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ABSTRACT

This study was conducted to assess the impact of expanded resources and extended eligibility on the internal functioning of a state vocational agency local office. The effects of expansion were examined in the areas of: (1) agency personnel, (2) client characteristics, (3) caseload characteristics, (4) counselor characteristics, and (5) patterns of purchased services. Comparison of the experimental county with several control counties showed that the expanded resources resulted in significantly increased services to medically disabled clients. The agency expansion resulted in the counselor having more time for providing services to his clients without lengthening the rehabilitation process. The increased funds and personnel resulted in a larger number of clients served, rather than increased service costs. Rehabilitation of the culturally handicapped proved to be generally less costly than services for the medically disabled. A related document is available as VT 015 129 in this issue. (BH)

Wisconsin Studies in Vocational Rehabilitation
Monograph XIV
Series 2

The Impact of an Expanded Vocational Rehabilitation Program Upon Intra-Agency Processes and Procedures

Solly Katz
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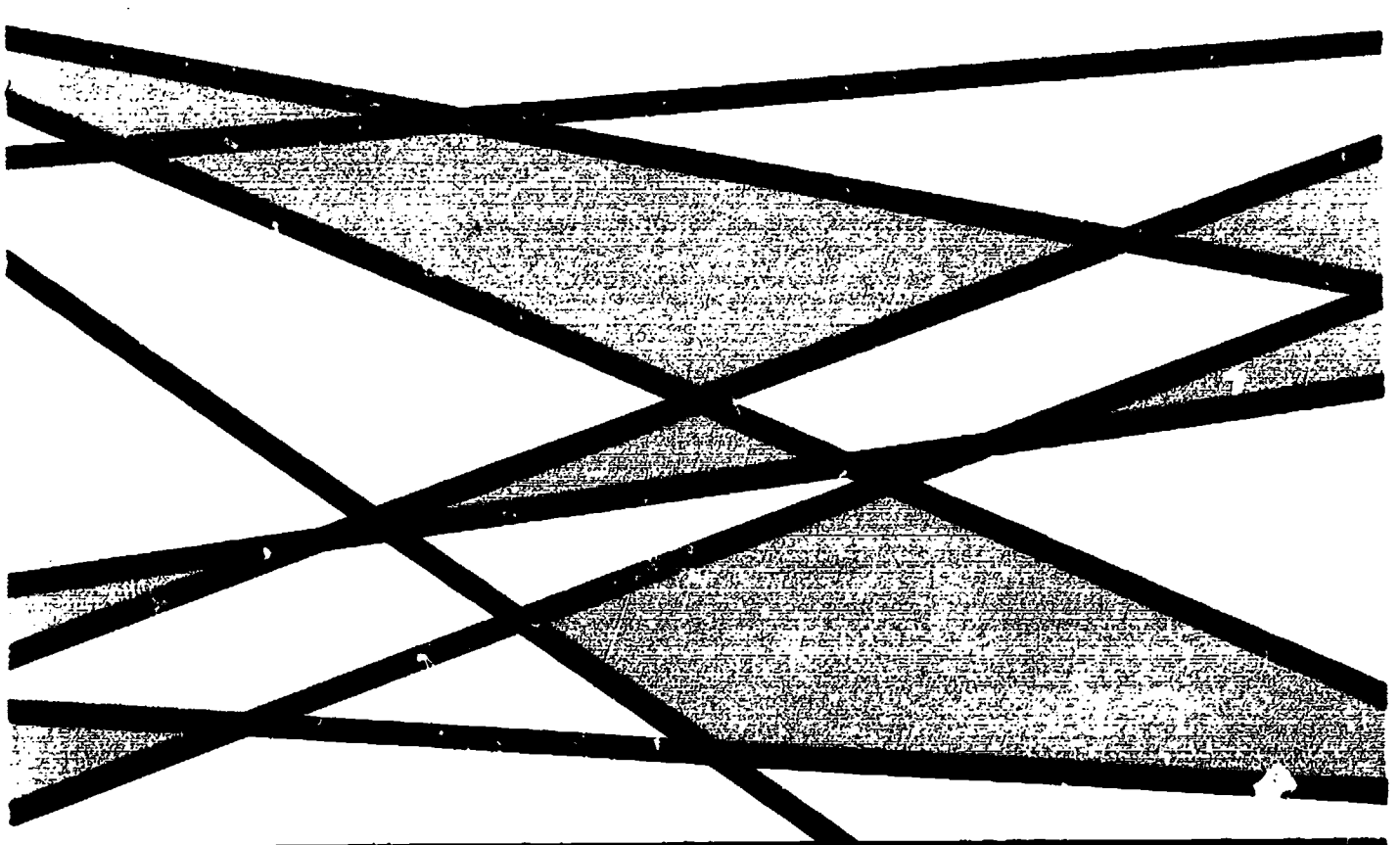

The University of Wisconsin
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Madison
1971

Significant Findings for the Rehabilitation Worker

- increased funding and manpower for expanded vocational rehabilitation services should be made available to rehabilitation agencies; such expansion enables the agency to successfully serve many more clients, operate more efficiently, and make a substantial economic contribution to the community all in a short period of time. By expanding services to meet needs, much human suffering and resulting economic waste can be eliminated.
- vocational rehabilitation agencies and others need to realize that the real barriers to rehabilitating the culturally disadvantaged are a result of limiting eligibility criteria and inadequate manpower, facilities, and funds, *not* from lack of an adequate concept and process.
- a greater emphasis must be placed on "reaching out" for clients, on establishing new and more refined referral sources which will *bring services to the client.*

Agency Caseload Characteristics

- expanding the agency resources resulted in more than a ten-fold increase in the number of clients rehabilitated in Wood County – from an expected pre-project rate of 60 for 1967 and 1968 to 78 under the experimental program.
- 463 clients per 10,000 population were served in the Wood County agency, compared to 178 and 144 in the two control agencies.
- 130 clients per 10,000 population were rehabilitated in the Wood County agency, compared to 27 and 38 in the two control agencies.

Counselor Professional Services

- total time the counselor spent on activities *for* (coordination) and *with* (one-to-one counseling) clients was greater in the expanded than in the traditional agency.
- liberalizing eligibility did not affect the total amount of counselor's time spent on the culturally and medically handicapped in the expanded agency. But the proportion of time spent with and for the client differed: more time was spent *with* the culturally handicapped than in coordinating activities *for* them; the reverse was true for the medical group.

Case Processing

- the time from referral to acceptance and from acceptance to closure was shorter in Wood County than in the primary control agency (5.0 mo. vs. 5.4 mo. and 9.9 mo. vs. 12.2 mo., respectively).
- for the culturally handicapped, the time from referral to acceptance was substantially less (2.8 mo. vs. 5.0 mo.) and from acceptance to closure slightly less (8.7 mo. vs. 9.9 mo.) than for the medically handicapped.
- overall evidence indicates that program expansion may result in decreased case processing time.

Costs and Patterns of Purchased Rehabilitation Services

- no increase in cost per case for purchased services resulted from agency expansion.
- within the Wood County agency, the average cost per rehabilitant for the culturally handicapped ($515) was significantly lower than for the medically handicapped ($732).
- no marked difference in the pattern of services to the medically handicapped was noted between the expanded and traditional agencies.
- within the expanded agency, the medically handicapped required, understandably, more medical services and the culturally handicapped more training and maintenance services.

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PREFACE

The Research and Demonstration Grant Program of the Social and Rehabilitation Service, U.S. Department of Health, Education, and Welfare (HEW), supports a research institute in each of the eight regions of the Department as a facility for scientific studies in rehabilitation. The basic purposes of these institutes have been defined as follows: (a) to develop a program of core research in an area important to vocational rehabilitation; (b) to provide consultation to state vocational rehabilitation agencies (DVR) on operational problems subject to research; and (c) to participate in the conduct of operational research at the request of state DVR agencies. Thus, the programs of the institutes were designed to provide a comprehensive and programmatic attack upon the major research problems in vocational rehabilitation, with each institute providing a unique contribution through its core research and through utilization of regional and local resources and professional talents.

In HEW Region V, the Regional Rehabilitation Research Institute (RRRI) was established at the University of Wisconsin in October, 1963, for a program of core research on the roles and functions of the DVR counselor in the client rehabilitation process. Since rehabilitation counseling is a new field at a challenging stage of professionalization, it is of major importance that counselor services be well-founded on research-based knowledge. Broadly stated, the objective of the RRRI is the advancement of the research foundations of rehabilitation with special attention to the central professional person, the counselor who is responsible for the delivery of services.

Within the University, the RRRI is affiliated with the Rehabilitation Counselor Education Program. This affiliation assures the professional resources and participation of the rehabilitation counselor education staff and students. Staff studies, doctoral dissertations, and master's theses have made a substantial contribution to the core research of the Institute. In turn, the Institute facilitates research-oriented training and continuing interest of graduate students in rehabilitation research.

The research model of the Institute was designed to serve in problem finding, selection, and classification, as well as in information retrieval and dissemination. It is based on the premise that the client rehabilitation process is influenced by counselor services in interaction with the context of these services and with the handicapping characteristics of the client. In the model, there are three dimensions: counselor services, context of services, and handicapping characteristics. Nine counselor services are conceptualized: (a) case finding, (b) eligibility determination, (c) counseling and vocational planning, (d) provision of restoration services, (e) provision of client training, (f) provision of supportive services, (g) employment placement, (h) consultation provided to other agencies serving the handicapped, and (i) public relations. Contextual covariables include selected attributes of: (a) the client, (b) the counselor, (c) the agency, and (d) the community. Handicapping conditions are classified as: (a) physical, (b) emotional, (c) mental, and (d) cultural.

Identification of potential projects for Institute core research is derived from three basic sources: (a) expressed needs of rehabilitation counselors (as determined by surveys, direct consultation, and regional planning), (b) the DVR agencies' requests which are consistent with the objectives of the Institute core research and have operational application, and (c) systematic search of the relevant literature to identify important and researchable problems.

Two major types of investigations are sponsored--one, the development of measures of the functions and their covariables, and two, the assessment of their interrelationships. The core research of the Institute is supplemented by satellite projects relevant to rehabilitation counselor functions. The *Wisconsin Studies in Vocational Rehabilitation* represents the principal means of disseminating the Institute's research findings to rehabilitation practitioners and researchers.

GNW

FOREWORD

In this study the dynamics of rapid agency expansion--increased staff, budget, facilities--were investigated. The Wood County, Wisconsin, DVR office was given greatly increased resources with the mandate to serve *all* handicapped residents. In three years time, the caseload of medically-handicapped clients increased from 152 in the 1965 fiscal year to 1170 during the fiscal years of 1967 and 1968 combined. In addition, the staff of the Wood County agency was also serving 676 cases classified as culturally disadvantaged.

For many years, critics of the state-federal vocational rehabilitation program have charged that counselors have been deliberately selecting "easy" cases to increase their rate of success. These critics make quality versus quantity an issue, but they ignore the compatability of the two concepts. They ignore the humanitarian justification for helping people, which means that every one of the millions of handicapped and disadvantaged persons are desperately in need of rehabilitation services, self-dependency, and personal respect. In criticizing the "numbers game," the academic critics contend that the rehabilitation agency should concentrate its efforts on raising "professional standards" even though it means reducing the number of clients served. Consequently, for awhile focus shifted to the concept of rehabilitation for *independent living* and away from the *vocational adjustment* of the millions of unemployed or underemployed Americans. These critics have overlooked the fact that the vocational rehabilitation process is highly effective despite large counselor caseloads. In addition, their lack of vision reveals a misunderstanding of the role of the rehabilitation counselor by those who see him as a therapist rather than as the professional coordinator of the total vocational rehabilitation process.

