

Minnesota Studies in Vocational Rehabilitation:

VI. A Survey of the Physically Handicapped in Minnesota

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Preface

This is the sixth bulletin in the current series of Minnesota Studies in Vocational Rehabilitation. These bulletins have dealt with two major problem areas: (1) extent and magnitude of employment problems of vocationally handicapped persons, and (2) principles, policies and techniques for improved effectiveness of job placement procedures. Research underlying this series of bulletins was supported in large measure by the Office of Vocational Rehabilitation in the U. S. Department of Health, Education, and Welfare.

Support for the research study described in this bulletin was provided largely by the State of Minnesota Interim Commission on Employment of Handicapped Persons, thereby providing an excellent example of close and effective research cooperation between federal and state government agencies, and a state university.

The Interim Commission, under the chairmanship of the Honorable Mr. Curtis B. Warnke, sought to obtain facts concerning the number of handicapped persons in Minnesota, their age, sex, type of disability and employment status. Such basic facts were needed in their attempts to evaluate effectiveness of existing state laws relating to employment of handicapped persons. Available evidence proved to be inadequate, and they turned to the Industrial Relations Center for assistance.

Fortunately, the IRC was already at work on similar problems for the Office of Vocational Rehabilitation and thus had the nucleus of a trained professional staff with special interest and competence in this area. Drs. George W. England and Lloyd H. Lofquist provided leadership and supervision for the additional personnel selected for a special survey team. A research contract was signed in the middle of June and the report was completed in September of 1958. Dr. Kenneth E. Clark, Chairman of the Department of Psychology, served as special consultant to the project. Mr. Sidney Goldish, Director of the Research Department of the Minneapolis Star and Tribune, and his statewide staff of professional interviewers played a signal role in the success of the survey. The IRC Survey Directors were James H. Koplín, Stephen J. Carroll, Jr. and Allan C. Yater, graduate students in psychology and industrial relations. IRC staff members Professor Donald G. Paterson and Rene V. Dawis, and Interim Commission members Larry W. Binger of Minnesota Mining and Manufacturing Co., and Donald Savelkoul of the Minnesota (AFL-CIO) Federation of Labor, provided valuable counsel. Materials and data gathered in prior and concurrent OVR-sponsored IRC surveys greatly facilitated the survey design for the State of Minnesota project. The IRC provided administration,

general direction, facilities and a nucleus of professionally trained staff members for the supervision of the project.

It is worth repeating that the survey described in this bulletin was indeed a cooperative research venture, underscoring the role of the IRC as an agency to integrate and coordinate team research in employment and industrial relations. It provides also an outstanding example of the advantages of mutual cooperation between state and federal agencies. Experience from the OVR studies greatly facilitated the Interim Commission survey; results from the Interim Commission survey will benefit not only the citizens of Minnesota, but will be of much value in advancing the continuing basic research probes of OVR. The Industrial Relations Center has been able to continue its role as a catalytic agent in providing the public with a growing body of current knowledge and understanding of employment relations. The IRC is grateful to the Interim Commission and to OVR for their cooperation in making this bulletin possible.

HERBERT G. HENEMAN, JR.

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*8. Approximately 33% of the handicapped in the labor force age range who are not working have worked since their injury or illness.

The following appear to be some of the major implications of the survey findings:

1. The survey estimate of approximately 323,000 physically handicapped persons in the state of Minnesota is compelling evidence of the magnitude and importance of the problems concerning the physically handicapped.
2. A comparison of this large number of physically handicapped persons with the number of persons rehabilitated by the state each year (approximately 1,000) makes it evident that an overwhelming proportion of the handicapped population is not receiving service from the rehabilitation agencies of the state.
3. The need for rehabilitation services (including job placement) by the handicapped in Minnesota is clearly shown by the facts that over half (56%) of the handicapped population of labor force age range are currently unemployed, and about 21% of this group (22,000) are actively seeking employment.
4. It would seem desirable to increase services to the rural handicapped population, since approximately 41% (118,000) of the non-institutional handicapped live in rural areas. This geographical distribution of the handicapped suggests the need for more rehabilitation services outside of major urban centers.
5. A comparison of the age distributions of the physically handicapped in Minnesota with the total group rehabilitated by the State Division of Vocational Rehabilitation (fiscal year 1956-57) indicates the need for extending services to persons at higher age levels. Approximately 60% of the rehabilitated group were below age 30 while only 30% of the Minnesota handicapped are below age 30.
6. In view of the effect of Workmen's Compensation on employment of the physically handicapped, it is interesting to note that employment accidents are the origin of disability for only 9% of the Minnesota handicapped, 4% originated from war injuries or illness, and 60% originated from illness.

* These estimates pertain to the non-institutionalized population only.

A Survey of the Physically Handicapped in Minnesota

Summary and Implications

A survey of the physically handicapped population of Minnesota was conducted by the Industrial Relations Center of the University of Minnesota for the State Legislature's Interim Commission on the Employment of the Handicapped. The survey was completed between July 22 and August 4, 1958.

