

Minnesota Studies in Vocational Rehabilitation:

VIII. A Study of ES Applicants

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A Study of ES Applicants¹

Summary

Data on samples of physically handicapped applicants were obtained from the Minneapolis and St. Paul local offices of the Employment Service (ES). Analysis of these data showed:

1. Handicapped ES applicants in Minneapolis differed from those in St. Paul in age, marital status, and number of dependents. This finding emphasizes the danger of generalizing from data on an agency population in one city to agency populations in adjoining urban areas even within the same labor market area.

2. Handicapped ES applicants differed from Division of Vocational Rehabilitation (DVR) counselees in age, occupation, and kind of disability. The physically handicapped population served by ES is older, predominantly "blue-collar," and less severely handicapped (vocationally speaking), when compared with the DVR population. Working relationships between the two agencies in the placement of the physically handicapped should take these differences into consideration.

3. More counseling services were provided by ES for individuals with neuropsychiatric and neurological disabilities than for other disability groups. Counseling services were given more frequently to handicapped applicants for the clerical and semiskilled occupations (in Minneapolis) and for the service and semiskilled occupations (in St. Paul). No differences were found between counseled and non-counseled applicants in age, proportion of the sexes, education, and marital status.

4. Counseled and non-counseled groups of handicapped applicants (matched on sex, age, education, and occupation) showed no differences in length of time on last job, pay on last job, and type of disability, but they differed in estimated severity of disablement (the counseled group being more severely disabled).

5. Application at ES resulted in referral to employers for 34% of the total sample of handicapped applicants studied. Of those referred, 46% (16% of the total sample) were hired.

¹This study was supported, in part, by a research Special Project grant from the Office of Vocational Rehabilitation, Department of Health, Education, and Welfare.

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6. Relatively more referrals to employers were made for female handicapped applicants and handicapped applicants who had more than a high school education, and who were in professional-managerial occupations. No differences in frequency of referral to employers were found among applicants grouped by age, marital status, number of dependents, and length of time on last job.

7. Among handicapped applicants who were referred to employers, the proportion hired was higher for those referred on service and unskilled jobs, for those less severely disabled and for those widowed, divorced or separated. No relationship was found between hiring rate and sex, age, education, number of dependents, kind of disability, length of time on last job, and wage on last job. These findings are presumably indicative, in part, of the practices of some employers in the hiring of handicapped persons (i.e., employers to whom ES makes referrals).

8. Counseled and non-counseled applicant groups (matched on sex, age, education, and occupation) did not differ in frequency of referral to employers and frequency of hires. Since employers tended to hire the less severely handicapped more frequently, the latter finding might be interpreted as a favorable outcome of counseling.

9. Data on handicapped and non-handicapped applicants in selected occupational groups were also analyzed with the following major findings:

a. The two groups (handicapped and non-handicapped) did not differ on sex, education, marital status, and number of dependents. Handicapped applicants, however, were older than non-handicapped applicants in the same occupational categories.

b. In general, handicapped applicants did not differ from non-handicapped applicants in length of time on last job and pay on last job. The one exception: handicapped applicants for semiskilled jobs were paid more on their last jobs than were their non-handicapped counterparts.

c. Handicapped applicants did not differ from non-handicapped applicants in the frequency with which they were referred to employers.

d. While, generally speaking, no differences were found in the pay rates for jobs to which handicapped and non-handicapped applicants were referred, handicapped semiskilled applicants and male handicapped clerical-and-sales applicants were referred to jobs with lower pay rates than those for jobs to which non-handicapped applicants in the same occupations were referred.

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e. Refusing the referral, refusing employment, unavailability for employment, and failure to report for referral to employers was less frequent for handicapped than non-handicapped applicants. There is some indication that handicapped applicants may be forced to be less discriminating than non-handicapped applicants when it comes to taking advantage of employment opportunities.

f. No differences between handicapped and non-handicapped applicant groups were found in the frequency with which they were hired and in the rates of pay at which they were hired, with the exception of handicapped applicants for professional-managerial jobs, who were hired at higher rates of pay than were their non-handicapped counterparts. This finding is a favorable reflection on the practices of some employers with respect to the physically handicapped population served by ES.

The preceding findings generally tend to reflect favorably on ES policies and practices concerning the placement of handicapped applicants as compared to the placement of the non-handicapped. However, the absence of differences in outcomes between handicapped and non-handicapped ES applicants might be due to the fact that most handicapped ES applicants had only minor disabilities.

The significant findings resulting from this study were limited to specific sub-groups. Such findings were often obliterated in total group comparisons. This emphasizes the necessity for careful analysis and rigorous standards in reporting research on physically handicapped populations.

The data from this study that relate to level of placement should perhaps be emphasized. There is some evidence that the physically handicapped may be forced to be less discriminating with regard to employment than are non-handicapped individuals. There is some evidence that the job market is much more restricted for handicapped individuals than for non-handicapped individuals, at least below the professional and managerial levels. There is some evidence that handicapped individuals may be over-qualified for the jobs they obtain, or, putting it in another way, that handicapped individuals obtain jobs at levels lower than those for which they are qualified. There is some suggestion that a stereotype prevails about the kinds of jobs that handicapped individuals are "good for." The question is: How vocationally adjusted are these physically handicapped individuals under such circumstances?

Introduction

As part of the Industrial Relations Center's program of vocational rehabilitation research,² data on physically handicapped groups were studied in preparation for the development and refinement of research techniques and instruments. Characteristics of one of these groups, Division of Vocational Rehabilitation (DVR) counselees, have been analyzed and reported.³ The present bulletin reports the study of another sample: physically handicapped applicants at the Minneapolis and St. Paul local offices of the State Employment Service (ES).⁴

The report is written in three parts. The first part describes the ES physically handicapped applicant population and compares it with the DVR counselee population and the total labor force. The second part attempts to relate applicant characteristics to application outcomes including referral-placement outcomes. The third part compares the characteristics of handicapped and non-handicapped applicants and attempts to determine if the two groups differ in application outcomes.

Data for this study were obtained from application cards on file at the ES local offices in Minneapolis and St. Paul.⁵ Selected items of information on the application cards were transcribed, using a simplified checklist to facilitate the transcription. A copy of this checklist is shown in the Appendix.

² *Minnesota Studies in Vocational Rehabilitation: I. Research Plan and Bibliography*, IRC Bulletin 21, June, 1958.

³ *Minnesota Studies in Vocational Rehabilitation: IV. A Study of 1,637 DVR Counselees*, IRC Bulletin 24, November, 1958.