The argument that vocational rehabilitation agencies should restrict services to the medically or the severely disabled is refuted by several important considerations:

(a) the severity and type of handicapping conditions are *not* necessarily related to the individual's need, feasibility and/or potential for rehabilitation;

(b) both economic and humanitarian reasons dictate that the primary basis of case selection should be the existence of a handicap to productivity which can be substantially ameliorated through vocational rehabilitation;

(c) vocational rehabilitation--as a profession, agency, and service--has so proven its effectiveness that its value should not be curtailed; rather, services should be extended to all handicapped persons who have potential for occupational adjustment.

The present study shows that traditional vocational rehabilitation agency techniques can be extended to the handicapped of our country who are presently denied service. Those who do not actively seek rehabilitation are left out because the vocational rehabilitation agencies lack an adequate *budget,* number of *counselors,* and community *facilities.* The problem is lack of legal authority and funds--not inadequate knowledge of effective procedures, not over-emphasis on numbers by agency policies, and not routine rejection of difficult cases by counselors.

The most important finding in Wood County was that unserved handicapped persons are very similar to those who happen to receive service by legal eligibility or counselor selection. The medically handicapped who received services as a result of expansion were no different from those who normally receive service (i.e., without expansion). And extending services to the culturally handicapped was feasible since there were no contraindications in terms of rehabilitation need, feasibility, kind and quality of required services (counselor and purchased), process time, and the impact of rehabilitation (gain) in general for this new population of potential clients.

The present monograph represents the major research effort of the UW-RRRI in exploring the roles and functions of the rehabilitation counselor in the context of the vocational rehabilitation agency. (The reader is referred to our research model which is presented in the Preface.) There is much to support our theoretical conceptualization of the broad professional responsibilities of DVR counselors.

This report is based, in part, on the doctoral dissertation of the senior author (Katz, Solly. The Impact of Expanded Resources and Extended Eligibility Criteria on the Internal Functioning of a State Vocational Rehabilitation Agency. Unpublished doctoral dissertation, The University of Wisconsin, 1969). He is presently the coordinator of the Rehabilitation Counselor Education Program and a lecturer in the Department of Psychology at Bar Ilan University, Ramat-Gan, Israel.

GNW

INTRODUCTION

The American state-federal vocational rehabilitation program has had an impressive history, covering half a century, in rehabilitating the medically disabled. Legal restraints and inadequate financial support, however, have limited the number of persons receiving services to a small percentage of the vocationally handicapped and dependent population. The Wood County Project was designed to demonstrate the potential benefits of extending services to all handicapped persons and to define administrative guidelines for the transitional and operational phases of the expanded program. The underlying thesis of the Project was that established (traditional) techniques developed over the years by state rehabilitation agencies--individualized client services using agency and community resources--can be effectively applied for the vocational adjustment of a much broader range of unemployed and underemployed people. The caseload of an experimental agency was expanded *vertically* to include a larger number of the handicapped with medically-defined disabilities and *horizontally* to extend services to persons with cultural (nonmedical) handicaps.

The Project, covering the five-year period ending June 30, 1969, was sponsored by the U.S. Department of Health, Education, and Welfare through a Research and Demonstration grant (RD-1629) to Adrian E. Towne, Director, Division of Vocational Rehabilitation (DVR), Wisconsin Department of Health and Social Services. The University of Wisconsin Regional Rehabilitation Research Institute (UW-RRRI) conducted the research, as reported in this monograph series. All client services were provided by DVR. Grant funds for the Project--including research, client service demonstration, and the establishment of two new workshops—totaled 1.5 million dollars for the five-year period.

Definition of Terms

Client group referred to one of the following: (a) *medically handicapped:* having a vocational limitation associated with a

physical and/or mental (retardation or emotional) disability; or (b) *culturally handicapped* or *disadvantaged* (the two terms are used synonymously): having a vocational limitation associated with a social, financial, and/or educational disadvantage. Culturally-disadvantaged clients who also had a mental or physical disability were classified as medically handicapped.

Experimental area referred to Wood County where the expanded program was established and operated by the Wisconsin DVR as the demonstration site or experimental agency for the Project. Several *control areas* in which Wisconsin DVR offices, or traditional agencies, were located were designed for comparison purposes: (a) *primary control area:* Eau Claire County; and (b) *other control areas:* Wood County (pre-Project status), selected counties, the state of Wisconsin, and the nation as a whole.

Project Settings

Wood (1960 population, 59,105) and Eau Claire (1960 population, 58,300) counties, the experimental and the primary control counties respectively, and the other control counties involved were generally rural-urban in character, having primarily Caucasian populations of similar size; 15% to 20% of the families in each county had annual incomes below $3,000. The economies of these areas were based both on industry and agriculture. In general, there were good educational, vocational, and medical resources available for rehabilitation.

Agency Administration and Staffing

The Wood County agency, established and operated as a special district office of the Wisconsin DVR, was provided with the necessary staff and budget to meet the responsibilities of an expanded case-service load. Agency services (e.g., counseling, training, job placement) were identical to those available throughout the state-federal rehabilitation program (except for an additional provision for relocation expenses of Wood County clients). Traditional procedures for delivery of services were followed,

including geographic assignment of the counselors who worked as generalists; none of the Wood County counselors served as a specialist in terms of handicap group or function in the rehabilitation process. Throughout the Project's administration, the agency operated in accordance with statewide DVR regulations and personnel policies; case processing and coding were consistent with state and federal regulations. Some extra time demands were made on the staff for data collection.

The staff members of the Eau Claire County (control) agency were, in general, better educated and had had more professional experience than those in Wood County. In addition, the employment pattern in the Eau Claire agency--established for many years as a permanent DVR office--was more stable.

Research Procedures

The research plan was formulated to assess the impact of the expanded program on (a) the clien. (b) the agency, and (c) the commu nity. Details of the research design and operational plan were developed in an initial six-month planning period, with special attention given to the collection of pre-Project control data. In the first 24 months, instruments unique for the Project's purposes were developed. In addition, an on-site data collection office was established, and data processing procedures were refined. Concurrently, the experimental agency was expanded at a pre-planned rate: personnel were employed and oriented, workshop facilities were established, and public relations efforts accelerated to an appropriate level. Thus, the third and fourth years of the Project represent the period of an established, maximized agency operation, i.e., it operated with full staff and budget as the "model" expanded agency. During the fifth and final year, no new clients were added to the existing data bank, and agency operations were reduced.

Sour- : of data concerning the impact of services on the client included the UW-Wood County Project Client Test Battery, composed of published instruments measuring educational achievement, intelligence, and perceptions, and instruments developed by the UW-RRRI staff as indicators of client

characteristics. Each applicant was referred by his counselor for the Test Battery. After acceptance, a client's handicap in significant life areas was rated by his counselor, who also kept a record of the time and nature of his work with and for individual clients. Approximately six months after closure, the follow-up instruments of the Test Battery were administered by representatives of the UW-RRRI staff.

The impact on the agency was assessed by examination of the DVR and UW-RRRI records concerning changes in staff, type of caseload, services rendered and purchased, and costs resulting from the expansion of the program. During 1966 and 1967, counselors from both counties also completed a record of contacts made with or concerning clients during the rehabilitation process.

The impact of the expanded program on the community was assessed by data collected before the Project's initiation and at its termination concerning community members' knowledge of and attitudes toward rehabilitation and the handicapped. In particular, financial records were examined for a benefit-cost analysis and changes in public assistance expenditures.

Continuous and up-to-date research data records were provided by a model for the establishment of a data bank. Concurrently, a coding guide for all variables was completed to initiate the data-collection model. A Client Master File was constructed to include client demographic characteristics, test performance, and expenditures by type of service, e.g., counselor time, purchased resources.

Description of Client Populations

Records from fiscal years 1965-66, 1966-67, and 1967-68 indicated that 1,732 persons (521 culturally handicapped and 1,213 medically handicapped) were referred in Wood County and 850 in Eau Claire County. Of these, 1,553 were accepted--336 culturally- and 788 medically-handicapped persons in Wood County and 429 medically handicapped in Eau Claire. Closed as rehabilitants were 265 culturally- and 756 medically-handicapped clients in Wood County and 317 in Eau Claire County. As of June 30, 1968, the

numbers of clients remaining in each status were as follows: (a) referral: Wood--cultural, 59, medical, 194; Eau Claire--62; (b) accepted: Wood--cultural, 77, medical, 194; Eau Claire--224; and (c) in training: Wood--cultural, 27, medical, 24; Eau Claire--17.

To describe the client populations, a comparison was made of specific handicap subgroups, viz., the culturally, physically, and mentally handicapped, on relevant demographic variables.[1] These comparisons indicated that some characteristics were associated with all subgroups: (a) race: white; (b) number of dependents: less than three; (c) primary source of support: family and friends; (d) secondary disability: none; (e) employment outlook: having difficulty in finding a job or not looking; no post-rehabilitation job available; (f) intellectual ability: average intelligence (many culturally-handicapped clients scored at the 69th percentile on the Raven's PM, however) and client perception reported as "average" or "above average"; and (g) educational achievement: higher grade-level equivalent performance in reading than in arithmetic.

Characteristics differentiating the subgroups were the following: age, sex, primary source of support, source of referral, marital status, onset of handicap, driver's license and automobile ownership, employment status, highest grade completed, and educational achievement. For a definitive description of the Wood County Project, the reader is referred to the introductory monograph of the series (Wright, G.N., Reagles, K.W., & Butler, A.J. *An Expanded Program of Vocational Rehabilitation: Methodology and Description of Client Population.* Monograph XI, 1970).

[1] It should be noted that individuals with mental or physical disabilities were excluded from the culturally-disadvantaged classification and systematically classified as medically handicapped. This assignment underlies some of the subgroup differences reported in this section--particularly the differences between the culturally disadvantaged and the mentally handicapped, one-third of whom were mentally retarded. There is a particularly high prevalence of disability among the culturally disadvantaged, but theoretically these people (with disabilities) are entitled to public rehabilitation services under traditional eligibility criteria. The exclusion of the culturally disadvantaged with medically-defined disabilities from the culturally-handicapped population in the Wood County Project permitted analysis and interpretation of data concerning the horizontal expansion of the rehabilitation program.

CONTENTS

LIST OF TABLES

The Impact of an Expanded Vocational Rehabilitation Program Upon Intra-Agency Processes and Procedures

THE NATURE AND SCOPE OF THE PROBLEM

The Wisconsin experiment--the Wood County Project[1]--was based on the concept of saturation intervention--to make vocational rehabilitation services available to virtually every handicapped (both medically and culturally) person in the county. In addition to other provisions, this required an expansion of the staff and functions of the Wood County DVR agency. A bank of longitudinal data and a great deal of knowledge was gained from this expansion: the Wood County Project was the most extensive research project so far undertaken on total rehabilitation.

All state-federal vocational rehabilitation agencies, regardless of the specific or specialized problems and programs with which they deal, have many organizational factors in common. For example, any agency must assess the demand for specific services as related to the handicap types of its clients. To operate efficiently, it must make sure that these services are available and know how to obtain them. It is possible that new facilities (e.g., sheltered workshops) need to be developed to serve the agency's clients. The agency must also take into consideration such factors as the costs of the services and whether the costs exceed the benefits derived from these services. In addition to providing guidelines for allocating available resources, knowledge of such factors aids an agency in selecting the pattern of services which is likely to be most effective at a given cost level.

