 | -01 |
| 6 Diagnosis | 05 | 03 | -02 | 02 | 07 | -06 | -01 | 06 | -08 |
| 7 Last hosp. | -09 | 03 | -06 | -04 | -04 | 01 | -01 | -05 | -01 |
| 8 Prev. employ. | 14 | .24# | 18 | 08 | 26# | 11 | 06 | 25# | 06 |
| 9 Jewish | | | | -02 | -04 | -01 | 01 | -03 | -01 |
| 10 Protestant | | | | -07 | -06 | -03 | -06 | -05 | -02 |
| 11 Catholic | | | | 06 | 06 | 02 | 05 | 06 | 02 |
| 12 Race | | | | 16 | 24# | 00 | 14 | 19 | -03 |
| 13 Social class | | | | 13 | 13 | 12 | 07 | 03 | 06 |
| 14 Prev. rehab. serv. | | | | 21* | 12 | 23* | 16# | 05 | 18# |
| 15 Prev. hosp. | | | | -14 | 12 | -17 | -14 | 14 | -16 |
| 16 1 X 2 | | | | | | | -03 | -06 | -11 |
| 17 1 X 3 | | | | | | | -08 | -29* | -24 |
| 18 1 X 4 | | | | | | | -13 | -17# | -04 |
| 19 1 X 7 | | | | | | | 23* | 13 | 12 |
| 20 1 X 8 | | | | | | | 13 | 20 | 14 |
| 21 1 X 14 | | | | | | | 00 | -04 | 04 |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | | | | | |
| | 26 (07) | 27 (12) | 20 (00) | 37 (15) | 37 (15) | 35 (07) | 42 (14) | 45# (20) | 40 (00) |

the correlation between recency of discharge and time employed is -.29, while the corresponding $r$ for Group $A_C$ is .15. In addition, there is evidence that the ICD program is more effective with younger clients; for Group $A_C$, there is a -.36 correlation between age and obtaining a job during the follow-up period, while the corresponding $r$ in Group C is -.04.

Additional Findings Regarding Employment Outcome

A separate analysis was conducted, in which the workers in each group were compared on the amount of time that they were employed. The mean percentage of time worked was 47% for the 44 Group $A_C$ workers while the corresponding figure for the 46 Group C workers was 51%. The $r_{pbi}$ between the group membership variable and time employed is .07.

A split-plot analysis of variance was performed to determine whether there were significant changes in employment status over time.[1] No employment differences were found between adjacent time segments of the follow-up period, and there was no significant interaction between group membership and the time segments.

Finally, a number of comparisons were made between the study groups on qualitative aspects of the longest held job and on the subject's reported functioning on this job. Table 13 indicates that the trade school group, compared to the ICD group, is more heavily represented in the clerical-sales and semi-skilled areas of employment, and under-represented in the skilled and unskilled areas. To a large extent, this distribution reflects the differences in the training programs that were provided, and the larger number of women present in the trade school group.

TABLE 13

CLASSIFICATION OF LONGEST HELD JOB

| Area | Group $A_C$ (N=44) | Group C[2] (N=44) |
|---|---|---|
| Clerical & Sales | 22 | 30 |
| Skilled | 10 | 2 |
| Semi-skilled | 3 | 10 |
| Unskilled | 9 | 2 |

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[1] The procedure employed for this analysis is the same as that used in comparing Groups $A_B$ and B. See Chapter 5.

[2] Two subjects in Group C were omitted from this analysis due to insufficient data for classifying their jobs.

There was a minor difference between the groups in salary level which is attributable to the lower levels of occupational entry characterizing some of the Project clients. The median salaries were $61 and $65 for Groups $A_C$ and C, respectively. There were essentially no differences between groups on the subject's self reports of: (1) job performance; (2) relationships with supervisors and co-workers, and (3) the supervisor's and co-workers' knowledge of their previous psychiatric status. For the combined groups, 33% of the respondents viewed their job performance as "very good", 41% as "a little better than average", 21% as "just average" and 5% as "not very good". Ninety-two percent reported that they got along well with their supervisors, and 93% that they got along well with their co-workers. Twenty-six percent reported that their employers knew of their past history of emotional difficulties, while 13% said that their co-workers knew.

Hospitalization Outcome

The zero-order correlations between group membership and the hospitalization indices are not statistically significant. Fifteen of the 64 $A_C$ subjects (23%) and 19 of the 58 C subjects (33%) were hospitalized during the TTS. For the hospitalized individuals, both groups had a mean hospitalization time of 35%, and neither group tended to be hospitalized at an earlier point in the TTS. The beta weights in Table 14 indicate that there is still no difference between the study groups with regard to the hospitalization criteria, when the other factors are held constant.

In marked contrast to the Group $A_C$ vs. C employment analyses, the composite sets of predictors appearing in Table 14 are significantly associated with the hospitalization criteria. The basic set of the initial predictors provides as much criterion-relevant information as the larger sets (see Shrunken Multiple Rs). The two distinctive influences on the criteria are recency of hospital discharge and length of previous hospitalization, with both of these factors associated with the adverse outcomes. The significant interaction of group membership with sex (1 X 2) reflects the fact that women fare worse in the ICD program, while men fare worse in trade school settings; the $r_{pbi}$ between sex and subsequent time in hospital is -.35 in the ICD group, with a corresponding r of .24 for the trade school sample.

Personal and Social Functioning

The analyses pertaining to the personal and social functioning measures appear in Tables 15 and 16. The predictor interaction variables are omitted because of the reduction in sample size (N = 88). The instruments were administered only to those subjects who were personally seen by the interviewer and who were capable of providing the required information; subjects residing in hospital were excluded.

TABLE 14

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS $A_C$ and C: THE RELATIONSHIPS OF THREE SETS OF INDEPENDENT VARIABLES AND HOSPITALIZATION OUTCOME DURING FOLLOW-UP (N=122)

| | INDEPENDENT VARIABLE SET | | | | | |
|---|---|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | | Beta Weights for Set 3 | |
| Independent Variables | Time in Hospital | Hosp. vs. Not Hosp. | Time in Hospital | Hosp. vs. Not Hosp. | Time in Hospital | Hosp. vs. Not Hosp. |
| 1 Group membership | -08 | -08 | -09 | -07 | -11 | -08 |
| 2 Sex | 13 | 04 | 07 | 03 | 06 | 03 |
| 3 Age | 22# | 12 | 08 | 07 | 04 | 05 |
| 4 Education | -04 | 02 | 00 | 04 | 05 | 09 |
| 5 Marital status | -16# | -03 | -08 | -02 | -04 | 00 |
| 6 Diagnosis | 07 | 02 | 10 | 02 | 10 | 04 |
| 7 Last hosp. | 44** | 40** | 36** | 34** | 30** | 29* |
| 8 Prev. employ. | -02 | -04 | 04 | 01 | 00 | -04 |
| 9 Jewish | | | 06 | 03 | 04 | 02 |
| 10 Protestant | | | -02 | 07 | -02 | 06 |
| 11 Catholic | | | -10 | -06 | -09 | -05 |
| 12 Race | | | 07 | -13 | 04 | -14 |
| 13 Social class | | | 06 | 07 | 02 | 06 |
| 14 Prev. rehab. serv. | | | 06 | -01 | 05 | -02 |
| 15 Prev. hosp. | | | 22* | 16 | 23* | 17 |
| 16 1 X 2 | | | | | -18* | -09 |
| 17 1 X 3 | | | | | -20 | -23 |
| 18 1 X 4 | | | | | 17# | 11 |
| 19 1 X 7 | | | | | -08 | -11 |
| 20 1 X 8 | | | | | -01 | 07 |
| 21 1 X 14 | | | | | -01 | 05 |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | | |
| | 46** (40) | 41** (34) | 51** (40) | 45* (32) | 56** (42) | 49# (31) |

TABLE 15

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS AC and C: THE RELATIONSHIPS OF TWO SETS OF INDEPENDENT VARIABLES AND MEASURES OF SELF-SATISFACTION AND ANOMIE (N = 88)

| | INDEPENDENT VARIABLE SET | | | |
|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | |
| Independent Variables | Self-Satis. | Anomie | Self-Satis. | Anomie |
| 1 Group membership | -05 | -13 | -02 | -09 |
| 2 Sex | 06 | -07 | 17 | -15 |
| 3 Age | 29 | 00 | 40 | -04 |
| 4 Education | 07 | 02 | 04 | 03 |
| 5 Marital status | -12 | -02 | -22 | 00 |
| 6 Diagnosis | 01 | -17 | -03 | -19 |
| 7 Last hosp. | -04 | 02 | -06 | 04 |
| 8 Prev. employ. | 15 | 04 | -11 | 06 |
| 9 Jewish | | | -10 | 09 |
| 10 Protestant | | | 16 | 18 |
| 11 Catholic | | | 06 | -02 |
| 12 Race | | | -42* | 00 |
| 13 Social class | | | 00 | 08 |
| 14 Prev. rehab. serv. | | | -10 | 27* |
| 15 Prev. hosp. | | | -04 | -01 |
| MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | |
| | 23 (00) | 23 (00) | 39 (00) | 37 (00) |

Our data indicate the following:

1. The study groups do not differ on any of the four criterion measures.

2. The independent variable sets generally possess insignificant criterion relevant information.

3. The only specific factor that is associated with more than one of the criteria is previous rehabilitation services, with new DVR referrals tending to have greater levels of social and leisure time activities and lesser amounts of anomic feelings.

The zero-order correlation matrix (see Table 4 or Appendix E) is generally congruent with the findings based on the multiple regression system.

TABLE 16

MULTIPLE REGRESSION ANALYSES INVOLVING GROUPS AC and C: THE RELATIONSHIPS OF TWO SETS OF INDEPENDENT VARIABLES AND MEASURES OF SOCIAL AND LEISURE TIME ACTIVITIES (N = 88)

| | INDEPENDENT VARIABLE SET | | | |
|---|---|---|---|---|
| | Beta Weights for Set 1 | | Beta Weights for Set 2 | |
| Independent Variables | Social Partic. | Leis. Time Activities | Social Partic. | Leis. Time Activities |
| 1 Group membership | 11 | 14 | 08 | 12 |
| 2 Sex | 17 | -05 | 25# | 02 |
| 3 Age | 28 | -01 | 28 | 00 |
| 4 Education | -01 | -01 | 02 | 06 |
| 5 Marital status | -20 | 19 | -21 | 21 |
| 6 Diagnosis | 15 | 03 | 16 | 03 |
| 7 Last hosp. | -02 | 12 | -08 | 10 |
| 8 Prev. employ. | -08 | 08 | -07 | 09 |
| 9 Jewish | | | -04 | -01 |
| 10 Protestant | | | -13 | 02 |
| 11 Catholic | | | 00 | 01 |
| 12 Race | | | -07 | -01 |
| 13 Social class | | | 03 | 19 |
| 14 Prev. rehab. serv. | | | -27* | -26* |
| 15 Prev. hosp. | | | 12 | 04 |
| MULTIPLE R AND SHRUNKEN MULTIPLE R (in parenthesis) | | | | |
| | 33 (14) | 24 (00) | 44 (16) | 40 (00) |

Similarity between Training Skill and Job Skill

What is the relationship between the specific job that an individual is trained for, and the job at which he subsequently works? Do the specific job skills in which he is trained allow him to obtain work involving these skills? Or is the training a more general influence, by which he is returned to the world of work but not necessarily in a job for which he has been specifically trained.

These issues were explored with Groups AC and C by use of the job classification scheme provided in the Dictionary of Occupational Titles (1966).

The three-digit DOT code groups jobs "according to a combination of work field, purpose, material product, subject matter, service, generic term, and/or industry...." The first number of the code indicates the relation of a job to one of nine broad categories (e.g. clerical and sales, service, machine trades, etc.) The second digit narrows each of the broader categories into smaller, more homogeneous divisions, and the third digit further increases the refinement of the classification.

For the 44 Group $A_C$ subjects who were employed, and for 44 of the 46 Group C subjects, there was enough descriptive material to classify their training areas and jobs on the first two digits of the DOT. Two-digit correspondence between the training area and job area was used to define "high correspondence". Similarity in only the first digit of the code or non-similarity in both digits defined "low correspondence".

Table 17 presents the degree of correspondence between the training area and the first job obtained during the follow-up period. There is only a minor difference between the study groups, with the trade school group showing more similarity. For the combined sample, slightly more than half obtained jobs that corresponded to their training areas. A similar analysis was performed for the 48 subjects whose last job during the follow-up period differed from their first one. For these individuals, there were no substantial differences between study groups, with approximately half again showing high correspondence between training area and job area.

TABLE 17

DOT CORRESPONDENCE BETWEEN TRAINING AREA AND FIRST JOB OBTAINED DURING FOLLOW-UP

| | Group $A_C$ (N = 44) | | Group C (N = 44) | | Combined Samples (N = 88) | |
|---|---|---|---|---|---|---|
| Correspondence | N | % | N | % | N | % |
| High | 22 | 50 | 26 | 59 | 48 | 55 |
| Low | 22 | 50 | 18 | 41 | 40 | 45 |

The final study was focused on whether individuals with previous work histories were receiving refresher training in skills already acquired or whether they were being trained for new careers. The work histories of the 73 subjects in both study groups who had been employed prior to program entrance were classified by means of the DOT. Only the last job prior to program entrance, and jobs held for more than six months during the preceding

five years were coded. Table 18 presents the relationship between the previous employment areas and the subsequent training programs. There are no apparent differences between groups, and for the combined sample, approximately three quarters of the individuals received training for new occupations.

TABLE 18

DOT CORRESPONDENCE BETWEEN PREVIOUS EMPLOYMENT AREAS AND SUBSEQUENT TRAINING AREAS

| Correspondence | Group $A_C$ (N = 35) | | Group C (N = 38) | | Combined Groups (N = 73) | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| High | 9 | 26 | 10 | 26 | 19 | 26 |
| Low | 26 | 74 | 28 | 74 | 54 | 74 |

Summary of Findings

1. There are ascertainable prior differences between clients with emotional disability who receive vocational training in a comprehensive rehabilitation center and other emotionally disabled clients who are referred directly for vocational training in a trade school. In general, it appears that the latter group made a better overall life adaptation than the former. It was speculated that the trade school group's more adequate previous status was perceived by the referring DVR counselors as indicating that these clients did not need (or perhaps would not derive benefit from) an elaborate network of supportive services ancillary to vocational training. Specifically, the trade school group tended more often to be female, was characterized by minority-group status and lower socio-economic standing, had less previous hospitalization, had been diagnosed as having less severe pathology, and had a better previous work-history.

2. There is no evidence that either study sample attained a higher degree of rehabilitation success on any of the outcome criteria of the study. The composite relationships of demography with the outcome criteria (via Multiple R) was generally meagre.

3. Although the study groups did not differ with regard to length or completion of training program, there were some client attributes related to these criteria. Specifically, the more recent dischargee and the individual with a poorer prior work history are less likely to complete training. There is some evidence that younger clients, clients who carry a diagnosis of schizophrenia, and those discharged a longer time ago tend to receive lengthier training programs.

4. Two specific background factors were found to be related to employment outcome. These are (1) age, with younger clients tending to work more, and (2) previous rehabilitation services, with the new DVR clients having better employment outcomes. There is also some evidence that Project training was more effective than trade school training with the younger and more recently discharged client, with respect to future employment outcome.

5. The two study groups do not differ on rehospitalization during follow-up, even when all other differences between them are held constant. For the groups combined, greater hospitalization is associated with recency of discharge and length of previous hospitalization. An interesting finding that is difficult to interpret is that females had poorer hospitalization outcomes in the Project training programs, while males tended to fare worse in the trade school settings.

6. A series of analyses was conducted to determine the relationship between what an individual is trained in and what he subsequently works at. There was no difference between study groups with regard to the degree of correspondence between training and employment areas, and a little more than half of both groups combined worked in the specific area for which they were trained.

# CHAPTER 7

## THE EXPERIMENTAL GROUP: PROGRAM AND SUBJECT VARIANCE (GROUP $A_p$)

The results so far have primarily been reported to account for criterion variance in terms of : (1) between-treatment (or program) effects; (2) between-subject differences in demographic and other background variables; (3) the interaction of background characteristics with treatment conditions. The current chapter describes a series of investigations that were designed to study the experimental group itself. The first section deals with within-program variables and the second involves between-subject effects for variables other than demography. These studies were performed on the total group of 92 clients who received "substantial" services from the ICD program (Group $A_p$). Of the total N of 111 Group A clients, 19 were excluded from these analyses because they were in the program for less than 2 weeks.[1]

### The Effect of Program Variables

A series of objective and readily quantifiable program characteristics were selected and studied for criterion-relevance. These program variables reflected, in a general way, the amount of service effort invested in particular clients. They were as follows:

1. Psychotherapy. Thirty-two of the Group $A_p$ clients (35%) received some form of group or individual psychotherapy or intensive case-work service. Only individuals who were seen for more than 10 successive sessions on at least a once-a-week basis, were defined as having received treatment for purposes of this study. The 32 treated patients were coded with the lower score, while the higher code was given to the non-treated Ss.

2. Program Length. The number of days that each client actually attended the program was computed. The group mean for this variable is 113 service days, with a standard deviation of 79 days (clients could come no more than 5 days per week).

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[1] These 19 "no-shows" were also studied in follow-up. In general, they did not differ in background characteristics from their counterparts in Group A who received substantial service at ICD. The one significant difference, of 13 background variables studied, was that the "no-shows" tended to have somewhat more previous employment. With respect to outcomes, the "no-shows" spent more time in the hospital during follow-up and a smaller proportion found employment. The group available for study, however, was small and it is difficult to attach much significance to these findings.

3. Program Completion Forty-one of the $A_p$ clients (45%) were judged by the Project staff to have completed their assigned programs. Of 51 non-completers, 24 were administratively terminated by the Project and 27 dropped out. The program completers were coded with the higher score, and the non-completers were assigned the lower score.

4. Number of Staff Contacts. Project service personnel were required to keep a record of their contacts with clients. The contacts that each client had with the social worker, psychologist, and vocational counselors were summed. The group mean for this variable was 43 contacts with a standard deviation of 37.[1]

Table 19 presents the multiple regression analyses for the selected program variables against two outcome criteria: follow-up time employed and time hospitalized. Each of the program indicators is sequentially studied as one predictor of a set of seven, where the remaining six are demographic characteristics. By including the program variable in the independent variable system, it becomes possible to remove the influence of the demographic attributes on the relationship between the program variable and the criteria. Thus, any obtained relationship is free from the confounding effects that potentially inhere in the background characteristics.

The data indicate that all of the program characteristics studied are significantly related to the criteria.[2] No attempt was made to determine which of the indicators possessed greater saliency. They are obviously intercorrelated variables, and the conservative conclusion is that the greater the program involvement, the more positive are the outcomes.

One additional study employing a program variable was performed. The selected variable was time of program entrance. Group $A_p$ was subdivided by placing the 41 earlier entering clients in one group, and the remaining clients in the other group. Sub-group membership was then scored dichotomously, and multiple regression analyses against the time employed and time hospitalized criteria were performed. The sub-group variable (reflecting time of program entrance) was included as a predictor, together with the six demographic characteristics that were used as controls in the above reported study. The beta weight for this independent variable against employment was significant at the .05 level, and its beta weight against hospitalization was significant at the .10 level. In both cases, the earlier entrants fared better, working more and being hospitalized less.

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[1] On the average, a client had two contacts with Project service staff each week that he was in the program.

[2] Significance levels for beta weights, Multiple Rs, and Shrunken Multiple Rs are reported for the .01 (**), .05 (*), and .10 (#) levels in all tables.

TABLE 19

/MULTIPLE REGRESSION ANALYSES INVOLVING GROUP $A_p$: THE RELATIONSHIPS OF DEMOGRAPHIC VARIABLES AND SELECTED PROGRAM INDICATORS WITH EMPLOYMENT AND HOSPITALIZATION OUTCOME DURING FOLLOW-UP (N = 92)

| | INDEPENDENT VARIABLE SET | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Betas for Demography Alone | | Betas for Demography & Psychotherapy | | Betas for Demography & Prog. Lngth. | | Betas for Demography & Prog. Complet. | | Betas for Demog. & No. staff contacts | |
| Independent Variable | Time Empl. | Time Hosp. | Time Empl. | Time Hosp. | Time Empl. | Time. Hosp. | Time Empl. | Time Hosp. | Time Empl. | Time Hosp. |
| 1 Sex | 04 | -30** | 05 | -32** | 04 | -31** | 06 | -31** | 03 | -29** |
| 2 Age | -37* | -25# | -31# | -31* | -31# | -33* | -31* | -28# | -31* | -32* |
| 3 Education | 05 | 21* | 04 | 23* | 06 | 20* | 14 | 17 | 01 | 26* |
| 4 Social class | 10 | 02 | 08 | 04 | 12 | 00 | 05 | 05 | 10 | 02 |
| 5 Prev. hosp. | -04 | 31** | -06 | 34** | -09 | 39** | -08 | 33** | -07 | 35** |
| 6 Prev. employ. | 19 | 06 | 17 | 07 | 18 | 06 | 07 | 11 | 21 | 02 |
| Psychotherapy | | | -22* | 23* | | | | | | |
| Program length | | | | | 21* | -31** | | | | |
| Program completion | | | | | | | 47** | -23* | | |
| No. staff contacts | | | | | | | | | 25* | -30** |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | | | | | | | |
| | 31 (18) | 45** (39) | 38# (27) | 50** (44) | 37# (25) | 54** (48) | 55** (50) | 51** (44) | 39* (28) | 54** (48) |

This finding is of interest to research endeavors that focus on program evaluation. It may mean that service staffs "try harder" in the early phases of a program and "run out of steam" or become routinized in its later phases. Whatever the specific mediating mechanism, this program factor appears to be a significant source of outcome variance, and should more frequently be incorporated in the designs for evaluation research.

## Staff Assessments

A series of studies was performed to explore whether there were criterion relevant behavioral characteristics that could reliably be assessed in clients during their early weeks in the program. Three instruments were employed to obtain independent ratings from the five to seven staff members with whom the client was in contact during his first two weeks in the program. Adequate precautions were taken to insure independence of the assessments. Each of the instruments was factor analyzed to obtain a reduced number of salient dimensions. These more basic dimensions were then factor scored, and the quantified factors were studied for their relationships with the criteria.[1]

A quasi-second order factor analysis was also performed, using the factors obtained in the separate analyses of the three instruments. However, inspection of the higher order factor structure and the relationships of these factors with the criteria indicated that the quest for commonality had gone too far, resulting in losses of specific instrument variance. The quasi-second order factor analysis is employed below only to provide some understanding of the relationships among the factors derived from the three instruments. The assessment devices that were employed are as follows:

1. Coping scale. This instrument consisted of seven coping styles, each defined by an accompanying brief description (see Appendix C). The coping syndromes that were selected were based on clinical impressions formed in earlier studies of psychiatric rehabilitation (cf. Gellman, Friedman, Gendel, Glaser and Neff, 1957; Neff, 1959), and were refined in pilot studies conducted by the Project staff. The coping styles were: (a) Fearful; (b) Dependent; (c) Impulsive; (d) Socially naive; (.) Withdrawn-apathetic; (f) Self-deprecatory; (g) Hostile.

   Staff members were required to rate these broad types of behavior in terms of their predominance in the client's make-up on a four point scale, from very predominant to not predominant.[2] The accompanying instructions requested raters to make their judgements

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[1]The factor scoring procedure weighted each item in accordance with its signed factor loading (a) and its variance ($\sigma$). The formula was as follows:

$$\frac{a}{(1 - a^2)(\sigma)} .$$

[2]Rankings, as well as ratings were initially obtained. However, the rankings possessed lower-inter-judge reliability and were dropped from further use.

"on the basis of the client's behavior (how he acts and what he says) and not on the basis of inferences about underlying motivations and dynamics."

The intraclass coefficient of correlation (Haggard, 1958) was used to determine the reliabilities of the composite set of ratings on each item. The obtained reliabilities range from .56 to .79 and were deemed to be acceptably high, since the intraclass R provides an approximation of the squared coefficient of reliability obtained with the Pearson r (Cronbach, Rajaratram and Gleser, 1963).[1]

The Coping scale was factor analyzed and three principal components were rotated by the varimax method. The rotated factors are as follows:

Factor 1 is defined by Impulsive (loading of .98)
Factor 2 is defined by Self-deprecatory (loading of .87).
Factor 3 is defined by Dependent, Socially naive, and Fearful (loadings of .85, .65, .62 respectively) and was renamed Passive immaturity.