⁴ Grateful appreciation is extended to the Minnesota Department of Employment Security for making the data available.

⁵ Identical filing procedures are used at both local employment offices. Job application cards are filed according to D.O.T. code numbers and then alphabetized within code number groups. Application cards for handicapped persons are marked with red tabs. Each card is kept in the "active" file until the applicant obtains a job or does not return after a period of 60 days. When a card is removed from the "active" file, it is transferred to the "inactive" file, where the same filing procedures are followed. Cards are kept in the "inactive" file for a period of two years. If an applicant returns within this period, his card is placed again in the "active" file.

Characteristics of the ES physically handicapped applicant population

Table 1 summarizes the characteristics of a sample⁶ of 607 physically handicapped ES applicants.⁷ Table 1 gives data separately on the Minneapolis and St. Paul sub-samples. No significant difference⁸ was found for the two city sub-samples in the proportion of the sexes, with approxi-

Table 1
Characteristics of Minneapolis, St. Paul, and
total handicapped ES applicant samples

Characteristics	Minneapolis (N=388)	St. Paul (N=219)	Total (N=607)
	Per cent		
Sex:			
Male	77	73	76
Female	23	27	24
Age:			
14-18	3	1	2
19-28	28	25	27
29-43	38	33	36
44+	31	41	35
Marital status:			
Single	41	27	36
Married	47	64	53
Other	12	9	11
Number of dependents:			
None	54	48	52
1-2	27	29	27
3-4	15	18	16
5+	4	6	5
Union member:	23	30	27
Veteran:	42	29	37
Education:			
7 & less	7	7	7
8th	20	21	20
9-11	19	26	22
12th	33	28	31
More than 12	21	18	20

⁶ Four application cards of physically handicapped job applicants were drawn at random from each full file drawer of application cards and proportionately less from file drawers which were not full.

⁷ "Physically handicapped ES job applicants" are operationally defined as those applicants identified as such by ES.

⁸ The chi-square test of independence and the .05 level of significance were used in all comparisons reported in this bulletin unless otherwise indicated.

mately three-fourths of each sub-sample being male. The Minneapolis sub-sample was younger than the St. Paul sub-sample. The difference was particularly noticeable in the age group 44 years and older. Significant differences in marital status were found between sub-samples. Only 47% of the Minneapolis sub-sample were married, compared with 64% of the St. Paul sub-sample. About 54% of the Minneapolis sub-sample had no dependents, compared with 48% of the St. Paul sub-sample. Some 30% of the St. Paul sub-sample were union members, compared with 23% of the Minneapolis sub-sample. The Minneapolis sub-sample had proportionately more veterans (42% compared with 29% for the St. Paul sub-sample). Average education was slightly higher for the Minneapolis sub-sample than for the St. Paul sub-sample, but for practical purposes the two sub-samples were comparable in education.

The total ES applicant sample described above differed in some respects from the total DVR counselee sample reported on in a previous publication of this series.⁹ ES and DVR samples differed significantly in age. Only 15% of the total ES sample were under 24 years, compared with 57% of the DVR counselees at age of acceptance.

Inter-city sub-sample comparisons showed that, for both ES and DVR, the Minneapolis sub-samples were younger, had fewer dependents, and had a larger proportion of unmarried individuals. This finding re-emphasizes the danger of generalizing from data on an agency population in one city to agency populations in adjoining urban areas even within the same labor market area.¹⁰

The educational distribution of the total ES sample was quite comparable to the total DVR sample. The DVR figures, however, pertain to education at time of acceptance for rehabilitation. A large proportion of the DVR counselees received further training so that by the time they actually entered the labor market, their educational level was undoubtedly higher.

Men constituted 76% of the total ES sample and 62.5% of the total DVR sample. Proportionately more male handicapped ES applicants came from Minneapolis, while proportionately more male DVR counselees came from St. Paul.

Table 2 shows the percentage of the ES samples in each major occupational group.¹¹ No large differences were found between Minneapolis

⁹ *Minnesota Studies in Vocational Rehabilitation: IV. A Study of 1,637 DVR Counselees*, IRC Bulletin 24, November, 1958.

¹⁰ *Ibid.*, pp. 16-20.

¹¹ The "occupation" of a job applicant is operationally defined as that determined by ES.

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Table 2

Occupational distribution of Minneapolis, St. Paul and total handicapped ES applicant samples, total DVR counselee sample, and total labor force

Occupation	ES sample			Total DVR counselee sample ^a	Total labor force ^b
	Minneapolis (N=388)	St. Paul (N=219)	Total (N=607)		
			Per cent		
Professional and managerial ...	7	8	7	20	21
Clerical and sales	24	25	24	36	28
Service	9	9	9	12	11
Skilled	13	11	13	12	15
Semiskilled	32	29	31	14	17
Unskilled	15	18	16	6	5
Other ^c	*	0	*	*	3

^a Data for Minneapolis-St. Paul, 1953-57. See: *Minnesota Studies in Vocational Rehabilitation: IV. A Study of 1,637 DVR Counselees*. IRC Bulletin 24, November, 1958.

^b 1950 census data for Minneapolis-St. Paul.

^c Includes agricultural and kindred, and "occupation not reported."

* Less than 0.5%.

and St. Paul ES sub-samples when percentages in each occupational group were compared.

Table 2 shows a large difference in occupational composition between the total ES sample and the total DVR sample at time of closure.¹² A larger proportion of the DVR counselees found jobs at closure in the professional-managerial, and clerical-sales fields, while more of the ES applicants were in semiskilled and unskilled occupations. Only 7% of the total ES sample were in professional and managerial occupations, while 47% were in semiskilled and unskilled occupations. This compares with 20% of the DVR counselees in professional-managerial occupations and 20% in the semiskilled and unskilled occupations.

Table 2 also compares the occupational distribution of total ES and total DVR samples with that of the 'Twin Cities' total labor force in 1950. The total DVR sample approximates total labor force proportions better than the total ES sample does.

Table 3 shows the distribution of disabilities in the total ES sample. No significant differences were found between Minneapolis and St. Paul sub-samples. The largest single disability category was orthopedic. The next largest disability groups were cardiovascular, and hearing and speech.

¹² "Closure" refers to "closing the case" after the counselee has completed a program of rehabilitation and has been placed on a job.