Using information obtained from interviews at 2,440 households and questionnaires completed by 523 hospitals and related institutions in Minnesota, the following estimates were made:

1. There are approximately 323,000 physically handicapped persons in Minnesota. This includes about 288,000 persons in households and about 35,000 persons in institutions (such as hospitals, special schools and nursing homes). Of those in households, 183,000 are men and 105,000 are women.

2. The three largest disability groups are orthopedic (89,000), cardiovascular (59,000), and generalized or systemic (32,000). These three groups comprise about half of all the physically handicapped in the state.

3. Approximately 40,000 handicapped persons are under 14 years of age, 200,000 are in the labor force age range of 14-64, and 77,000 are 65 and over.

*4. Disabilities were caused by illness in 60% of the cases. Employment accidents accounted for 9% of the disabilities and only 4% were caused by war injuries and/or illnesses.

*5. A large percentage of handicapped persons stated that they received no assistance from agencies such as the Division of Vocational Rehabilitation and the State Employment Service. Most of those who did receive assistance received medical, surgical, or hospital services.

*6. Over half (56%) of the handicapped population in the labor force age (14-64 years) are currently not working.

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7. Other data obtained in the survey, such as that on number of handicapped in each disability area, should be useful in estimating the extent to which the total state rehabilitation program is meeting the needs of the physically handicapped population.
8. The importance of these implications points to the necessity for establishing a continuous and active research program as an integral part of the State Division of Vocational Rehabilitation. Present provision for research by the agency is apparently limited to compilation of annual report statistics.
9. The above implications indicate that the combined services of State DVR, State Employment Service and related agencies are not meeting the needs of the physically handicapped in Minnesota. This suggests the need for expansion of the state programs, and the desirability of continuing study of the problems of the physically handicapped in Minnesota.

Introduction

The 1957 Session of the Minnesota State Legislature appointed an Interim Commission, with Representative Curtis B. Warnke as chairman, to investigate the problems of the physically handicapped population in Minnesota.¹ As a part of this total investigation, the Industrial Relations Center of the University of Minnesota, through an agreement with the Interim Commission, conducted a statewide survey to estimate the number of physically handicapped persons in the state and to study such things as the age, sex, disability distribution, and employment status of these persons. The information gained from the survey is to be used in making recommendations to the State Legislature concerning problems of the handicapped.

A review of available data on the incidence of disability in the general population revealed the inadequacy of current information on the nature and extent of illness and disability in the general and hospitalized populations. While some figures were available from local, state, and federal health records, census reports, workman's compensation commissions, and industrial and safety organizations, these were not enough to answer the questions raised by the Interim Commission.

Purposes and Scope

The survey was designed to answer the following questions:

1. How many physically handicapped² persons are living in Minnesota?
2. What are the major disabilities of these persons?
3. How are the handicapped distributed according to age?
4. How did these persons become handicapped?
5. What services have these persons received from agencies such as the State Employment Service, the Division of Vocational Rehabilitation, and the Veteran's Administration?

¹ Minnesota State Legislation. 1957 Session Laws. Senate File 1457, Chapter 829.

² The "physically handicapped" individual is defined in Public Law 565 (Vocational Rehabilitation Amendments of 1954) as "any individual who is under a physical or mental disability which constitutes a substantial handicap to employment, but which is of such a nature that vocational rehabilitation may reasonably be expected to render him fit to engage in a remunerative occupation." (Sec. 11b) In the implementation of the law by public agencies, "physical or mental disability" has come to include emotional disabilities, that is, mental illness. In this report, "physically handicapped" will be used to refer collectively to the physically handicapped (such as orthopedics, amputees, cardiacs, tuberculosis patients, and the cerebral palsied), the mentally handicapped (mentally retarded), and the emotionally handicapped (those suffering from mental illness).

6. What is the employment status of the handicapped?
7. Do the unemployed handicapped persons want employment and feel that they could be employed?
8. Have the unemployed handicapped persons been employed since becoming handicapped?

To answer these questions, two related statewide surveys were conducted. One survey covered a random sample of households in Minnesota for the purpose of estimating the number of physically disabled persons by type of disability and age in the general non-institutionalized population. The second survey covered every hospital, institution, nursing home and boarding-care home in Minnesota. An estimate of the number of physically handicapped persons would be incomplete without this second survey, since a significant number of handicapped individuals are in hospitals and related institutions. This report discusses the methods used in carrying out these statewide surveys and presents the major findings.

Method

Household Survey: The household survey utilized a questionnaire developed in previous studies of the physically handicapped in Minneapolis and St. Paul.³ It had been developed by the Industrial Relations Center vocational rehabilitation project staff and was known to be an effective instrument for obtaining information concerning the characteristics of physically handicapped individuals. Only slight modifications were needed to adapt the questionnaire to this study. Other information collected in over a year of Industrial Relations Center research also proved useful to this study. It was found, for example, that the best way to collect accurate comprehensive data on the handicapped population was to conduct an interview survey of a random sample of the general population.⁴ This bears out similar findings of the National Health Survey of 1935-36.⁵

After careful consideration of the questions to be answered, the questionnaire was modified to include specific items necessary for this study. The questionnaire was then pretested by members of the research staff in different socio-economic areas within the city of Minneapolis. The pre-testing indicated that the interview questionnaire would provide answers

³ *Minnesota Studies in Vocational Rehabilitation: V. Methodological Problems in Rehabilitation Research*, IRC Bulletin 25, December 1958.