The Hostile and Withdrawn-apathetic styles had split-loadings and were consequently dropped.

2. Rating scales. An assortment of 21 rating scales were devised or selected by the Project staff. A few were adapted from previous research studies, but most represented dimensions that staff members deemed relevant to client outcome. The heterogeneous characteristics to be rated included, among other things, the client's appearance, work motivation, mental status, potential to profit from various services, and self-confidence (See Appendix C). Each characteristic was rated on a three to five point scale.

The intraclass, interjudge reliability correlations that were computed for each of the scales ranged from .45 to .84, with a median value of .75[2]. Centroids were obtained from the mean ratings over items and three factors were rotated by the varimax procedure.[3]

Factor 1 loaded heavily on items denoting bizarreness of behavior, the prognostication that the client could ultimately

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[1] See Appendix C for the reliabilities of each of the items.

[2] See Appendix C for reliabilities of each item.

[3] See Appendix C for a listing of the rating items assigned to each factor and the loadings for these items.

not be placed in employment, impaired comprehension, defective communicative ability, poor grooming, and physical unattractiveness. The content of this factor suggests the label: Poor facade in relation to placeability.

Factor 2 consisted of items dealing with the client's lack of work motivation, the staff's disinterest in working with the client, and the prediction that the client would not work continuously when in the labor market. This factor has been named: Low motivation for employment.

Factor 3 was derived primarily because of the inclusion of three bipolar scales in a set that otherwise was unipolar. These three scales were the client's pessimism about obtaining work (ranging from highly pessimistic to highly optimistic), the soundness of his vocational choices (ranging from highly grandiose to highly self deprecatory); and his confidence in himself as a worker (ranging from feeling he is excellent to feeling he is poor). The content of this factor suggests the name: Negative vocational self-perception.[1]

3. Adjective Q-sort. The last staff assessment device was a 70 item set of descriptive adjectives that had been devised by Block (1956). Each staff member was required to sort the adjectives into a seven-step, rectangular Q-sort distribution that was descriptive of the client.[2] The ten adjectives that were most characteristic of the client were placed at the seventh step, the next ten most characteristic items at the sixth step, and so on, down to the first step which contained the ten adjectives that were least descriptive of the client.

In the present study, this instrument represented the least pre-structured assessment device, since it consisted of an array of items from a large domain of personal qualities. Unlike the previous two instruments, which were composed of pre-selected attributes from smaller domains, this device has less of an a priori constraint on its content.

For each client, the mean value over raters on each of the 70 items was computed to obtain a mean sort for the client. The

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[1] After factor scoring, this factor was split at the mean, and a higher coded score was assigned to scores above the mean (negative vocational self-perceivers), and a lower value to those below the mean. This step was taken since it was highly unlikely that the continuous distribution of these factor scores would linearly relate to the outcome measures. By treating this factor dichotomously, we are asking whether the more negative vocational self-evaluation, as compared to the more positive self-evaluation, is related to outcome.

[2] See Appendix C for a list of the adjectives.

mean sorts were then factored over subjects to obtain clusters of items. Seven centroids were extracted and rotated by the varimax method. One of the rotated factors was dropped because it accounted for a minor amount of matrix variance, and was characterized by split loadings on most of its items. The factors employed in this study are as follows:[1]

Factor 1 had high positive loadings on such items as friendly, cooperative, likeable, warm, sincere, and sympathetic. High negative loadings occurred on items such as hostile, defensive, suspicious, resentful, and cruel-mean. The content of this factor suggests Positive interpersonal orientation.

Factor 2 was characterized by positive loadings on easily embarrassed, timid-submissive, helpless, dependent, and easily hurt. These items suggest Passive timidity and this cluster appears quite similar in content to the Passive immaturity factor obtained in the analysis of the Coping scale.

Factor 3 had positive loadings on excitable, restless, impulsive, energetic, and negative loadings on calm, self-controlled, reserved, dignified, and poised. This factor has been named impulse-ridden and it is similar in content to the Impulsivity factor obtained in the Coping scale analysis.

Factor 4 is positively loaded on imaginative, idealistic, intelligent, introspective, and sophisticated; it has a negative loading on dull. This factor has been labelled Intelligent-idealistic.

Factor 5 is positively loaded on self-indulgent, selfish and lazy and is negatively loaded on dependable, reliable, and wise. The content suggests Egocentrism.

Factor 6 is loaded positively on unhappy, dissatisfied, self-pitying, and worried-anxious, with a negative loading on confident. This factor is labelled Personal misery.

4. A second-order factor analysis was performed on the item clusters obtained from the three assessment instruments to get a more global picture of the staff members' perception of the entering client. Four generalized client attributes were retrieved from this analysis. They are as follows:

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[1] See Appendix C for factor compositions and loadings.

a. Impulse-ridden, with loadings on the impulsivity factors from the Coping scale and the Q-sort.

b. Feelings of hopelessness, consisting of the personal misery factor from the Q-sort, self-deprecation from the Coping scale, and negative vocational self-perception from the Rating scales.

c. Passive immaturity defined by this factor in the Coping scale, and by the poor facade and passive timidity cluster in the Rating scales and Q-sort, respectively.

d. Egocentrism, with a negative loading on positive interpersonal orientation in the Q-sort; positive loading on the low motivation factor of the Rating scales; and a positive loading on its namesake in the Q-sort.

Relationship of factors with the criteria

Do the staff assessments provide criterion-relevant information that cannot be obtained from demography alone? This general question can be examined by referring to Table 20. The criteria selected for this study are (1) Completion of the assigned ICD program (higher score is assigned to completers); (2) Time employed during follow-up; (3) Time hospitalized during follow-up. The first row of the Table lists the Multiple Rs generated by the group of six demographic characteristics: sex, age, education, social class, previous hospital history, and previous employment. The remaining three rows present the Multiple Rs obtained when the demographic variables are combined with the factor scores from a particular assessment instrument. Each of the three combined predictor sets was tested against the basic demographic set to determine whether there was a statistically significant increment in the value of $R$.[1] The symbols **, * and # are used to signify those increments which are significant at the .01, .05, and .10 level, respectively

The data indicate that each of the three sets of assessment factors makes a modest, but statistically significant, contribution to the criteria of program completion and time employed. The values of the Shrunken Multiple Rs suggest that the devices are approximately equal with regard to their performance, with perhaps a slight edge for the Q-sort factors. The criterion of time in hospital is as effectively predicted by demography alone, as by the more inclusive sets of predictors. Thus, the client qualities derived from the assessments do not appear to be as relevant for rehospitalization.

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[1] See Guilford (1965) for relevant statistical test.

TABLE 20

MULTIPLE CORRELATIONS OF DEMOGRAPHY ALONE AND DEMOGRAPHY-STAFF ASSESSMENT COMBINATIONS WITH OUTCOME CRITERIA (N = 92)

| | MULTIPLE R and SHRUNKEN MULTIPE R (in parenthesis) | | |
|---|---|---|---|
| Variable Set | Prog. Complet. vs. Non-complet. | Time Emplov. | Time in Hosp. |
| Demography alone | 27<br>(08) | 31<br>(18) | 45<br>(39) |
| Demography and Rating scale factors | 38#<br>(22) | 53**<br>(45) | 47<br>(36) |
| Demography and Q-sort factors | 47*<br>(33) | 58**<br>(48) | 51<br>(39) |
| Demography and Coping scale factors | 43**<br>(31) | 40*<br>(25) | 50<br>(42) |

Tables 21, 22, and 23 examine the specific client characteristics which possess distinctive relationships with the three outcome criteria. These multiple regression analyses employ the six demographic variables as controls, so that any relationships between the assessment factors and the criteria are not attributable to the underlying influence of the demography.

TABLE 21

MULTIPLE REGRESSION RELATIONSHIPS OF RATING SCALE FACTORS AND DEMOGRAPHY WITH OUTCOME CRITERIA (N = 92)

| | BETA WEIGHTS | | |
|---|---|---|---|
| Independent Variable | Prog. Comp. vs.Non-Comp. | Time Employ. | Time in Hosp. |
| F.1 Poor facade | -01 | -18 | -02 |
| F.2 Low motiv. for empl. | -23# | -35** | 10 |
| F.3 Neg. voc. self-percep. | 19# | 13 | -08 |
| Sex | 02 | 07 | -32** |
| Age | -14 | -29# | -23 |
| Education | -22# | 00 | 22* |
| Social class | 13 | 17 | 01 |
| Prev. hosp. | 07 | -07 | 32** |
| Prev. employ. | 19 | 00 | 06 |
| | MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | |
| | 38<br>(22) | 53**<br>(45) | 47*<br>(36) |

TABLE 22

MULTIPLE REGRESSION RELATIONSHUPS OF Q-SORT FACTORS AND DEMOGRAPHY WITH OUTCOME CRITERIA (N = 92)

| Independent Variables | BETA WEIGHTS: Prog. Comp. vs Non-Comp. | Time Employ. | Time in Hosp. |
|---|---|---|---|
| F.1 Pos. interper. orient. | -16 | 16 | 10 |
| F.2 Passive timidity | 00 | -34** | -07 |
| F.3 Impulse ridden | 04 | 04 | -03 |
| F.4 Intell.-idealistic | 06 | -07 | -03 |
| F.5 Egocentrism | -48** | -34** | 29* |
| F.6 Personal misery | -06 | 08 | -06 |
| Sex | -04 | 07 | -27** |
| Age | -13 | -34* | -22 |
| Education | -19# | 05 | 20# |
| Social class | 12 | 16 | 03 |
| Prev. hosp. | 10 | -04 | 30** |
| Prev. employ. | 10 | 01 | 13 |
| MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | |
| | 47* | 58** | 51* |
| | (33) | (48) | (39) |

TABLE 23

MULTIPLE REGRESSION RELATIONSHIPS OF COPING SCALE FACTORS AND DEMOGRAPHY WITH OUTCOME CRITERIA (N = 92)

| Independent Variables | BETA WEIGHTS: Prog. Comp. vs. Non-comp. | Time Employ. | Time in Hosp. |
|---|---|---|---|
| F.1 Impulsivity | -19 | -03 | 20* |
| F.2 Self-deprecation | 27* | 12 | -11 |
| F.3 Passive immaturity | -20# | -25* | -12 |
| Sex | 01 | 06 | -33** |
| Age | -14 | -31# | -15 |
| Education | -28* | 00 | 24* |
| Social class | 12 | 11 | 03 |
| Prev. hosp. | 08 | 05 | 30** |
| Prev. employ. | 16 | 07 | -01 |
| MULTIPLE R and SHRUNKEN MULTIPLE R (in parenthesis) | | | |
| | 43* | 40# | 50** |
| | (31) | (25) | (42) |

1. Program completion. Our data suggest that the client who completes the ICD program is more likely to indicate to the service staff that he is dissatisfied with himself than is the non-completer. Both negative vocational self-perception (F.3, Rating scales) and self-deprecation (F.2, Coping scale) are significantly related to this criterion. Psychotherapy studies suggest that patients who continue in therapy express greater personal dissatisfaction and feelings of inadequacy than those who drop out (Rubenstein and Lorr, 1956; Lorr, Katz and Rubenstein, 1958; Taulbee, 1958). It may be that the elevation in negative self-evaluation found in the current study represents a more realistic self-assessment by the client and his willingness to confront personal problems and inadequacies.

   As might be expected, our study indicates that the non-completer shows less initial work motivation (F.2, Rating scales) and is more likely to be judged as impulsive (F.1, Coping scale). It is interesting to note that passive immaturity (F.3, Coping scale) and Egocentrism (F.5, Q-sort) are associated with non-completion of the program. To some degree, these factors appear to reflect a characterological syndrome of the inadequate personality (e.g. dependent, socially naive, self-indulgent, lazy, unreliable). It may well be that a relatively demanding program tends to "wash out" individuals who have difficulty tolerating increasing program pressures.

2. Subsequent employment. Analysis of the data on employment outcome indicates that the above-described, characterologically impaired individual has a poorer work record during follow-up. Passive immaturity (F.3, Coping scale) and egocentrism (F.5, Q-sort) relate negatively to time employed. Passive timidity (F.2, Q-sort) also produces the less desirable employment consequences. It is not surprising that the easily embarrassed, easily hurt individual should find it harder to cope with the everyday interpersonal stresses of work and tends to avoid the source of his discomfort. Finally, as would be expected, there is a relationship between initially judged low motivation for employment (F.2, Rating scale) and subsequent work outcome.

3. Hospitalization during follow-up. Only two of the factors relate to hospital outcome. As was indicated earlier, the three staff assessment devices generally have weak relationships with this criterion. The impulsivity factor from the Coping scale is related to this criterion in the expected direction, and egocentrism (F.5, Q-sort) also is associated with greater hospitalization.

## Psychometric Instruments

An assortment of psychometric devices were administered to entering Project clients during their first three weeks in the program. These instruments were employed to generate a variety of predictors to be used in exploratory studies of the three outcome criteria. Aside from the WAIS, the measures obtained from the various tests generally showed minimal and non-significant relationships with the client's later outcome. All 92 members of Group $A_p$ received the WAIS and the Gates Reading Test. The remaining measures are reported for the 79 subjects who had at least sixth grade reading ability, and who were able to give valid test responses. A brief summary of these explorations follows.

1. Gates Reading Test and WAIS. The reading test score was unrelated to the three criteria. The full-scale WAIS score was studied in multiple regression format with the six demographic variables. In addition, the WAIS subscales were specifically scored for the three factors that have been obtained in studies of this test's factorial structure (Cohen, 1957): Factor 1 (Verbal Comprehension) consisted of the Information, Comprehension, Similarities and Vocabulary subtests. Factor 2 (Perceptual Organization) was made up of Block Design and Object Assembly. Factor 3 (Memory) consisted of the Arithmetic and Digit Span subtests. A fourth score, which was computed to index the "scatter", consisted of the absolute sum of the deviations of the three factor scores from the mean of these scores. These four scores were plugged into the multiple regression format, against the criteria. Table 24 presents the results of these analyses. Holding demography constant, the WAIS full scale I.Q. makes a significant contribution to the criteria of Program Completion and Time Employed. Examination of the factor-score relationships with these criteria indicates that it is essentially the memory factor (arithmetic and digit span) that is accounting for most of this relationship. Thus, it would appear that individuals with impaired ability to concentrate are less likely to complete their vocational programs and to subsequently work.

2. MMPI. The booklet form of the MMPI was individually administered to subjects, and scored with the K correction factor included. The zero-order correlations (See Table 5, Appendix E) of the three validity and ten clinical scales with the three criteria were generally non-significant. These 13 MMPI scales were combined in multiple regression equations against each of the three criteria. Neither the beta weights nor the obtained Multiple Rs were statistically significant. Thus, the current study found no effectiveness in the linear statistical combination of the more frequently used MMPI scales.

TABLE 24

MULTIPLE REGRESSION RELATIONSHIPS OF DEMOGRAPHIC VARIABLES AND SELECTED WAIS SCORES WITH OUTCOME CRITERIA
(N = 92)

| | Betas for Demography & WAIS Total Score | | | Betas for Demography, WAIS Factors & Scatter | | |
|---|---|---|---|---|---|---|
| Independent Variable | Prog. Comp. | Time Employ. | Time Hosp. | Prog. Comp. | Time Employ. | Time Hosp. |
| Sex | -07 | -01 | -30** | -07 | -05 | -26* |
| Age | -08 | -33* | -26# | -08 | -34* | -24 |
| Education | -25* | -01 | 22* | -22# | -05 | 26* |
| Social class | 15 | 16 | 02 | 17 | 20# | -01 |
| Prev. hosp. | 05 | -07 | 32** | 04 | -07 | 31** |
| Prev. employ. | 20 | 14 | 06 | 17 | 13 | 07 |
| WAIS total score | 28* | 30** | -02 | | | |
| Verb. Comprehen. factor | | | | -03 | 07 | 04 |
| Percept. organ. factor | | | | 01 | 03 | 04 |
| Memory factor | | | | 35** | 36** | -19 |
| Factor scatter | | | | -09 | 13 | -19 |
| | | | MULTIPLE R and SHRUNKEN MULTIPLE R (in paren.) | | | |
| | 37 (25) | 42* (32) | 45** (37) | 43 (28) | 48# (37) | 51* (41) |

In addition, the zero-order correlations of the following MMPI research scales with the criteria were also computed (Dahlstrom and Welsh, 1960): Welsh Anxiety; Welsh Rigidity; Barron Ego-strength; Tydlaska and Mendel Scale of Work Attitudes (W.A.) None of these relationships were statistically significant.

3. Survey of Interpersonal Values. This standarized test yields scores for six value orientations which are reflected in an individual's interaction with his social world. The orentations are: (1) Support (e.g. being treated with understanding and receiving encouragement); (2) Conformity (e.g. doing what is socially correct); (3) Recognition (e.g. being looked up to and admired; (4) Independence (e.g. being free to make one's own decisions); (5) Benevolence (e.g. doing things for other people); (6) Leadership (e.g. being in charge of other people).

The zero-order correlations of the six value orientation scores with the criteria are generally not significant, and the composite of these scores through multiple regression equations do not produce significant criterion relationships.

4. Opinions about Mental Illness. This factor analytically derived questionnaire yields five scores (Struening and Cohen, 1963): (1) Authoritarianism which reflects an authoritarian, anti-intraceptive orientation toward mental illness; (2) Benevolence which represents a moralistic, humanistic approach; (3) Mental health ideology which consists of items that embody the beliefs of the present day mental health worker; (4) Social restrictiveness which reflects the ideas that mental patients are a societal threat and should be restricted in their activities; (5) Interpersonal etiology which represents the belief that mental illness arises from interpersonal experience.

   Here again, the zero-order correlations of the predictors, and their composite use through multiple regression, were not significantly associated with the criteria.[1]

5. Additional Measures. The Attitude toward Physical Disability Scale (Yuker, Block, and Campbell, 1960) yields a single global measure of prejudice toward, and discomfort with, the physically disabled. ICD had a large number of the physically handicapped in its various programs, and this test was included in the battery to determine whether the Project client's attitude toward the physically disabled was related to his outcome. The correlations between this test variable and the outcome measures were non-significant at the zero-order level, and were still non-significant when partial correlations, controlling for social desirability, were computed.

   Finally, the Rokeach Dogmatism Scale (1960) was found to be unrelated to the criteria in a number of alternate analyses.

Summary of Findings[1]

1. In general, the greater the supply of supportive services to emotionally disordered clients undergoing intensive rehabilitative services, the more positive the outcomes. Clients who received some form of psychotherapy or intensive casework service,

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[1] There was one statistically significant r, indicating a positive relationship between program completion and the social restrictiveness factor.

[2] For the sake of completeness, the research design had included a special group of clients who had not received service from either the Project or DVR, because they had broken off contact with the state agency before a service plan could be formulated (Group D). No detailed results are being reported for this group because, after very strenuous efforts, only a portion of them (22 of 35) could be interviewed during follow-up. Insofar as the 22 interviewed clients are representative, this group of early DVR dropouts tended to be people who were frustrated by waiting periods or what they perceived as a lack of DVR interest in their cases. Six of these clients had relinquished service because they had found jobs on their own. As a group, the 22 clients were not significantly different in background characteristics from the other subjects of the study.

who were in the program for a longer period of time, who completed their assigned programs, and who had a larger number of staff contacts, tended to do better in post-service employment and were hospitalized less than their less served counterparts.

2. It was found possible to distinguish between the more successful and the less successful client on the basis of certain globally rated personal characteristics. In general, clients who managed to complete their assigned service programs were judged initially to have been more self-deprecatory, less impulse-ridden, less egocentric and appeared to have stronger motivation for work than those clients who were either administratively terminated or dropped out before program completion. Clients who had the better work records during the follow-up period were initially characterized as less egocentric and immature, more motivated, and less passively timid. With regard to hospitalization, the picture is somewhat less clear, but the more impulse-ridden and egocentric client tends to spend more follow-up time in the hospital.

3. In contrast to the relationships of the global, clinical impressions obtained from Project staff, an extensive battery of psychological tests did not differentiate between the more successful and the less successful clients. Neither the MMPI, the Gates Reading Test, the Survey of Interpersonal Values, the Scale of Opinions about Mental Illness, the Scale of Attitudes to Physical Disability, nor the Rokeach Dogmatism Scale was related to the basic outcome criteria of the study. The memory factor from the WAIS (Arithmetic plus Digit Span subtests) was found to be positively associated with the client's ability to complete his assigned program, and with the amount of time that he worked ddring the follow-up period

# CHAPTER 8

# DISCUSSION AND CONCLUSIONS

## Overall Objectives

The present investigation had two inter-related aspects. The first of these was to develop a network of services to the vocationally disadvantaged former mental patient which would (a) help him find gainful employment and (b) help him stay out of the mental hospital. The second aspect was simultaneously to study the relative effectiveness of the devised service-pattern, in comparison to rehabilitative services already being made available to this kind of client by a state rehabilitation agency. A secondary aim was to determine whether clients who succeeded were different, in any measurable way, from clients who failed, and whether these differences depended upon the type of rehabilitation program which the client had experienced. The study was thus in a strategic position to make a contribution not only to the development of badly needed services to a highly maladapted sector of the handicapped population, but also to administrative policy and to the general theory of work adjustment.

It is not necessary to enlarge on the fact that these were quite ambitious aims and that they required a complex research design. On the one hand, the investigators were intent on innovating a pattern of rehabilitative services which would be maximally efficient in helping former mental patients to maintain themselves in the community. On the other hand, they were also committed to the maximal degree of research rigor, in order to determine if the developed pattern of services had been, in fact, of any particular benefit to the clients served. Anyone who is at all familiar with the problems of service-oriented research is aware that these two aims may, at times, be contradictory and it is not easy to keep them in balance. The directors of the study had to wear two hats-- one marked service and one marked research-- and would sometimes have been glad to throw one away. At the same time, it is the belief of the investigators that the near-ideal mix of service and research features, in the present Project was partly made possible by the consolidation of these two functions.

## The Methodology in General

The details of the service and research features of the study are presented in detail in earlier chapters and need not be repeated now. In retrospect, however, it is necessary to comment on some of the more general conditions under which the study was carried through, in order to grasp the degree to which the findings have more than local significance. A number of specifications need to be made.

### 1. The Subjects

The fact that a certain sector of the population has been tagged with the label of "emotional disability" does not markedly

diminish their essential heterogeneity as persons. People with histories of emotional disorder may be rich or poor, young or old well or poorly educated, highly intelligent or comparatively dull, aggressive or passive, hostile or benevolent. The nature of the emotional disturbance may be very severe or comparatively mild. Its time of onset may have been so early in childhood that the entire life-pattern of the person has been seriously distorted, or its period of acute onset may have been compara ively recent. The fact that a given individual has been discharged from a mental hospital is itself of very variable significance. For one individual, discharge from a mental hospital may signify that he has been substantially "cured". For another, it may simply mean that an administrative decision has been made that he is not a danger to himself or others and thus does not require incarceration; he may still be very disturbed and disorganized, by almost any other criteria. It must also be understood that the emotional disorders, especially if they have eventuated in commitment to a mental hospital, have very powerful social consequences. Not only has the patient been cut off-- for variable lengths of time-- from all ordinary social arrangements (job, family, friends, the responsibilities and assets of ordinary citizenship), but also he returns to a social environment which has variable attitudes to what is thought of as mental illness. It should be added that many of these attitudes are negative, strongly entrenched, and often quite unconscious. Given the ordinary operation of these multitudinous groups of factors, it is obvious that we need to know much more about a given individual than the fact that he had been classified as a schizophrenic and committed to a mental hospital.