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Table 3

Distribution of disabilities in the Minneapolis, St. Paul and total handicapped ES applicant samples and in the total DVR counselee sample

Disability	ES sample			DVR Total counselee sample*
	Minneapolis (N=388)	St. Paul (N=219)	Total (N=607)	
	Per cent			
Orthopedic	33	29	32	35
Visual	7	4	6	**
Hearing and speech	11	9	10	10
Cardiovascular	11	10	11	6
Respiratory	5	7	5	12
Neurological	4	4	4	5
Neuropsychiatric	4	3	4	5
Skin and allergy	3	1	2	**
Generalized and systemic	8	9	8	3
Gastro-intestinal	3	4	3	**
Genito-urinary	*	1	1	**
Mental retardation	0	0	0	12
Miscellaneous	11	19	14	12

* Data for Minneapolis-St. Paul, 1953-57. See: *Minnesota Studies in Vocational Rehabilitation: Bulletin IV. A Study of 1,637 DVR Counselees*. IRC Bulletin 24.

* Less than 0.5%.

** These categories were not used in the computation of disability group percentages for the DVR sample. Rehabilitation of visually handicapped persons is not undertaken by DVR. The other categories (skin and allergy, gastro-intestinal, and genito-urinary) constitute such a small fraction of the total DVR counselee sample that these were included in the miscellaneous category.

More than half of the total ES sample were in these three disability categories.

Table 3 also shows the disability distribution for the total DVR sample. The total DVR sample had proportionately more individuals in the respiratory and mental retardation categories than the total ES sample. On the other hand, the total ES sample had proportionately more persons in the cardiovascular, and generalized and systemic disability groups.

In summary, the two agencies, ES and DVR, seemed to have worked with different, although overlapping, populations of physically handicapped individuals. The ES served an older population; DVR served a younger population. The larger portion of ES applicants were in semi-skilled and unskilled occupations. DVR counselees at closure found jobs mainly in professional-managerial and clerical-sales occupations. In terms of disabilities, the three largest groups were orthopedic, cardiovascular, and hearing and speech for ES applicants, and orthopedic, respiratory and mental retardation for DVR counselees.

Outcomes of application at ES

This section of the bulletin concerns studies on the outcomes of job placement applications by physically handicapped individuals at the Employment Service. An attempt was made to determine what applicant characteristics were related to these outcomes. The data consisted of pertinent items of information obtained from ES application cards. The sample was the same sample of 607 physically handicapped applicants described in the preceding section. The studies centered on: (a) initial outcomes of application, (b) outcomes of referrals to employers, and (c) comparison of outcomes for individuals who received employment counseling services and those who did not.

Initial application outcomes

When a physically handicapped individual applies for job placement at the Employment Service, one or more of the following outcomes result. He may be interviewed concerning job placement if there are job openings available in his particular line of work.¹³ If he is not interviewed, his application is filed for a future "call-in" as soon as job openings materialize. If he is interviewed, he may be given a referral to an employer on a job opening which the employment interviewer decides is suitable for him. If the employment interviewer decides that none of the job openings are suitable for the applicant, no referral is given and the individual's application is then filed for a future "call-in."

It might be assumed that, from an applicant's point of view, the important initial outcome of an application at ES is whether or not he is given a referral to an employer. Tables 4 through 8 summarize the data relative to frequency of referral to employers. The data pertain to the outcomes of the last job placement applications of the 607 physically handicapped applicants in the sample.¹⁴

Table 4 shows the proportions given referrals to employers for physically handicapped applicants grouped according to sex, age, education, marital status, and number of dependents. Significantly more of the female group were referred to employers on job openings. Only 28% of those 44 years and over were referred, compared to 37% or better for the other age groups. Proportionately more of the group with better than a high school education were referred, in comparison with the group with

¹³ Footnote 11, page 6.

¹⁴ Applicants may apply for job placement more than once.

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Table 4

Initial application outcomes for handicapped ES applicants, by personal characteristics

Characteristic	N	Referred to Employer	Not referred to Employer
		Per cent	
Sex:			
Male	459	31	69
Female	148	46	54
Age:			
14-23 years	87	37	63
24-33 years	176	38	62
34-43 years	134	39	61
44 and older	210	28	72
Education:			
8 years or less	165	31	69
9-12 years	313	31	69
13-15 years	76	41	59
16 or more	39	48	52
Marital status:			
Single	215	38	62
Married	319	30	70
Other	66	41	59
Number of dependents:			
None	318	35	65
One	104	33	67
Two	58	32	68
Three	58	28	72
Four or more	67	36	64

twelve years schooling or less. No significant differences in the proportion referred to employers were found among the various marital status groups or for applicants grouped according to number of dependents.

Table 5 shows referral data for physically handicapped applicants grouped according to occupation. The differences among occupational groups in the proportion referred to employers were statistically significant. More than half of the professional-managerial group were given referrals, in contrast to one-fourth of the skilled and unskilled groups.

Among the occupational data available, another variable which conceivably might be related to frequency of referral was length of time on last job. It might be assumed that this variable reflects the job stability of individuals to some extent, and that the more stable individuals (i.e., those who stayed on their last jobs longer) would be referred to employers more frequently. Analysis of the data, however, revealed no signi-

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Table 5

Initial application outcomes for handicapped ES applicants by occupation

Occupation	N	Referred to Employer	Not referred to Employer
		Per cent	
Professional and managerial	45	51	49
Clerical and sales	146	35	65
Service	54	42	58
Skilled	76	26	74
Semiskilled	187	34	66
Unskilled	98	25	75

ficant differences in the proportion referred to employers among the following length-of-time-on-last-job groups: 6 months or less, 7 to 12 months, 13 to 24 months, 25 to 36 months, and 37 months or more.

Table 6

Initial application outcomes for handicapped ES applicants, by disability

Disability	N	Referred to Employer	Not referred to Employer
		Per cent	
Neuropsychiatric	23	52	48
Neurological	25	40	60
Orthopedic	192	37	63
Cardiovascular	65	37	63
Respiratory	33	36	64
Skin and allergy	14	36	64
Visual, hearing and speech	100	34	66
Generalized and systemic	48	27	73
Gastro-intestinal	19	26	74
Genito-urinary	4	25	75
Miscellaneous	84	17	83

Table 6 summarizes referral data for individuals grouped according to gross disability category. Large but not statistically significant differences were found among the disability groups in the proportion referred to employers. The neuropsychiatric¹⁵ and neurological groups were referred most

¹⁵ It must be noted that the larger proportion of individuals in the neuropsychiatric disability category had relatively less severe psychoneurotic disabilities usually described as "nervous condition."