The Wood County Project, then, by establishing a model expanded agency, hoped to find information relevant to all DVR agencies and to offer the knowledge gained to the field of vocational rehabilitation research to facilitate the future planning of similar programs. Specifically, the present study was designed to assess the impact of the experimental conditions (expanded resources and extended eligibility criteria) on the internal functioning (activities, personnel, and other dimensions) of a state vocational rehabilitation agency. The effects of expansion were examined with respect to: (a) expansion of agency personnel; (b) client characteristics; (c) caseload

[1]A description of the Wood County Project is presented in the Introduction.

characteristics; (d) counselor professional services; and (e) patterns of purchased services.

Definition of Terms

In addition to the terms basic to the Wood County Project as defined by Wright, Reagles, and Butler (1970) and in the introductory section, a number of other terms germane to this study require clarification.

Feasibility refers to the counselor's prediction of rehabilitation outcome [this is to be distinguished from *feasibility level* as defined by Hammond, Wright, and Butler (1968)]. Feasibility is almost entirely a matter of the counselor's judgment. As stated by McGowan and Porter (1967), the determination of feasibility:

> requires the counselor to evaluate and ascertain potential capacity of the individual for employment, taking into consideration the effect the agency's services may have on reducing or correcting the disability or on lessening the employment handicap and providing greater opportunity for employment (p. 88).

Clients served refers to the number of clients provided with rehabilitation services during a given fiscal year, regardless of the year in which they were referred for rehabilitation services.

Size and characteristics of the caseload refers to the number of clients referred, served, accepted, and rejected, and the total closures in each agency, obtained from the DVR-2 form and DVR fiscal records.

Counselor professional services is defined as the amount of professional time the counselor spent with or for the client. This information was obtained from the Client Service Record (CSR). The total counselor professional time expenditure was determined from a summation of the amount of time expended per month for each service activity in the experimental and primary control agencies. These total times were then converted to mean scores, providing the total mean time per handicap type per caseload. The total time was

then dichotomized into mean time spent *with* a client ("one-to-one" counseling) and total mean time spent *for* the client (any activity related to the client's rehabilitation) but not directly *with* him. Similarly, the mean number of contacts per client was obtained for the experimental and primary control groups and was also dichotomized into mean number of contacts with and for the client.

Case velocity refers to the total time (in months) that a client spent from the date of referral to the date of acceptance, and from the date of acceptance to the date of closure. Data concerning case velocity patterns were obtained from the Counselor Master List of Clients on which these vital dates were recorded.

Research Questions

The following research questions were posed for this study, aimed at examining the effects of the experimental treatment on the rehabilitation process in an agency:

(a) Are client characteristics related to services delivered in the rehabilitation process, and what is the nature of the relationship?

(b) What is the relationship between expanded rehabilitation resources and agency caseload characteristics?

(c) How does the expansion of resources influence the professional functions of the counselor?

(d) How does the expanded agency concept influence the delivery of services by the agency?

(e) What is the effect of the expansion of rehabilitation resources on the cost of rehabilitation services?

(f) What information does the expansion of the rehabilitation process generate for future agency operations and research?

LITERATURE REVIEW

The Wood County Project was the earliest and most extensive project thus far undertaken to determine the feasibility of, and provide guidelines for, the vertical and horizontal expansion of public vocational rehabilitation. Research relevant to such expansion of resources is reviewed in this section and has been divided into three subsections: (a) modifications in the rehabilitation process, (b) professional functions of the rehabilitation counselor, and (c) feasibility and eligibility.

Modifications of Emphasis in the Rehabilitation Process

The 1965 Amendments to the Vocational Rehabilitation Act reflected the idea that, despite the realities of cost and risk, rehabilitation facilities and professional skills should be made available to the severely disabled. These Amendments also promoted the expansion of rehabilitation eligibility criteria to include clients formerly not considered for services. Research indicates that it is economically wise to expand programs to rehabilitate severely handicapped persons who would otherwise almost certainly be dependent upon society. The following studies deal with the process variables relevant to expansion of the state-federal rehabilitation program.

The New Jersey Rehabilitation Commission, through an intensified team approach and a coordinated program of services, demonstrated that agency techniques involving extensive, personal counselor contact and very intensive support in placement were more successful than those in which these intensified service methods were not employed (Selling, 1966). The Utah State Division of Vocational Rehabilitation (1963) developed a project which demonstrated that individuals formerly judged unemployable could be rehabilitated by agencies with intensified programs for severely disabled clients. A project initiated by the District of Columbia Department of Vocational Rehabilitation (Sepe & Schwartz, 1968) established that: (a) early referral for rehabilitation services diminished client

dependency; (b) group counseling was a valuable tool when incorporated as part of the total plan of services; and (c) workshops could provide accurate and comprehensive client evaluations.

Research concerning the rehabilitation of older disabled persons indicates that intensified programs are also helpful in this area. Landon and Brown (1961) reported that a comprehensive rehabilitation center offering speech, hearing, physical, occupational, and pre-vocational therapy as well as psychological, social, and medical services could successfully rehabilitate older males. A project at the St. Paul Rehabilitation Center and Workshop, Inc. (1964) demonstrated that rehabilitation of older disabled workers was feasible by using a closely coordinated and integrated program of medical, psychological, vocational, and work-evaluation procedures.

Similarly, a Federation Employment and Guidance Service program (Rusalem & Dill, 1961) successfully rehabilitated older disabled workers in New York City by offering vocational evaluation, counseling, personal adjustment training, and employment services. A one-year project of the Mankato Rehabilitation Center, Inc. (1965) also demonstrated the feasibility of rehabilitating older disabled workers; this project, which included social integration training, indicated that a successful rehabilitation program must (a) assess realistically the client's actual physical condition, intellectual skills, and abilities; and (b) provide employers with realistic employment criteria.

Similar studies on the provision of intensive services in various agencies and institutions were carried out by Allen (1965), Baily (1964), Churchill (1965), Mullins, Archer, and Burchett (1967), and Ware (1964). The following conclusions appear justified: (a) agencies may extend rehabilitation services to older clients, recipients of SSDI, and others in severely disabled groups; (b) the costs of such services are relatively higher than the costs for regular DVR clients; and (c) comprehensive agency programs are needed to enable clients from these groups to return to employment. Generally, the research emphasized the continuing need for agencies to provide comprehensive, expert physical treatment, personal adjustment training, staff continuity, and placement and follow-up services--all of which have been available in traditional DVR programs.

A criticism often directed against rehabilitation counseling states that only clients with high feasibility are accepted for services. Dishart and Epstein (1964), for example, studied patterns of services provided by 90 state vocational rehabilitation agencies. The authors found that of 88,699 processed applicants, 39,253 were not accepted for services; and of those not accepted, two-thirds were rejected because of severity in disability, age, or residency requirements. Those rejected because of severe disabilities, however, were not necessarily less feasible for services, as has been demonstrated. Thus, it appears that most clients were rejected for reasons not related to actual feasibility, e.g., inadequate case-service funds, staff, and rehabilitation facilities in the community.

Counselor Professional Functions

The UW-RRRI research model is based on the premise that the client rehabilitation process is influenced by counselor functions in interaction within the context of those functions (Wright & Butler, 1968). Nine counselor functions related to the rehabilitation process are postulated, with contextual covariables on selected attributes of the client, the counselor, the agency, and the community. In this section, the literature will be reviewed in relation to agency covariables and counselor professional functions with the UW-RRRI model serving as the organizational framework

The effective rehabilitation counselor must have a reasonable and realistic caseload whose management was described by the Committee on Caseload Management at the Third Institute on Rehabilitation Services (Muthard, 1965) as:

> The use of techniques (methods or details of procedure) to control the distribution, quality, quantity, and cost of all aspects of casework activities in order to accomplish the program goals of the agency (p. 12).

A group of state DVR directors meeting in Nebraska in 1948 developed standards of caseload management to increase counselor efficiency and rehabilitation success. The "ideal" load, they determined, would be 100 active clients and 60 referred cases for each counselor, with an estimated 50 closures per year. The results of

the New Brunswick Project (Muthard, 1965) also dealt with increasing counselor efficiency. It showed that: (a) a strictly limited geographical area and smaller population enabled the counselor to develop a more intensive program and serve a larger number of people; (b) it is important to define the size and density of the population that can be served most efficiently by the counselor; and (c) a program of more strictly controlled services could achieve maximum results by involving various community forces to help the counselor in developing and managing the most appropriate caseload. Ooley (1961) developed a staff specialization approach to DVR case processing. The results of this approach indicated that clients with severe mental disabilities and those who were "marginal" were more effectively served although the total number of closures was not significantly larger for those counselors confined to counseling and case management.

The Committee on Caseload Management of the Third Institute on Rehabilitation Services (Muthard, 1965) classified factors influencing caseload management as either internal or external. Internal factors included: (a) state and federal legislation and rehabilitation plans, (b) budget, (c) number of counselors, (d) rate and quality of referrals, (e) closure goals, (f) case processing procedures, (g) handicap group served. (h) geographical area served, and (i) caseload size. External factors included: (a) counselor preparation, (b) superior counselor performance, (c) effects of administration, (d) clients' problems, and (e) morale of agency personnel.

Muthard and Jaques (1961), in their study of barriers to effective service, found that counselors often perceived their agency's practices as hindering their professional effectiveness. The size of the caseload and the amount of time available for counseling were considered the most inhibiting. Wright, Smits, Butler, and Thoreson (1968) in a study of problems, policies, and procedures in the rehabilitation process reported similar counselor perceptions. The counselors indicated that large caseloads and/or pressure for closures, clerical work, and general agency policies and procedures were the major agency-related problems encountered.

A similar issue--the influence of administering caseload management on the agency's effectiveness--was studied extensively in a report published by Harbridge House (1963). Both the director's administrative skills and the skills and motivation of the staff influenced agency efficiency. Similarly, the agency's rehabilitation philosophy, decentralization, fund allocations, placement services, use of medical consultants, and use of public relations to improve the "climate" for placement were all influential; the existence and use of community resources also had some impact. This report indicated that an agency emphasizing *quantity* of service would translate a fixed budget into a large number of closures at lower cost per rehabilitant while an agency emphasizing *quality* of service would translate the same amount of money into a smaller number of closures at increased cost per rehabilitant.

In a study dealing with counselor time by the U.S. Department of HEW, Vocational Rehabilitation Administration (1956), the counselors and their supervisors were asked to estimate the amount of time that ideally should be spent in various activities. Both groups agreed that too much time was then being spent in clerical work, reporting, travel, and dealing with "unprofitable" clients, while not enough time was being spent on counseling and guidance, professional growth, public relations and program promotion, and resource development.

Miller, Muthard, and Barillas (1965) examined the time distribution and changes in work activities reported by Iowa DVR counselors. The authors reported that counselors devoted the most time to counseling and guidance, recording, traveling, resources development, and reporting. The counselor's experience and type of territory did not significantly affect how he spent his time. In addition, the "effectiveness" or "ineffectiveness" of the counselors made no difference on allocation of time.

At the Kansas Services for the Blind, a study was conducted (Barnhart, 1963) to assess the proportional use of staff time. Approximately 20% of total professional time was used in face-to-face client contact and almost one-third in office work. Less than one hour of every 50 was spent supervising individual vocational

rehabilitation plans. Similar studies were conducted by Muthard and Miller (1963) and Muthard and Salomone (1968).