The 230-odd mental patients studied in the Project were certainly far from a homogeneous grouping, as our data indicate, but the full possible range of heterogeneity was probably limited by the following considerations. The subjects of the study represent neither mental patients in general (some never leave the hospital), nor discharged mental patients in particular. The target population of the study is rather sharply specified. First, the subjects had to be people who wanted jobs but could not find them, either through their own efforts or through the ordinary public and private employment agencies that are available. Second, they were people who found their way to a state rehabilitation agency, who met the feasibility requirements of this agency and who were able to tolerate all of the necessary delays and waiting periods incumbent on being accepted as a case. Third, if they were to become members of the experimental or control groups of the study (Groups A and B) they had to accept referral to a place called the Institute for the Crippled and Disabled (regardless of the uncertainties and fears that this name may have aroused) and they also had to meet the minimal admission requirements of

the Project (no complicating physical disabilities, no history of addictions, minimally adequate intelligence, etc.) Referral to the Project was also a function of the judgement of the counselor at the state agency, who had his own notions of what was best for the particular client. The primary subjects of the project were thus, in part, self-selected and, in part, selected by others. They are clearly not a random sample of discharged mental patients in general, nor even a truly random sample of mental patients who enter the caseload of such an agency as DVR.

The complex research strategy of the Project reflected the expectation that the primary subjects of the study would be assigned "selectively" rather than randomly. It was anticipated that these primary subjects, the experimentals (Group A) and the direct controls (Group B), would be persons referred to the Project because the DVR counselor, in his own best judgement, thought that these were people who would profit from it. But there were other clients in the DVR caseloads for whom other dispositions were made, and the addition to the study of Groups C and D comprised an effort to construct a representative sample of the full range of persons who make up the DVR mental patient caseload.

The degree to which the findings have generality is also influenced by the particular site of the study. It was carried on in the New York City urban area, which has its own unique demography and labor market conditions. It was influenced by whatever unique properties are attached to the New York City DVR. Finally, and most important, it was influenced by the fact that it was carried on at a quite unique rehabilitation facility-- the Institute for the Crippled and Disabled-- which differs in many important ways from most other rehabilitation agencies. These global conditions also influenced who entered the study and who stayed in or dropped out.

In an overall sense, therefore, the study subjects constitute a highly selected group, although they were not "selected" by the Project itself. A large number of unspecifiable variables operated to bring the subjects to the Institute, and most of these were not under Project control. The conjoint operation of all of these selective influences produced a sample of patients which had certain specialized characteristics, not all of which were anticipated. First, the referred clients (Groups A and B) tended to be somewhat younger than had been expected. Second, they tended to be more white-collar and middle-class than is characteristic of the typical state mental hospital population. Thirdly, (this was anticipated) they tended to be people with a life-long history of poor adaptation, covering most life areas, with frank symptomatology making its appearance typically in adolescence. As a group, they had little previous work experience and tended to be unmarried,

social isolates. Whether their emotional disorders were a cause or an effect of their poor levels of social adjustment, it is obvious that the experimental and control subjects comprised a highly marginal population. The quite moderate measure of success achieved by Project clients must be appraised in the light of the gravity of their presenting problems.

2. The Service Plan. The service strategy of the study directors was to focus the client's attention on an intensive and graded series of vocational experiences, while at the same time providing him with whatever personal and therapeutic support he required in order to benefit from these experiences. Thus, the explicit core of the program was vocational and the emphasis was on adjustment to work. More traditional services to psychiatric patients--casework, psychotherapy, recreational and socialization activities--were defined as "ancillary" and supplied as needed. As it turned out, virtually all of the clients appeared to need these supportive services and the staffs both of the Project and the Institute had to work very hard to supply them. Nevertheless, everything was done to convey to the client that his chief reason for being at ICD was to learn how to work and to acquire the personal and vocational skills that would make employment a more likely possibility.

One of the essential points to remember, however, in connection with service-oriented research, is that horses can be led to water but they cannot uniformly be made to drink. In laboratory settings, or in certain kinds of pharmacological research, every subject in a given treatment condition can be said to have an identical stimulus exposure. In service settings, this is far from being the case. Whether a given client does, or does not, avail himself of a given service is, in the first place, a voluntary decision on his part and, in the second place, also a function of decisions made by the serving staff. Within the Project experimental group, as in all service programs, there was a great deal of variation in the kinds of services offered and accepted, in the intensity and duration of particular services, and in the degrees of commitment and involvement with a service, both on the side of individual clients and individual staff members. While these matters are too intricate and ill-defined to be currently subjected to statistical analyses, they can be assumed to play some part in influencing the absolute size of measured differences between experimentals and controls. In "field" researches such as this one, not all experimentals can be assumed to have received the specified treatments, and not all controls can be assumed to have received no treatment, or a definably different treatment. In the chapters detailing our results, we have attempted to take account of some of these problems by carefully subdividing the groups into more truly comparable subgroups ($A_B$ vs. B, served B vs unserved B, AC vs. C, $A_P$ vs. $A_{NS}$), but restrictions on sample size and the

difficulty of arriving at finer subdivisions were realistic limitations.

3. The Outcome Criteria. In the initial research proposal (Neff, 1961), the success-failure criteria of the Project were defined very generally in terms of employment and rehospitalization. The strategic decision was made that more precise criteria would be formulated from the data of the intensive follow-up study that was projected for all subjects. The rationale for this decision was that nothing very much is known about the base rates for employment and rehospitalization which characterize the target population. There have been very few adequate follow-up studies of discharged mental patients in general, and we were aware that our sample might not be entirely representative of former mental patients studied elsewhere. The several outcome criteria which were actually used in the study were worked out on the basis of Project follow-up, and are not necessarily comparable with criteria utilized by other studies. They have the advantage, however, of being empirically, rather than intuitively, derived.

The great virtue of the derived outcome measures is that they are generally "hard" criteria. No element of subjectivity or personal judgement enters into their computation. Employment and rehospitalization are strictly matters of record, and strenuous efforts were made to ensure that the record was objective and accurate. Thus, this investigation is not faced with the many doubtful issues related to unreliable criteria, which have plagued many studies of therapeutic outcome.

On the other hand, there is ground for belief that the outcome criteria were, in certain respects, too rigorous and inflexible. The fault lies not in the strategy of the investigation but in the current level of resources of society. Unfortunately, present social arrangements do not permit this very disadvantaged and maladapted population to experience a range of possible outcomes: from highly sheltered work situations to totally unprotected jobs. At present, employment is pretty much an all-or-none affair. One must be able to find an entirely unprotected job in the ordinary labor market, or one does not work at all. Sheltered employment situations are few and far between, and variable degrees of sheltering are non-existent. To a considerable extent, the same situation holds for rehospitalization, although there has been some limited recent experimentation with alternatives to total hospitalization (the day hospital, the night hospital, etc.). For our clients, however, rehospitalization simply meant re-commitment to a conventional, largely custodial, mental hospital, of the same type from which they had been discharged. Thus, rehospitalization also tended strongly to have

an all-or-none character. The point we are making is that present social arrangements compel us to accept criteria of rehabilitation outcome that may be too demanding for many members of this target population. Some of these former mental patients may need a degree of sheltering that falls somewhere between the current definitions of total success and total failure. The Project, however, had to make do with whatever outcome our society currently permits. The investigators became deeply convinced, during the course of the study, that the target population is badly in need of more flexible arrangements for employment and institutional assistance than are currently available.

## The Chief Study Findings

The detailed results of the study are briefly summarized at the ends of Chapters 5, 6 and 7, and it is not necessary to review them here. The chief findings of the study are, first, that the elaborate network of Project services had a significant, if quite moderate, influence on the employability of this group of former mental patients (albeit, no effect on their rehospitalization rates) and, second, that clients with certain personal characteristics benefitted more than clients with other characteristics. We shall comment briefly on these principal results.

That there was a significant statistical difference between experimentals and controls is gratifying; that the difference was quite moderate in magnitude is not. The brutal fact is that only approximately one-sixth of either group was able to maintain stable employment during the follow-up period and a little less than three-quarters of the experimentals and one-half of the controls were able to work at all. While we have no very hard evidence, our strong impression is that this meager result is attributable to two major sets of circumstances. First, the target population is marked by prolonged social maladaptation in every significant life-area, and it may be that much more extensive service than the Project permitted is required to change these entrenched lifelong patterns of behavior. Second, as was mentioned earlier, it is our

belief that society must provide a number of forms of sheltered and quasi-sheltered employment in order for people of this type to make any really significant adaptation to work. Some of these patients appear to be so damaged or undeveloped, that some sort of sheltered employment, together with minimal ancillary services, may be needed for the rest of their lives.

That there was no differential influence on rehospitalization rates is disappointing, but not entirely unexpected. It must be recalled that the central aim of the Project was vocational adjustment and that all of its supporting and ancillary services were focused on removing barriers to employment and not just maintaining the patient in the community. It is also possible that experimentals and controls turned to the hospital for different reasons, although this issue was not investigated. The chief unknowns in this situation are that rehospitalization occurs for different reasons in different clients and not all of the reasons necessarily reflect an increase in pathology. The relative ease of rehospitalization is increasingly a function of shifts in administrative policy, and these changes have been, on the whole, positive rather than negative. Again, however, it would appear that our rehospitalization criteria need to be far more flexible, permitting a larger range of institutional and semi-institutional alternatives than are readily available at the present time.

Two further findings are of considerable interest: first, that Project clients who had more frequent contacts with staff, and who had more quanta of supportive services, did better than clients who had less of each; second, that global, clinical judgements of personal characteristics-- based on judgemental rating scales-- were significant predictors of criterion outcomes, while some standardized psychometric tests in general use were generally not. The first result suggests the value of more intensive and extensive services. The second result suggests that it may be impractical to rely on standard psychometric tests as selection instruments. This finding is in some contrast to other studies, in which clinical judgements were poorer predictors than psychometric tests.

The final issue of importance has to do with the ability of the Project to differentiate between successful and unsuccessful clients. Some of these client characteristics are rather obvious; some are less so. That the more successful client tended to be younger and with a better employment history might well be considered an expected result. But even with these more obvious characteristics held constant, certain other clinical impressions turned out to be criterion-related. Thus, the client who managed to successfully complete the Project program gave the initial impressions of being more self-deprecatory, less impulse-ridden, less egocentric and more strongly motivated for work. Similarly, clients who had the better work records during the follow-up period were initially characterized by less egocentrism, immaturity, and passive timidity, and greater motivation for work. It is also worth noting that the DVR counselor was able to distinguish the more from the less successful client merely on the basis of the prior judgement as to who he thought had better rehabilitation potential.

In sum, therefore, the study directors feel that something can be learned from this Project, concerning what it takes to rehabilitate the vocationally disadvantaged former mental patient, although it is also clear that a great deal more needs to be done. The problems brought to the rehabilitation process by this kind of client are both severe and intransigent. Above all, it is our considered belief that the desired rehabilitation outcomes-- work and freedom from hospitalization-- need much more flexible arrangements than are currently available. It is not enough to achieve increased discharge rates, although this itself is a social gain. If the discharged mental patient is to avoid the negative consequences of enforced idleness and recommitment, our society will have to invest a larger share of its mental health resources in various forms of long-term, semi-sheltered employment and in many more varieties of partial institutionalization.

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APPENDIX A
Table I

DVR Reasons for Closure*

| CODE | REASON |
|---|---|
| 1 | Under age 14 |
| 2 | Not a state resident |
| 3 | Moved out of state |
| 4 | Legally blind |
| 5 | No significant disability |
| 6 | No employment handicap |
| 7 | Unable to contact - not found |
| 8 | Failure to respond to correspondence or report for interview |
| 9 | Temporarily unavailable for services |
| 10 | Made own vocational adjustment |
| 11 | Deceased |
| 12 | Unfavorable medical prognosis |
| 13 | Requires indeterminate period of treatment in hospital, institution, or home |
| 14 | Impairment too severe |
| 15 | Exacerbation of disability |
| 16 | Employment or other facilities not available |
| 17 | Not interested in DVR service and not amenable to counseling. |
| 18 | Interested only in service not related to a vocational objective |
| 19 | Unrealistic goals - not amenable to counseling |
| 20 | Unable to participate in planning - other than disability reasons |
| 21 | Rejects program of rehabilitation services during counseling |
| 22 | Other _____ (Specify) |

*This series of codes is used by DVR to report non-acceptance of a prospective client for DVR service.

APPENDIX A (Cont'd)
Table 2

Initial letter sent to subjects notifying them of an interview

Dear

At the request of the United States Vocational Rehabilitation Administration, I am carrying out a survey of the experiences and needs of people who, at one time or another, applied for assistance in finding a job or in getting vocational training. The ideas and suggestions that we can get from people who have gone to community agencies for help with their job problems will be very useful in deciding how the work of these agencies can be improved, and what additional kinds of assistance should be provided.

I understand that, during the last two years or so, you have approached _____ _____ for help with your employment problems. I would like to arrange to have one of our staff members visit you within the next two or three weeks, so that you can tell us about your own experiences, ideas and opinions. As in all government-sponsored surveys, the information you give us will be strictly confidential.

One of our staff members will call you in the next few days in order to set up an appointment.

Let me thank you in advance for your cooperation, which will benefit others who have problems in finding employment.

Sincerely yours,

Walter S. Neff, Ph.D.
Survey Director.

APPENDIX A (Cont'd)
Table 3

Initialletter sent to subjects who did not have telephones.

Dear

At the request of the United States Vocational Rehabilitation Administration, I am carrying out a survey of the experiences and needs of people who, at one time or another, applied for assistance in finding a job or in getting vocational training. The ideas and suggestions that we can get from people who have gone to community agencies for help with their job problems will be very useful in deciding how the work of the agencies can be improved, and what additional kinds of assistance should be provided.

I understand that, during the last two years or so, you have approached _____ for help with your employment problems. I would like to arrange to have one of our staff members visit you within the next two or three weeks, so that you can tell us about your own experiences, ideas and opinions. As in all government-sponsored surveys, the information you give us will be strictly confidential.

We are enclosing a self-addressed envelope and an appointment form. Please indicate when, and during what hour of the day or evening, it would be convenient for you to be visited.

Let me thank you in advance for your cooperation, which will benefit others who have problems in finding employment.

Sincerely yours,

Walter S. Neff, Ph.D.
Survey Director

APPENDIX B
Table 1

Index of social participation

(Go through list asking which activities individuals performed in the last month, determine frequencies, and apply code:)

1. Almost every day
2. Once or twice a week
3. Once or twice a month
4. Did not do during month.

1. Visit friends _____
2. Entertain friends at home _____
3. Talk to friends on the telephone _____
4. Visit relatives _____
5. Entertain relatives at home _____
6. Talk to relatives on telephone _____
7. (If unmarried) Go out on dates _____ _____
8. Go to parties and other social activities _____
9. Go to a neighborhood bar or other neighborhood hangout _____
10. Go to meetings of clubs, organizations, lodges, unions or other groups _____
11. Other social activities _____

APPENDIX B (Cont'd)
Table 2

Index of leisure time activities

(Go through list, asking which activities individual performed in the last month, determine frequencies, and apply codee:)

1. Almost every day
2. Once or twice a week
3. Once or twice a month
4. Did not do it during month.

1. Work on some hobby _____
2. Read newspapers and magazines _____
3. Go to the movies _____
4. Go to lectures, theaters, concerts, sports events _____
5. Go to church or synagogue _____
6. Do volunteer work in the community _____
7. Bowl, swim, do exercise, or other sports _____
8. Play cards, checkers, chess, or other games _____
9. Sew, crochet, or knit _____
10. Repair things around the house _____
11. Read books _____
12. Go to a library or museum _____
13. Take courses at home or at school _____
14. Other-- How else do you usually spend your time (when you are finished working)?

_____

_____

APPENDIX B (Cont'd)
Table 3

Index of self-satisfaction

PLEASE ANSWER EACH OF THE FOLLOWING QUESTIONS BY PUTTING A CHECK (✓) NEXT TO THE ANSWER WHICH TELLS HOW YOU FEEL.

XI. How satisfied are you with your marriage?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

XIA. How satisfied are you with being single?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

2. How satisfied are you with your physical appearance?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

3. How satisfied are you with the way you spend your leisure time?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

APPENDIX B (cont'd)
(Table 3(cont'd)

4. How satisfied are you with your personal friendships?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

5. How satisfied are you with the way you get along with your family (mother, father, brothers, sisters)?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

6. How satisfied are you with your sexual life?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

7. How satisfied are you with your financial situation?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

8. How satisfied are you with your intelligence?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied.

APPENDIX B (Cont'd)
Table 3 (cont'd)

9. How satisfied are you with your personality?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

10. How satisfied are you with the way in which you deal with difficult situations?

_____1. very satisfied
_____2. pretty satisfied
_____3. slightly satisfied
_____4. slightly dissatisfied
_____5. pretty dissatisfied
_____6. very dissatisfied

APPENDIX B (Cont'd)
Table 4

Reimanis scale for Anomie

PLEASE DRAW A CIRCLE AROUND THE WORD UNDER EACH STATEMENT WHICH TELLS HOW YOU FEEL ABOUT THE STATEMENT.

1. In spite of what some people say, the lot of the average m is getting worse.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

2. Most public officials are very much interested in the problems of the average man.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

3. It's hardly fair to bring children into the world with the way things look for the future.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

4. There are many people around these days one surely can count on.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

5. Nowadays a person has to live pretty much for today, and let tomorrow take care of itself.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

6. In spite of what some people may say, the lot of the average man is getting better and better.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

7. These days a person doesn't really know whom he can count on.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

8. Considering everything that is going on these days, there is a very bright future ahead for the younger generation.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

9. There's little use writing to public officials because often they aren't really interested in the problems of the average man.

   Strongly agree  Agree  Can't decide  Disagree  Strongly disagree

10. It is always a good idea to plan far ahead for your future.

    Strongly agree  Agree  Can't decide  Disagree  Strongly disagree.

APPENDIX C
Table 1

Rating form used by DVR counselor for Groups A and B subjects

CLIENT'S NAME _____

DVR COUNSELOR _____

DATE _____

If you were to arrange your client caseload in the order from difficult to rehabilitate to easy to rehabilitate, where would you place this client?

_____ 0% - 25% (difficult to rehabilitate)

_____ 25% - 50%

_____ 50% - 75%

_____ 75% - 100% (easy to rehabilitate)

APPENDIX C
Table 2

Coping Scale[1]

Below is a list of seven types of behavior. On the next page, please rank these types of behavior from most predominant to least predominant in the the client's make-up.

After you finish the ranking, please indicate for each type of behavior how predominant it is in the client's make-up by check marks (✓).

A note of explanation: The descriptions below accompanying each type are meant to be suggestive and illustrative of the kinds of behavior that go to make up that type. However, these descriptions are not exhaustive or complete so that a client may rank high on a given type although he does not fully fit the whole description.

Also, please make your judgements on the basis of the client's behavior (how he acts and what he says) and not on the basis of inferences about underlying motivations and dynamics. You may find it helpful to remove this page and keep it next to the answer sheet.

---

IMPULSIVE (R = .63)

Among other things, this sort of individual may rarely see a task through, may be unable to stick to a plan of action, may flit from one thing to another, may be unable to delay the gratification of his impulses, may immediately seek to satisfy his desires, may easily become enthusiastic about something and then rapidly lose the enthusiasm.

DEPENDENT (R = .56)

This kind of individual might give the appearance of being impotent in dealing with the world by himself. Among other things, he may frequently ask help from others, may rely on others for support, may be unable to initiate action on his own, may place himself in the position of making others direct him, may be highly compliant, may seek others' approval.

FEARFUL (R = .60)

Among other things, this sort of individual may be tense, fidgety, jumpy, uneasy, may be frequently troubled or worried, may be afraid and timid in his relationship with others, may be afraid to establish contact with others, may seem mousy, may shy away from things and people.

SOCIALLY NAIVE (R = .78)

This kind of individual may be unperceptive when it comes to the needs or feelings of others, may not realize that his behavior elicits reactions from others or has an effect on them, may be socially inept, may not seem to know what is appropriate in ordinary social situations.

---

[1] Intraclass (R) inter-judge reliability of each item appears in parenthesis.

APPENDIXIC (Cont'd)
Table 2 (Cont'd)

WITHDRAWN, APATHETIC (R = .79)
Among other things, this kind of individual may be bland, lethargic, may lack vitality, may give the impression of being indifferent to things going on around him, may lack emotional responsivity, may seem very easy-going and uninvolved.

HOSTILE (R = .67)
Among other things, this sort of individual may be angry with others most of the time, may be subtly negativistic, may contradict and argue with others, may do things to irritate and annoy others, may be sarcastic, may belittle or insult others, may criticize others.

SELF-DEPRECATORY (R = .64)
Among other things, this sort of individual may point up and willingly talk about his deficiencies, may be highly self-critical, may talk about his ineptitude, may derogate his qualities and abilities, may generally run himself down, may express self-doubts.

---

TYPE RANKING AND RATING

| | | very predominant | somewhat predominant | slightly predominant | not predominant |
|---|---|---|---|---|---|
| MOST | 1. _____ | | | | |
| | 2. _____ | | | | |
| | 3. _____ | | | | |
| | 4. _____ | | | | |
| | 5. _____ | | | | |
| | 6. _____ | | | | |
| LEAST | 7. _____ | | | | |

APPENDIX C
Table 3

Staff Assessment Rating Scales[1]

CLIENT'S NAME _____ CASE NUMBER _____
RATER _____ DATE _____
WEEK NUMBER _____

---

PLEASE TRY TO RATE THE CLIENT ON EACH SCALE. HOWEVER, IF YOU FEEL YOU DO NOT HAVE THE INFORMATION AVAILABLE ON WHICH TO RATE THE CLIENT ON A PARTICULAR SCALE, PUT A DK 'DON'T KNOW) NEXT TO THAT SCALE.

1. CLIENT'S GROOMING: (do not base your rating on the fashionability or quality of the client's dress) (R = .81)

_____1. Very well groomed
_____2. Above average grooming
_____3. Below average grooming
_____4. Very poorly groomed

2. CLIENT'S PHYSICAL ATTRACTIVENESS: (do not base your rating on the client's dress or grooming) (R = .83)

_____1. Very attractive
_____2. Better than average in attractiveness
_____3. Below average in attractiveness
_____4. Unattractive

3. CLIENT'S ABILITY TO COMMUNICATE (R = .83)

_____1. Has no difficulty in getting meaning across
_____2. Has slight difficulty in getting meaning across
_____3. Is hard to follow at times, but is usually understood
_____4. Meaning can only be understood with great effort.

4. CLIENT's COMPREHENSION: (R = .80)

_____1. Has no difficulty understanding your questions, statements, or instructions.
_____2. Has slight difficulty understanding your questions, statements, or instructions.
_____3. Has moderate difficulty understanding your questions, statements, or instructions.
_____4. Has great difficulty understanding your questions, statements, or instructions.

---

[1] Intraclass (R), interjudge reliability of each item appears in parenthesis.

APPENDIX C (Cont'd)
Table 3 (Cont'd)

5. HOW AWARE WOULD THE AVERAGE PERSON BE THAT THE CLIENT HAS EMOTIONAL PROBLEMS (R = .80)

_____1. Highly aware
_____2. Somewhat aware
_____3. Unaware

6. RATER'S JUDGEMENT CONCERNING CLIENT'S ODD OR INAPPROPRIATE BEHAVIOR (gestures, verbalizations, mannerisms, actions, etc.) (R = .81)

_____1. No odd or inappropriate behavior evident
_____2. Moderately odd or inappropriate behavior evident
_____3. Bizarre behavior evident

7. RATER'S FEELING ABOUT WORKING WITH THIS KIND OF CLIENT (R = .45)

_____1. Prefer to work with this kind of client
_____2. Have no preference when it comes to working with this kind of client.
_____3. Prefer not to work with this kind of client.

8. FEAR MANIFESTED BY CLIENT IN HIS DEALINGS WITH RATER (R = .69)

_____1. Manifests no fear
_____2. Slightly fearful
_____3. Moderately fearful
_____4. Considerably fearful

9. CLIENT'S COOPERATION WITH RATER (R = .67)

_____1. Is actively cooperative
_____2. Is passively cooperative
_____3. Is passively resistant
_____4. Is actively resistant

10. CLIENT'S CONFIDENCE IN HIMSELF AS A WORKER (R = .50)

_____1. Feels he is an excellent worker
_____2. Feels he is an average worker
_____3. Feels he is a poor worker

11. CLIENT'S PESSIMISM ABOUT OBTAINING WORK IN THE FUTURE (R = .52)

_____1. Highly pessimistic
_____2. Somewhat dubious
_____3. Somewhat optimistic
_____4. Highly optimistic

12. SOUNDNESS OF CLIENT'S VOCATIONAL CHOICES IN RELATION TO HIS PRESENT LEVEL OF FUNCTIONING (R = .55)

_____1. Vocational choices are highly grandiose
_____2. Vocational choices are slightly grandiose
_____3. Vocational choices are realistic and practical
_____4. Vocational choices are slightly deprecatory
_____5. Vocational choices are highly deprecatory.