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often and the genito-urinary, genito-intestinal and miscellaneous groups least often.

Severity of disablement is invariably assumed to be a significant factor in any study of physically handicapped individuals. The relationship of this factor to the frequency of being given referrals to employers was investigated in two ways. The first study involved the comparison of severely disabled groups with relatively less severely disabled groups in two major disability categories, orthopedic and hearing disabilities. These disability categories were selected because of the relative ease and accuracy of classifying disabilities into severely disabled and not severely disabled categories from available data. For example, flat feet would not be severe, while total loss of leg would be; hard-of-hearing would not be severe, while total loss of hearing would be. Table 7 shows the proportions referred and not referred for the severely disabled and not severely disabled groups. The data include only extreme cases, i.e., only those distinctly severe and those distinctly not severe. Were the data available, a better classification of severity would have been one based on residual vocational handicap.

No significant differences were found between orthopedic groups (severely disabled vs. not severely disabled) in the proportion receiving referrals. A significant difference was found between the two hearing groups, with the severely disabled group receiving fewer referrals. This indicates that, at least for the group with hearing disabilities, severity of disablement is a characteristic related to frequency of referral to employers.

The second study concerning severity of disablement and frequency of referral to employers involved the use of matched groups. Applicants

Table 7
Initial application outcomes for orthopedic and hearing
disability groups, by severity of disablement

Group	N	Referred to Employer	Not referred to Employer
		Per cent	
Severely disabled			
Orthopedic	65	49	51
Hearing	33	24	76
Total	98	41	59
Not severely disabled			
Orthopedic	67	49	51
Hearing	22	50	50
Total	89	50	50

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who were not given referrals were paired with applicants who were referred to employers, each pair being matched on sex, age, education, and occupation. Age and education were matched to within an average of two years. Occupation was matched to the first three D.O.T. digits. Three judges¹⁶ independently evaluated the disability descriptions for each pair in terms of severity of disablement. Since different disabilities were frequently matched in these comparisons, the judges used an occupational-handicap frame of reference in their evaluations, i.e., the handicapping severity of each disability was considered in reference to the occupation of the handicapped person. Each judge then sorted pairs into one of four categories: both severely disabled, both not severely disabled, and two categories in which one was severely disabled and the other not severely disabled, depending on which member of the pair was more severely disabled. Out of a total of 114 pairs in which matching was possible under the conditions given, two of the three judges agreed on the categorization of 90 pairs. Table 8 shows the distribution of these 90 pairs.

Table 8
Comparison of severity of disablement for matched pairs of
referred and not-referred handicapped ES applicants

	Referred to employer	
	Severely disabled	Not severely disabled
Not referred:	N pairs	
Severely disabled	16	21
Not severely disabled	27	26

A test for the difference between proportions as described by McNemar¹⁷ was applied to the data in Table 9. The difference was not statistically significant. This finding did not support the hypothesis that severity of disablement was related to being referred to employers.

From the data presented above, it appears that some applicant characteristics were related to frequency of being given referrals to employers. Sex, age, education, and occupation seemed to be related to the proportion of referrals received. Kind of disability and severity of disablement were not found to be related to frequency of being given referrals, except in the case of applicants with hearing disabilities.

¹⁶ All three judges had at least an M.A. in psychology and two years research experience in the area of vocational rehabilitation.

¹⁷ McNemar, Q., *Psychological Statistics*, New York: Wiley & Sons, 1949, pp. 56-60.

Referral outcomes

If an applicant is given a referral to an employer, one of the following outcomes of the referral is recorded on the individual's application card at ES: (a) he is hired, (b) he is not hired, (c) he refuses the referral, (d) he refuses the job offer, (e) he fails to report, or (f) he may not be available for other reasons (e.g., he has already found a job, he is sick, etc.). The first two referral outcomes depend on employer action. The other outcomes are largely determined by the applicant.

The present section is primarily concerned with the first two referral outcomes (i.e., being hired or not), since these outcomes might be viewed as reflecting, in part, employer practices and policies concerning the employment of physically handicapped population served by the Employment Service. The study of applicant characteristics as related to being hired or not might yield some clues indicative of employer policies and practices. Tables 9 through 12 summarize data bearing on this study. The data pertain only to handicapped applicants who were given referrals.

Table 9 shows the outcomes of last referrals¹⁸ for handicapped applicants grouped by sex, age, education, marital status, and number of dependents. The only statistically significant differences found were among the marital status groups. The widowed, divorced, and separated group had the highest percentage of hires. Single applicants had the highest percentage of those not hired. Married applicants had more referrals that did not involve employer action (31% compared to less than 20% for the two other groups).

Outcomes of last referrals for handicapped applicants in the various occupational groups are shown in Table 10. Individuals in unskilled and service occupations were hired most frequently, while those in professional-managerial occupations were hired least frequently. When all outcomes (i.e., "hired," "not hired," and "other") were considered, differences in referral outcomes among occupational groups approached accepted statistical significance levels (P between .10 and .05). When only "hired" and "not hired" were considered, occupational group differences were significant.

Comparison of Table 10 with Table 5 indicates that the occupational groups with the lowest proportion of referrals tended to have the highest proportion of hires resulting from referrals, while occupational groups with the highest proportion of referrals tended to have the lowest proportion

¹⁸ The last section of the ES job application card is used to record all referrals given an applicant. Data were obtained on all referrals, but for purposes of this analysis, only data on the most recent referral were used.

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Table 9

Outcomes of last referral to employers for handicapped ES applicants, by personal characteristic

Characteristic	N	Referral outcomes		
		Hired	Not hired	Other
		Per cent		
Sex:				
Male	142	50	31	19
Female	68	38	32	30
Age:				
14-23 years	32	44	38	18
24-33 years	67	48	33	19
34-43 years	52	38	25	37
44 and older	59	49	35	16
Education:				
8 years or less	51	35	28	37
9-12 years	97	48	33	19
13-15 years	31	48	32	19
16 or more	19	37	42	21
Marital status:				
Single	82	44	39	17
Married	96	43	26	31
Other	27	59	26	15
Number of dependents:				
None	111	44	35	21
One	34	41	35	23
Two	20	60	15	25
Three	16	50	25	25
Four or more	24	50	25	25

of hires resulting from referrals. The unskilled group had the lowest proportion referred to employers (25%), but 71% of these were hired. In contrast, the professional-managerial group had the highest proportion referred (51%) and the lowest hiring rate among those referred (30%).