Jaques (1959) and Muthard and Miller (1966) offered a list of those areas of the counselor's work which must be evaluated. Jaques determined that, according to counselors, the critical requirements for successful counseling were: (a) the creation of a climate conducive to therapy, (b) interaction between client and counselor, (c) client evaluation of his problems, (d) meaningful exchange of information, (e) establishment of counseling limitations, (f) the gathering of client information, and (g) administrative arrangements for the client.

In a study soliciting DVR counselor perceptions, Dumas, Butler, and Wright (1968) found that when counselors were asked about self-evaluation procedures, they advocated the following criteria:

> quality and/or quantity of placement, amount of involvement with client, effectiveness in providing complete service, client behavior relative to services provided, caseload balance, types of services rendered, caseload movement, accuracy and completeness of clerical work, organization of counselor time, and time alloted to various functions.
>
> The supervisor, current clients, closed clients, and other counselors were all identified as possible evaluative agents in lieu of the counselor himself. For the counselor, self-rating forms and/or check lists were frequently suggested (p. 20).

In dealing with the problem of counselor evaluation, Miller (1963) suggested that norms for case complexity could be obtained by: (a) using fixed numbers of rehabilitations per year, (b) constructing a set of weights using closure figures for several years, and (c) assigning the clients to groups in terms of particular variables relevant to the state in which the study took place.

Miller and Barillas (1967) developed an empirical measure of client problem complexity by matching clients in terms of variables impeding rehabilitation. The authors found that counselors effected fewer closures as their cases became more complex and difficult.

Current national practices regarding weighted case closures and counselors' attitudes toward such closures were investigated by Carnes (1967). He found that counselors felt they deserved more credit for the more difficult cases they handled and favored an evaluation of their performance based on such a measure. The counselors believed that with proper procedures closures could be objectively valued and weighted.

Seeman (1954) and Auld and Myers (1954) studied the effect of counseling time limits on outcome. The authors reported that the more time the counselor spent with the client, the more successful he was in effecting change. However, this hypothesis was refuted by Shlien, Mosak, and Dreikus (1962) and Muench (1965) who demonstrated that time-limited therapy was effective, efficient, and economical in terms of total staff time and client progress.

Auld and Myers (1954) and Winder and Hersko (1955) studied the relationship between client characteristics, counselor time, and outcome. They found that clients classified as "middle-class" were in therapy longer and had higher success ratios. McNair and Callahan (1963) and Lorr and McNair (1964) found a relationship between the client's personality and the length and outcome of counseling. Tyler (1960) found the time factor irrelevant to counseling outcome, but Gendlin and Shlien (1961) and Johnson (1965) presented conflicting results.

The preceding review of research studies indicates that caseload management does not depend solely on the counselor. The goals, objectives, policies, and procedures of the agency, and the rehabilitation philosophy of the workers are also influential factors. The literature review also suggests the need for systematically studying both case services and the rehabilitation process itself. It was generally concluded that the principles and procedures for caseload management and counselor evaluation criteria need to emanate from empirical research rather than from the opinion survey techniques presently employed. The research points to the continuing need for further investigation into the function of time in rehabilitation.

Feasibility and Eligibility

One of three eligibility criteria used in the state-federal program is the feasibility of rehabilitation services in overcoming the handicapped individual's barrier to employment. This criterion has often been attacked as a barrier to the provision of rehabilitation services to many of the handicapped. For example, Whitten (1965) advocated the radical revision of regulations governing acceptance of cases; he felt that regulations should become flexible enough to encourage the largest number of handicapped individuals to seek rehabilitation services. Following is a review of studies dealing with the problem of feasibility and eligibility.

By investigating factors that predict rehabilitation success, Drasgow and Dreher (1965) found that certain psychological variables were more accurate than biographical ones in indicating success. Biographical data has, however, been used in a number of studies analyzing rehabilitation success variables. On the basis of single variable analysis, for instance, DeMann (1963) found that eight variables (extracted from an extended series of proposed characteristics) were the most valuable: previous contact with agencies, employment history, home ownership, source of financial support, referral source, age at disablement, age at acceptance, and educational level. Other studies using biographical data to predict rehabilitation success include those by Ayer, Thoreson, and Butler (1966), Ehrle (1961), McPhee, Griffiths, and Magleby (1963), McPhee and Magleby (1960), Mortensen (1961), and Neff (1960?).

Eber (1966), using factor analysis to analyze the goals of vocational rehabilitation as related to what was achieved at closure and follow-up, found positive correlations between success and: (a) the greater amount of money the client earned during the three months prior to acceptance, (b) being married, (c) having an "adequate" work history, (d) presence of some dependents, (e) race (Caucasian), (f) nonreceipt of benefits from SSDI, and (g) younger age.

Knowledge of the client's personality characteristics was emphasized by Danielson (1965) in his study of factors predicting

rehabilitation success. Although providing little support for the contention that "ego strength" and motivation are the most significant variables, his study indicated that the client's ego strength does affect his behavior during rehabilitation. Degree of client disability, however, remained the most accurate single predictor of rehabilitation potential.

Bankston (1967) studied the variables influencing agency acceptance of certain types of clients. He found that more accepted clients had been referred from medical sources than from any other source. He conjectured this higher acceptance rate was partially due to (a) the counselor's tendency to positively evaluate clients from medical sources, and (b) the more detailed information about clients available from physician's records. Of great importance to acceptance was the counselor's personal acceptance or rejection of clients.

In a study of clinical versus statistical prediction of client feasibility, Bolton, Butler, and Wright (1968) found that statistical prediction was significantly more accurate than "average" clinical counselor predictions. They also found wide variation in predictive accuracy among counselors, but predictive accuracy was not related to the counselor's education and experience.

Hammond, Wright, and Butler (1968) reviewed the literature concerning correlates of rehabilitation outcome and identified 25 variables or characteristics reflecting clients' non-feasibility for rehabilitation services. These selected variables were the basis for developing a scale of client feasibility for rehabilitation. Analysis indicated that rehabilitation for the culturally handicapped residing in rural areas is just as feasible as for the medically handicapped.

Summary

The research related to the expansion of services indicates the feasibility of extending services to a broader segment of the handicapped population. The studies reviewed concerning counselor professional functions and the vocational rehabilitation process suggest that the extension of rehabilitation to all who need service depends on the availability of adequate rehabilitation funds,

counselors, and facilities. The research points to the need for developing criteria for counselor functioning through empirical research rather than through opinion surveys. The feasibility studies reviewed indicate that many variables have been found to be related to rehabilitation case feasibility over and beyond the type or severity of the disability.

METHODOLOGY

Subjects

Subject data were based on information recorded by agency personnel and by rehabilitation counselors for all clients served by the experimental and control agencies during the period July, 1966, to July, 1968. A client was considered "served" if an application for services was filled out and signed by him, and if he was included in a counselor's caseload. The information consisted of all aspects of the client's progress from initial referral to acceptance (or rejection) through the rehabilitation process to placement and closure. The total number of clients in the sample was 9,320; a sub-sample of 2,115 clients closed as "rehabilitated" was used to assess the effect of the experimental conditions on a number of dependent variables.

The comparisons drawn were between: (a) the medically handicapped in the experimental (Wood) and primary control (Eau Claire) agencies, and the medically handicapped in the six hidden agencies combined (Control Agency B); and (b) the culturally handicapped and the medically handicapped in the experimental agency. The clients (subjects) of this investigation are arrayed by handicap type in Table 1.

Instrumentation and Data Collection

The instruments providing data for this study were the Wisconsin Data Record Form (DVR-2), the Client Service Record (CSR), and the Rehabilitation Counselor Master List of Clients. The DVR-2 is a standard form on which demographic and idiographic client information is recorded by Wisconsin counselors during the rehabilitation process. The CSR was developed by the UW-RRRI staff for systematic recording by the counselor of: (a) the number of counselor professional contacts for or with the client; and (b) the number of minutes spent by the counselor *in toto* and for specific services during the rehabilitation process. The Master List of Clients is an alphabetical, printed roster of a counselor's total assigned

Table 1

Total Number of Clients Served in the Experimental and Control Agencies for Fiscal Years 1967 and 1968

County	Physically Handicapped	Emotionally Disturbed	Mentally Retarded	Culturally Disadvantaged	Total
Chippewa*	304	109	133		546
Dodge*	540	702	113		1355
Fond du Lac*	545	293	67		905
Jefferson*	403	93	146		642
La Crosse*	684	248	173		1105
Marathon*	822	271	311		1404
Eau Claire**	538	305	209		1052
Wood***	1170	275	190	676	2311
Total	5006	2296	1336	676	9320

* The six "hidden" control counties (referred to as Control Agency B)

** The primary control agency

*** The experimental agency

caseload and is updated once each month. It lists the counselor's caseload, current caseload status of each client, dates of change of client status, and specific case service costs for each client. Such a list indicates the "case velocity" of clients and provides a guide for appropriate supervision and caseload management.

The data were collected by a field research staff in conjunction with the counselor-reported data derived from the DVR-2. In the instance of the six hidden control counties, information requisite for this study was obtained from the Wisconsin DVR data tapes for each of the two fiscal year periods examined. This computerized record provided client information unavailable from any other source except the case files themselves. The data from the CSRs were submitted monthly by the experimental and primary control agencies. The data were than transferred to the Master Client File of the UW-RRRI for storage and subsequent analysis.

Statistical Analysis

For purposes of comparing Wood County with an "uncontaminated" control agency (where the staff members were not aware of their participation in a research project), the data for the six hidden agencies were combined and treated as a single agency (Control Agency B). The statistical techniques of analysis of variance, chi square, and correlation were used to assess the significance of differences observed in the data comparisons. The significance level established was .05.

RESULTS

Prior to a discussion of the results, the reader should be advised that the analysis of the expanded programming in Wood County was complicated by the fact that the Project was confined to a five-year period. The caseload had been phased down by the end of the fifth year to conform with normal operating levels throughout the state. Meanwhile, the state-wide "normal" operating level had increased consistently during the five years in question. Therefore, the two years when the Project was fully funded and staffed were used in this monograph to obtain the clearest impact of agency expansion. Caseload comparison, however, must be interpreted in light of this limitation. There was no truly normal operation in Wood County due to this extremely rapid acceleration and subsequent deceleration during a time when the control areas, specifically, and the state agency, in general, were in a phase of substantial growth.

Expansion of Agency Personnel

Before discussing the relationship between agency expansion and client and caseload characteristics, a brief description of the concept of expansion as related to agency personnel is necessary.[1] Table 2 presents the percentage of counselor time spent on the caseload (each counselor working full-time devoted "100% time" to the caseload; one working half-time spent "50% time," etc.). As a number of counselors left or were changed during the time period considered, and as others devoted only small percentages of their time to the particular caseload, the increase is presented as the total percentages of time spent by an agency's counselors. This information was derived by computing the percentage increase in time spent on caseloads before and after the Project's initiation.

Table 2 reveals that in the Wood County agency nearly twice as much counselor time was spent on caseloads (376% equivalent

[1] For a complete discussion of the concept of expansion, see: An Expanded Program of Vocational Rehabilitation: Methodology and Description of Client Population *(Wisconsin Studies in Vocational Rehabilitation), 2,* XI, 1970.