APPENDIX C (Cont'd)
Table 3 (Cont'd)

13. INTENSITY OF CLIENT'S MOTIVATION TO WORK (R = .67)

_____1. Strong _____
_____2. Moderate _____
_____3. Mild _____
_____4. None _____

14. SOURCE OF WORK MOTIVATION: Social - prodding by others (R = .45)

_____1. Strong
_____2. Moderate
_____3. Weak

15. SOURCE OF WORK MOTIVATION: Psychological - inner needs and values (R = .50)

_____1. Strong
_____2. Moderate
_____3. Weak

16. SOURCE OF WORK MOTIVATION: Financial-immediate money problems (R = .46)

_____1. Strong
_____2. Moderate
_____3. Weak

17. CLIENT'S POTENTIAL FOR UNDERGOING TOWER EVALUATION IN THE NEXT FEW WEEKS (R = .84)

_____1. High potential
_____2. Moderate potential
_____3. Little potential
_____4. No potential

18. CLIENT'S POTENTIAL FOR TRAINING (i.e. individual will become employable through specific vocational training) (R = .75)

_____1. High potential
_____2. Moderate potential
_____3. Little potential
_____4. No potential

APPENDIX C (Cont'd)
Table 3 (Cont'd)

19. CHECK THE AREA (S) IN WHICH THE CLIENT HAS HIGH OR MODERATE POTENTIAL FOR TRAINING (R = .75)

_____1. Sheltered workshop
_____2. Unskilled
_____3. Semi-skilled
_____4. Skilled
_____5. Managerial-professional
_____6. Other (Please indicate) _____

20. CLIENT'S PLACEABILITY IN AN AVERAGE JOB MARKET AFTER RECEIVING ICD SERVICES (R = .83)

_____1. Highly placeable; comparatively easy to find a job
_____2. Moderately placeable; position can be found, but with some difficulty and delay.
_____3. Minimally placeable; great difficulty in placing
_____4. Possibly placeable in sheltered employment
_____5. Unplaceable

21. IF COMPETITIVE INDUSTRIAL EMPLOYMENT IS OBTAINED, CLIENT'S ABILITY TO MAINTAIN EMPLOYMENT FOR THE SUCCEEDING YEAR (R = .66)

_____1. Will probably maintain employment for less than one month of the succeeding year
_____2. Will probably maintain employment 1-3 months of succeeding year
_____3. Will probably maintain employment 3-7 months of succeeding year
_____4. Will probably maintain employment 7-11 months of succeeding year
_____5. Will probably maintain employment for full succeeding year.

APPENDIX C (Cont'd)
Table 3 (Con't'd)

Factor Loadings of Staff Assessment Rating Scales

| Item No. | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| 5 | -87 | -21 | -08 |
| 6 | 84 | 23 | -07 |
| 19 | 84 | 38 | 04 |
| 17 | 80 | 46 | 04 |
| 4 | 78 | 22 | -02 |
| 3 | 76 | 31 | -07 |
| 18 | 76 | 49 | 00 |
| 21 | -65 | -21 | -13 |
| 8 | 59 | 03 | 25 |
| 2 | 54 | -07 | -05 |
| 1 | 51 | 00 | 04 |
| 13 | 23 | 77 | 09 |
| 9 | 19 | 71 | -13 |
| 15 | 08 | 57 | 21 |
| 7 | 37 | 57 | -24 |
| 20 | -44 | -52 | -12 |
| 14 | -26 | -52 | -25 |
| 10 | 17 | 06 | 71 |
| 11 | -06 | -16 | -66 |
| 12 | -11 | -22 | 55 |
| 16 | 11 | 02 | 04 |

APPENDIX C
TABLE 4

Staff Assessment - Q-Sort

You are asked to describe the client (whose name appears on this page) as you see him. Please follow the procedure outlined below.

Look through the list of adjectives and notice that a good many of them are descriptive of the client to a greater or lesser degree. Other of the adjectives are quite undescriptive of him and are even the opposite of the way you see him. Your task is to indicate the various degrees with which each adjective describes him.

As a first step, look through the list and then pick out the ten adjectives or phrases you feel are most characteristic or descriptive of him. Put the number 7 in front of these words. Now, look through the list again and pick out the ten words which are quite characteristic of him (excluding from consideration those words you have already given the number 7 to). Write the number 6 in front of these words. Now of those words that remain, pick out the ten adjectives that are fairly descriptive of him and place the number 5 in front of them.

Now work from the opposite end toward the middle. Of those words not yet numbered, pick out the ten adjectives that are most uncharacteristic of him and give them the number 1. Pick out ten adjectives that are quite uncharacteristic of him and give them the number 2. Now choose the ten adjectives fairly uncharacteristic of him and give them the number 3.

As a check, count the words that still have no numbers. If the total is ten then you have followed the procedure properly. If the total is different, then a mistake has been made somewhere and you had better check to see if you have ten words numbered 7, ten 6's, ten 5's, ten 3's, ten 2's, ten 1's.

When you have checked to see if you are correct, place the number 4 in front of the ten words remaining without numbers and your task is finished.

A few soothing words. You may have difficulty in placing the required number of adjectives into each of the categories. For example, where ten words are required for a category, you may find that you have too many or too few. In either event, finish with the required number of words, either by eliminating those that can most sensibly be moved out or by moving in those words that are most relevant. You may feel that some of your word placements are forced. Your task is admittedly an awkward one but try and work through it anyway. There is a research method in our madness.

APPENDIX C (Cont'd)
Table 4 (Cont'd)

CLIENT'S NAME _____ CLIENT'S NUMBER _____
RATER _____ DATE _____

1. ___absent-minded
2. ___alert
3. ___ambitious
4. ___assertive, dominant
5. ___bossy
6. ___calm
7. ___cautious
8. ___competitive
9. ___confident
10. ___considerate
11. ___cooperative
12. ___cruel, mean
13. ___defensive
14. ___dependable
15. ___dependent
16. ___disorderly
17. ___dissatisfied
18. ___dull
19. ___easily embarrassed
20. ___easily hurt
21 ___energetic
22. ___excitable
23. ___fair-minded, objective
24. ___flexible
25. ___frank
26. ___friendly
27. ___helpless
28. ___hostile
29. ___idealistic
30. ___imaginative
31. ___impulsive
32. ___intelligent
33. ___versatile
34. ___introspective
35. ___ jealous
36. ___lazy
37. ___likable
38. ___personally charming
39. ___reasonable
40. ___rebellious
41. ___reliable
42. ___resentful
43. ___reserved, dignified
44. ___restless
45. ___sarcastic
46. ___poised
47. ___self-controlled
48. ___self-indulgent
49. ___ selfish
50. ___self-pitying
51. ___sense of humor
52. ___sentimental
53. ___shrewd, clever
54. ___sincere
55. ___sophisticated
56. ___stubborn
57. ___suspicious
58. ___sympathetic
59. ___timid, submissive
60. ___touchy, irritable
61. ___tactless
62. ___unconventional
63. ___undecided, confused
64. ___unhappy
65. ___uninterested, indifferent
66. ___unworthy, inadequate
67. ___warm
68. ___withdrawn, introverted
69. ___worried and anxious
70. ___wise

APPENDIX C (Cont'd)
Table 4 (Cont'd)

| Factor 1 | | Factor 2 | | Factor 3 | | Factor 4 | | Factor 5 | | Factor 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Item | Load | Item | Load | Item | Load | Item | Load | Item | Load | Item | Load |
| 11 | 79 | 1 | 53 | 6 | -89 | 18 | -61 | 14 | -61 | 9 | -63 |
| 12 | -70 | 3 | -56 | 21 | 61 | 29 | 68 | 36 | 68 | 17 | 70 |
| 13 | -78 | 4 | -79 | 22 | 86 | 30 | 68 | 41 | -58 | 50 | 55 |
| 25 | 66 | 5 | -67 | 31 | 83 | 32 | 64 | 48 | 69 | 64 | 72 |
| 26 | 84 | 8 | -72 | 43 | -82 | 34 | 59 | 49 | 68 | 69 | 50 |
| 28 | -82 | 15 | 77 | 44 | 85 | 55 | 50 | 70 | -44 | | |
| 35 | -46 | 19 | 84 | 46 | -64 | | | | | | |
| 37 | 76 | 20 | 76 | 47 | -86 | | | | | | |
| 42 | -74 | 27 | 81 | | | | | | | | |
| 54 | 74 | 53 | -64 | | | | | | | | |
| 56 | -66 | 59 | 82 | | | | | | | | |
| 57 | -77 | 63 | 55 | | | | | | | | |
| 58 | 73 | 66 | 61 | | | | | | | | |
| 60 | -73 | | | | | | | | | | |
| 65 | -54 | | | | | | | | | | |
| 67 | 75 | | | | | | | | | | |

APPENDIX D
Part I

# SOCIAL WORK WITH EX-MENTAL PATIENTS IN A COMPREHENSIVE REHABILITATION PROJECT

David Katz, M.A.

(The following are brief excerpts from a much longer document written by the Project Social Worker, in response to questions posed by the Project Directors of VRA RD 990-p.)

What were the overt and covert expectations with which the client came to the Institute?

The most striking thing about interviewing entering clients with respect to their motivation was the way in which a large majority avoided taking any responsibility for choosing ICD. The concept of "being sent" was frequently heard. Clients very often expressed a desire in one way or another to "be changed by ICD." The use of a passive voice is deliberate, since it is in keeping with the way that clients, or at least most of them, express themselves. They come here wishing to be changed in a number of ways. They want to be given "more self-confidence", they want to "get a job which will make me feel like somebody", and there is often a fantasy wish that we will discover in them some hidden talent or ability which could reverse the trend of their chronic failure. I was speaking just now mainly of the realm of fantasy. What they let you see openly most often is a kind of detached resignation. "Well, I have been sent here because it will do me good. Other things tried in the past have failed; this probably will also, but here I am, so do something." From another point of view, the clients almost always perceived ICD as a school, and did feel some relief that they were being allowed to regress to a school type situation. The idea of getting another chance was quite apparent.

To summarize, I would say that the majority of clients came here with conflicting expectations. On the one hand, they hoped that somehow things would be different for them in this "school", that we would find a hidden talent in them, give them the kind of training that they could approach with self-confidence, and that we would find them a job that they could do which would provide security and prestige, - all this without a conscious commitment on their part. There were a smaller number of clients, more openly paranoid and grandiose, who openly expected to find that ICD was not good enough for them, but this was a small minority.

What were the most frequent verbalized resistances upon coming to the Institute?

Very frequently the client would express concern over why he had been sent to an agency for the crippled and disabled. I think there were actually two trends behind this concern. First, in a concrete way, the client wondered

if the various people who sent him here really considered him to be a cripple; "Am I that bad?" Second, I think there was also great concern whether there were any other mental patients here, whether the Institute was experienced in the "care" of mental patients; this could be paraphrased somewhat as follows: "Do you know enough about my kind of difficulty, how sensitive I am, how much attention I need, etc." A minor batch of resistances had to do with the question of how much this kind of program would change the client's life. Would it interfere with his welfare payments; could he get unemployment insurance; would the Social Security Administration cut off his disability checks; how could he get lunch and carfare; how could he keep his clinic appointments? However, these were minor, compared to the overwhelming resistance of passivity. There was a lack of personal involvement, an avoidance of commitment, and the absence of stated goals other than having something done for him.

What were the immediate methods of alleviating anxieties?

I want to speak at this point without raising the issue of how much anxiety one can alleviate among mental patients, or how much one should alleviate for optimal performance, because I feel that these are irrelevant to an initial interview. Let me say this. I think that the clients felt keenly that they were entering a "school" situation and reacted ambivalently to it. On the one hand, I felt a sense of relief from the patients when they had categorized ICD as a school, with the implication that they would start out learning slowly, and would not be expected to compete with the outside world. I am talking here about the implication of "shelteredness" in a school setting. However, on the other hand, the clients also felt, and rightly so, that they were under scrutiny, in an evaluation, others were judging them, and that it was a risky business.

Let me dwell more on two specific questions which sprang from their anxiety. The questions might be paraphrased in such a manner: "What will be expected of me here?" and "Do you know enough about my disability, sensitivity, panic, etc. to be able to help me?" One of the ways in which I tried to handle their anxiety was with a kind of matter-of-factness. I let the patient know that we were familiar with his type of problem, that we had run across it many times in the past, and that we were accepting him with full knowledge of his difficulties. This alleviated some anxiety, since the patient was encouraged to feel he would not have to keep up his front indefinitely, which in essence he couldn't do anyway. This often gave rise to such questions as "what if I don't feel well - what if I can't concentrate - what if I don't do well?" This, again, I tried to handle with matter-of-factness, explaining that these things happened to other people, and they might happen to the patient. However, we expected to be able to help the patient overcome his difficulties. With respect to their fears about being scrutinized and evaluated, it was really not possible to give assurances that the patient would do well, since, actually, we did not know. What I tried to do was to minimize the patient's tendency to personalize his future experiences by commenting on the universality of evaluation for all clients at the Institute, and assure him that while we understood the patient's anxiety about doing poorly, it was not peculiar to the patient, but again universally suffered, and universally endured.

What were the frequent reasons that clients gave for wanting to come here?

I spoke previously about the difficulties in commitment which the clients experienced. By and large, the majority said that they had come to ICD because they were sent. Curiously enough, many even found it difficult to indicate who had sent them to ICD. They didn't really know whether it was a social worker, a doctor, or whether it was a contact with the professional by a parent. When I ran into such vagueness or unwillingness to show any commitment or will to begin the program, the general reasoning the client gave went as follows: "I was referred here by either a professional or parent who felt it might do me some good." In some cases, we were able to get a little deeper, and the notion then emerged that ICD was the client's "last hope." In other words, the feeling was that the client was here because he had failed elsewhere and everywhere. Despite the lack of commitment and the pessimism with which many clients approached ICD, the idea of work, training for work, or placement was generally known to them, and almost without exception, a desire to work was expressed. As I previously mentioned, the most frequently expressed ideas dealt with wanting to feel better in the sense of greater self-confidence and wanting to feel like "somebody." This leads me to conclude that one of the major needs motivating the clients was to achieve a measure of relief from feelings of worthlessness and inadequacy.

What common problems arose during the evaluation period?

What strikes me as being important during the first few weeks are the client's reactions to the kinds of tasks that they are doing. It is my feeling that whatever their stated objectives, the clients wanted relief from psychic pain which in this instance, consisted of feelings of worthlessness, shame; guilt, and failure, Most clients who come here have a built-in fantasy that in some way ICD is going to make them feel better. During the first few weeks there is a shock of recognition by the client that he is in the same old rotten world where he will have to put out effort in order to receive approval. So during the first few weeks the following categories of complaints can be heard. The first category consists of those clients who feel that they are wasting their time in OT and Workshop, that they really want trade training, that it is trade training which will make them employable and feel better. They want to know why they are being given such meaningless tasks; OT reminds them of the hospital, and the Workshop represents the kind of work they don't want. There is a tendency for them to be concrete so that the individuals who are in the Workshop believe that you put them there because you think that this is what they are qualified for.

The second broad category, and not unrelated to the first, includes those clients who seem to be terrified at their inability to complete the little tasks of OT and Workshop. A typical example of this was a young male who was always complaining that he couldn't do this and he couldn't do that, and that the teacher thought he was stupid and how could he ever think of working in competitive employment. These seekers after omens of failure see the evaluation during the early weeks as further proof that they are no good and they threaten to leave the program. Around the time that they are in TOWER toward the end of the evaluation period, they begin to get anxious

about choice of occupation, and I found a great deal of resistance about making a choice, which I think is related to the client's difficulty in making a commitment to anything. This resistance often manifests itself in complaints against the professionals and claims that the professionals are not able to see what the client is really suited for.

How much contact did you have with the client during the evaluation period?

Formally, I saw each individual twice during the first week, and once during the second week of the evaluation period. After that, how often I saw the patient generally depended upon a number of factors. First, if I had noticed that during the intake, the patient related well to me, and seemed interested in maintaining a relationship with me, I would tend to see him frequently at his places of work during the evaluation. I would also do this if the patient looked particularly shaky, and in need of continued support to keep him on an even keel while going through the evaluation. Patients whom I found unresponsive, or found myself disliking, I did not see nearly as often. What I did do was to make myself available several times a week in each of the areas in which the patients were working; I went around from bench to bench saying hello, asking how things were going, and encouraging questions or suggestions that we get together. Although at first I had told each patient that my door was always open if he had problems or questions, I found that they rarely initiate contact unless you make yourself available on a day-to-day basis when their anxiety and problems seem particularly acute to them. Practically from the beginning I became interested in a number of clients, and continued to see them in a more formal treatment relationship.

Did youchange your mode of operation with clients in any way during the program?

Yes. About half way through the Project, I recognized that some clients were not coming to see me across the street in my office. What I did was to approach them at their places of work and make myself available for as much time as they wanted. Some clients never went beyond the state of passing pleasantries, others seemed to be encouraged to bring up problems. Almost from the inception of the program, I was interested in focusing on patients' difficulties with achievement situations and was sometimes quite direct in focusing those clients who wanted to ramble or ruminate. I think the longer I stayed here the more focused I became on work, and the effects on the client of being in a work-like situation.

What did casework consist of?

At intake, the caseworker's duties consisted of history-taking, orienting the patient, dealing with immediate resistances, and beginning to deal with reality problems which might conflict with the patient's attendance or good performance in the Project program. During the evaluation process, treatment relationships were initiated with a few clients. I saw a great many clients one to three times, generally in an unplanned way, when they asked to see me

with or without an appointment, usually about one of two things; the majority had some financial problems or wanted me to intercede in some way with an employer, a clinic, or a city agency; a minority came in to ask for treatment. These latter cases were generally brought up at the Mental Patient Project conference.

Now we get to the real issue which is what the caseworker saw "casework" as being. Let me again break down casework into a number of categories. The first would be "supportive". This word has probably been abused more than any other in the psychological, especially casework, jargon. With reference to particular problems, the client comes to us for help in assisting him to establish his capacity to cope in a work situation. However, his motivation, his commitment, and his ability are rarely straightforward, and it has been my experience that the idea of coping and working is bound up with the tremendous conflict in the client's psychic life. When a patient applies for service at ICD, whether he admits his commitment or not, I think we make an assumption that there is some ego strength present, and that some part of his ego is going to be allied with the aims and goals of the professionals at the Institute. When I speak of support, I mean supporting this alliance between the healthy part of the ego and the realistic aims and goals which can be realized through a vocational program, or rather a work rehabilitation program. How is this done? In many instances, a start is made by helping the client to act on his own behalf to relieve external pressures (financial, family) or if he is unable to do so by himself, to intervene on his behalf. It is a truism that the patient who is under stern pressure from his environment will be less able to devote himself to the work rehabilitation program.

There is a second facet of support which deals with reality testing. Our patients are extremely sensitive to external evaluations of themselves which may damage their already very shaky self-esteem. They tend to concretize, personalize and they seek omens in their everyday activities which are often interpreted in the light of their feelings of worthlessness. I found that sometimes valuable work can be done by helping the patient to put a particular activity in perspective and helping him examine the evidence on which he is condemning himself. While there is no lasting effect from this, very often the anxiety is temporarily relieved so that the client becomes less involved in defending himself against a task, and more able to absorb himself in it.

Did you feel you modified your treatment sessions to fit the vocational philosophies of the agency?

The effect that working in a work rehabilitation setting had on me was to give me a much greater appreciation for the many capacities which must be integrated before a person is able to work. I think very early in the program I became impressed with the quality of the individual's achievement and his feeling of competence as a major problem in human growth. It no longer seemed true to me that working was of secondary importance, based on successful sublimations of sexual and aggressive drives. Consequently, I found that my stress during the course of treatment was weighted very heavily with the individual's self-image as an achiever or non-achiever, and the ways in which he coped or did not cope with instrumental tasks.

Relative to the other professionals on the staff, what role did you have?

I was the only social worker on the Project which was something of an anomaly since there were at least two of everything else on the Project staff. I did not want to play the classical role of the social worker in the group. By this I mean someone who does intake interviews, handles the patients' financial problems, gets recalcitrant relatives out of the hair of other professionals, etc. At this point I am telling you about my own idiosyncrasies. Along with everybody else, I wanted to "pitch into the patient's psyche and change him." I had a tendency to become very defensive when other staff members looked to me to solve the patient's reality problems or to deal with recalcitrant relatives. Not that I didn't do these things, and not that this wasn't my job, but if I have to be objective about myself, I would have to admit that I was pretty defensive when I suspected that I was being given this or that task to do because I was the social worker.

This particular situation probably would not have occurred if originally someone had been hired who wanted to stick to traditional social work tasks. What I wanted was to have a say in determining the client's program, to be able to provide valuable diagnostic information from my knowledge of the patient's life history, and to treat patients. My idea of doing home visits I think was related very much to a need to have a specific piece of knowledge to contribute to the group that was different from the competencies of the rest of its members. It seems to me that I really haven't answered the question with a logical answer but I am giving you as candidly as I can, my own subjective reactions to the role. Let me put it this way: the ascribed role was that of "social worker." I was defensive about this role, and I did not feel it provided enough status or influence in the team.

What is your reaction to the Project staffing?

I have been asked to comment on how I would see the roles of the various professions as they might interact on a project team, given the experience that I have already had with this team. In order to do this, I would prefer not to work from the point of view of "professional competency" or professional role, but rather from what I feel is the basic goal of a project team: to influence the patient's behavior in such a way as to increase his competence in work situations. This, I think calls for a well-roundedness that is not inherent in any one of the professions to the exclusion of the others. I would prefer to see a staff of people who are rehabilitation specialists rather than vocational counselors, psychologists, and social workers. It seemed to me that too often we got embroiled in arguments over "this I do and this I don't do."

It is my belief that our wish to do therapy with the patients often interfered with our ability to make judgements about them. And in thinking about it, I probably would recommend that the responsibility for the patient's program not be vested in the "therapist." A major criterion in choosing staff members should be whether they are willing to assume program responsibility and are able to subordinate their wishes to do therapy with those patients for whom they have major administrative responsibility, handing those patients over to other treaters. Going along this line further, if one professional were responsible for a patient throughout his lifetime at the Institute, and had the final responsibility for disposition, we could probably run a much tighter program.

Although it is my opinion that the Project staff should be made up of "generalists" rather than "specialists", there are still special qualifications that each of the professions possesses which the others do not. For instance, the psychologists have at their disposal an array of diagnostic tests, and within the Project, each patient was tested in a number of ways. The major difficulty as I saw it, was what to do with the results of these tests. Do they have direct applicability to the kind of program in which we enroll the patient? Sometimes I saw this to be so. For instance, the IQ had some importance in determining the level of occupational goals, and sometimes the personality defen. structure was also taken into account, but I think in a rather oversimplified way. For instance, trying to take advantage of a client's obsessive-compulsive defenses by placing him in what we thought was a kind of work that could utilize these defenses. The social worker usually is thought to have the knowledge of community resources, and to be able to deal with the patient's family problems. The vocational counselor, of course, has an expert knowledge of the labor market, job requirements, and placement possibilities. I would see all these specialties as important, but secondary to a professional person who can take direct responsibility for guiding a patient through a rehabilitation program, supplying most needed services himself and referring the patient to other professionals for ancillary services.

What did the clients' families want?

It's harder to draw generalizations here. Those families whose members contacted me tended to do so when they perceived the patient was either in difficulty at the Institute, or was making difficulties for the family in the home. When things were going well, the parents did not call. The requests they made of the worker reflected their attitudes toward the client. What they really wanted was for the client to act in such a way as to produce less discomfort within the family.