Taking the total sample of handicapped applicants (both those who did and did not receive referrals), 26% of the service group were hired, 12% of the skilled group were hired, and the other groups averaged about 15% hired. These differences were not statistically significant.

Other occupational variables studied in relation to referral outcomes included length of time on last job and wage rates on last job. (Data on wage rates sufficient for analysis were available only for the semiskilled group.) No significant relationships were found between these variables (length of time on last job and wage rates on last job) and referral outcomes.

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Table 10

Outcomes of last referral to employers for handicapped
ES applicants, by occupation

Occupation	N	Referral outcomes		
		Hired	Not hired	Other
		Per cent		
Professional and managerial	23	30	40	30
Clerical and sales	51	41	41	18
Service	23	61	13	26
Skilled	20	45	20	35
Semiskilled	63	41	38	21
Unskilled	24	71	17	12

Referral outcomes among the different disability groups are shown in Table 11. Because of the small number of individuals referred to employers in several of the groups, the outcomes for all referrals¹⁹ were included in Table 11. No significant differences in referral outcomes were found

Table 11

Outcomes of all referrals to employers for handicapped
ES applicants, by disability

Disability	N referrals	Referral outcomes		
		Hired	Not hired	Other
		Per cent		
Neurological	6	67	33	0
Skin and allergy	10	50	25	25
Neuropsychiatric	19	47	37	16
Visual, hearing and speech	34	46	24	30
Cardiovascular	24	46	29	25
Orthopedic	75	46	37	17
Respiratory	8	38	24	38
Generalized and systemic	12	33	50	17
Gastro-intestinal	5	20	40	40
Genito urinary	1	0	100	0
Miscellaneous	14	25	33	42

among disability groups. Applicants with neurological and skin and allergy disabilities were hired most frequently. Those with generalized and systemic and gastro-intestinal disabilities were hired least frequently.

Comparison of Table 11 with Table 6 shows that, among disability groups, referral outcomes had a direct relationship with frequency of re-

¹⁹ See Footnote 18, page 14.

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errals, in contrast to the findings for occupational groups. Disability groups with the highest frequency of referrals tended to have the highest frequency of hires resulting from referrals, while disability groups with the lowest frequency of referrals tended to have the lowest frequency of hires.²⁰ This suggests that the frequency with which applicants were referred to employers might reflect the different degrees of success that ES had experienced in the placement of applicants with different disabilities.

Severity of disablement was found to make a significant difference in the outcome of referrals. Table 12 shows this finding. Data pertain to the same orthopedic and hearing groups studied in connection with frequency of referral to employers.

Table 12
Outcomes of all referrals to employers for orthopedic and hearing groups, by severity of disablement

Group	N	Referral outcomes		
		Hired	Not hired	Other
		Per cent		
Severely disabled:				
Orthopedic	32	21	67	12
Hearing	8	100	0	0
Total	40	28	61	11
Not severely disabled:				
Orthopedic	33	46	33	21
Hearing	11	44	19	37
Total	44	46	29	25

Table 12 shows that, for orthopedic and total groups, the severely disabled were hired much less frequently than those not severely disabled. Differences in referral outcomes between hearing groups (severely disabled vs. not severely disabled) were not significant. It should be noted that differences in frequency of referral to employers were found only between hearing groups, and not for orthopedic or total groups. (See Table 7.) There is some indication in these findings that selection on the basis of severity of disablement occurred at different points in the total placement process (i.e., from application at ES to hiring) for different disability groups.

In summary, differences in referral outcomes were found among marital status groups and among occupational groups. Physically handicapped ap-

²⁰ When disability groups were ranked according to frequency of referrals and frequency of hires, the Spearman rank order correlation coefficient obtained between the two rankings was +.85, significant at the .01 level.

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plicants in service occupations seemed to have the best prognosis for placement, in the sense of ultimately finding jobs. There was some evidence that severity of disablement, as well as kind of disability, were selective factors operating at different points in the total process of placement. Other factors found significant in the total placement process in addition to severity and kind of disability include sex, education, marital status, and occupation.

Comparison of counseled and non-counseled applicants

Table 13 shows the percentage of physically handicapped applicants receiving placement counseling services in each occupational group. Significantly more applicants at the St. Paul office than at the Minneapolis office received counseling. Among the St. Paul applicants, proportionately more of the service and semiskilled groups received counseling than in any other occupational group. In the Minneapolis sample, proportionately more in the clerical-sales and semiskilled groups received counseling than in other groups. Differences among occupational groups in the proportion receiving counseling services were significant for Minneapolis, St. Paul, and total sample.

Table 13

Proportion given counseling services in Minneapolis, St. Paul, and total handicapped ES applicant samples, by occupational group

Occupation	Minneapolis		St. Paul		Total	
	N	% of N counseled	N	% of N counseled	N	% of N counseled
Professional and managerial	28	11	17	18	45	13
Clerical and sales	90	21	56	29	146	24
Service	35	3	19	53	54	20
Skilled	51	6	25	16	76	9
Semiskilled	124	19	63	44	187	27
Unskilled	59	5	39	33	98	16

The proportion of counseled individuals in each major disability category is shown in Table 14. Applicants with neuropsychiatric and neurological disabilities received counseling services more frequently than applicants with other types of disabilities. Applicants with visual, hearing, and speech disabilities were counseled least frequently. Differences among disability groups in the proportion receiving counseling services were significant for Minneapolis, St. Paul, and total sample.

Differences in personal characteristics (sex, age, education, and marital status) were also observed between counseled and non-counseled groups

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Table 14

Proportion given counseling services in Minneapolis, St. Paul, and total handicapped ES applicant samples, by disability group

Disability	Minneapolis		St. Paul		Total	
	N	% of N counseled	N	% of N counseled	N	% of N counseled
Orthopedic	129	10	63	33	192	19
Visual, hearing and speech.....	71	6	29	24	100	11
Cardiovascular,	43	20	22	27	65	24
Respiratory	18	11	15	40	33	24
Neurological	16	44	9	67	25	52
Neuropsychiatric	17	53	6	83	23	61
Generalized or systemic	29	14	19	26	48	19
Other	52	8	52	31	104	19

of applicants. These differences, however, were not found to be statistically significant.

To investigate differences in application outcomes, 85 matched pairs of counseled and non-counseled physically handicapped applicants were drawn from the original ES sample. These pairs were matched on sex, age, education, and occupation. Age was matched to within an average of two years difference, in no case more than five years difference. Education was matched to within an average of two years. No pairings were made of individuals who had some high school education with those who did not. Occupation was matched to the first three D.O.T. digits, in the majority of cases to the first four D.O.T. digits.