Table 2

Mean Percentage of Full-time Counselors Devoted to Caseloads in the Experimental and Control Agencies for Fiscal Years 1967 and 1968

Agency	% of full-time counselors on caseload	No. cl. served per 10,000
Wood	376	358.29
Eau Claire	174	173.60
Control Agency B	128	142.92

full-time counselors, where one counselor equals 100%) as in Eau Claire (174%), and nearly three times the amount of counselor time was spent on caseloads as in Control Agency B (128%). Yet the Wood County agency had to cope with personnel problems. For example, the Wood County agency experienced a discontinuity of personnel, employing three different supervisors and eight different counselors (for three to four positions) during the period of time under investigation, while the Eau Claire agency had the same personnel throughout. Also, Eau Claire was an established district office with "established" referral sources and caseloads and, as such, enjoyed better initial "visibility"; i.e., it was better known as a rehabilitation agency than Wood County. In fact, prior to the inception of the Project, Wood County had only one counselor working two days per week and had a proportionately smaller caseload. The Wood County counselors were also generally less experienced.

Client Characteristics

To determine if particular client characteristics were related to acceptance or rejection under experimental conditions of expanded resources, the number of rehabilitated clients in each agency was cross-tabulated by these variables. The percentages of the handicap types rehabilitated are presented in Table 3. Wood County, it can be

Table 3

Percentage of Rehabilitated Clients in the Experimental and Control Agencies by Handicap Type

Agency	Handicap Type[a] 1	2	3
Wood County agency	71	18	11
Eau Claire agency	51	32	16
Control Agency B	56	29	15

[a] 1 = physically handicapped
2 = emotionally disturbed
3 = mentally retarded

seen, had a higher percentage of physically-disabled and a lower percentage of emotionally-disturbed and mentally-retarded clients than did the control agencies.

Each handicap type by age is presented in Table 4. According to the literature reviewed, the younger the client, the greater his feasibility for rehabilitation services (DeMann, 1963; Eber, 1966; Hammond, Wright, & Butler, 1968; McPhee, Griffiths, & Magleby, 1963). However, the Wood County agency rehabilitated a higher or equal number of older medically-disabled clients (aged 38 and over) as compared to the control agencies. In fact, all the agencies contained large proportions of clients (except for the mentally retarded) in older age groups which have higher incidences and prevalences of disability. The results thus indicated that rehabilitation agencies can and do rehabilitate older clients.

An analysis of clients by sex indicated a similar or higher percentage of male than female clients in most of the handicap groups. The exception was that the culturally-handicapped rehabilitants of Wood County were predominantly female (see Table 5). This may be attributed to the substantial number of young women with dependent children who were accepted as non-medically (culturally) handicapped.

Generally, it was concluded that there were no special significant relationships between these various client idiographic

Table 4

Rehabilitated Clients' Age by Hybrid Code of County of Residence and Handicap Type in Percentages

Age	Handicap Type[a]									
	Wood County				Eau Claire			Control Agency B		
	1	2	3	4	1	2	3	1	2	3
20 & under	15.9	17.8	46.6	39.7	21.6	23.9	44.4	25.0	18.4	60.4
21 - 28	15.2	25.5	25.0	27.0	15.3	26.8	30.6	13.6	28.4	20.1
29 - 37	13.5	21.7	18.8	13.1	12.6	19.7	8.3	15.0	17.1	10.4
38 - 46	16.9	15.1	10.9	8.9	14.4	15.5	11.1	16.6	16.1	4.9
47 & over	38.2	19.8	3.1	10.5	36.0	14.1	5.6	29.5	20.0	4.3

[a] 1 = physically handicapped
2 = emotionally disturbed
3 = mentally retarded
4 = culturally disadvantaged

Table 5

Rehabilitated Clients' Sex by Hybrid Code of County of Residence and Handicap Type in Percentages

Sex	Handicap Type[a]									
	Wood County				Eau Claire			Control Agency B		
	1	2	3	4	1	2	3	1	2	3
Male	63	62	64	41	72	45	69	65	59	59
Female	37	38	36	59	28	55	31	35	41	41

[a] 1 = physically handicapped
2 = emotionally disturbed
3 = mentally retarded
4 = culturally disadvantaged

variables and the experimental conditions of expanded resources: the culturally disadvantaged--vocationally-handicapped persons who would benefit from but are presently denied rehabilitation because of inadequate program funds--do not differ significantly from those fortunate enough to receive services.

Caseload Characteristics

To determine whether the experimental agency served more clients per capita than any of the control agencies, a comparison of caseload characteristics between the agencies was made (Table 6). The table provides information on the number of clients referred, accepted, served, and rehabilitated during the period July 1, 1966, through June 30, 1968; these client totals are presented in ratio form in Table 7.

Table 6

Caseload Characteristics of the Experimental and Control Agencies for Fiscal Years 1967 and 1968 Combined

County	Population Estimate	No. of Clients Served	No. of Clients Referred	No. of Clients Accepted	No. of Clients Rehabilitated
Chippewa	47,000	546	280	142	105
Dodge	61,400	1355	834	425	160
Fond du Lac	83,100	905	491	228	184
Jefferson	54,600	642	368	183	136
La Crosse	74,100	1105	582	337	220
Marathon	96,600	1404	796	398	274
Eau Claire	60,600	1052	535	311	218
Wood County	64,500	2311	1300	788	818
Medicals		1635	904	532	581
Culturals		676	396	256	237

Note.--"Served" refers to all clients in the caseload irrespective of year of referral.

Table 7

Ratios of Caseload Characteristics For Experimental and Control Agencies

Agency	Number of cl. served per 10,000	Ratio of cl. accept. to referr.	Ratio of cl. rehab. to accept.	Ratio of cl. rehab. to referr.	Number of cl. rehab. per 10,000
Control Agency B	142.92	.51	.63	.32	25.9
Eau Claire	173.60	.58	.70	.41	36.0
Wood	358.39	.61	1.05	.64	126.8
Medical	253.49	.59	1.09	.64	90.08
Cultural	104.81	.64	.92	.60	36.73

Number served and rehabilitated: experimental and control agencies. The results indicated that the Wood County agency served 80 and 111 more medically-handicapped clients per 10,000 population than did Eau Claire and Control Agency B, respectively (see Table 7). At the same time, however, the Wood County agency was serving an additional 105 culturally-disadvantaged clients per 10,000 population. Thus, the real difference was 185 more clients of all types per 10,000 population than were served in Eau Claire and 216 more than in Control Agency B. These differences were statistically significant in a chi-square test ($p < .01$) as shown in Table 8.

In order to draw meaningful conclusions, these statistics were considered in relation to the percentage of counselor time spent on the caseload (see discussion of "Expansion of Agency Personnel" and Table 2). Tables 2 and 7 reveal that by spending twice as much counselor time on the caseload as Eau Claire, the Wood County agency *served* twice as many clients per 10,000 population (358 versus 174). And by spending nearly three times the amount of counselor time on caseloads as Control Agency B, the Wood County agency *served* about three times as many clients.

Table 8

Summary of Chi-square Tests Pertaining to Caseload Characteristics

Ratios	Comparison[a] 1	2	3
Number of clients served per 10,000	15.64**	34.68**	
Number of clients rehabilitated per 10,000	32.86**	70.65**	
Ratio of clients accep. to referr.	.04	4.66*	3.81
Ratio of clients rehabilitated to accepted	14.77**	37.62**	2.76
Ratio of clients rehabilitated to referred	70.91**	40.16**	2.46

[a] 1 = Wood and Eau Claire medically handicapped compared.
2 = Wood and Control Agency B medically handicapped compared.
3 = Wood medically handicapped and culturally disadvantaged compared.

*$p < .05$.
**$p < .01$.

An additional control which was part of the research design of the Project was pre-Project data from Wood County. Although the volume of closure data was scant in comparison to that gathered during the Project, it was revealed that in fiscal year 1963, of the 81 persons served in Wood County, 33 were rehabilitated; in fiscal year 1964, the year immediately prior to the inception of the Project, of

the 59 clients served, 28 were rehabilitated. These two fiscal years were combined and are compared with the combined two fiscal year period used in this investigation in Table 9.

Table 9

Caseload Characteristics: Numbers and Ratios of Clients Prior to and Following the Inception of the Project

Fiscal Years	No. served	No. rehab.	No. served per 10,000	No. rehab. per 10,000
1963 & 1964*	70	31	10.85	4.80
1967 & 1968	2311	818	358.29	126.82

*Cultural disadvantage was not sufficient cause for vocational rehabilitation eligibility during these years; therefore, caseload data includes only those with a medically determined disablement.

The full impact of expanded resources used in Wood County can clearly be seen in Table 9. Nearly 27 times as many clients were rehabilitated during the two fiscal years (1967 and 1968) in which the agency was fully staffed (three counselors working full-time) as were rehabilitated by one counselor serving the county two days a week during the two fiscal years immediately preceding the Project. By expanding resources, 61% of the estimated medically-handicapped people in Wood County were referred for and received services from 1966 to 1968, and the agency's referrals from welfare agencies were double the state average, 18% versus 9%. With increased funding and manpower, the Wood County agency effectively acquainted the potential client population and referral sources with its available services, increased its caseload substantially, and served many more clients, all in a relatively short period of time.

Ratio of clients accepted to referred: experimental and control agencies. The results of a chi-square test (Table 8) indicated no significant difference in this ratio ($p > .05$) between the Wood and Eau Claire agencies. Wood County did not accept significantly more

Table 8). If it is assumed that when a client is accepted for services he is deemed feasible for rehabilitation, the results indicated that culturally-handicapped persons are at least as feasible as the medically disabled. These results are consistent with other Wood County Project findings, reported by Hammond, Wright, and Butler (1968), which demonstrated as high or higher feasibility for the culturally handicapped based on various scales derived from idiographic client variables.

Ratio of clients rehabilitated to accepted: experimental and control agencies. Concerning differences between the medically disabled in the experimental and control agencies in the ratio of clients rehabilitated to those accepted, Table 8 illustrates significant differences ($p < .01$). The earlier intensive case finding of 1966 in Wood County was reflected in a greater number of rehabilitated closures in subsequent years. The data on case velocity, however, indicated that an increase in the number of rehabilitated closures was true to a lesser extent in the control agencies. Therefore, the significant differences found in the ratio of clients rehabilitated to accepted between the experimental and control agencies were not primarily a function of the case finding activities in Wood County. Because the control agencies also showed an increase in the number of rehabilitated closures, it appeared that through expanded resources the Wood County agency rehabilitated a significantly greater proportion of clients than any of the control agencies.

Ratio of clients rehabilitated to accepted: experimental agency. No significant differences were found in comparing the ratio between the medically-handicapped and culturally-handicapped clients rehabilitated to accepted (see Table 8; $p > .05$). The results indicated that, as a group, the culturally disadvantaged did not have any more difficult rehabilitation problems than did the medically disabled; the same proportion of culturally-handicapped as medically-handicapped clients was rehabilitated.

A possible explanation for the high feasibility of the culturally handicapped was that they were generally younger (below age 30) than the medically handicapped; Hammond, et al. (1968) in part attributed this group's high feasibility to youth. In addition, there

medically-disabled clients to the number referred than did Eau Claire. However, there was a significant difference in this ratio ($p < .05$) between Wood and Control Agency B.

The above data for Wood and Eau Claire counties, however, do not include data for fiscal year 1966, the year in which the major case finding activities were carried out; in checking the data for 1966, these figures did indicate significant differences. In this year, Wood County had a ratio of 82% accepted to referred for medically-disabled clients, as opposed to 37% for the medically handicapped in Eau Claire, and 64% for culturally-disadvantaged clients. Case finding subsequently was phased down due to the time schedule of the Project.