In time I became aware that any difficulty the patient might be having at the Institute was very often translated into irritability and negativism in the family context. The majority of phone calls dealt with complaints, parents stating that the client was very upset, was unmanageable, was behaving in a very peculiar way, and they wanted help in making the patient more manageable. Second, when the client complained of something distressing at the Institute and took it out on the family, the parents would often try to intercede to get the patient's program changed. For instance, several times when patients had difficulty with teachers, the parents called to tell me how distressed the patient was, and wanted me to do something about getting the patient another teacher for his training course.

In general, I would say that the parents wanted little to do with the Institute unless the patient was making them miserable. I got the impression that they preferred not to know what was going on at the Institute, in order to shield themselves against further chronic disappointment with the patient. They preferred to fantasize that in some way we would be able to change the patient in line with their hopes for him.

The family's primary desire was a less troublesome patient. I found them resistant to any discussion of the relationships between the patient and the other family members, or how they might try to handle the patient differently. It was as if they were saying, "Do something, but don't involve me in it, since I am not the sick one." Strangely enough, I found this even in parents who in earlier interviews had done a lot of breast beating about how they felt they had ruined their children's lives.

Did your home visits and your interviews at ICD with relatives enlarge our understanding of the client? How?

In comparison with the home visits, I found the initial interviews with the parents singularly unrevealing. This was so for a number of reasons. First, the parents were usually interviewed at a time when they very much wanted to get the patient into a program, and so they tended to minimize their annoyance, or feeling of discomfort with his behavior. Second, the parent has a stake in defending himself against his own guilt feelings, and has a tendency to deny or distort, the quality of interaction between himself and the patient. Third, it is very often the absent parent, the one who does not accompany the client to the intake interview, who plays an extremely crucial role in the patient's life. So all in all, I would say that interviews with family members who accompany the client are of only moderate value.

I think the value of the home interview lies in getting the flavor of the habitual family interaction in their own home. It might be claimed that the families would put on a show for the interviewer, and in various ways deny their habitual interactive patterns. But I found that this is virtually impossible to do. The value of the home interview is that it allows you to see all members of the family and observe not only what they say, but how they look, where they sit, how they communicate by non-verbal methods; essentially how they live together. The value of seeing the client in his natural surroundings allows us to compare his behavior at ICD with his bahavior in the family setting.

I think this is of importance for the following reasons. First, we see in a patient bizarre behavior, peculiar attitudes, distorted views or reality, which we are at a loss to explain, but which in the family situation take on an extra dimension of logic. To put it more simply bizarre and peculiar behavior is often logical and appropriate in some of the family settings in which our clients live. I think one of the most important notions to be gained from intimate contact with the family is an appreciation of the fact that the patient's illness is not something he bears alone, but that the family suffers with him, and very frequently it seems as if the entire entity conspires to perpetuate the patient's symptomatic behavior.

In one very startling instance, data was obtained during the family visit which indicated a pathological family situation, and shed light on the patient's unrealistic attitudes which had previously been obscure. A young male patient had a pattern of developing complicated vocational plans for himself and seemed to have an overblown need for achievement. He was

capable of initiating training, but always seemed to collapse almost when within sight of his goal. When seen originally during the intake process, the mother gave a picture of a perfectly normal family situation. When I visited the home, I came away with the feeling of intense competition between the patient and his father, with the latter actually needing his son's continued inadequacy as a defense against his own feelings of inadequacy.

In general, how did your service help in rehabilitating the client?

When the client first comes to the Institute, he appears to us to have a mixture of realistic motivation, fantasies of health and grandiosity, severe conflicts over competence and achievement, and great dependency problems. He has for years managed to defeat his own tendencies toward health, and the efforts of others to rehabilitate him. With the mixture of fantasy and fearfulness which he brings to ICD, an intake procedure which is at the same time accepting and reality oriented is helpful. I see the intake process as both orienting the client, and preparing him for evaluation with its attendant risk, and, for the training and placement phases with their often painful demands for the client's growth to a higher level of functioning.

I stress the initial process of dealing with the patient when he comes here because I feel that although the end product of the patient's and the staff's wishes may coincide, each party approaches the rehabilitation process from a totally different avenue. The patient wants something done to him, which will make him feel better: "Give me more confidence and the feeling that I am somebody." The staff, on the other hand, seeks to sustain the patient so that he can endure the frustration of new learning, with its attendant anxiety and struggle. Somewhere along the line the patient is going to have to adopt an active orientation toward helping himself or fail in the rehabilitation effort. How this conflict is handled initially is of importance because it sets the tone.

Next we come to the diagnostic phase. Here, I think the social worker has a broader view of the client's total functioning than perhaps either the vocational or psychological professions. On the basis of the client's history, his perceptions of family relationships and his habitual interactions with them, the social worker 's able to piece together the "life style" of the patient. I spoke earlier of the patient's lack of commitment. Very often this is put in terms of not knowing what to want. Although the patient himself is unaware of its origins, he is very conscious of a feeling that nothing he can do will ever make him feel worthwhile or valuable. It has been my observation that this is not simply a by-product of the patient's guilt, but has its roots in the family symbiosis, where achievement and individuality in the patient are often felt as threatening by other members of the family. I think this point of view is necessary to obtain insight into the patient's conflicts over achievement.

A major problem remains the translation of what we learn about the patient into helpful ways of dealing with him. This usually rests on our ability to predict what will happen if the patient is subjected to this or that training program, or this or that therapeutic situation. For instance, looking at an individual's history and family situation, one may predict whether grandiosity and a wish for instant and easy success is going to be a major factor hindering the rehabilitation process. Using the history, we can also attempt to predict when times of crisis may occur in the program. For example, there are some clients who have a history of being able to start out well on a particular project, but collapse when success is in sight. There are other clients who manage to make some small adjustment in achievement situations only when they are helped to withstand the great initial anxiety, so as to permit some new learning. On the basis of the history and the family situation, I think we are often able to predict when a suggestion to the client to assume greater independence is premature, and when it is called for. We may also be able to predict on the basis of the client's life style, how he might respond to the particular personality characteristics of various teachers and other professionals.

Did you observe changes in the expectations of the client during the rehabilitation process?

It is my feeling that somewhere during the rehabilitation process, the patient must begin to shift his expectations, if he is to complete the program successfully. To discuss this, I'm going to have to repeat a few of the ideas that I have about the development of chronic work disability. I would like to paraphrase Robert White to the effect that the schizophrenic's problem includes a chronic weakness in interpersonal competence, which leads under stress to a surrender of effort and activity, and thus to a loss of control, and to the substitution of dreamlike ideation and fantasy for reality-oriented activity. This state of affairs has its genesis in childhood, where the rewards for competence, mastery and individuation are not forthcoming to the point where these "drives" are gradually abandoned in favor of symbiosis as a desperate and life-saving measure. The disability in competence is cumulative in the sense that earlier failures make the patient even less able to compete on equal terms with his peers later on. Competition becomes more and more painful as time goes on, fostering greater withdrawal into restitutional mechanisms of fantasied grandiosity. Dependency and a feeling of incompetence are intensely related.

As I remarked earlier, it is my opinion that there are basic conflicts between the wishes of the patient and the professional. This is analogous to what has been written about the differences in therapy expectations between the patient and the therapist. The patient wishes to be cured in a passive way, and similarly our client wishes to be "given self-confidence" and "a job I can hold", also in a passive mode. Now, of course, the client's major problem insofar as working is concerned, is

his chronic difficulty with coping and competition. In addition to the avoidance of risk and competitive situations, he has developed many kinds of compensatory fantasies centering around a feeling of uniqueness, a feeling of latent undiscovered talent, and feelings of grandiosity. In talking to many of the clients, I find that they often have fantasies of being "discovered", or as I put it previously, "mined" in the sense that the professional will bring out their latent, hidden talents with a minimum of risk or discomfort to themselves.

Somewhere during the course of a client's training here, he has to come to terms with the professional's goals in two ways. First, he must work through, at least to some extent, his wishes to be passively "made into a worker", and instead become more able to cope with the frustration and anxiety of active effort, with its risk of possible failure. Second, he must modify the wish that his professional helpers, and his future employers will actualize his compensatory fantasies, in favor of achieving what he can and accepting gratification from these achievements. How well these two things are done often determines the success or failure of the rehabilitation program. The more the patient depends on his compensatory fantasies of grandiosity, the less he will allow them to be tested in reality, and the more difficult he will be as a rehabilitation candidate.

What is your evaluation of the efficacy of the various sorts of services offered?

In this agency vocational services are considered the core of the rehabilitation process, and the other services are designed to support the individual's capacity to benefit from the vocational services. The crucial point is the ability of the various therapeutic endeavors to change the client's self-defeating feelings and behaviors so that he may become free enough to learn an occupation, and put up with the risks and frustrations of employment. The major question then becomes what therapeutic services are effective in so freeing the vocationally disabled mental patient. From my observations, the most effective treatment consists of a combination of group and individual psychotherapy. My own experience suggests that in individual therapy, there is often an unbridgeable gap between the professional and the client. This is especially true when the client has had several years of repeated failure experiences with mental health professionals, as well as with real life coping situations. Frequently, this type of client profoundly distrusts the professional's estimation of what he can or cannot do because he feels the professional cannot possibly understand his problems.

The thing about group therapy and also group work that has impressed me is its power to get the patient to act. It seems to me that in a group situation it is easier to begin to overcome the dependency conflicts which are so marked in individual treatment. I want to comment here, however, that I found myself to be most successful with adolescent clients who did not have a chronic history of defeat, who naturally tended to want to emulate "adults" and who had some belief in their achieving adult status. It is also interesting that quite a few of these patients resisted group therapy because of their fear of identification with "sick" people.

In your experience, what factors promote rehabilitation and what factors hinder it?

(a) Factors that promoted rehabilitation

1. Youth. It is my experience that we are more effective with clients when they are in their adolescence. This is a time when vocational behaviors are still in the process of formation, and the disability process stands a better chance of being reversed. In addition, of course, young people do not need to display work history, and employers are more willing to hire them.

2. Lack of institutional history. The more institutions a client has been in, and the more professionals who have worked with him previously, the slimmer are the chances of the professionals at this agency reaching him.

3. Absence of marked feelings of grandiosity. When patients have developed elaborate compensatory fantasies about their uniqueness as a defense against feelings of guilt and inadequacy, the rehabilitation process is often perceived by them as a threat to their defenses. This situation makes it extremely difficult to work with them. If, on the other hand, the defenses are fluid, we stand a much better chance of influencing the client.

4. The absence of marked feelings of a self-derogatory nature. I have observed this to be the other side of the coin of grandiosity, where the patient tends to derogate himself so much so that he is letting you know in advance not to expect anything of him. Both the marked grandiosity and the marked self-derogation are defenses which seem to be threatened by any active effort on the client's part in the direction of achievement.

5. Group therapy, and to a lesser extent, individual psychotherapy. Clients involved in group therapy seem to have a better chance at forming new and positive identifications as coping people.

6. Previous history of "activity". It has been my observation that the core problem of the majority of our patients deals with dependency vs. autonomy and competency, and I would suggest that the greater the client's orientation toward active mastery (e.g., a history of active job searches and job-finding),the better the chances of a successful rehabilitation outcome.

7. Absence of a pathological family situation. When the client's inadequacy is necessary for the adequacy of the parents, the prognosis appears poorer.

(b) Factors hindering rehabilitation:

1. Within the Institute, the lack of one professional to maintain control over the patient's program from start to finish and retain responsibility for patient management. Although the assignment of each client to a professional was formally made, I felt it was more nominal than it should have been since switches were frequently made.

2. At the time of placement, I do not feel that sufficient preparation is given to the patient to make the changeover, leading to a critical stress in the patient's rehabilitation career. I would suggest that we consider the use of "termination" groups.

3. I think there was an overall "benevolent" attitude at ICD, and particularly in our staff, which sometimes hindered the patient's progress. Patients did not know on what basis they would be terminated (i.e., misbehavior or non-achievement) and I scmetimes got the sense that "anything went".

How did the client deal with professional role diffusion?

I take as a starting point my own conception of what is meant by role diffusion: that the professional in some instances did not know what his role should be with a particular client. This is not to say that a social worker did not know what a social worker should do, or that a vocational counselor did not know what a vocational counselor should do, but it rather refers to a state of affairs in which the staff meetings were used to determine the program and service to the client on the basis of consensus. I think that this situation had some deleterious effects on our handling of clients. For instance, I think it was often the case that when a client showed some type of self-defeating behavior, or needed some clear-cut disciplining, there was some confusion about what was to be done and who was to do it. Very often the situation was allowed to continue until the patient could be discussed at our staff meeting. This appears to be more a diffusion of authority, rather than role diffusion.

In an optimal program, what would the social worker's role be?

I really don't see a separate role for a social worker within a mental patient rehabilitation program. Of course, a person with a social work background will probably be more qualified to serve as a resource person in dealing with community agencies, but on the other hand, other professionals can do this also. The procedure of the social worker obtaining an intake history is not necessarily most efficient. Traditionally, this function was performed by social workers because they were the lowest paid professionals and could be more economically devoted to this. My overall philosophy is that it is really less economical to treat people by professional disciplines, which involves an inevitable fragmenting of purpose. Social workers hired for the purpose of assisting in rehabilitation programs with mental patients should

be judged on their effectiveness in changing the behavior of the patient, and their willingness to assume responsibility for the management of the total patient's program. These qualities, of course, are not indigenous to social workers or any of the other mental health professionals. It is my opinion that we need to get away from the traditional role distinctions, and, instead, emphasize the patient's relationships with one individual who is concerned with the patient's total program, rather than with a variety of individuals to whom he brings portions of his problems. This is partly based on my belief that the patient's basic problems are his distorted attitudes toward competence and autonomy, which must be dealt with in a consistent manner.

APPENDIX D
Part 2

# THE ROLE OF AN OCCUPATIONAL THERAPIST IN A WORKSHOP EVALUATION UNIT DEVISED FOR PSYCHIATRIC REHABILITATION

Anna Ilson, O. T.

(A Workshop Evaluation Unit for Mental Patients, jointly staffed by an Occupational Therapist and a Vocational Counselor)

## Background

The Occupational Therapy Department offers the ICD client Pre-Vocational Evaluation and Functional Treatment on a one-to-one basis. These services are available from one to five hours per day, for a five day week. During this time the client is provided with a somewhat simulated work atmosphere. A variety of tasks are provided, with each client following his own program and receiving support and encouragement from his therapist in carrying out tasks, and with intensive teaching of the fundamentals of new skills available where necessary. There is emphasis on work habits such as punctuality, dress, care of tools, and organization of work, but only artificial pressure can be applied by the therapist and the main rewards are self-respect and self-realization which come from a task well done. There is little opportunity for recognition or pressure from co-workers and there is no concrete monetary gain. Work tolerance can only be built up for a five hour day.

Would a more realistic exposure to the actual work situations in the IndustrialWorkshop prior to TOWER be more beneficial? Should clients go to the Pre-Vocational Unit in the O.T. Department first, or would they benefit more by going straight to the Workshop, where an OT is on staff, and then on to TOWER? The extra staff and flexible organization provided by the Mental Patient Research Project made it possible to explore some of these questions prior to completion of the evaluative phase of the Project.

## Aims of the Workshop Evaluation Unit

1. To expose the client to real work atmosphere where work has the weight of production demands behind it, and where the multiple stimuli of the shop-floor provide a realistic work background.

2. To evaluate the client's adjustment to work and to begin adjusting the client to work, both in instances where the final goal is a new vocation or the re-adjustment to a previous occupation. This process can be started before training, rather than after training when work in a non-related (i.e. workshop practice) area might be perceived by the client as failure.

3. To expose the client to a variety of jobs, i.e., clerical, floorman, assembly (gross and fine), messenger, cafeteria, supervisory, for a realistic evaluation, not only of his adaptability to different pressures and groupings, but also to assess his manual skills and work tolerance.

4. To provide a realistic work-hardening experience for those with psychologically disabling characteristics.

5. To provide an opportunity for increasing self-esteem via graded success on assigned jobs.

6. To develop and increase the client's sense of responsibility for his own behavior.

7. To develop a sense of maintaining inner controls in the face of varying degrees of frustration and pressure, with the help of graded support.

Methods

1. In the first few weeks the client was exposed to a variety of tasks, each of which was presented visually and verbally by the supervisor, with the work checked regularly and often.

2. Later on, longer exposures to specific tasks were set up with more pressure on client to produce, after concrete instructions on how to pace himself.

3. There were counselors to provide bench counseling where necessary (talking to an individual client about his personal approach to a specific job, or his relationships with co-workers or bosses, etc.).

4. The balance between production emphasis and therapeutic goals was a continually changing and delicate problem. Staff should realize this because production demands can be used as a part of the supportive work exposure, but not to the exclusion of therapeutic considerations.

5. The fact that one supervisor was male (Vocational Evaluator) and the other was a female (OT) was valuable in that it became more quickly apparent which clients had difficulties in relating to either male or female authority-figures.

Recommendations

1. Permanent assignment of at least one Vocational Counselor and an Occupational Therapist seems warranted if an Evaluation Unit is continued in the Industrial Workshop for psychiatrically disabled clients.

2. Continue to utilize the workshop as an evaluation experience, a work-hardening experience, and as an on-the-job training experience for clients in final phases of clerical training.

3. An effort should be made to establish criteria for determining whether a client would benefit from this work exposure, with perhaps a one-week evaluation in OT in a series of pre-determined tasks providing the criterion.

4. Greater coordination and cooperation should be effected between Workshop, Occupational Therapy, and TOWER so that clients can be evaluated in any or all areas, with a smoother and more flexible transition between areas.

5. The tryout has been available not only to psychiatric clients in the evaluation phase, but also to those who are in the clerical training classes. Clients who have attended morning clerical classes have come to the Workshop in the afternoons to carry out actual work on the books, typing, mail sorting and zoning, etc. in an office situation. This has made for a full-time working day so that work tolerance is adequate when a job is obtained.

6. If patients with emotional disorders become part of the regular ICD intake after the Mental Patient Research Project expires, this try-out suggests the wisdom of adding an Evaluation Unit to the standard workshop.

APPENDIX D
Part 3

# ROLE AND OPERATION OF A WORKSHOP EVALUATION UNIT IN A PROGRAM OF PSYCHIATRIC REHABILITATION

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Project Vocational Counselor

(Excerpts from a longer report on counseling the vocationally disadvantaged mental patient)

## Aims of the Workshop Evaluation Unit

1. To evaluate a client's behavior while he is actually working in a work setting;

2. To attempt to modify work behavior and attitudes in a positive direction;

3. To act as an information source for all professionals working with the client, and to implement a team approach and a coordinated plan of service;

4. To evaluate those differential aptitudes applicable to the workshop;

5. To give training in those areas available in the workshop;

6. To evaluate gross potential for exposure to other evaluation phases such as the TOWER unit, where a more definitive evaluation for a given trade area could be given.

## General Framework

There is a basic assumption in the fields of personnel work and vocational guidance that the possession of acceptable work habits and attitudes are a prerequisite of employability. In many instances the reliable, conscientious worker outlasts his more skilled, but less reliable, socially inept co-worker. The question that is now facing the Institute is: How can all the variables found under the rubric "work habits" best be evaluated? It is my impression that for most clients referred to the Project, an initial exposure to a structured workshop setting provides basic data concerning the client's overall level of current work adjustment. By using the specialized workshop unit as the initial program in which the client is enrolled, it is less likely that we will overestimate or underestimate his general work adjustment. The inadequate estimation of the individual's work functioning can lead to subsequent wasteful experiences such as the following:

1. Inability to maintain oneself in a training class due to poor work habits;

2. Inability to maintain employment after training, due to deficient ability to tolerate work pressure, inability to follow the more complex social rules, and social naivete in work-related areas;

3. Inability to perform well on work-samples (TOWER), which might be experienced by the client as failure, followed by referral to a workshop setting which could be interpreted as additional failure.

4. Lack of preparedness, which results in "pseudo-failure", when prior experience in a work atmosphere might have provided a foundation for successful training.

5. An erroneous staff decision that the client is "vocationally unfeasible".

Methodology of Workshop Evaluation

The advantage that a rehabilitative workshop has over a factory, as a setting for work adjustment evaluation, is that the need for production is secondary to the purpose of evaluation and adjustment training. This allows for manipulations which would be unfeasible in a strictly production-oriented setting. In the workshop, to determine reaction to pressure, one creates pressure; to determine relations with co-workers, the client is placed in proximity to co-workers, either in a team effort or on a competitive basis; to get a reaction to routine, routine is initiated; to evaluate need for supervision, supervision intensity is varied. Reaction to money is observed in responses to pay, and the effort, or lack of effort to increase production as pay increases. It is possible, in this setting, to generally manipulate the environment so as to create the context in which important aspects of work adjustment are manifested. The major techniques used in our special workshop unit are as follows:

1. Manipulation of Supervisory Roles

   The deliberate shifting of the supervisor-worker relationship in accordance with a plan of treatment rather than that which might be imposed by circumstances of the work setting or moods of the supervisor. In the case of a frightened client, the supervisor might initially assume a paternal-accepting attitude, stating that "I understand, of course, it's hard at first."

Later as the client hopefully gains confidence, the role might be that of encouragement, "You can do it", or by selective indifference where little is said to the worker at all. In later stages, a demanding attitude might be taken, "Look! this is your job, do it, or I don't want to hear excuses." It is obvious that caution has to be taken in the timing of these moves. The shift from accepting supervision to demanding supervision might best be made by an actual shift in supervisors, since a change in attitude by one supervisor might simply be seen by the client as another rejection. In the Project, I manipulated the supervision by playing the role of accepting supervisor while shifting the clients gradually under the supervision of Mr. Stephenson who, as overall workshop supervisor, was actually more demanding. The shift was also aided by group discussions in which the problems of the boss-figure were discussed, and where it was pointed out that the boss was not arbitrarily making demands, but was himself trying to keep up with the work demands by having his workers produce.

2. Pressure

This involved such job demands as: coming in on time, producing a given amount of work in a given amount of time, conforming to the shop rules, coffee breaks, lunch hours, smoking regulations, limited talking during working hours, clean work area, taking care of tools, etc. Pressure of work demands can be conceived of as demanding conformity to the responsibilities of a worker in a given setting and can slowly be increased as the client is better able to tolerate the work setting.

3. Grading of Tasks

The difficulty of tasks in the Workshop can be viewed as the dexterity involved in performance of a given unit of work, the exactness demanded by a given unit of work, or the number of different operations required in a given unit of work. A puzzle assembly might require a high degree of dexterity, and a large number of operations for a finished unit. A three-piece pen assembly, on the other hand, is relatively simple and might be one of the early tasks assigned to a worker.

4. Pacing

Not all workers perform a given assignment in the same amount of time. Pacing attempts to draw the attention of the worker to his rate of production and tries to improve his production by giving him a baseline from which he can progress. The analysis of work speed would take into consideration all the factors that can slow a worker down: day-dreaming, too many smoke breaks, talking to other workers, inefficient work routine, lack of effort, etc.

5. Positioning

This pertains to where a person works, his physical location. In a therapeutic work setting, the positioning of a worker takes into consideration his ability to tolerate co-workers in general, and specific types of workers in particular, his fear of crowds, fear of the opposite or same sex, fear of machines, etc.

6. Team Incentives

Certain tasks can be broken down so that each member of a work-team has to depend on the production of the other workers. This assembly line inter-dependency forces cooperation and brings the worker up against pressures from his co-workers to increase his speed. At times this peer pressure is more meaningful than that of the boss-type pressure in increasing production.

The Workshop Supervisor not only supervises a production line, but must also fulfill his role as participant observer by noting such things as comments about boredom, body position, signs of anxiety, conversation with co-workers, seclusiveness, cooperation, resistance, dress, punctuality, reliability, quality and quantity of production, attitudinal clues and many other details of behavior which make up a work-adjustment profile. This is not an easy task, since the temptation to occupy oneself with the relatively simple, but demanding, needs of production is strong. The two-hat nature of the Workshop Supervisor also requires that he attempt to eliminate, as much as possible, subjectivity in his reports, since he is involved as a person with the client in this situation. Scrupulous observation and objective evaluation must take precedence over shop needs. The Supervisor must also be capable of being aloof or strict when necessary, even when these attributes are not part of his nature.