Before comparing the two groups on application outcomes, it was first necessary to inquire into characteristics (other than sex, age, education, and occupation) which were associated with being counseled, i.e., characteristics of the person prior to counseling which might explain why he was counseled.²¹ The 85 matched pairs were compared on four variables: (1) length of time on last job; (2) pay on last job; (3) type of disability; and (4) severity of disablement (from an occupational handicap frame of reference).²² These variables were chosen from available data as possible indicators of the need for counseling. Thus, counseled individuals were expected to have spent less time on the last job, earned less on the last job, have certain types of disabilities more frequently than other types, and be vocationally handicapped by more severe disabilities.

²¹ This procedure is analogous to the "before" comparisons in "before-after" type experimentation. Differences in outcomes ("after" comparisons) may be attributed to the "treatment" variable only if there were no differences in the "before" comparisons on relevant variables.

²² See page 13.

The McNemar test for the difference between proportions²³ was used to compare counseled and non-counseled groups on length of time on last job, pay on last job, and severity of disablement. The chi-square test was used to determine differences in type of disability.²⁴

No significant differences between counseled and non-counseled groups were generally found on length of time on last job, pay on last job, and type of disability. The one exception concerned the clerical group, where counseled and non-counseled groups differed on length of time on last job, counseled individuals having spent significantly more time on their last jobs than did non-counseled individuals.²⁵ No other differences within occupational groupings were found between counseled and non-counseled groups.

A significant difference in severity of disablement was found between counseled and non-counseled groups. Table 15 shows this finding.²⁶ The counseled group was significantly more severely disabled than the non-counseled group. It would appear, therefore, that severity of disablement was one factor associated with the process which determines whether a physically handicapped applicant is counseled or not.

Counseled and non-counseled groups were then compared on frequency of referral to employers and on referral outcomes. It was hypothesized that more effort would have been exerted toward placing counselees in jobs, in comparison with the placement of non-counselees. The data did not support this hypothesis. No significant differences in frequency of referral to employers were observed between counseled and non-counseled groups. Actually more of the non-counseled group (31%) than of the counseled group (28%) were referred to employers.

The data also showed that both counseled and non-counseled individuals were hired by employers with practically the same frequency

²³ McNemar, *op. cit.* The test involved assigning each pair to one of four cells in a four-fold table: (1) both members of the pair above the cut-off point; (2) both members below the cut-off point; (3) the counseled member above the cut-off point and the non-counseled member below the cut-off point; and (4) the reverse of (3). Medians (by total occupational group including both counseled and non-counseled) were used as cut-off points for length of time on last job and pay on last job. The cut-off point for severity of disability was determined by the pooled ratings of three judges working independently. The rating method was described in the section on initial application outcomes.

²⁴ The McNemar test for differences between proportions could not be used with these data.

²⁵ It is difficult to interpret this finding from the data. One probable explanation is that disability resulted in termination of the job, hence the need for counseling, especially for individuals who have become quite habituated to certain types of jobs. However, the data necessary to test this interpretation (e.g., data on date of disablement) were not available.

²⁶ Table 15 represents the consensus of categorization among the three judges. All three judges agreed on the categorization of 32 pairs, two judges agreed on the categorization of 47 pairs, making a total of 79 out of the 85 pairs on which at least two of the three judges agreed.

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Table 15

Comparison of severity of disablement for matched pairs of
counseled and non-counseled ES handicapped applicants

	Counseled	
	Severely disabled	Not severely disabled
Not counseled:	N pairs	
Severely disabled	16	15
Not severely disabled	31	17

NOTE: Does not include 6 pairs on which all three judges disagreed.

(46% of the counseled group compared to 42% of the non-counseled group). No significant differences were observed in the proportions of those not hired. Since counseled and non-counseled groups were closely matched or comparable on relevant employment-related characteristics except severity of disablement (the counseled group being the more severely disabled), and since a previous finding indicated that individuals with more severe handicaps tended to be hired less frequently, the data may be interpreted as showing that counseling resulted in favorable placement outcomes.

Comparison of handicapped and non-handicapped applicants

Data on a second sample were obtained from the Minneapolis ES local office for the purpose of comparing application outcomes between handicapped and non-handicapped applicants. The sampling procedure consisted of locating occupational groups (3-digit D.O.T. groups) with the largest number of applicants and obtaining information on all handicapped applicants in each group. (These samples were therefore not necessarily representative of the applicant population in each major, first D.O.T. digit, occupational category.)

For each card on a handicapped applicant drawn from the files, an adjacent card on a non-handicapped applicant was also drawn. Identical information was recorded on both cases. By this procedure, the handicapped and non-handicapped groups were matched for occupation and randomized for age, sex, and other personal characteristics. A total of 345 pairs were drawn in this manner. The information was recorded on a short checklist, a copy of which is included in the Appendix (page 31).

Characteristics of the samples

Table 16 summarizes the sex, age, and educational characteristics of the samples. No significant differences in the proportion of the sexes were found between handicapped and non-handicapped groups in each major occupational category. The handicapped group tended to be older in each occupation, particularly in the unskilled occupations where the median age difference was 12 years. The median age of the total handicapped sample was 37 years while the median age of the total non-handicapped sample was 31 years. The age difference between handicapped and non-handicapped samples was found to be statistically significant. Very little difference was found between the two groups in terms of education.

Other applicant characteristics studied included marital status, number of dependents, length of time on last job, and pay on last job. No significant differences between handicapped and non-handicapped groups were observed except for pay on last job. Table 17 shows the average earnings on the last job held for handicapped and non-handicapped groups in each major occupational category.