Thus, even though there were significant differences between Wood and Eau Claire counties in acceptance ratios for fiscal year 1966, these differences did not appear, to any significant degree, for fiscal years 1967 and 1968. There are a number of possible explanations for the small differences in the latter years. In fiscal years 1967 and 1968, acceptance ratios generally increased in all Wisconsin counties; the percentage of rehabilitants in 1968 was 34% larger than in 1966 This increase was perhaps due to the 1965 Amendments to the Vocational Rehabilitation Act, Public Law 333, which extended eligibility criteria for medically-handicapped clients. Also, Dishart and Epstein's (1964) study, which assailed low acceptance ratios, may have influenced all agencies to improve their acceptance ratios. Therefore, these factors may have been influential on increasing the Eau Claire agency's acceptance ratios in fiscal years 1967 and 1968, thereby making them similar to Wood County. Wood County, however, possibly due to the concept of expansion, had increased its acceptance ratio earlier; the percentage of medically-disabled clients accepted in Wood County in 1966 was 30% higher than that reported by Dishart and Epstein in their study of 90 state vocational rehabilitation agencies.

Ratio of clients accepted to referred: experimental agency. There were no significant differences in the ratios of clients accepted to those referred between the medically handicapped and the culturally handicapped within the experimental agency ($p > .05$,

were a higher percentage of females than males in this group; sex may have been as influential as age on the rehabilitation ratios – many of these women were closed as unpaid family workers.

Ratio of clients rehabilitated to referred: experimental and control agencies. The differences between the Wood and Eau Claire agencies and between Wood and Control Agency B in the ratio of the number of medically-handicapped clients rehabilitated to those referred were significant on a chi-square test ($p < .01$ for both; see Table 8). The Wood County agency rehabilitated 23% more clients in proportion to the number referred than Eau Claire, and 32% more than Control Agency B (see Table 7).

Ratio of clients rehabilitated to referred: experimental agency. There was no significant difference in these ratios between the medically handicapped and the culturally handicapped in the experimental agency ($p > .05$, Table 8), again indicating that the culturally handicapped were rehabilitated in at least the same proportion as were the medically handicapped.

Counselor Professional Services

Related to counselor professional services (including the time spent in counseling, number of client contacts made, and "case velocity" for each client), data were available only for the Wood and Eau Claire agencies; the data for Wood were recorded for a two-year period, whereas the data for Eau Claire were only recorded during a 12-month period. The data on time spent in counseling were additionally limited by the fact that they were analyzed in terms of handicap type and by month. As such, one handicap type may have affected disproportionately the grand mean for the medically-handicapped group. For instance, because the physically-handicapped groups were larger and required different kinds of services than the mentally retarded, the time spent in counseling for the former may have affected the mean for all the medically-handicapped groups. Because the handicap types were not represented in equal proportions in both agencies (see Table 3), grouping them together necessarily restricts the kinds of conclusions that can be drawn.

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Time spent by counselor: experimental and primary control agencies. For time spent by the counselor, a comparison between the two medically-handicapped groups showed a significant difference in mean total counselor time ($p<.01$, see Table 10). The total time spent *with* and *for* a client in the Wood and Eau Claire agencies was also significantly different ($p < .01$). The results showed that the counselors in the Wood County agency spent more time in work for and with clients than did those in Eau Claire County.

Table 10

Comparison of Wood County and Eau Claire Medically-Handicapped Clients on Time Spent for Counselor Services

Category	Wood County *M*	Wood County *sd*	Eau Claire *M*	Eau Claire *sd*	*F*	*p*
Total time spent by counselor	16.48	9.83	7.49	3.23	12.46	.01
Total time spent with the client	7.24	4.18	2.87	1.36	13.45	.01
Total time spent for the client	9.23	6.51	4.61	1.35	17.83	.01

To determine further the possible relationship of the different handicap types to time spent by the counselor, the various handicap types were compared separately. The results of this comparison are presented in Table 11.

Although the data from Eau Claire represented a period of only 12 months, the differences in means were too large to be overlooked. Each of the handicap types comprising the medically-handicapped group in the Wood County agency received more counselor time than did those in Eau Claire. It was concluded, therefore, that the expansion of resources had some effect on the amount of counselor time spent.

Table 11

Mean Amount of Total Time (in Minutes) Spent for Counselor Services by Handicap Type

Handicap Type	Wood County *M*	Wood County *sd*	Eau Claire *M*	Eau Claire *sd*	*F*	*p*
Physically handicapped	17.76	11.63	7.11	3.11	9.57	.001
Emotionally disturbed	13.79	8.55	11.84	3.41	7.26	.001
Mentally retarded	12.89	8.31	3.52	3.15	14.04	.001

The results of the investigation of time spent *for* and *with* a client are interesting; both agencies exhibited significant differences between the two. More time was spent on counselor activities *for* medically-disabled clients (58%) than on one-to-one counseling *with* them (42%). It appeared that the counselors in both agencies devoted more time to coordinating activities for the clients than in interaction with them.

This finding corroborated results of other studies of counselor use of time in which counselors were found to spend more time on other activities in behalf of their clients than in face-to-face counseling. However, the findings of the present study disclosed that the 42% of counselor time spent with clients was, in fact, generally higher than that reported by other researchers: for example, Barnhart (1963) reported 20%; Muthard and Miller (1963) reported 53.5%; and Miller, Muthard, and Barillas (1965) found 25.5% spent on counseling and guidance (and in some instances other activities).

Time spent by counselor: experimental agency. In examining the differences in time spent between the medically disabled and the culturally handicapped in the experimental agency, the differences in total-time means spent by counselors were not significant ($p>.05$; see Table 12). Similarly, the total time spent *for* a client was not significantly different ($p>.05$), but counseling time spent *with* him

Table 12

Comparison of Wood County Medically-Handicapped and Culturally-Disadvantaged on Time Spent for Counselor Services

Category	Med. Disab. *M*	Med. Disab. *sd*	Cult. Disad. *M*	Cult. Disad. *sd*	*F*	*p*
Total time spent by counselor	16.48	9.83	18.77	11.44	0.90	0.34
Total time spent with the client	7.24	4.18	10.02	5.39	6.78	0.01
Total time spent for the client	9.23	6.57	8.75	7.53	0.08	0.76

was ($p<.01$). Significantly, it can be seen that more time was spent *with* the culturally-handicapped client than *for* him, in contrast to the situation of the medically-handicapped clients. A possible explanation for this may be the existence of the "lack of motivation" noted by numerous researchers as characteristics of the culturally disadvantaged (Barry & Malinovsky, 1965; Goldin & Perry, 1967; and Grigg & Wilson, 1967). Such an explanation is questioned, however, in a recent publication by Margolin and Goldin (1970).

Although the sample of culturally-handicapped clients studied was composed of more women than men, most of whom were welfare recipients, the relative importance of sex and social status could not be estimated. More time, however, seemed to be needed to help these clients to accept services and to construct their vocational plans: hence, the greater time spent with them. The results, however, indicated that culturally-handicapped clients, as a group, did not require more counselor time but merely a redistribution of the total time usually required in different areas of service – in particular, more time spent *with* the client.

Counselor contacts made: experimental and primary control agencies. When the frequency with which counselors made a professional contact (with and for clients, and *in toto)* was examined, it was found that there were no significant differences

between the two agencies' counselors for either the total mean number of contacts or the mean number of professional contacts *for* a client (Table 13); the mean number of contacts *with* clients, however, were significantly different ($p<.01$). In this instance, the

Table 13

Comparison of Wood and Eau Claire Medically-Disabled Clients in Number of Counselor Service Contacts

Category	Wood County *M*	Wood County *sd*	Eau Claire *M*	Eau Claire *sd*	*F*	*p*
Total number of contacts	1.340	.601	1.340	.587	2.35	0.13
Total contacts with client	.425	.226	.304	.299	5.77	0.01
Total contacts for client	.923	.420	1.040	.584	2.35	0.13

medically-handicapped clients of Wood County counselors received the highest mean number of contacts. Caution had to be used in interpretation, however, because of the limitation imposed by grouping the medically handicapped together (as mentioned previously). Thus, a comparison of the medically handicapped by frequency of counselor professional contacts was made (Table 14).

When the three medically-handicapped groups were considered separately, there was, indeed, a significant difference in the mean total number of counselor professional contacts between the counselors of the two agencies. Whereas the emotionally-disturbed group in the Eau Claire agency had a significantly greater number of counselor contacts than did those in Wood County, the counselors of the Wood County office made a significantly greater number of contacts in service to the physically handicapped and mentally retarded. A possible explanation for this difference may be the specialized caseload technique for the emotionally disturbed that the Eau Claire agency had. However, when the three medically-

Table 14

Mean Number of Counselor Service Contacts by Handicap Type

Handicap Type	Wood County		Eau Claire			
	M	*sd*	*M*	*sd*	*F*	*p*
Physically handicapped	1.386	.546	.979	.603	4.131	.05
Emotionally disturbed	1.545	.655	2.573	.765	17.59	.001
Mentally retarded	1.115	.536	.488	.393	12.98	.001

handicapped groups were combined in each agency for calculation of the mean number of counselor service contacts, the differences between the agencies were eliminated (see Table 13).

Counselor contacts made: experimental agency. Analysis of the mean number of contacts made in service to the medically handicapped and the culturally handicapped revealed no significant differences in either the total number of counselor contacts or contacts *for* clients (Table 15). There was a significant difference in the number of contacts *with* clients; here the culturally handicapped received a slightly greater mean number.

Case velocity: experimental and control agencies. Case velocity was defined as the length of time from date of referral to acceptance and from acceptance to closure. It was used to partially determine any differences between the rehabilitated medically-handicapped clients in the experimental and control agencies in patterns of services. The mean velocities for medically-disabled clients can be found in Table 16. The differences between these means were found to have been significant in a one-way analysis of variance test, using case velocity as the dependent variable.

Table 15

Comparison of Wood County Medically Disabled and Culturally Disadvantaged in Number of Counseling Service Contacts

Category	Med. Disab. *M*	Med. Disab. *sd*	Cult. Disab. *M*	Cult. Disab. *sd*	*F*	*p*
Total number of contacts	1.340	.601	1.430	.686	0.321	0.57
Total contacts with client	.425	.226	.614	.317	10.11	0.01
Total contacts for client	.923	.420	.817	.409	1.14	0.28

Table 16

Mean Case Velocities (in Months) for Experimental and Control Agencies

Agency	Referral to Acceptance *M*	Referral to Acceptance *sd*	Acceptance to Closure *M*	Acceptance to Closure *sd*
Wood Culturals	2.8	2.9	8.7	6.8
Wood Medicals	5.0	8.1	9.9	8.5
Eau Claire	5.4	10.5	12.2	9.0
Control Agency B	6.6	11.2	11.8	10.2

The analyses indicated that the counselors in the experimental agency required less time to determine the client's eligibility (F = 5.193; df = 2,1862; $p<.01$) as determined from the mean difference and variance in time from referral to acceptance; also, the Wood County clients spent significantly less time receiving services — time from acceptance to closure — than was required of the clients in either of the two control areas (F = 8.267; df = 2,1861; $p < .01$). While the experimental conditions may have influenced the length of time from referral to acceptance, there may have been other factors influencing the length of time from acceptance to closure. One explanation may be the service pattern of the agency; Eau Claire, for example, which had the longest mean times from acceptance to closure, provided a significantly higher percentage of clients with training services. Though not definitely indicating that the experimental conditions resulted in higher case velocity, the results do imply that increasing the number of clients does not in and of itself prolong the length of the rehabilitation process.