All of the above are only part of the Supervisor's duties. He must also act as information source for other professionals working with the client, review records, and determine what approach to use with each client, as well as what specific task should be assigned to the client on a given day. As the client must be fitted into a constantly changing work floor, a large degree of flexibility and imagination is required.

I have added the additional responsibility of group orientation and counseling. Since the early weeks of the unit, at least two group meetings per week have been held with the Workshop clients. In these meetings I act as group leader, and bring up for discussion such topics as the reason for a work adjustment program, problems with co-workers and supervisors, methods of handling particular work problems, fear of pressure, fear of looking for a job, ignorance of work demands, other issues which are related to work and the Workshop program.

In these meetings, I maintain my authority role as the boss, but allow as much freedom as possible in the choice of topics and the content of the discussions. There seems to be greater interaction between clients as a result of these groups, and it has been frequently noted that the clients with good work histories are able to give information and "straighten out" the inexperienced, or naive co-worker who raises questions. The fact that such counseling came from a group member rather than from a professional seems to have a noticeable effect on the acceptance of an idea. Even clients who do not discuss problems in the group have made remarks to their counselor, or to the supervisor, indicating that they were listening in the group, and learned something from the discussions. There is the added factor that the "boss" has his own work pressures and responsibilities, and can talk with his workers about them.

APPENDIX D
Part 4

# COUNSELING THE VOCATIONALLY DISADVANTAGED MENTAL PATIENT IN A REHABILITATION PROGRAM

Malcolm Quigley, M.A.
Project Vocational Counselor

Beginning with the first counseling session, I presented myself as one whom the client could come to with a specific problem or just for general discussion. However, I also told the clients that my main purpose in working with them was to assist in the area of vocational problems and that I would refer them to other staff members for help with other kinds of difficulties. During the time I was on the Project staff, few saw my role as other than vocational. Thus, deep-seated emotional problems, family problems and the like were infrequently brought to my personal attention. I met formally with each client twice during the first week of evaluation and once a week for the remaining six weeks of evaluation. About one-third of the clients came to see me at other than scheduled times during this evaluation period.

I would estimate that two-thirds of the clients appeared eager and interested in being at ICD, while the remaining group was more apathetic and felt hopeless. Both of these groups sought to be told what to do in the initial session. However, the former group responded to the information I gave by mobilizing some motivation to help themselves, while the latter group tended to continue to behave as helpless persons.

## The Workshop Evaluation Period

Most clients seemed interested in the Workshop Evaluation to begin with, due to the fact that they would earn something for their efforts. However, at the beginning of their second week, sometimes sooner, about one-third of the clients developed complaints about the Workshop. Most of these complaints centered on the actual tasks they were given. Complaints took the forms of: "this work is too hard", "I don't like this work" or "this is not what I came here for". Some complaints were directed at the supervisor for assigning work that was too hard or that the client didn't like. Others remarked about co-workers, who bothered them by talking to them or, in other cases, ignoring them. A few clients were upset over having to work on the same floor with severely handicapped cerebral palsied individuals. Concern was also generated when a few clients began telling others that, although they had been promised classroom training, we often left people in the Workshop; this latter problem was handled by explaining that some people needed longer Workshop exposure in order to go to work, as well as by discussing with the client whether this would be true in his case.

The Workshop provided a genuine work setting in which our staff could observe the basic work habits of the client and begin to focus his attention on his work deficits. Probably no other areas at ICD provided as realistic a

setting for the evaluation of clients' potential for going to work. Most important, it allowed the clients to see for themselves how they functioned in a real work environment.

My role as counselor during the Workshop program was to discuss with the client the problems that arose and attempt to have him focus on various ways of dealing with them. The major problem during this time was the client's fear that he would be unable to handle the work. This fear tended to interfere with his production and general Workshop performance, and thereby further strengthened his apprehension toward work. As such times, I reflected back the fact that he was accomplishing something just by coming and by the amount of work he did turn out. Because so many clients felt worthless, I thought it important to provide encouragement by showing them that previously they had been doing nothing, while now they were more actively involved in trying to help themselves. Although their basic work habits were of great concern, I did not push this issue too hard in the first few weeks of evaluation.

During the entire seven week evaluation, I had three main objectives: (1) the growth of "ego-skills" in the general work-ability domain; (2) development or brush-up of specific work habits; (3) discovery of a skill area which the client liked and in which he could potentially perform well enough to eventually be placed. The problems of developing an individual's confidence in his ability to work and helping him overcome the obstacles to working, were the main areas of concentration. Some clients were so fearful upon entering the Workshop that it became necessary to place them in a more sheltered atmosphere. We used the Occupational Therapy Department, where clients could work at things such as sewing, weaving, woodworking. Here they could still accomplish something and, yet, not be under the production pressures of the Workshop.

While many were impeded by the fear of failure, others appeared fearful of success. Success might mean giving up dependent relationships with doctors, agencies, and other people and places. This problem was occasionally apparent during early evaluation but was more prevalent during the placement process.

Counseling during TOWER

TOWER appeared to represent the most demanding experience in evaluation for the clients. Their fears appeared to arise because: (1) TOWER was the final stage of evaluation and for some it was "do or die"; after failure in the Workshop; (2) training would partly depend on the TOWER results; (3) clients frequently saw TOWER area as a cold and objective place where supervisors were only interested in performance and lacked warmth and understanding. This feeling was not altogether a fantasy; TOWER instructors are trained to get information on performance and are not primarily concerned with personal problems. Because of these factors, most clients viewed TOWER in a somber light, as a sink-or-swim situation.

The three-week stay in TOWER was a strain on most clients. I would see see them at least once a week to discuss their feelings and reactions to the previous week's evaluation. Most clients expressed fear and doubt as to whether they were doing well and were also afraid that they would not be accepted into a subsequent training program. There was much more complaining about the evaluators and how tough they were: "They don't give you many breaks, like in the Workshop." A few clients became so anxious that we placed them back in the Workshop for a while.

I feel that this greater concern over TOWER does not accurately index actual structural and operational differences between Workshop and TOWER, but rather that it represents a difference in the perception of these areas by the clients. The Workshop was not perceived by the client as a serious determinant of his future work role, while TOWER concerned itself with areas related to his work aspirations. The clients became more dependent on me during TOWER. They were more eager to tell about their successes and to have me remedy uncomfortable situations: "Tell the instructor that I need more than two breaks a day", "I don't feel I was given a fair evaluation in a particular area - I want a longer try-out in this and they won't allow it." Thus, my role as counselor was seen as a negotiator with "outsiders" on behalf of the clients to protect them from pressures and to speak up in their behalf.

Counseling during Vocational Training

For people who went into training, the selection of a training area was not difficult. The real problem lay in acceptance by the client of the reality and responsibility of a training class, as preparation for work. I would add that many of our people saw training as a process where one attends the class to passively receive skill training. They tended to omit from the equation the effort they must put out to learn and the importance of good work habits. Another difficult problem was breaking through fantasy so that clients could see and accept work as it really is and not as they thought it would or should be.

During training at least half the clients had some difficulty in meeting basic work requirements. While there was little uncontrollable behavior (acting out), the fears and anxieties of life hindered them in keeping up with the responsibilities of being on time, taking the prescribed breaks, and following instructions. Attempts were made during training to help clients deal with the problems surrounding acceptance of mature work roles. Role-playing was used with client as boss and counselor as worker. In general, these kinds of techniques helped the clients to gain some feeling for responsibility. It was evident that the lack of a mature worker-role was a function of intense fear and anxiety about going to work.

The counselor's main role was to meet with the clients in training once every week or two, or as needed, to discuss progress, go over instructor's reports, talk of handling problems of concentration and work habits. Because the classroom settings and instructors were quite pleasant, most of the

clients did not see going to work as a big problem. While they realized that their concentration, skills in class, and general work habits might be improved, they were quite comfortable and dependent on the many services available at the Institute, while remaining unaware of what the outside world of work was like. These issues were discussed not once, but repeatedly, but it frequently remained an unresolved problem.

Placement

Most Project clients were assigned to placement status after completion of training, or after evaluation when no training was provided. Workshop clients were assigned to placement after a given period of adjustment training. Each client was given a six month period in placement, with some clients placed more than once during this period.

It was mentioned earlier that techniques such as supportive counseling, role playing, and information-giving were used in preparing clients for jobs, and, after jobs were obtained, in helping clients maintain these jobs. Although these were probably helpful, I believe that the experience of having to go through real interviews and then working, whether in the first, second or third job, were the main factors involved in vocational success or failure. Nearly all clients needed from two to five months, plus more than one job, before a good adjustment was made at work. Many clients looked like good workers in class and in practicing job interviews at ICD. However, when they went to real interviews and began working, it often appeared as though much had been lost. There was much involved in going to work beside the job itself. Going to work meant severing dependent ties at home and at ICD, and this was one of the strongest barriers to getting the clients out to a job. The idea of becoming self-sufficient and responsible, after being in the role of patient and client for so long, is a big step.

The role of the counselor during placement was to help the client find a job in keeping with his work skills and his emotional tolerance. Although the process of finding a suitable job is by no means impossible, the difficult factor is getting the client to accept it.

As placement approached, I discussed with each client the type of job he would like, the setting of the job, etc. We would also discuss the reality of the job in terms of the client's skills and abilities. I would go over a general job application blank with the client to determine how he could best handle the questions which might be asked by an employer. The two questions which caused the most difficulty were (1) explaining previous work history, and (2) explaining disability and hospitalization. Most of our patients had poor work histories with large gaps of time without work. In some cases, this time could be accounted for by "elaborating" on the length of jobs, or by using a relative, employer or friend who would state that a client worked during a certain time period. The falsification of previous work history was used only in instances when client felt more comfortable telling this to an employer. The majority of clients were very

upset about the lack of work experience and the years without work, and wanted any way to get around this embarrassing issue with the employer. While the idea of falsifying past work history helped the client feel more at ease in presenting himself to an employer, it usually served this purpose and not much else. The point I am driving at is that the employer was concerned with getting a reliable worker whom he could train. He judged the client on the basis of the report he received from the counselor and on his own impressions of the client during the interview. Naturally, he would have liked an employee with experience in his field, but he realized that this was not always possible.

The second area concerns the disability. The employer is not interested nor does he understand the theoretical aspects of the disability. All he wants is a stable, reliable worker. Thus, it becomes important to convince him that he is hiring someone whose disability is under control. How do you convince an employer that the client can hold a job and not have his disability interfere with his work? I found it effective to have myself, or better yet, the client, explain the disability along the following lines: "I had problems resulting from family difficulties or from school adjustment (etc.) but I went for help, was treated and trained, and worked out my emotional problems to a degree where it does not interfere with my work."

The two main factors here are (1) telling the employer that yes, the person had problems, but something was done to help and he is improved to a degree where he can handle a job, and (2) describing the emotional problem in terms which the employer can understand. Everyone has had family or work problems to some degree, so it is not so difficult to understand this type of problem. Care must be taken not to use technical terminology. By saying one is emotionally ill, mentally disturbed or using any medical term, one can destroy the job opportunity. It is much easier to accept and understand that an individual gets better by moving away from his family, his previous job, etc., rather than an "ill person" trying to do better in and of himself. The illness is taken off the person and placed onto a situation.

Some of our clients felt so uncomfortable in explaining the emotional disability that they used a minor physical disability, while still others sought jobs on their own or through outside agencies where they did not have to mention their disability. If they were forced to explain their training at ICD, they would say that they were there because of vocational difficulties, not because of psychiatric difficulties.

When clients obtained jobs, I usually saw them a few times the first week and then once a week thereafter. We discussed the job issues, with the ultimate goal on my part to diminish support and let them move more and more on their own. Clients, after working a few months, were seen only once a month. There appeared to be some relationship between seeing clients after placement occurred and the success of the placement. Clients were seen in the evenings or in many cases, during lunch time. Whether the client

saw the importance of job follow-up or not, I made arrangements to see them during their initial period of work, and in this way opened a path that they could follow if problems arose later on.

Throughout this report I have grouped clients according to certain similarities. However, I feel that grouping does not really represent the true complexity and great variation between clients. Statistically, these clients may be grouped discretely, but the variables involved in the grouping may actually be continuous. From experience in working with other disability groups (the physically handicapped, the retarded, etc.), the mental patients as individuals and as a group present much more complex problems.

APPENDIX D
Part 5

# COUNSELING THE PSYCHIATRIC CLIENT

Thelma Schmones, M. A.
Project Vocational Counselor

In what way do the psychiatrically disabled differ from the "normal case load" that one might anticipate in a rehabilitation center?

The client with a primary psychiatric disability has been viewed by this counselor (with a past experience of counseling the physically disabled) in the following light. In the first instance, the client "looks good." There are no braces, no wheel chair, no distortions of speech or any other visible signs that this individual needs specialized assistance. It is easy to get fooled. Frequently this group is verbal, knows much of the professional jargon, and seems somehow employable. The opportunity to observe these individuals on a daily basis in a variety of work settings therefore makes it possible to appreciate the over-sensitivity of this group, their tremendous mood swings, their poor concentration on even simple tasks, and their general restlessness and inability to cont in themselves in meaningful ways. In addition, this particular group is comparatively bright, superficially sophisticated in social skills, and at the same time, relatively unable to make decisions, maintain positive interpersonal relationships, and make reasonable demands on staff time. For these reasons, the assignment of counseling a psychiatric client calls for a variety of skills on the part of the counselor: flexibility, imagination, a willingness to experiment and utilize the structure and the limits of work demands, and an ability to help the client to "tune in" and adapt to these demands. For example, it seemed desirable with some Project clients to suggest that they enter a sheltered workshop program to develop good work habits and tolerance, prior to entering a more skill-demanding program. By setting a reasonably modest work-directed goal, and in a sense excluding the new learning that would be required in a training program, the clients were given the opportunity to adjust to one type of demand at a time.

A counselor planning to deal with this client group should, in justice to himself and the clients, consider whether he or she is able to function in the following kinds of ways. One should not be afraid, nor have many self doubts about professional competence within the specific realm of vocational rehabilitation. Many of the clients are sensitive to these fears and doubts, and will respond accordingly. One of the primary services that the counselor can provide is consistency, with constant support, availability, and flexibility as paramount. The counselor should have a fair degree of frustration tolerance and recognize that exacerbations are not necessarily related in one-to-one fashion to the counselor's behavior or to the stress of the program.

It is part of the basic philosophy of vocational rehabilitation to emphasize strengths rather than weaknesses, to build on health rather than to deal with pathology. This seems to be an approach to which this group responds, especially when the guidance is vocational in nature and when the limits are appropriate to the client's capacities at that given time. It is necessary, for example, despite a client's intelligence, manual dexterity and the like to suggest short term goals to him which provide more immediate gratification and success, as a part of an overall plan of long term goals which capitalize on "ultimate" potential.

For example, a bright young man needed constant reassurance and re-affirmation of his skill, as he met with failures at various points in his evaluation program. With much support, he was finally able to complete the evaluation and entered a training class. During his training career, he again expressed many doubts, but finally began to accept his potential. Having done this, he began to evidence considerable understanding of the fact that success vocationally would bring to the surface the need to come to grips with other social and personal problems such as dating, marriage, having his own home, etc. If we had initially tried to explore these areas, we might have lost this client. By setting our sights on the stated vocational goal and keeping them there, we were ready, when he was, to broaden his horizon.

Vocational rehabilitation can be viewed as an end in itself or a means to an end. It is this writer's belief that having a successful experience not only in and of itself, but with a professional, frequently makes it possible for the client to seek other professional help when it is needed. It is necessary for the professional to recognize and accept the fact that this group, for the most part, will continue to manifest problems in the area of work after placement has occurred. The counselor can become a checking point, or home base, that the client can turn to whenever a vocational problem arises, and should remain part of the counselor's case load for as long as is needed. As a group, ex-mental hospital patients present difficulties for rehabilitation, and one feels considerable professional satisfaction when a client with a lengthy previous hospitalization history assumes a useful role in the community and earns his own way. He may have many problems although he is working, but at least a structure and form to his life has been provided from which he can try to cope with the other pressures of daily living.

APPENDIX E
TABLE 1

INTERCORRELATION MATRIX OF INDEPENDENT AND DEPENDENT VARIABLES FOR GROUPS $A_B$ AND B INVOLVING HOSPITALIZATION AND EMPLOYMENT OUTCOMES (N = 122)[1]

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Group membership | | -07 | 04 | 04 | 05 | 00 | 09 | 02 | -05 | -03 | 05 | -04 | 06 | -07 | -04 |
| 2 Sex | -07 | | 06 | 07 | 04 | -08 | -02 | 00 | 03 | -08 | -02 | 11 | 02 | -14 | 17 |
| 3 Age | 04 | -06 | | 18 | 42 | -04 | 03 | 76 | -06 | 05 | -18 | 04 | 00 | 04 | -02 |
| 4 Education | 04 | 07 | 18 | | -10 | -04 | 11 | 21 | -06 | -27 | 12 | 22 | 18 | -22 | -03 |
| 5 Marital status | 05 | 04 | 42 | -10 | | 09 | 17 | 35 | 11 | 12 | -33 | 03 | -32 | -06 | 16 |
| 6 Diagnosis | 00 | -08 | -04 | -04 | -09 | | -29 | 00 | -03 | 09 | 11 | 15 | 02 | 09 | 09 |
| 7 Last hospital. | 09 | -02 | 03 | 11 | 17 | -29 | | 10 | 10 | -10 | 03 | 09 | 05 | -08 | -03 |
| 8 Prev. employ. | 02 | 00 | 76 | 21 | 35 | 00 | 10 | | 14 | 09 | -14 | 02 | -08 | 16 | 02 |
| 9 DVR rating | -05 | 03 | -06 | -06 | 11 | -03 | 10 | 14 | | 00 | -17 | 11 | -17 | 11 | 12 |
| 10 Jewish | -03 | -08 | 05 | -27 | 12 | 09 | -10 | 09 | 00 | | -42 | -78 | -37 | 43 | -03 |
| 11 Protestant | 05 | -03 | -18 | 12 | -34 | 11 | 03 | -14 | -17 | -42 | | -18 | 62 | -23 | -14 |
| 12 Catholic | -04 | 11 | 04 | 22 | 03 | -15 | 09 | 02 | 11 | -78 | -18 | | 02 | -29 | 11 |
| 13 Race | 06 | 02 | 00 | 18 | -32 | 02 | 05 | -08 | -17 | -37 | 62 | 02 | | -30 | -16 |
| 14 Social class | -07 | -14 | 04 | -22 | -06 | 09 | -08 | 16 | 11 | 43 | -23 | -29 | -30 | | -19 |
| 15 Prev. rehab. serv. | -04 | 17 | -02 | -03 | 16 | 09 | -03 | 02 | 12 | -03 | -14 | 11 | -16 | -19 | |
| 16 Prev. hospital. | 04 | 06 | 20 | -08 | 12 | -38 | 53 | 06 | 10 | -16 | 01 | 17 | -06 | -14 | -08 |
| 17 1 X 4 | -03 | -06 | 03 | -20 | 01 | 01 | 09 | -13 | 13 | 13 | 04 | -15 | -13 | 12 | -07 |
| 18 1 X 7 | -07 | -05 | -02 | 09 | 05 | -09 | -08 | -03 | -08 | -01 | | 04 | -07 | 02 | -14 |
| 19 1 X 8 | -02 | -15 | -02 | 14 | 04 | 01 | -04 | 04 | 15 | 08 | 11 | -16 | 03 | -02 | -17 |
| 20 1 X 9 | 04 | 05 | 07 | 14 | 12 | 13 | -08 | 16 | 07 | 04 | -14 | 05 | -14 | 02 | 14 |
| 21 1 X 15 | 04 | 06 | -15 | -07 | -02 | 02 | -14 | -17 | 14 | 03 | 02 | -07 | -02 | -11 | 04 |
| 22 Time in hosp. - F.U. | 04 | -18 | 13 | 08 | 07 | -19 | 32 | 07 | -03 | 12 | -15 | -05 | -16 | 03 | -02 |
| 23 Hosp. vs. not hosp. - F.U. | 01 | -06 | 22 | 13 | 09 | -24 | 32 | 17 | 06 | 08 | -27 | 11 | -18 | 08 | -01 |
| 24 Emp. vs. not emp. - F.U. | 19 | 08 | -37 | -02 | -23 | 03 | 03 | -15 | -24 | -08 | 21 | 00 | 08 | 06 | -06 |
| 25 Time employ. - F.U. | 14 | 12 | -24 | 07 | -12 | 05 | -08 | 00 | 29 | -13 | 07 | 13 | 00 | 06 | 04 |
| 26 Employ. at end of F.U. | 16 | 04 | -22 | 17 | -11 | 00 | -05 | 01 | 16 | -09 | 10 | 05 | -10 | 04 | 05 |

[1]For a sample size this large, an $r$ of .17 is significant at the .01 level, and an $r$ of .23 is significant at the .01 level, two tailed.