Table 17 shows that handicapped applicants in semiskilled occupations earned significantly more on their last jobs than did non-handicapped ap-

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Table 16

Sex, age, and education of handicapped and non-handicapped
ES applicants, by occupation

Occupation	N Pairs	Per cent male	Median age (years)	Median schooling (years)
Professional and managerial	69			
Handicapped		97	32	15
Non-handicapped		94	27	16
Clerical and sales	104			
Handicapped		70	35	12
Non-handicapped		59	32	12
Skilled	91			
Handicapped		99	41	11
Non-handicapped		100	37	10
Semiskilled	40			
Handicapped		95	36	9
Non-handicapped		97	33	10
Unskilled	41			
Handicapped		95	40	10
Non-handicapped		85	28	10
Total	345			
Handicapped		89	37	12
Non-handicapped		85	31	12

Table 17

Rates of pay on last job held for handicapped and non-handicapped
ES applicants, by occupation

Occupation	Handicapped			Non-handicapped		
	N	Median	Q	N	Median	Q
Monthly rates						
Professional and managerial	37	\$390	\$82.50	38	\$402	\$80.00
Clerical and sales						
Male	46	365	91.50	34	362	75.50
Female	19	234	43.50	27	235	34.50
Hourly rates						
Skilled	52	\$2.05	\$0.22	62	\$2.10	\$0.26
Semiskilled	29	1.94	0.16	28	1.82	0.34
Unskilled	27	1.52	0.20	32	1.59	0.35

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plicants.²⁷ In other occupations, the differences were small and not statistically significant. While the non-handicapped generally earned more than the handicapped, the semiskilled and the male clerical-sales handicapped groups earned more on the average than the corresponding non-handicapped groups.

In general, therefore, the two groups, handicapped and non-handicapped, were comparable on both personal and employment characteristics studied, with the exception of age and, for semiskilled applicants, pay on last job.

Referral to employers

Table 18 summarizes the data on frequency of referral to employers for physically handicapped and non-handicapped applicants in each major occupational group. Since the samples were not representative of the major occupational groups, there are differences between the percentages reported in Table 18 and those reported in Table 5.

Table 18

Initial application outcomes for handicapped and non-handicapped
ES applicants, by occupation

Occupation	N	Referred to Employer	Not referred to Employer
		Per cent	
Professional and managerial			
Handicapped	69	67	33
Non-handicapped	69	60	40
Clerical and sales			
Handicapped	104	69	31
Non-handicapped	104	60	40
Skilled			
Handicapped	91	45	55
Non-handicapped	91	47	53
Semiskilled			
Handicapped	40	39	61
Non-handicapped	40	38	62
Unskilled			
Handicapped	41	34	66
Non-handicapped	41	40	60
Total			
Handicapped	345	54	46
Non-handicapped	345	52	48

²⁷ The median test was used. See: Siegel, S., *Non-Parametric Statistics for the Behavioral Sciences*, New York: McGraw-Hill, 1956, pp. 111-116.

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Table 18 shows that the handicapped applicants for the professional-managerial and clerical-sales occupations received more referrals than the non-handicapped applicants. In the unskilled occupations, the handicapped applicants received fewer referrals. These differences were small and not statistically significant.

Starting pay rates on referrals were compared for handicapped and non-handicapped applicants in each occupational group. Table 19 summarizes the data on these comparisons. Male handicapped clerical and sales applicants and handicapped semiskilled applicants were referred on jobs paying significantly less than jobs on which corresponding non-handicapped applicants were referred.

Table 19

Salaries and wage rates for jobs on which handicapped and non-handicapped ES applicants were referred, by occupation

Occupation	Handicapped			Non-handicapped		
	N	Median	Q	N	Median	Q
Monthly rates						
Professional and managerial	48	\$377	\$68	43	\$346	\$86
Clerical and sales						
Male	73	260	65	51	310	66
Female	51	225	38	52	230	40
Hourly rates						
Skilled	47	\$1.82	\$0.22	50	\$1.99	\$0.18
Semiskilled	18	1.48	0.18	18	1.60	0.35
Unskilled	21	1.38	0.13	22	1.30	0.25

Comparison of Tables 17 and 19 shows that, for both handicapped and non-handicapped applicants, starting pay rates on job referrals were lower than earnings on last job, with one exception. Women in clerical and sales occupations, both handicapped and non-handicapped, were referred on jobs with higher average starting pay rates than their average earnings on their last jobs.²⁸ When handicapped and non-handicapped groups were compared on the differential between starting pay rates on referral jobs and average earnings on last job, the non-handicapped were found to have larger differentials in the professional and managerial occupations, while the handicapped had the larger differentials in the semi-

²⁸ Data were not available for further investigation into the significance of this finding. One possible explanation might lie in the job mobility characteristics of female clerical-sales workers. It might be hypothesized that female clerical-sales workers generally consider changing jobs only if such change involves an increase in pay.

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skilled and unskilled occupations. This suggests that, for the ES job applicant population, being disabled is more vocationally handicapping in the semiskilled and unskilled occupations than in other occupational fields, insofar as the criterion of pay is concerned.

Referral outcomes

Table 20 shows the outcomes of referrals to employers. The data show that handicapped and non-handicapped applicants were about equally successful in obtaining jobs when the outcomes of all referrals were considered. However, there were proportionately more referrals involving direct employer action (i.e., hiring or not hiring) for the handicapped applicants than for non-handicapped applicants (68% of all referrals for the handicapped group, compared to 58% for the non-handicapped group). Thus, the data also show that the handicapped were not hired more frequently than the non-handicapped, and that the non-handicapped refused the referral, refused employment, were not available, or failed to report more frequently than did the handicapped. The differences between

Table 20

Outcomes of last three referrals to employers for handicapped and non-handicapped ES applicants, by occupation

Occupation	N referrals	Referral outcomes		
		Hired	Not hired	Other
		Per cent		
Professional and managerial				
Handicapped	115	14	50	36
Non-handicapped	98	9	39	52
Clerical and sales				
Handicapped	165	24	57	19
Non-handicapped	162	26	46	28
Skilled				
Handicapped	91	30	32	38
Non-handicapped	103	31	23	46
Semiskilled				
Handicapped	38	39	42	19
Non-handicapped	26	35	35	30
Unskilled				
Handicapped	30	30	47	23
Non-handicapped	28	46	32	22
Total*				
Handicapped	439	23	45	32
Non-handicapped	417	23	35	42

* Differs significantly at 2% level (handicapped versus non-handicapped).

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handicapped and non-handicapped groups on the "not hired" and "other" referral outcomes were statistically significant for the total samples, but not for any occupational category taken singly.

As indicated earlier, differences between handicapped and non-handicapped groups in percentage of "hires" were not significant when the outcomes of all referrals were considered, whether for total sample or major occupational category. When only referrals which resulted in direct employer action were considered (i.e., "hired" plus "not hired"), the differences between handicapped and non-handicapped groups, while growing larger, were still found to be not significant statistically.

Salaries and wage rates at which applicants were hired are shown in Table 21. Handicapped applicants for professional-managerial and unskilled jobs were hired at higher pay rates than non-handicapped applicants for similar jobs. On the other hand, non-handicapped applicants for clerical-sales, skilled, and semiskilled jobs were hired at higher pay rates than their handicapped counterparts. However, the only statistically significant difference in hiring pay rates between handicapped and non-handicapped groups was the difference in the professional and managerial category.