⁴ *Op. cit.*

⁵ U. S. Federal Security Agency, Public Health Service, Division of Public Health Methods. The national health survey: 1935-1936. *Publ. Hlth. Bibliogr. Ser.*, 1951, 85, No. 5.

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to questions the survey was trying to answer. It also indicated that this information could be coded reliably and analyzed efficiently. Pretest findings resulted in further refinements of the questionnaire.⁶

Detailed interview instructions were prepared and tested by the research staff. These instructions were designed to insure proper use of the questionnaire by each interviewer.

The survey data were collected between July 22 and August 4, 1958 by a staff of professional interviewers employed and trained for the Minnesota Poll studies.⁷ The time limits within which this project had to be completed made it impossible to hire a new group of interviewers and conduct training sessions.

A total of 2,440 households throughout the state were interviewed. These households included 940 rural households and 1,500 urban households. The sampling procedure utilized by the Minnesota Poll in its surveys was made available to the Industrial Relations Center for this project. It was modified to increase the number of interviews conducted in each area. The sample was designed to be representative of all households in the state with respect to population density and geographic location. A more detailed discussion of the sampling procedure can be found in Appendix A-1.

Institutional Survey: A complete list of all licensed⁸ hospitals (both general and specialized), institutions, special schools, nursing homes, and boarding care homes in Minnesota as of May 1, 1958, was obtained from the Minnesota Department of Health.⁹ This list was supplemented by the addition of the names of all public specialized institutions and schools concerned with confinement and training under the control of the Minnesota Department of Welfare and all Federal Hospitals within the borders of Minnesota. A check of this list against all hospitals and boarding-care or nursing homes listed in the Minneapolis and St. Paul telephone directories resulted in the addition of only one institution, a boarding-care home.

A questionnaire¹⁰ was designed to identify by type of disability and age all persons who were handicapped and currently hospitalized or insti-

⁶ See Appendix C for a copy of the household survey questionnaire.

⁷ The Minnesota Poll is a continuing survey by the Research Department of the Minneapolis Star and Tribune.

⁸ Hospitals and related institutions in Minnesota are licensed under the provisions of Sections 144.50 to 144.58, inclusive, Minnesota Statutes. These statutes cover all places in which "any accommodation is maintained, furnished, or offered for the hospitalization of the sick or injured or for maternity care of more than one woman within a period of six months or for care of three or more aged or infirm persons requiring or receiving chronic or convalescent care."

⁹ Minnesota Department of Health. *Minnesota directory of licensed hospitals and related institutions, 1958.* Minneapolis: University of Minnesota, 1958.

¹⁰ See Appendix C for a copy of the institutional survey questionnaire.

tutionalized in Minnesota. In developing the questionnaire, consultations were held with the directors and medical personnel of several of the larger hospitals and institutions in Minneapolis to determine the best method to use in classifying patients as handicapped and to see what terminology was most common and understandable to hospital personnel. A complete description of questionnaire design and methodology can be found in Appendix A-2.

Questionnaires were mailed to each of the 641 hospitals, special institutions and schools, nursing and boarding-care homes on the survey list.¹¹ Hospitals and institutions with capacities of over 150 beds were informed that additional questionnaires were available for use in each ward or at each nursing station if this procedure was preferred.

At the end of a two-week period, a follow-up postcard was sent to non-responding institutions. A follow-up letter was sent to non-respondents at the end of three weeks.

Results

Each of the questions raised by the Interim Commission is treated separately in the discussion that follows.

Final estimates from the sample of households were computed by applying a multiplier to the sample frequencies to make estimates for all households in the state. These estimates were further adjusted upwards by thirty per cent to correct for those handicapped persons in the household sample who were not identified. This thirty per cent adjustment was derived from previous Industrial Relations Center research which showed that, in a survey such as this, about thirty per cent of the actual number of handicapped individuals present in a particular sample will not be reported.¹²

Figures from the survey of hospitals and related institutions were adjusted to account for the unreturned questionnaires. Questionnaires that were usable for analysis were received from about 82% of the hospitals and related institutions in Minnesota. These had, however, 91% of the available hospital and institutional beds.

Technical procedures such as those used in estimating for the whole population from the sample are discussed in Appendix A-1 for the household survey and Appendix A-2 for the institutional survey. A detailed

¹¹ Seven maternity homes with a total bed capacity of 17 beds were not sent questionnaires.

¹² *Minnesota Studies in Vocational Rehabilitation: V. Methodological Problems in Rehabilitation Research*, IRC Bulletin 25, December 1958.