APPENDIX E
TABLE I (Con't'd)

| Variable | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 04 | -03 | -07 | -02 | 04 | 04 | 04 | 01 | 19 | 14 | 16 |
| 2 | 06 | -06 | -05 | -15 | 05 | 06 | -18 | -06 | 07 | 12 | 04 |
| 3 | 20 | 03 | -02 | -02 | 07 | -15 | 13 | 22 | -37 | -24 | -22 |
| 4 | -08 | -20 | 09 | 14 | 14 | -07 | 08 | 13 | -02 | 07 | 17 |
| 5 | 12 | 01 | 05 | 04 | 12 | -02 | 07 | 09 | -23 | -12 | -11 |
| 6 | -38 | 01 | -09 | 01 | 13 | -02 | -19 | -24 | 03 | 05 | 00 |
| 7 | 53 | 09 | -08 | -04 | -08 | -14 | 32 | 32 | 03 | -08 | -05 |
| 8 | 06 | 13 | -03 | 04 | 16 | -17 | 07 | 17 | -15 | -01 | 01 |
| 9 | 10 | 13 | -08 | 15 | 07 | 14 | -03 | 06 | 24 | 29 | 16 |
| 10 | -16 | 13 | -02 | 08 | 04 | 03 | 12 | 08 | -08 | -13 | -09 |
| 11 | 01 | 04 | -01 | 11 | -14 | 02 | -15 | -27 | 21 | 07 | 10 |
| 12 | 17 | -15 | 04 | -16 | 05 | -07 | -05 | 11 | 00 | 13 | 05 |
| 13 | -06 | -13 | -07 | 03 | -14 | -02 | -16 | -18 | 08 | 00 | -10 |
| 14 | -14 | 12 | 02 | -02 | 02 | -11 | 03 | 08 | 06 | 06 | 04 |
| 15 | -08 | -07 | -14 | -17 | 14 | 04 | -02 | -01 | -06 | 03 | 05 |
| 16 |  | 14 | -06 | -08 | -07 | 00 | 37 | 34 | -07 | -17 | -19 |
| 17 | 14 |  | -04 | 11 | -15 | 02 | 13 | 06 | -03 | -09 | 00 |
| 18 | -06 | 04 |  | 12 | 17 | 07 | 10 | 17 | -09 | -08 | -02 |
| 19 | -08 | 11 | 12 |  | 04 | 14 | -05 | 06 | 15 | -01 | 06 |
| 20 | -07 | -15 | 17 | 04 |  | 02 | 07 | 16 | -13 | -10 | -05 |
| 21 | 00 | 02 | 07 | 14 | 02 |  | -12 | -15 | 12 | 11 | 07 |
| 22 | 37 | 13 | 10 | -05 | 07 | -12 |  | 80 | -17 | -28 | -24 |
| 23 | 34 | 06 | 17 | -06 | 16 | -15 | 80 |  | -09 | -22 | -25 |
| 24 | -07 | -03 | -09 | 15 | -13 | 12 | -17 | -09 |  | 70 | 54 |
| 25 | -16 | -09 | -08 | -01 | -10 | 11 | -28 | -22 | 70 |  | 73 |
| 26 | -19 | 00 | -02 | 06 | -05 | 07 | -24 | -25 | 54 | 73 |  |

APPENDIX E
TABLE 2

INTERCORRELATION MATRIX OF INDEPENDENT AND DEPENDENT VARIABLES FOR GROUPS $A_B$ AND B INVOLVING ADDITIONAL FOLLOW-UP MEASURES (N = 74)[1]

| VARIABLE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Group membership | | -08 | 13 | 05 | 10 | -03 | -03 | -01 | -12 | -06 | 13 | -03 | 22 | -11 | 01 |
| 2 Sex | -08 | | -06 | 10 | 06 | 05 | -14 | 05 | 15 | -07 | -01 | 07 | 05 | -07 | 13 |
| 3 Age | [illegible] | -06 | | 21 | 42 | -08 | 03 | 74 | -22 | 01 | -10 | 06 | 00 | -03 | -07 |
| 4 Education | 05 | 10 | 21 | | -17 | 03 | -02 | 26 | -07 | -25 | 10 | 20 | 15 | -17 | -06 |
| 5 Marital status | 10 | 06 | 42 | -17 | | -02 | 16 | 28 | -08 | 05 | -06 | -01 | 09 | -25 | 23 |
| 6 Diagnosis | -04 | 05 | -08 | 03 | -02 | | -22 | -05 | -10 | 15 | 06 | -20 | 02 | 04 | 15 |
| 7 Last hosp. | -03 | -14 | 03 | -02 | 16 | -22 | | 10 | 14 | -07 | 07 | 03 | 05 | 00 | -03 |
| 8 Prev. employ. | -01 | 05 | 74 | 26 | 28 | -05 | 10 | | -01 | 08 | -15 | 02 | -04 | 06 | 03 |
| 9 DVR rating | -12 | 15 | -22 | -07 | -08 | -10 | 14 | -01 | | -15 | -10 | 23 | -10 | -06 | 14 |
| 10 Jewish | -06 | -07 | 01 | -25 | 05 | 15 | -07 | 08 | -15 | | -41 | -79 | -35 | 43 | 02 |
| 11 Protestant | 13 | -01 | -10 | 10 | -06 | 06 | -07 | -15 | -10 | -41 | | -23 | 53 | -31 | -08 |
| 12 Catholic | -03 | 07 | 06 | 20 | -01 | -20 | 03 | 02 | 23 | -79 | -23 | | 01 | -25 | 04 |
| 13 Race | 22 | 05 | 00 | 15 | 09 | 02 | 05 | -04 | -10 | -35 | 53 | 01 | | -35 | -12 |
| 14 Social class | -11 | -07 | -03 | -17 | -25 | 04 | 00 | 06 | -06 | 43 | -31 | -25 | -35 | | -12 |
| 15 Prev. rehab. serv. | 01 | 13 | -07 | -07 | 23 | 15 | -03 | 03 | 14 | 02 | -08 | 04 | -12 | -12 | |
| 16 Prev. hosp. | 04 | 00 | 19 | -24 | 07 | -32 | 50 | 01 | 13 | -23 | 15 | 14 | -05 | -17 | -13 |
| 17 Social participation | 04 | -13 | 28 | -08 | 05 | -04 | -21 | 07 | -32 | 03 | 11 | -11 | 14 | -08 | -22 |
| 18 Leis. time activities | 16 | -05 | 07 | -17 | -01 | -03 | 05 | -04 | -10 | -11 | 07 | 07 | 12 | 03 | -11 |
| 19 Self-satisfaction | 12 | -09 | 17 | 17 | -03 | -20 | -11 | -05 | 05 | -14 | 11 | 08 | -01 | -04 | -23 |
| 20 Anomie | 00 | 02 | -15 | 12 | 07 | -23 | 31 | -02 | -02 | -14 | 07 | 10 | -02 | -05 | 27 |
| 21 Employ. vs not employ-F.U. | 33 | 11 | -25 | 11 | -14 | 00 | 09 | -07 | 31 | -13 | 17 | 03 | 03 | -06 | 08 |
| 22 Time employ. - F.U. | 21 | 20 | -23 | 21 | -04 | -01 | -02 | 00 | 32 | -12 | 04 | 10 | -09 | -03 | 19 |
| 23 Employ. at end of F.U. | 18 | 12 | -26 | 32 | -15 | -06 | -10 | -05 | 21 | -11 | 12 | 04 | -15 | -02 | 25 |

[1]With an N of 74, an $r$ of .22is significant at the .05 level, and an $r$ of .29 is significant at the .01 level, two tailed.

APPENDIX E
TABLE 2 (Cont'd)

| Variable | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|
| 1 | 04 | 04 | 16 | 12 | 00 | 33 | 21 | 18 |
| 2 | 00 | -13 | -05 | -09 | 02 | 11 | 20 | 12 |
| 3 | 19 | 28 | 07 | 17 | -15 | -25 | -23 | -26 |
| 4 | -24 | -08 | -17 | 17 | 12 | 11 | 21 | 32 |
| 5 | 07 | 05 | -01 | -03 | 07 | -14 | -04 | -15 |
| 6 | -32 | -04 | -03 | -20 | 23 | 00 | -01 | -06 |
| 7 | 50 | -21 | 05 | -11 | 31 | 09 | -02 | -10 |
| 8 | 01 | 07 | -04 | -05 | -02 | -07 | 00 | -05 |
| 9 | 13 | -32 | -10 | 05 | -02 | 31 | 32 | 21 |
| 10 | -23 | 03 | -11 | -14 | -14 | -13 | -12 | -11 |
| 11 | 15 | 11 | 07 | 11 | 07 | 17 | 04 | 12 |
| 12 | 14 | -11 | 07 | 08 | 10 | 03 | 10 | 04 |
| 13 | -05 | 14 | 12 | -01 | 02 | 03 | -09 | -15 |
| 14 | -17 | -08 | 03 | -04 | -05 | -06 | -03 | -02 |
| 15 | -13 | -22 | -11 | -23 | 27 | 08 | 19 | 25 |
| 16 | | 08 | 16 | 04 | -01 | 00 | -18 | -26 |
| 17 | 08 | | -06 | 25 | -16 | -26 | -26 | -35 |
| 18 | 16 | 22 | | 15 | -08 | -06 | -06 | -23 |
| 19 | 04 | 25 | 15 | | -19 | 02 | 02 | 08 |
| 20 | -01 | -16 | -08 | -19 | | 19 | 19 | 23 |
| 21 | 00 | -26 | -06 | 02 | 19 | | 70 | 53 |
| 22 | -18 | -30 | -18 | 02 | 20 | 70 | | 75 |
| 23 | -26 | -35 | -23 | 08 | 23 | 53 | 75 | |

APPENDIX E
TABLE 3

INTERCORRELATION MATRIX OF INDEPENDENT AND DEPENDENT VARIABLES FOR GROUPS $A_C$ AND C INVOLVING HOSPITALIZATION AND EMPLOYMENT OUTCOMES (N = 129)[1]

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Group membership | | 33 | -08 | 00 | -17 | -17 | -09 | -18 | -13 | 21 | -05 | 28 | -18 | -05 | 17 |
| 2 Sex | 33 | | -24 | 01 | -08 | -08 | 00 | -14 | -09 | 10 | 01 | 19 | -12 | 11 | 18 |
| 3 Age | -08 | -24 | | 16 | 36 | 00 | -08 | 73 | 06 | -02 | -05 | 08 | 02 | 06 | 09 |
| 4 Education | 00 | 01 | 16 | | -13 | -11 | 31 | 19 | -14 | 12 | 04 | 08 | -27 | 00 | 15 |
| 5 Marital status | -17 | -08 | 36 | -13 | | 01 | -04 | 32 | 18 | -35 | 13 | -34 | 22 | 04 | -20 |
| 6 Diagnosis | -17 | -08 | 00 | -11 | 01 | | -45 | 09 | 15 | -10 | -07 | -18 | 19 | 02 | -42 |
| 7 Last hosp. | -09 | 00 | -08 | 31 | -04 | -45 | | -04 | -19 | 10 | 11 | 08 | -17 | 01 | 48 |
| 8 Prev. employ. | -18 | -14 | 73 | 19 | 32 | 09 | -04 | | 07 | -08 | -01 | 00 | 07 | 07 | -10 |
| 9 Jewish | -13 | -09 | 06 | -14 | 18 | 15 | -19 | 07 | | -51 | -61 | -44 | 30 | 17 | -25 |
| 10 Protestant | 21 | 10 | -02 | 12 | -35 | -10 | 10 | -08 | -51 | | -38 | 67 | -32 | -18 | 20 |
| 11 Catholic | -05 | 01 | -05 | 04 | 13 | -07 | 11 | -01 | -61 | -38 | | -15 | -02 | -01 | 08 |
| 12 Race | 28 | 19 | 08 | 08 | -34 | -18 | 08 | 00 | -44 | 67 | -15 | | -34 | -15 | 27 |
| 13 Social class | -18 | -11 | 02 | -27 | 22 | 19 | -17 | 07 | 30 | -32 | -02 | -34 | | -08 | -20 |
| 14 Prev. rehab. serv. | -05 | 11 | 06 | 00 | 04 | 02 | 01 | 07 | 17 | -18 | -01 | -15 | -08 | | -01 |
| 15 Prev. hosp. | 17 | 18 | 09 | 15 | -20 | -42 | 48 | -10 | -25 | 20 | 08 | 27 | -20 | -01 | |
| 16 1 X 2 | -03 | -01 | 03 | -01 | 11 | 09 | -01 | -02 | 03 | -06 | 02 | -14 | -07 | -01 | -03 |
| 17 1 X 3 | 00 | 03 | -16 | 09 | -06 | -03 | -07 | -10 | -01 | -02 | 03 | -07 | 13 | -08 | 02 |
| 18 1 X 4 | 00 | -01 | 09 | -10 | 10 | 10 | -01 | 16 | 06 | -10 | 03 | -13 | 04 | -05 | 01 |
| 19 1 X 7 | 00 | -01 | -06 | -02 | 13 | 32 | -18 | 03 | 04 | -16 | 11 | -17 | 19 | 05 | -23 |
| 20 1 X 8 | 02 | -01 | -12 | 17 | 01 | -06 | 03 | 04 | 04 | -04 | -01 | -12 | -04 | 07 | 05 |
| 21 1 X 14 | 00 | -02 | -07 | -06 | 05 | -04 | 05 | 07 | -05 | -01 | 06 | -05 | -22 | 04 | -07 |
| 22 Prog. comp. vs non-compl | -04 | -12 | 04 | -16 | 06 | 06 | -22 | 17 | 10 | -11 | -01 | -05 | 15 | 09 | -16 |
| 23 Length of prog. | 04 | -05 | -08 | -06 | 00 | 00 | -22 | -02 | 09 | -05 | -06 | -04 | 07 | 01 | -11 |
| 24 Time in hosp -F.U. | -08 | 06 | 08 | 14 | -10 | -13 | 40 | 06 | 00 | 11 | -10 | 13 | -04 | 07 | 35 |
| 25 Hosp. vs not hosp-F.U. | -10 | -01 | 05 | 16 | -01 | -16 | 40 | 04 | 00 | 05 | -04 | -03 | 01 | 01 | 28 |
| 26 Empl. vs not empl.-F.U. | -07 | 06 | -19 | -07 | -01 | 05 | 02 | -02 | -09 | -02 | 11 | 06 | 09 | 07 | 00 |
| 27 Time employ. - F.U. | -09 | 02 | -18 | -03 | -07 | 11 | -08 | -05 | 02 | -11 | 07 | -04 | 11 | 18 | -19 |
| 28 Employ. at end of F.U. | 00 | -02 | -11 | -02 | 04 | 03 | -04 | 00 | 07 | -12 | 03 | -13 | 12 | 21 | -19 |

[1]For a sample size this large, an $r$ of .17 is significant at the .01 level, and an $r$ of .23 is significant at the .01 level, two tailed.

APPENDIX E
TABLE 3 (Cont'd)

| Variable | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | -03 | 00 | 00 | 00 | 02 | 00 | -04 | 04 | -08 | -10 | -07 | -09 | 00 |
| 2 | -01 | 03 | -01 | -01 | -01 | -02 | -12 | -05 | 06 | -01 | 06 | 02 | -02 |
| 3 | 03 | -16 | 09 | -06 | -12 | -07 | 04 | -08 | 08 | 05 | -19 | -18 | -11 |
| 4 | -01 | 09 | -10 | -02 | 17 | -06 | -16 | -06 | 14 | 16 | -07 | -03 | -02 |
| 5 | 11 | -06 | 10 | 13 | 01 | 05 | 06 | 00 | -10 | -01 | -01 | -07 | 04 |
| 6 | 09 | -03 | 10 | 32 | -06 | -04 | 06 | 00 | -13 | -16 | 05 | 11 | 03 |
| 7 | -01 | -07 | -01 | -18 | 03 | 05 | -22 | -22 | 40 | 40 | 02 | -08 | -04 |
| 8 | -02 | -10 | 16 | 03 | 04 | 07 | 17 | -02 | 06 | 04 | -02 | -05 | 00 |
| 9 | 03 | -01 | 06 | 04 | 04 | -05 | 10 | 09 | 00 | 00 | -09 | 02 | 07 |
| 10 | -06 | -02 | -10 | -16 | -04 | -01 | -11 | -05 | 11 | 05 | -02 | -11 | -12 |
| 11 | 02 | 03 | 03 | 11 | -01 | 06 | -01 | -06 | -10 | -04 | 11 | 07 | 03 |
| 12 | -14 | -07 | -13 | -17 | -12 | -05 | -05 | -04 | 13 | -03 | 06 | -04 | -13 |
| 13 | -07 | 13 | 04 | 19 | -04 | -22 | 15 | 07 | -04 | 01 | 09 | 11 | 12 |
| 14 | -01 | -08 | -05 | 05 | 07 | 04 | 09 | 01 | 07 | 01 | 07 | 18 | 21 |
| 15 | -03 | 02 | 01 | -23 | 05 | -07 | -16 | -11 | 35 | 28 | 00 | -19 | -19 |
| 16 | | -23 | 01 | 03 | -08 | 13 | 05 | 01 | -14 | -03 | -04 | -04 | -07 |
| 17 | -23 | | 15 | -07 | 72 | 07 | -07 | -02 | -16 | -14 | -15 | -02 | -12 |
| 18 | 01 | 15 | | 31 | 19 | 00 | -07 | 00 | 10 | 06 | -13 | -08 | -03 |
| 19 | 03 | -07 | 31 | | -05 | 00 | 14 | 25 | -11 | -13 | 12 | 23 | 17 |
| 20 | -08 | 72 | 19 | -05 | | 07 | 00 | -01 | -09 | -05 | -01 | 04 | 01 |
| 21 | 13 | 07 | 00 | 00 | 07 | | 05 | 09 | -07 | 01 | -02 | 01 | 05 |
| 22 | 05 | -07 | -07 | 14 | 00 | 05 | | 53 | -26 | -25 | 35 | 53 | 31 |
| 23 | 01 | -02 | 00 | 25 | -01 | 09 | 53 | | -33 | -32 | 20 | 31 | 27 |
| 24 | -14 | -16 | 10 | -11 | -09 | -07 | -26 | -33 | | 80 | -11 | -28 | -20 |
| 25 | -03 | -14 | 06 | -13 | -03 | 01 | -25 | -32 | 80 | | -07 | -24 | -20 |
| 26 | -04 | -15 | -13 | 12 | -01 | -02 | 35 | 20 | -11 | -07 | | 71 | 48 |
| 27 | -04 | -02 | -08 | 23 | 04 | 01 | 53 | 31 | -28 | -24 | 71 | | 67 |
| 28 | -07 | -12 | -03 | 17 | 01 | 05 | 31 | 27 | -20 | -20 | 48 | 67 | |

APPENDIX E
TABLE 4

INTERCORRELATION MATRIX OF INDEPENDENT AND DEPENDENT VARIABLES FOR GROUPS $A_C$ AND C INVOLVING ADDITIONAL FOLLOW-UP MEASURES (N = 88)[1]

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Group membership | | 27 | -09 | -06 | -25 | -19 | -07 | -22 | -21 | 31 | -07 | 38 | -17 | -12 | 33 |
| 2 Sex | 27 | | -21 | -06 | -15 | -04 | -04 | -14 | -05 | 21 | -14 | 28 | -11 | 16 | 19 |
| 3 Age | -09 | -21 | | 15 | 46 | -07 | -13 | 73 | 07 | -06 | -02 | 09 | -05 | 04 | 06 |
| 4 Education | -06 | -06 | 15 | | -26 | -04 | 26 | 12 | -03 | 08 | -03 | 04 | -33 | 02 | 07 |
| 5 Marital status | -25 | -15 | 46 | -26 | | 06 | -12 | 37 | 17 | -33 | 13 | 31 | 20 | 11 | -24 |
| 6 Diagnosis | -19 | -04 | -07 | -04 | 06 | | -46 | 05 | 22 | -14 | -10 | -24 | 15 | 05 | -53 |
| 7 Last hosp. | -07 | -04 | -13 | 26 | -12 | -46 | | -15 | -15 | 04 | 12 | 00 | -14 | -03 | 47 |
| 8 Prev. employ. | -22 | -14 | 73 | 12 | 37 | 05 | -15 | | 18 | -18 | -02 | -02 | 03 | 06 | -21 |
| 9 Jewish | -21 | -05 | 07 | -03 | 17 | 22 | -15 | 18 | | -49 | -60 | -41 | 30 | 18 | -38 |
| 10 Protestant | 31 | 21 | -06 | 08 | -33 | -14 | 04 | -18 | -49 | | -40 | 63 | -32 | -21 | 35 |
| 11 Catholic | -07 | -14 | -02 | -03 | 13 | -10 | 12 | -02 | -60 | -40 | | -15 | -02 | 01 | 07 |
| 12 Race | 38 | 28 | 09 | 04 | -31 | -24 | 00 | -02 | -41 | 63 | -15 | | -33 | -18 | 34 |
| 13 Social class | -17 | -11 | -05 | -33 | 20 | 15 | -14 | 03 | 30 | -32 | -02 | -33 | | -09 | -31 |
| 14 Prev. rehab. serv. | -12 | 16 | 04 | 02 | 11 | 05 | -03 | 06 | 18 | -21 | 01 | -18 | -09 | | -08 |
| 15 Prev. hosp. | 33 | 19 | 06 | 07 | -24 | -53 | 47 | -21 | -38 | 35 | 07 | 34 | -31 | -08 | |
| 16 Social partic. | 17 | 17 | 08 | 04 | -14 | 09 | -10 | 01 | -06 | 05 | 01 | 10 | 00 | -23 | 11 |
| 17 Leisure time activ. | 05 | -05 | 12 | -03 | 17 | -03 | 06 | 10 | -02 | -02 | 03 | -02 | 18 | -27 | 02 |
| 18 Self-satis. | 00 | 02 | 13 | 12 | -06 | 00 | -03 | 04 | -15 | 08 | 09 | -09 | -03 | -08 | 07 |
| 19 Anomie | -12 | -10 | 06 | 05 | 02 | -15 | 11 | 06 | 07 | 03 | -11 | -03 | 01 | 21 | 02 |
| 20 Time employ. | -03 | 10 | -09 | 07 | -12 | 12 | -02 | 02 | 06 | -13 | 05 | -02 | 08 | 34 | -12 |
| 21 Employ. vs not employ F-U | 00 | 11 | -05 | 04 | -05 | 02 | 03 | 11 | -02 | -06 | 08 | 03 | 09 | 23 | 07 |
| 22 Employ at end of F-U. | 05 | -02 | -01 | 04 | 01 | 01 | -01 | 06 | 10 | -11 | -01 | 10 | 14 | 25 | -17 |

[1] For an N of 88, an $r$ of .21 is significant at the .05 level, and an $r$ of .27 is significant at the .01 level, two tailed.

APPENDIX E
TABLE 4 (Cont'd)

| Variable | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|
| 1 | 17 | 05 | 00 | -12 | -03 | 00 | 05 |
| 2 | 17 | -05 | 02 | -10 | 10 | 11 | -02 |
| 3 | 06 | 12 | 13 | 06 | -09 | -05 | -01 |
| 4 | 04 | -03 | 12 | 05 | 07 | 04 | 04 |
| 5 | -14 | 17 | -06 | 02 | -12 | -05 | 01 |
| 6 | 09 | -03 | 00 | -15 | 12 | 02 | 01 |
| 7 | -10 | 06 | -03 | 11 | -02 | 03 | -01 |
| 8 | 01 | 10 | 04 | 06 | 02 | 11 | 06 |
| 9 | -06 | -02 | -15 | 07 | 06 | -02 | 10 |
| 10 | 05 | -02 | 08 | 03 | -13 | -06 | -11 |
| 11 | 01 | 03 | 09 | -11 | 05 | 08 | -01 |
| 12 | 10 | -02 | -09 | -05 | -02 | 03 | -10 |
| 13 | 00 | 18 | -03 | 01 | 08 | 09 | 14 |
| 14 | -23 | -27 | -08 | 21 | 34 | 23 | 25 |
| 15 | 11 | 02 | 07 | 02 | -12 | 07 | -17 |
| 16 | | 19 | 18 | -18 | -17 | -22 | -20 |
| 17 | 19 | | 13 | 00 | -22 | -12 | -16 |
| 18 | 18 | 13 | | -12 | -10 | -12 | -02 |
| 19 | -18 | 00 | -12 | | 03 | -04 | 01 |
| 20 | -17 | -22 | -10 | 03 | | 68 | 63 |
| 21 | -22 | -12 | -12 | -04 | 68 | | 45 |
| 22 | -20 | -16 | -02 | 01 | 63 | 45 | |

APPENDIX E
TABLE 5

INTERCORRELATION MATRIX OF DEMOGRAPHIC, PROGRAM, & WAIS VARIABLES WITH OUTCOME CRITERIA FOR GROUP $A_p$ (N = 92)[1]

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Sex | | -26 | 01 | -02 | -16 | 01 | -17 | -05 | 07 | 01 | 12 | -18 | 03 | 05 | -08 |
| 2 Age | -26 | | 28 | 34 | -06 | 19 | 74 | 02 | -19 | 16 | -24 | 19 | 02 | -12 | 15 |
| 3 Education | 01 | 28 | | -07 | -20 | 10 | 34 | -16 | -05 | -01 | 06 | 11 | -12 | -15 | 38 |
| 4 Marital status | -02 | 34 | -07 | | 02 | 03 | 31 | 07 | -02 | -01 | -03 | -11 | -10 | -11 | -04 |
| 5 Social class | -16 | -06 | -20 | 02 | | -25 | 09 | 16 | -12 | -08 | -08 | -19 | 05 | 06 | -19 |
| 6 Prev. hosp. | 01 | 19 | 10 | 03 | -25 | | 03 | 02 | 21 | -04 | 10 | 14 | 02 | 03 | 11 |
| 7 Prev. employ. | -17 | 74 | 34 | 31 | 09 | 03 | | 10 | -17 | 08 | -22 | 11 | 09 | -18 | 10 |
| 8 Prog. completion | -05 | 02 | -16 | 07 | 16 | 02 | 10 | | 56 | -36 | 40 | 10 | -05 | -10 | 01 |
| 9 Prog. length | 07 | -19 | -05 | -02 | -12 | 21 | -17 | 56 | | -56 | 78 | 15 | 05 | -20 | 07 |
| 10 Psychotherapy | 01 | 16 | -01 | -01 | -08 | -04 | 08 | -36 | -56 | | -71 | -22 | 12 | 14 | -21 |
| 11 No. staff contacts | 12 | -24 | 06 | -03 | -08 | 10 | -22 | 40 | 78 | -71 | | 09 | 06 | -07 | 14 |
| 12 F.1-Q sort | -18 | 19 | 11 | -11 | -19 | 14 | 11 | 10 | 15 | -22 | 09 | | -03 | -23 | 43 |
| 13 F.2-Q sort | 03 | 02 | -12 | -10 | 05 | 02 | 09 | -05 | 05 | 12 | 06 | -03 | | -07 | -41 |
| 14 F.3-Q sort | 05 | -12 | -15 | -11 | 06 | 03 | -18 | -10 | -20 | 14 | -07 | -23 | -07 | | -02 |
| 15 F.4-Q sort | -08 | 15 | 38 | -04 | -19 | 11 | 10 | 01 | 07 | -21 | 14 | 43 | -41 | -02 | |
| 16 F.5-Q sort | 06 | -29 | -10 | -12 | 03 | 00 | -35 | -37 | -23 | 33 | -16 | -56 | 06 | 40 | -22 |
| 17 F.6-Q sort | 08 | 15 | 03 | 35 | 04 | 06 | 14 | -10 | -14 | 17 | -09 | -20 | 29 | 23 | -08 |
| 18 F.1-Rating scale | -14 | 01 | -26 | -19 | 11 | 01 | -24 | -07 | -09 | 14 | -02 | -30 | 46 | 28 | -37 |
| 19 F.2-Rating scale | 09 | -23 | -19 | -02 | 13 | -15 | -30 | -19 | -17 | 22 | -12 | -63 | 30 | 18 | -36 |
| 20 F.3-Rating scale | -16 | 09 | 00 | -05 | 03 | -04 | -01 | 14 | -02 | 00 | 12 | -02 | 37 | 05 | -15 |
| 21 F.1-Coping scale | 02 | -17 | -17 | -01 | -01 | 07 | -19 | -16 | -24 | 15 | -15 | -32 | -23 | 85 | -01 |
| 22 F.2-Coping scale | -22 | 25 | 15 | -09 | -06 | 13 | 11 | 16 | 03 | -02 | 10 | 21 | 19 | 25 | 29 |
| 23 F.3-Coping scale | -05 | -03 | -21 | -11 | 02 | 02 | -27 | -19 | -14 | 20 | -03 | -21 | 64 | 40 | -39 |
| 24 WAIS-Verb. comp. (F.1) | 17 | 08 | 42 | -04 | -34 | 16 | 09 | 01 | 20 | -21 | 17 | 15 | -30 | -06 | 57 |
| 25 WAIS-Percep. org. (F.2) | 12 | -10 | -01 | 05 | -06 | 13 | -05 | 16 | 26 | -33 | 20 | 14 | -21 | -04 | 35 |
| 26 WAIS-Memory (F.3) | 21 | 05 | 23 | 03 | -29 | 15 | 10 | 24 | 29 | -15 | 14 | 18 | -33 | -11 | 36 |
| 27 WAIS-Full scale | 21 | 01 | 25 | 06 | -26 | 16 | 06 | 18 | 30 | -28 | 20 | 21 | -34 | -12 | 52 |
| 28 Gates reading test | 16 | 10 | 49 | 05 | -28 | 13 | 11 | 03 | 19 | 00 | 08 | 25 | -26 | -13 | 52 |
| 29 WAIS-Factor-scatter | 10 | 10 | 21 | -04 | -06 | -02 | 10 | -17 | -12 | 00 | -02 | -01 | -09 | -09 | 09 |
| 30 Time employ-F.U. | 09 | -24 | -01 | -12 | 13 | -12 | -06 | 46 | 21 | -22 | 26 | 20 | -32 | -05 | 14 |
| 31 Time hosp.-F.U. | -25 | -01 | 18 | -02 | -03 | 28 | 01 | -22 | -20 | 16 | -21 | 02 | -09 | 03 | 09 |

[1]With an N of 92, an $r$ of .20 is significant at the .05 level, and an $r$ of .26 is significant at the .01 level, two tailed.