Table 21

Salaries and wage rates for referrals at which handicapped and non-handicapped ES applicants were hired, by occupation

Occupation	Handicapped			Non-handicapped		
	N	Median	Q	N	Median	Q
Monthly rates						
Professional and managerial	14	\$385.00	\$74.00	8	\$234.00	\$38.00
Clerical and sales						
Male	18	244.00	60.00	11	286.00	59.00
Female	18	190.00	34.00	22	225.00	44.00
Hourly rates						
Skilled	23	\$ 1.88	\$.16	31	\$ 2.00	\$.17
Semiskilled	8	1.50	.09	9	1.50	.28
Unskilled	6	1.43	.30	11	1.18	.28

Comparison of Tables 19 and 21 shows that average pay rates for jobs on which both handicapped and non-handicapped applicants were hired were generally equal to or lower than the average pay rates for all jobs on which they were referred. There were some exceptions, however. Handicapped applicants for professional-managerial and unskilled jobs were hired at pay rates slightly higher than average pay rates for jobs on which they were referred. In contrast, non-handicapped applicants for professional-managerial and unskilled jobs, and handicapped applicants for

clerical and sales jobs were hired at pay rates much lower than the average pay rates for jobs on which they were referred.

The findings reported above show that, in general, handicapped groups compare favorably with non-handicapped groups in terms of the proportion of "hires" resulting from all referrals. However, handicapped applicants tended to follow through on referrals more frequently than did non-handicapped applicants. As a result, handicapped applicants were turned down by the employer more frequently than were non-handicapped applicants. Another finding that stands out concerns the professional and managerial category. Handicapped applicants for professional and managerial jobs showed significantly better outcomes than did their non-handicapped counterparts. One possible explanation for this finding might be that handicapped applicants for professional and managerial jobs had better qualifications than non-handicapped applicants for similar jobs.²⁹ Data on educational attainment did not support this explanation. However, the experience factor might be the more heavily weighted in terms of qualifications, and the age discrepancy between handicapped and non-handicapped applicant groups tended to support this explanation.

Comparison of matched pairs

A final study involved pairing handicapped with non-handicapped job applicants, each pair being matched for sex, age (average difference: two years), education (average difference: two years), and occupation (to the first three D.O.T. digits). Handicapped and non-handicapped groups were compared on length of time on last job, number of referrals to employers, and number of hires. The McNemar test for differences between proportions was used in the analysis. No significant differences between handicapped and non-handicapped groups were found on all three variables studied.

In summary, comparison of characteristics, referrals, and referral-outcomes for handicapped and non-handicapped applicants at ES tended to show a number of significant differences between the two groups. The handicapped group was older than the non-handicapped group. Handicapped applicants in semiskilled occupations earned more on their last jobs than did non-handicapped applicants in the same occupations. Male handicapped applicants in clerical-sales occupations and handicapped applicants in semiskilled occupations were referred on jobs paying less than jobs on which non-handicapped applicants in the same occupations were re-

²⁹ It is quite possible that non-handicapped individuals with qualifications similar to those of the handicapped applicant group are quite able to find jobs for themselves without having to apply for ES assistance.

ferred. In general, the pay rates for jobs on which applicants (both handicapped and non-handicapped) were referred were generally equal to or lower than the pay rates for the jobs last held by these applicants. No difference was found between handicapped and non-handicapped groups in the frequency with which they were referred to employers, but more referrals among handicapped applicants resulted in direct employer action. No difference was found in employer action (hiring) on the referrals for handicapped and non-handicapped groups. The last two findings tend to reflect favorably on ES and employer practices concerning the placement and hiring of the handicapped when compared to their practices in the placement and hiring of the non-handicapped.

One further implication concerns research methodology. The significant differences observed in the comparison of handicapped and non-handicapped groups pertain to specific occupational categories and not to the total groups. In some instances, findings in one occupational category were in direct contradiction to findings in another category. These contradictory findings parallel other contradictory findings on handicapped versus non-handicapped worker comparisons reported in the literature.³⁰ One explanation for such findings seems to lie in the differing populations involved. The necessity for rigorous standards in reporting research cannot be overemphasized.

³⁰ Compare, for example, Dietz, J. W. An experiment with vocationally handicapped workers. *Personnel J.*, 1931-1932, 10, 365-370; Brighthouse, G. The physically handicapped worker in industry. *Industr. Relat. Sect., Calif. Inst. Technol., Bull. No. 13*, 1946; and Wagner, T. *Selective Job Placement*, New York: Assoc. Casualty & Surety Execs., 1946.

Appendix

Counseled_____ Rehab_____ DOT Code_____ Last date of referral_____

Employment Service Handicapped Workers

1. Name_____ Male_____ Female_____

2. Address_____ Veteran: Yes_____ No_____

3. _____ Telephone No._____

City_____ Zone_____

6. Age_____ 8. No. of Dependents_____

7. Married_____ Divorced_____ 12. Union Member: Yes_____ No_____

Single_____ Separated_____

Widowed_____

14. Years of Education: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Special Training: _____

15. Job Title:_____

Date started_____ Date ended_____ Pay_____

Reason for leaving_____

21. Job Title:_____

Date started_____ Date ended_____ Pay_____

Reason for leaving_____

27. Job Title:_____

Date started_____ Date ended_____ Pay_____

Reason for leaving_____

34. Describe physical impairment_____

Disability rating for 10% or more Yes_____ No_____

SPECIAL INFORMATION_____

REFERRAL INFORMATION

	Code	Date	Pay	No. of referrals Perm. or temp.	Result
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____

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University of Minnesota

OVR Project

CONFIDENTIAL

1. DOT Code_____ 4. Total number of calls_____
6. Counseled: Yes_____ No_____ 7. Handi_____ Non-handi_____ 8. Handi. Code_____
11. Age_____ 13. Sex_____ 14. Union member_____
15. Mar._____ Singl._____ Wid._____ Div._____ Sep._____ 16. Dependents_____
17. Education: 1 2 3 4 5 6 7 8 _____ 9 10 11 12 _____ 13 14 15 16 17 18 19
19. Special Training:_____
20. Work History:
- | Started | Ended | Months | Pay |
|---------|-------|--------|-------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
27. 10% Disability: Yes_____ No_____
28. Applicant for U.C.: Yes_____ No_____ 29. Total referrals_____
30. Job Titles: _____
- Pay: _____
- Results: _____