Case velocity: experimental agency. For comparison of the case velocity of the medically-handicapped and culturally-disadvantaged clients in the experimental agency, the case velocity figures for these handicap types are also presented in Table 16.

A one-way ANOVA was again performed using case velocity as the dependent variable. Within the experimental agency, the culturally handicapped were accepted for services at a significantly more rapid rate than were the medically-handicapped clients (F = 16.540; df = 1,816; $p<.01$). Similarly, the culturally disadvantaged received case services in a significantly shorter period of time (F = 3.705; df = 1,816; $p<.05$). Considered collectively, these two analyses demonstrated even further the feasibility of the culturally handicapped for services in a rehabilitation program with expanded resources.

Patterns of Purchased Services

Service patterns were analyzed by frequency of specific services purchased in the experimental and control agencies, yielding a percentage score of clients who received a particular service (see

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Table 17). Chi-square tests were performed using the agencies and the number of clients receiving specific services as the independent and dependent variables, respectively (see Table 18). In addition, the cost of specific services and the total cost of rehabilitation were taken into consideration.

Table 17

Percentages of Rehabilitated Clients Receiving Purchased Services by Handicap Type in the Experimental and Control Agencies

	Handicap Type[a]												
	Wood County					Eau Claire				Control Agency B			
Type of Service	1	2	3	C	4	1	2	3	C	1	2	3	C
Diagnostic	91	93	95	93	93	83	64	88	79	86	75	84	83
Medical	13	14	6	13	7	12	50	5	23	8	16	6	10
Prosthesis	27	3	6	21	3	11	2	0	6	24	2	3	15
Hospital	5	6	0	4	1	4	1	0	2	3	2	1	2
Training	24	27	14	23	38	40	69	33	48	29	20	23	26
Main. Support	26	33	31	28	37	24	61	27	37	15	31	21	20
Tools & Equip.	12	11	1	11	8	10	1	0	5	3	4	3	3
Other Goods	10	11	3	10	7	5	1	0	3	5	3	0	4
Workshops	14	30	68	23	8	16	28	61	27	14	34	62	27

[a] 1 = physically handicapped
2 = emotionally disturbed
3 = mentally retarded
4 = culturally disadvantaged
C = medically handicapped clients combined

Type of service patterns: experimental and control agencies. It can be seen that the Wood County agency provided proportionately more medically-handicapped clients (considered collectively) with diagnostic and prosthetic devices, tools and equipment, and other goods, while the Eau Claire agency purchased more medical services, training, and maintenance for clients. A greater proportion of medical clients in Control Agency B received training than those clients in Wood County, whereas a significantly greater proportion of Wood County medically-handicapped clients

Table 18

Chi-square Values for Frequency of Service in Experimental and Control Agencies

Type of service	Comparison[a] 1	2	3
Diagnostic	32.01**	33.36**	0.02
Medical	13.01**	2.36	3.89*
Prosthesis	21.40**	9.40**	5.15*
Hospital	1.35	21.74	6.10*
Training	44.90**	8.90**	2.74
Maintenance Support	5.50*	11.10**	0.40
Tools & Equipment	3.50	34.10**	1.03
Other Goods	12.50**	22.90**	0.90
Workshops	1.20	3.60	23.63**

[a] 1 = Comparison between Wood and Eau Claire agencies.
2 = Comparison between Wood and Control Agency B.
3 = Comparison between Wood County medically disabled and culturally disadvantaged.

*$p < .05$.
**$p < .01$.

received diagnostic services, prosthetic devices, maintenance, tools and equipment, and other goods than did clients of Control Agency B.

The percentage of clients receiving particular services, when placed in rank order, revealed that the four services most frequently provided in both the control and experimental agencies were: diagnostic, maintenance, training, and workshop. The least frequently offered was hospitalization. The introduction of expanded resources did not appear to result in any differences between the agencies in service patterns; rather, the results appeared to be more of a function of extraneous factors.

The classification of client services by handicap type in percentages is also presented in Table 17. The differences discerned between the percentages of clients with a specific handicap who

received services indicated that the differences may have been due merely to local policies, caseloads, and counselors, and not to expansion of resources. The higher rehabilitation ratios in the experimental agency do imply, however, that while expansion of resources did not radically alter the general pattern of service, it did facilitate the provision of services to a greater number of clients.

Type of service patterns: experimental agency. The percentage of clients receiving a specific purchased service is presented in Table 17. Chi-square tests performed using the two main handicap groups in the experimental agency as the independent variables and the number of clients receiving specific services as the dependent factor resulted in the analyses presented in Table 18. A higher percentage of medically-disabled clients received medical, prosthetic, hospital, and workshop services ($p<.01$) — anticipated because of the kinds of handicap types in the sample. The low percentage of culturally-handicapped clients who received workshop services is interesting, however, as research in this area has stressed the importance of workshops in rehabilitating the culturally disadvantaged (Friedman, 1966; Stensland, 1968; Walker, 1967). Although 23% of the medically-disabled as compared to 8% of the culturally-handicapped group received workshop services (Table 16), and although the latter had twice as many women as men, the disparity between the medically disabled and culturally handicapped could not be explained in terms of client sex (see Table 19). The percentage of culturally-handicapped females receiving workshop services was similar to the percentage of medically-disabled females (5% to 7%) and to the culturally-handicapped males (3%). Thus, the disparity seemed to be due to handicap type rather than client sex. In general, the results indicated that the sex of the client had little significance for the data obtained on purchased services for the clients of this investigation.

The percentages of clients receiving services within each age group are presented in Table 20. The percentages were in the same proportions as the age distribution of the total sample, and there appeared to be no significant patterns of service distribution by age.

Table 19

Percentage of Male and Female Culturally-Disadvantaged and Medically-Disabled Clients Receiving Purchased Services in Wood County

Type of Service	Medically Handicapped		Culturally Disadvantaged	
	M	F	M	F
Diagnostic	57	49	39	61
Medical	7	5	2	4
Prosthesis	13	8	1	2
Hospital	2	1	0	0
Training	14	6	13	24
Main. Support	17	10	13	23
Tools & Equip.	7	3	5	2
Other Goods	5	4	3	4
Rehab. Centers	0	0	0	0
Workshops	16	7	3	5

Table 20

Percentage of Culturally-Disadvantaged and Medically-Handicapped Clients Receiving Purchased Services by Age in Wood County

Type of Service	Age Group[a] Medically Handicapped					Culturally Disadvantaged				
	1	2	3	4	5	1	2	3	4	5
Diagnostic	16	17	14	15	27	14	25	12	8	9
Medical	3	2	1	2	1	2	1	0	0	3
Prosthesis	2	2	3	3	9	0	0	0	0	1
Hospital	0	1	0	0	1	0	0	0	0	0
Training	7	4	4	4	3	16	10	5	2	2
Main. Support	7	7	4	4	4	16	10	5	1	2
Tools & Equip.	1	2	7	3	3	2	2	1	0	2
Other Goods	1	1	1	2	2	0	3	1	0	0
Rehab. Centers	0	0	0	0	0	0	0	0	0	0
Workshops	13	26	10	12	26	36	24	13	8	8

[a] 1 = age 20 and below
2 = age 21 - 28
3 = age 29 - 37
4 = age 38 - 46
5 = age 47 and over

A Spearman rank-order correlation from highest to lowest percentage of clients from both groups was .84, which seemed to indicate that the culturally-handicapped clients in Wood County generally required and received the same kinds of services as did the medically handicapped. This implies that the barriers to rehabilitating culturally-handicapped clients are not due to the inappropriateness of services provided, but in the agencies' policies of eligibility and acceptance and the general insufficiency of services available. Independent client idiographic variables alone did not seem to be related to the patterns of services required for rehabilitation success.

Costs of services: experimental and control agencies. The results pertaining to this variable indicated the potential for rehabilitation agencies to reach and rehabilitate more clients at no increase in case service costs. A one-way ANOVA was performed using the medically-handicapped clients of the agencies as the independent variable and the mean cost per service as the dependent variable, the results of which are presented in Table 21. An inspection of this

Table 21

Mean Cost per Service in Dollars for Rehabilitated Clients in the Experimental and Control Agencies

Type of Service	Medically Handicapped									
	Wood County			Eau Claire			Control Agency B			
	M	*sd*	*n*	*M*	*sd*	*n*	*M*	*sd*	*n*	*F* ratio
Diagnostic	43	57.6	547	41	58.3	174	47	98.6	902	0.67
Medical	181	228.9	76	132	154.0	52	186	194.2	112	1.41
Prosthesis	233	188.9	123	205	136.3	15	284	202.1	163	3.12*
Hospital	662	815.7	23	271	175.6	6	576	574.5	30	0.83
Training	508	536.5	139	444	517.8	106	578	658.2	281	2.08
Main. Support	729	126.1	165	353	395.9	81	589	690.8	225	4.74*
Tools & Equip.	424	630.3	66	424	436.6	13	245	867.9	41	0.86
Other Goods	67	133.8	62	134	66.1	7	117	108.7	45	2.70
Workshops	1035	104.3	137	943	803.3	60	1062	123.0	301	0.27

*$p < .05$.

table indicated significant differences between the agencies in the provision of prostheses and of maintenance and support services ($p<.05$). Control Agency B exhibited the highest mean cost for prostheses, followed by Wood and Eau Claire. The Wood County agency had the highest mean cost for maintenance and support services, perhaps a result of the more liberal case service monies available through expanded resources there. Expanding resources by increasing case service funds did not result, it was found, in more money being spent per service per client but in a larger number of clients receiving services and being rehabilitated. Except for maintenance and support services in Wood County, the mean cost per service was not significantly different in the experimental and control agencies, although more clients were rehabilitated in the experimental agency.

Cost of services: experimental agency. Using handicap type as the independent variable and mean cost per service as the dependent variable, a one-way ANOVA test was performed concerning the rehabilitated medically-disabled and culturally handicapped clients in the experimental agency. The results yielded by the test are listed in Table 22. The mean cost for the medically disabled was highest for diagnostic ($p>.01$), prosthetic ($p<.05$), and training ($p>.01$) services provided them; hospitalization, tools and equipment, other goods, rehabilitation centers and workshops also cost more for this group, though not significantly so. The culturally handicapped had higher mean costs only for medical and maintenance services, indicating that services for them generally cost less (especially in the areas of workshop and training services).

Total cost per rehabilitant: experimental and control agencies. A one-way ANOVA was performed to assess the significance of the difference between the mean cost per medically-handicapped client of the three comparison agencies. No significant difference in mean cost was observed (Wood = $732, Eau Claire = $715, Control Agency B = $723). The additional case service monies made available by vertical expansion of services in Wood County were reflected by the larger number of clients rehabilitated and *not* by an increase in the mean cost per case.