APPENDIX E
TABLE 5 (Cont'd)

| Variable | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 06 | 08 | -14 | 09 | -16 | 02 | -22 | -05 | 17 | 12 | 21 | 21 | 16 | 10 | 09 | -25 |
| 2 | -29 | 15 | 01 | -23 | 09 | -17 | 25 | -03 | 08 | -10 | 05 | 01 | 10 | 10 | -24 | -01 |
| 3 | -10 | 03 | -26 | -19 | 00 | -17 | 15 | -21 | 42 | -01 | 23 | 25 | 49 | 21 | -01 | 18 |
| 4 | -12 | 35 | -19 | -02 | -05 | -01 | -09 | -11 | -04 | 05 | 03 | 06 | 05 | -04 | -12 | -02 |
| 5 | 03 | 04 | 11 | 13 | 03 | -01 | -06 | 02 | -34 | -06 | -29 | -26 | -28 | -06 | 13 | -03 |
| 6 | 00 | 06 | 01 | -15 | -04 | 07 | 13 | 02 | 16 | 13 | 15 | 16 | 13 | -02 | -12 | 28 |
| 7 | -35 | 14 | -24 | -30 | -01 | -19 | 11 | -27 | 09 | -05 | 10 | 06 | 11 | 10 | 06 | 01 |
| 8 | -37 | -10 | -07 | -19 | 14 | -16 | 16 | -19 | 01 | 16 | 24 | 18 | 03 | -17 | 46 | -22 |
| 9 | -23 | -14 | -09 | -17 | -02 | -24 | 03 | -14 | 20 | 26 | 29 | 30 | 19 | -12 | 21 | -20 |
| 10 | 33 | 17 | 14 | 22 | 00 | 15 | -02 | 20 | -21 | -33 | -15 | -28 | 00 | 00 | -22 | 16 |
| 11 | -16 | -09 | -02 | -12 | 12 | -15 | 10 | -03 | 17 | 20 | 14 | 20 | 08 | -02 | 26 | -21 |
| 12 | -56 | -20 | -30 | -63 | -02 | -32 | 21 | -21 | 15 | 14 | 18 | 21 | 26 | -01 | 20 | 02 |
| 13 | 06 | 29 | 46 | 30 | 37 | -23 | 19 | 64 | -30 | -21 | -33 | -34 | -26 | -09 | -32 | -09 |
| 14 | 40 | 23 | 28 | 18 | 05 | 85 | 25 | 40 | -06 | -04 | -11 | -12 | -13 | -09 | -05 | 03 |
| 15 | -22 | -08 | -37 | -36 | -15 | -01 | 29 | 39 | 57 | 35 | 36 | 52 | 52 | 09 | 14 | 09 |
| 16 |  | 15 | 29 | 60 | -04 | 47 | -05 | -34 | -05 | -14 | -19 | -17 | -07 | -07 | -30 | 20 |
| 17 | 15 |  | -12 | 19 | -01 | 15 | 03 | -32 | -09 | -05 | -15 | -10 | -08 | -06 | -12 | -07 |
| 18 | 29 | -12 |  | 53 | 23 | 20 | 04 | -71 | -32 | -26 | -40 | -42 | -44 | -11 | -33 | -01 |
| 19 | 60 | 19 | 53 |  | 12 | 24 | -29 | -48 | -20 | -15 | -30 | -26 | -22 | -10 | -32 | 00 |
| 20 | -04 | -01 | 23 | 12 |  | -02 | 51 | -27 | -13 | -10 | -12 | -13 | -13 | -10 | 02 | -06 |
| 21 | 47 | 15 | 20 | 24 | -02 |  | -11 | -23 | -04 | -02 | -07 | -09 | -10 | -13 | -04 | 16 |
| 22 | -05 | 03 | 04 | -29 | 51 | -11 |  | -13 | 18 | 05 | 10 | 12 | 16 | -05 | 00 | 00 |
| 23 | 34 | 32 | 71 | 48 | 27 | -23 | -13 |  | -39 | -30 | -37 | -45 | -48 | -10 | -25 | -11 |
| 24 | -05 | -09 | -32 | -20 | -13 | -04 | 18 | -39 |  | 46 | 55 | 81 | 63 | 10 | 16 | 05 |
| 25 | -14 | -05 | -26 | -15 | -10 | -02 | 05 | -30 | 46 |  | 40 | 79 | 33 | -46 | 13 | 10 |
| 26 | -19 | -15 | -40 | -30 | -12 | -07 | 10 | -37 | 55 | 40 |  | 79 | 54 | -03 | 30 | -09 |
| 27 | -17 | -10 | -42 | -26 | -13 | -09 | 12 | -45 | 81 | 79 | 79 |  | 62 | -19 | 25 | 02 |
| 28 | -07 | -08 | -44 | -22 | -13 | -10 | 16 | -48 | 63 | 33 | 54 | 62 |  | -01 | 07 | 07 |
| 29 | -07 | -06 | -11 | -10 | -10 | -13 | -05 | -10 | 10 | -46 | -03 | -19 | -01 |  | 07 | 07 |
| 30 | -30 | -12 | -33 | -32 | 02 | -04 | 00 | -25 | 16 | 13 | 30 | 25 | 07 | 07 |  | -30 |
| 31 | 20 | -07 | -01 | 00 | -06 | 16 | 00 | -11 | 05 | 10 | -09 | 02 | 07 | -19 | -30 |  |

APPENDIX E
Table 6

INTERCORRELATION OF SELECTED PSYCHOMETRIC VARIABLES WITH OUTCOME CRITERIA FOR GROUP $A_p$ (N = 79)[1]

| | DEPENDENT VARIABLE | | |
|---|---|---|---|
| Independent Variable | Program Completion | Time Employed | Time Hospitalized |
| Rokeach Dogmatism Scale | 11 | -01 | -21 |
| Attitude Toward Physical Disability Scale | 18 | 14 | 01 |
| Survey of Interpersonal Values: Support Scale | -13 | -06 | 02 |
| Survey of Interpersonal Values: Conformity Scale | 20 | 00 | -04 |
| Survey of Interpersonal Values: Recognition Scale | -02 | -02 | 10 |
| Survey of Interpersonal Values: Independence Scale | -22* | 03 | -07 |
| Survey of Interpersonal Values: Benevolence | 13 | -06 | 03 |
| Survey of Interpersonal Values: Leadership | 01 | 07 | 10 |
| MMPI: Lie Scale | -16 | -19 | -22* |
| MMPI: F Scale | 09 | 06 | 12 |
| MMPI: K Scale | -08 | -10 | 01 |
| MMPI: Hs. Scale | 07 | -16 | -18 |
| MMPI: D Scale | 10 | -10 | -12 |

[1]With an N of 79, rs of .28 and .22 are significant at the .01 (**) and .05 (*) levels, respectively.

APPENDIX E (Cont'd)
Table 6 (Cont'd)

| Independent Variables | Program Completion | Time Employed | Time Hospitalized |
|---|---|---|---|
| MMPI: Hy. Scale | -01 | -14 | -16 |
| MMPI: Pd. Scale | 10 | -03 | 12 |
| MMPI: MF. Scale | -01 | 02 | -13 |
| MMPI: Pa. Scale | 03 | -16 | 10 |
| MMPI: Pt. Scale | 14 | -08 | -03 |
| MMPI: Sc. Scale | 06 | -10 | 07 |
| MMPI: Ma. Scale | 07 | 08 | 05 |
| MMPI: Si. Scale | 14 | 02 | -08 |
| MMPI: Welsh R Scale | 01 | -02 | -08 |
| MMPI: Welsh A Scale | 12 | 01 | 04 |
| MMPI: Edward's Social Desirability Scale | -11 | -06 | -04 |
| MMPI: Barron Ego-Strength Scale | -21 | 07 | 13 |
| MMPI: Work Attitudes Scale | 08 | 00 | 05 |
| Opinions about Mental Illness: Authoritarianism Scale | 22* | -07 | 05 |
| Opinions about Mental Illness: Benevolence Scale | -19 | -03 | -02 |
| Opinions about Mental Illness: Mental Health Ideology Scale | -11 | 05 | -01 |
| Opinions about Mental Illness: Social Restrictiveness Scale | 22* | -03 | 00 |
| Opinions about Mental Illness: Interpersonal Etiology Scale | 09 | -08 | 04 |

APPENDIX F
Table 1

CODING OF DEMOGRAPHIC AND PERSONAL HISTORY VARIABLES

| Score Value | Variable and Variable Categories |
|---|---|
| | **Sex** |
| 1 | Female |
| 2 | Male |
| | **DVR Counselor Rating** |
| 1 | Most difficult to rehabilitate |
| 2 | Moderately difficult to rehabilitate |
| 3 | Easier to rehabilitate |
| 4 | Easiest to rehabilitate |
| Log Transformed | **Age** |
| Years of Schooling | **Education** |
| | **Marital Status** |
| 0 | Currently unmarried |
| 1 | Currently married |
| | **Religion** |
| 1 | Jewish |
| 2 | Non-Jewish |
| | **Religion** |
| 1 | Protestant |
| 2 | Non-Protestant |
| | **Religion** |
| 1 | Catholic, Greek Orthodox, and Russian Orthodox |
| 2 | Other |
| | **Diagnosis** |
| 1 | Schizophrenic |
| 2 | Other |
| | **Race** |
| 1 | Negro and Puerto Rican |
| 2 | Other |

APPENDIX F (Cont'd)
Table 1 (Cont'd)

| Score Value | Variable and Variable Categories |
|---|---|
| Hollingshead Score | Social Class |
| | Previous DVR Rehabilitation Services |
| 1 | Yes |
| 2 | No |
| Log Transformed | Months Hospitalized Prior to Referral |
| | Length from Hospital Discharge to Referral |
| 1 | Never hospitalized |
| 2 | More than five years |
| 3 | Two to five years |
| 4 | One to two years |
| 5 | Six months to one year |
| 6 | Three to six months |
| 7 | .1 to three months |
| 8 | Still in hospital |
| Log Transformed | Months Employed Full-time Prior to Referral |

APPENDIX F
Table 2
(Independent Variables)

FREQUENCY DISTRIBUTION OF VARIABLES FOR SUB-GROUPS IN TOTAL SAMPLE

Sex[1]

| | $A_p$ N=92 | $A_{ns}$ N=19 | $A_B$ N=82 | B N=40 | $B_S$ N=22 | $B_{ns}$ N=18 | $A_C$ N=63 | C N=63 | D N=22 |
|---|---|---|---|---|---|---|---|---|---|
| Male | 61 | 15 | 60 | 32 | 17 | 15 | 44 | 21 | 14 |
| Female | 31 | 4 | 22 | 8 | 5 | 3 | 22 | 42 | 8 |
| **Age** | | | | | | | | | |
| 17 20 yrs. | 17 | 1 | 15 | 7 | 4 | 3 | 10 | 9 | 3 |
| 21-25 yrs. | 17 | 3 | 18 | 10 | 5 | 5 | 11 | 11 | 2 |
| 26-30 yrs. | 16 | 5 | 15 | 10 | 5 | 5 | 13 | 12 | 5 |
| 31-35 yrs. | 20 | 5 | 13 | 3 | 2 | 1 | 16 | 11 | 5 |
| 36-40 yrs. | 15 | 1 | 12 | 5 | 4 | 1 | 11 | 7 | 3 |
| 41-45 yrs. | 3 | 2 | 5 | 4 | 2 | 2 | 2 | 4 | 2 |
| 46-50 yrs. | 4 | 2 | 4 | 1 | 0 | 1 | 3 | 9 | 2 |
| **Education** | | | | | | | | | |
| Less than 8 yrs. | 3 | 0 | 2 | 3 | 2 | 1 | 2 | 2 | 1 |
| 8 yrs. | 7 | 0 | 7 | 2 | 1 | 1 | 6 | 7 | 0 |
| 9-11 yrs. | 27 | 6 | 25 | 14 | 9 | 5 | 18 | 20 | 3 |
| 12 yrs. | 42 | 9 | 35 | 12 | 5 | 7 | 30 | 19 | 9 |
| 13-15 yrs. | 8 | 2 | 9 | 6 | 4 | 2 | 5 | 10 | 5 |
| 16 yrs. & over | 5 | 2 | 4 | 3 | 1 | 2 | 5 | 5 | 4 |
| **Marital Status** | | | | | | | | | |
| Single | 81 | 16 | 71 | 36 | 22 | 14 | 57 | 46 | 16 |
| Married | 11 | 3 | 11 | 4 | 0 | 4 | 9 | 17 | 6 |

[1] The Ns for the various sub-groups are the same for all variables, with the exception of Rehospitalization During Follow-Up; for this latter variable, the Ns are separately listed in its table.

APPENDIX E (Cont'd)
Table 2 (Cont'd)
(Independent Variables)

| | $A_P$ | $A_{ns}$ | $A_B$ | B | $B_S$ | $B_{ns}$ | $A_C$ | C | D |
|---|---|---|---|---|---|---|---|---|---|
| **Diagnosis** | | | | | | | | | |
| Schizophrenic | 76 | 17 | 70 | 34 | 17 | 17 | 58 | 47 | 15 |
| Other | 16 | 2 | 12 | 6 | 5 | 1 | 8 | 16 | 7 |
| **Length From Last Hospital Discharge to Referral** | | | | | | | | | |
| Never Hospitalized | 11 | 2 | 11 | 8 | 6 | 2 | 4 | 10 | 6 |
| Disch. more than 60 Mo. | 12 | 0 | 6 | 1 | 0 | 1 | 11 | 1 | 0 |
| Disch. 25-60 Mo. | 7 | 1 | 4 | 5 | 4 | 1 | 6 | 5 | 1 |
| Disch. 13-24 Mo. | 7 | 4 | 8 | 6 | 3 | 3 | 7 | 10 | 1 |
| Disch. 7-12 Mo. | 13 | 3 | 13 | 5 | 2 | 3 | 10 | 7 | 3 |
| Disch. 4-6 Mo. | 12 | 5 | 12 | 4 | 1 | 3 | 11 | 4 | 0 |
| Disch. 0.1-3 Mo. | 20 | 1 | 16 | 3 | 2 | 1 | 15 | 13 | 2 |
| In Hospital at Referral | 10 | 3 | 12 | 8 | 4 | 4 | 2 | 13 | 9 |
| **Months Employed Full Time Prior to Referral** | | | | | | | | | |
| No Prev. Employ. | 18 | 2 | 17 | 8 | 6 | 2 | 12 | 8 | 2 |
| 0.1-6 Mo. | 15 | 1 | 14 | 8 | 4 | 4 | 12 | 6 | 1 |
| 7-12 Mo. | 7 | 1 | 5 | 2 | 0 | 2 | 4 | 9 | 0 |
| 13-24 Mo. | 12 | 2 | 6 | 4 | 2 | 2 | 9 | 5 | 3 |
| 25-60 Mo. | 15 | 5 | 16 | 8 | 5 | 3 | 13 | 12 | 9 |
| 61-120 Mo. | 16 | 4 | 13 | 7 | 4 | 3 | 10 | 11 | 5 |
| More than 120 Mo. | 9 | 4 | 11 | 3 | 1 | 2 | 6 | 12 | 2 |
| **DVR Counselor Rating** | | | | | | | | | |
| Most Difficult to Rehab. | 32 | 5 | 34 | 14 | 9 | 5 | | | |
| Moderately Difficult to Rehabilitate | 45 | 11 | 32 | 16 | 10 | 6 | | | |
| Moderately Easy to Rehabilitate | 13 | 3 | 14 | 10 | 3 | 7 | | | |
| Easiest to Rehabilitate | 2 | 0 | 2 | 0 | 0 | 0 | | | |
| **Religion** | | | | | | | | | |
| Protestant | 13 | 3 | 11 | 7 | 4 | 3 | 10 | 21 | 3 |
| Jewish | 47 | 9 | 42 | 19 | 10 | 9 | 34 | 24 | 10 |
| Catholic | 32 | 7 | 29 | 14 | 8 | 6 | 22 | 18 | 9 |

APPENDIX F (Cont'd)
Table 2 (Cont'd)
(Independent Variables)

| | $A_p$ | $A_{ns}$ | $A_B$ | B | BS | $B_{ns}$ | $A_C$ | C | D |
|---|---|---|---|---|---|---|---|---|---|
| **Race** | | | | | | | | | |
| Negro or Puerto Rican | 9 | 1 | 9 | 6 | 3 | 3 | 7 | 21 | 2 |
| Other | 83 | 18 | 73 | 34 | 19 | 15 | 59 | 42 | 20 |
| **Social Class (Based on Hollingshead Index)** | | | | | | | | | |
| Class I (11-17) | 5 | 0 | 4 | 2 | 1 | 1 | 5 | 3 | 2 |
| Class II (18-31) | 7 | 1 | 5 | 0 | 0 | 0 | 6 | 4 | 1 |
| Class III (32-47) | 24 | 6 | 24 | 10 | 6 | 4 | 21 | 13 | 6 |
| Class IV (48-63) | 40 | 8 | 33 | 18 | 9 | 9 | 24 | 25 | 12 |
| Class V (64-77) | 16 | 4 | 16 | 10 | 6 | 4 | 10 | 18 | 1 |
| **Previous DVR Rehabilitation Services** | | | | | | | | | |
| Yes | 32 | 7 | 28 | 12 | 8 | 4 | 22 | 18 | 21 |
| No | 60 | 12 | 54 | 28 | 14 | 14 | 44 | 45 | 1 |
| **Months Hospitalized Prior to Referral** | | | | | | | | | |
| Never Hospitalized | 11 | 2 | 11 | 8 | 6 | 2 | 4 | 10 | 6 |
| 0.1-6 Mo. | 13 | 3 | 11 | 3 | 1 | 2 | 7 | 11 | 5 |
| 7-12 Mo. | 13 | 5 | 12 | 5 | 2 | 3 | 9 | 13 | 3 |
| 13-24 Mo. | 16 | 4 | 13 | 11 | 6 | 5 | 10 | 14 | 3 |
| 25-60 Mo. | 27 | 1 | 23 | 7 | 4 | 3 | 26 | 8 | 3 |
| More than 60 Mo. | 12 | 4 | 12 | 6 | 3 | 3 | 10 | 7 | 2 |

APPENDIX F (Cont'd)
Table 2 (Cont'd)
(Dependent Variables)

| | $A_p$ | $A_{ns}$ | $A_B$ | B | $B_S$ | $B_{NS}$ | $A_C$ | C | D |
|---|---|---|---|---|---|---|---|---|---|
| **Length of Relevant Training Program** | | | | | | | | | |
| Received No Program | | | 12 | 18 | | | 0 | 0 | |
| 7 Weeks or Less | | | 17 | 7 | | | 10 | 16 | |
| 8 Weeks to 3 Months | | | 5 | 5 | | | 9 | 7 | |
| 3 Months to 5 Months | | | 13 | 3 | | | 11 | 11 | |
| 5 Months to 8 Months | | | 12 | 2 | | | 14 | 8 | |
| 8 Months to 12 Months | | | 17 | 4 | | | 17 | 14 | |
| More than 12 Months | | | 6 | 1 | | | 5 | 7 | |
| **Percentage of Time Employed During Follow-Up Period (PSTS)** | | | | | | | | | |
| Did Not Work | 27 | 8 | 25 | 20 | 11 | 9 | 22 | 17 | 6 |
| .01% - 19% | 16 | 3 | 16 | 6 | 5 | 1 | 12 | 11 | 4 |
| 20.0% - 39% | 14 | 2 | 11 | 5 | 3 | 2 | 8 | 6 | 2 |
| 40.0% - 59% | 10 | 2 | 9 | 2 | 1 | 1 | 7 | 6 | 2 |
| 60.0% - 79% | 6 | 1 | 6 | 0 | 0 | 0 | 6 | 11 | 2 |
| 80.0% - 99% | 16 | 2 | 11 | 4 | 2 | 2 | 10 | 10 | 4 |
| 100% | 3 | 1 | 4 | 3 | 0 | 3 | 1 | 2 | 2 |
| **Employed at End of Follow-Up Period** | | | | | | | | | |
| Employed | 35 | 7 | 32 | 9 | 3 | 6 | 23 | 22 | 10 |
| Not Employed | 57 | 12 | 50 | 31 | 19 | 12 | 43 | 41 | 12 |
| **Percentage of Time Hospitalized During Follow-Up Period (TTS)[1]** | | | | | | | | | |
| Never Hospitalized | 66 | 9 | 53 | 22 | 11 | 11 | 48 | 37 | 12 |
| .01% - 25% | 12 | 4 | 13 | 10 | 8 | 2 | 9 | 10 | 5 |
| 26% - 50% | 8 | 3 | 10 | 2 | 1 | 1 | 4 | 5 | 2 |
| 51% - 75% | 2 | 2 | 2 | 1 | 1 | 0 | 1 | 3 | 1 |
| 76% - 100% | 3 | 1 | 3 | 1 | 0 | 1 | 2 | 3 | 2 |

[1] Subjects who were residing in a hospital at referral, and remained hospitalized for more than two months, are omitted from the table; for those Ss who were discharged within two months of referral, the initial time in the hospital is excluded from the hospitalization score.