Table 22

Mean Cost per Service in Dollars for Medically-Disabled and Culturally-Disadvantaged Rehabilitated Clients in the Experimental Agency

	Wood County						
	Medically Disabled			Culturally Disadvantaged			
Type of Service	*M*	*sd*	*n*	*M*	*sd*	*n*	*F* ratio
Diagnostic	43	57.6	547	27	34.8	225	15.10**
Medical	181	228.9	76	214	204.3	17	0.20
Prosthesis	223	188.9	123	38	11.9	9	9.43*
Hospital	662	815.7	29	181	96.7	3	1.01
Training	508	536.5	139	376	347.3	91	10.03*
Main. Support	729	126.1	165	776	805.5	89	0.10
Tools & Equip.	424	630.3	66	256	653.2	19	1.00
Other Goods	67	133.8	62	64	86.0	20	0.07
Workshops	1035	104.3	137	584	527.8	20	3.50

*$p<.05$.
**$p<.01$.

Total cost per rehabilitant: experimental agency. Of particular interest to all concerned with the potentiality and feasibility of horizontal expansion of rehabilitation agencies, i.e., expanded eligibility to include those with non-medical barriers to employment, is the comparison of the mean cost per medical and cultural rehabilitant within the experimental agency. The results revealed that the medically handicapped had a mean amount of $732 spent for their rehabilitation; the culturally-handicapped rehabilitants, in contrast, had a mean cost of only $515. This difference was significant when assessed by a one-way ANOVA ($F = 6.252$; $df = 1,816$; $p<.01$). A plausible explanation for this difference may be that the culturally handicapped did not require substantial

expenditures for medical restoration or treatment. Nevertheless, the implication is clear: on the average it costs substantially less to rehabilitate a culturally-handicapped client than a medically-handicapped one.

DISCUSSION AND IMPLICATIONS

Some limitations are imposed upon the generalizability of the results. The most important is that the Wood County Project dealt with a rural-urban, predominantly Caucasian population. Although research has shown that poor people, regardless of their idiographic and demographic characteristics, have many of the same barriers to vocational adjustment as those without cultural barriers to employment, generalization of the Project's results to other populations (e.g., blacks in the urban ghetto) is restricted.

On the other hand, there are some limitations that would tend to make the expanded program seem less effective than it actually was. First, the expanded agency had poor visibility and its program was underdeveloped, comparing unfavorably to the primary control agency before expansion. Second, the Wood County agency experienced professional staffing problems: (a) there were three changes of supervisor in the four production years; (b) the counselors had less adequate training and experience than the control county counselors; (c) the counselors lacked handicap specialization; and (d) there was a higher turnover rate in Wood County than in Eau Claire County. Third, extra time demands were made on the Wood County staff for research purposes. Fourth, the research timetable (the need to phase out expansion after five years) imposed artificial restrictions on program growth with regard to case acceptance and services rendered. Finally, the experimental agency had an initial absence of local workshop services. When these disadvantages of the experimental agency are taken into consideration, estimations of the success and productivity of agency expansion appear to be quite conservative. The following section presents a discussion concerning the conclusions and implications of the impact taking into consideration the above-mentioned limitations.

The data indicated that the experimental agency, with expanded resources, served and rehabilitated significantly more medically-disabled clients (in relation to the total population and to the number referred) than did the control agencies. The data clearly showed that an expanded rehabilitation program initiated in an

agency virtually unknown to the disabled population, and with low service and rehabilitation ratio records, could expand to serve and rehabilitate significantly more clients than established agencies.

The Wood County agency, having been given adequate funds, facilities, and counselors, was able to improve its visibility to the disabled population. It developed and built up substantial caseloads of clients in a relatively short period of time (from 152 clients served in 1965 to 1129 served during fiscal year 1967).

The benefits of expanding agency resources became manifest in a short period of time; 818 clients were rehabilitated during fiscal years 1967 and 1968 in Wood County, whereas at a pre-Project rate only 60 persons would have been rehabilitated during the entire period from 1965 until 1967 (Wisconsin DVR *Annual Report,* 1967). Expansion provided relatively immediate returns in the number of clients served and rehabilitated.

The agency expansion also resulted in more time being spent by the counselor in providing services to his clients. The rehabilitation process as a whole, however, was not found to be lengthened by this expansion: the time required to accept and then to rehabilitate a client was, in fact, found to be less than that required by the control agencies. More intensive services, it could be concluded, were provided in a shorter period of time. The medically handicapped required more counselor time expended on services *for* the client than time spent on services in a one-to-one relationship *with* the client.

The increase in case monies and personnel in the experimental agency did not increase service costs, even when liberal maintenance and training services were provided. A larger number of clients served, rather than an increase in cost, was the result of these expanded resources, the pattern of which was generally similar to that in other agencies serving similar handicap types. It is clear that without the agency expansion in Wood County, a larger percentage of traditionally-defined "handicapped" persons would not have received services.

The implications of the results and the conclusions summarized above are obvious for the disabled population, specifically, and for

rehabilitation in general: in order to serve *all* handicapped clients who can benefit, greater investments of funds and manpower (including a more efficient referral system) are needed. This study confirms the suggestions of the literature reviewed: there is a steady rise in numbers of referrals, acceptances, and percentages of the population served by rehabilitation agency programs. In addition, the projected number of individuals requiring vocational rehabilitation services in the future is as high, if not higher. Expansion of public vocational rehabilitation agencies is necessary to meet these future clients' needs; it can help eliminate the economic waste and prolonged human suffering that results from insufficient services. The expanded program in Wood County did not reach the saturation limit; not *all* of the vocationally-handicapped persons there were rehabilitated. The rate and kind of expansion needed to resolve the problem of vocational maladjustment for all the handicapped remain undetermined.

The Wood County Project has demonstrated, by the rapid expansion of caseloads and clients served, the importance of adequate case finding techniques and adequate visibility for the program. The result of moving the agency and its services to the handicapped population (i.e., by establishing local offices within Wood County) provides an additional implication for rehabilitation. A greater emphasis must be placed on the further development of "reaching out" for clients, of establishing new and more refined referral sources, in essence bringing rehabilitation services to the client. The Wood County experience demonstrated the importance of public relations within the community, of making the community aware of rehabilitation.

The data indicated that the culturally disadvantaged were as feasible – indeed, often more so – for rehabilitation services as the medically disabled. The experimental agency was able – by the provision of traditional services – to rehabilitate a significantly larger number of clients who hitherto were ineligible for rehabilitation services, i.e., the culturally handicapped. The patterns of services purchased were generally similar for the medically disabled and the culturally disadvantaged, indicating that the same services provided for the "traditional" medically-disabled clients were appropriate for

the culturally handicapped.

In addition, the time required for culturally-handicapped clients to complete the rehabilitation process was generally less than for the medically disabled: as a group, the culturally handicapped required less time to achieve rehabilitation success. The cost of services to the culturally handicapped, also, was found to be generally less than for the medically disabled, the primary reason being the lack of physical restoration services.

The implications of this study are perhaps more important, however, for the culturally handicapped. That a vocational rehabilitation agency, given sufficient staff and funds, was able to serve this group as effectively as traditional clients (the physically and mentally handicapped) certainly emphasizes the value of expanding present resources. The problems of dependency have been brought to the forefront of public concern; it has become apparent that in order to solve these problems, concerted long-term commitment and efforts are needed. It has been increasingly recognized that the omneity of social ills associated with the condition called "poverty" confronts its victims with social, psychological, economic, and vocational handicaps which are often indistinguishable from those imposed by physical or mental disability. And, as this study demonstrated, the experience gained by vocational rehabilitation personnel in serving the medically handicapped can be useful in efforts to eliminate the handicapping conditions of the poor.

The general implication is that the rehabilitation process can assist the disadvantaged client in becoming part of and contributing to the economy. The services provided in diagnosis and work evaluation and the procedures developed in these areas with the physically and mentally handicapped can be directly adapted to the needs of the culturally handicapped.

The flexibility of the rehabilitation process, its individual approach to client needs, and the availability of funds for the purchase of necessary services provide an ideal method for overcoming the barriers manifested by the culturally handicapped. There is a need for legislators to accept a broader understanding of

"handicap" and how existing vocational rehabilitation techniques can be effectively applied to a national manpower development plan and strategy. Similarly, at the local level, administrators and rehabilitation personnel must develop a better understanding of the potential of rehabilitation services and use initiative and imagination to apply them in the context of a concerted effort to help solve the problems of the culturally handicapped.

It should, however, be noted that the changes in eligibility criteria to include clients defined as culturally handicapped and the extension of services to more medically disabled will out of necessity place an extra burden on the already overtaxed rehabilitation agencies. The frequent inability of a rehabilitation agency to provide immediate and on-the-spot services is often a major obstacle in dealing with the disadvantaged client. It is obvious that in order to meet this unmet need the present shortage of rehabilitation personnel must be overcome.

SUMMARY

The present study was part of the larger Research and Demonstration Wood County Project which was designed to develop guidelines for the vertical and horizontal expansion of the state-federal rehabilitation program. By *vertical expansion,* services were offered to all medically-handicapped people; *horizontal expansion* extended vocational rehabilitation to the culturally disadvantaged (those vocationally handicapped because of social, financial, or educational barriers).

The purpose of this study was to assess the impact of expanded resources and extended eligibility on the internal functioning of a state vocational agency local office. The effects of expansion were examined in the areas of: (a) expansion of agency personnel; (b) client characteristics; (c) caseload characteristics; (d) counselor professional services; and (e) patterns of purchased services.

Impact on intra-agency functioning and rehabilitation processes and procedures was assessed for the fiscal years 1966-67 and 1967-68. The two major comparisons drawn were between: (a) medically handicapped in the experimental (Wood) and the selected control (Eau Claire and the six "hidden") agencies; and (b) the culturally disadvantaged and medically handicapped in the experimental agency. The clients in the sample were classified by four principal handicap types: physically handicapped, emotionally disturbed, mentally retarded, and culturally disadvantaged.

Three instruments were used to collect the data: (a) the Wisconsin Data Record form, DVR-2, a standard form on which demographic and idiographic client characteristics were recorded in addition to case expenditure figures; (b) the Client Service Record, developed by the UW-RRRI staff, on which the time spent in contact with the client for each professional service was recorded (completed only in Wood and Eau Claire counties); and (c) the Rehabilitation Counselor Master List of Clients, an alphabetical printed roster of a counselor's clients, their status, and total expenditures to date for a client.

Analysis of variance, chi square, and correlational techniques were used in analysis of the data. The results indicated that the experimental county "saturated" with expanded resources over a period of time served and rehabilitated significantly more medically-disabled clients (in relation to the total population) than did the control counties. It was clearly shown that an agency, formerly unknown to the disabled population and with low service and rehabilitation ratio records, which initiated a saturation-type rehabilitation program could expand to serve and rehabilitate substantially more clients than established agencies.

The agency expansion, which included a larger number of counselors per capita, resulted in more time being spent by the counselor in providing services to his clients without a lengthening of the rehabilitation process as a whole. The time necessary to accept and rehabilitate a client in the experimental agency, in fact, was found to be significantly shorter than that required by the control agencies.

The increase in case monies and personnel in the experimental county did not ultimately increase service costs, even when liberal maintenance and training services were provided. Rather, a larger number of clients served was the result of expansion, the pattern of which was generally similar to that in other counties serving similar handicap types.

The culturally handicapped, as far as the data indicated, are as feasible for rehabilitation services as the medically disabled — indeed, often more so. Counselor time and costs for rehabilitating these individuals were found generally to be less than for the medically handicapped.

It is clear that without the expansion of the rehabilitation agency in Wood County, a large percentage of traditionally-defined "handicapped" persons would not have received services; the impact of the expansion of traditional vocational rehabilitation resources has important implications for rehabilitation in general and in particular for the rehabilitation of the culturally handicapped.

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