Contrasting Characteristics of Blind and Visually Impaired Clients Achieving Successful and Unsuccessful Job Retention

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INTRODUCTION

The ability to build and maintain a career in the competitive job market and to benefit from work, both personally and economically, is an element of life goals for the majority of individuals. As a visual impairment enters into the quotient, life goals are not necessarily altered; in most cases, there is no need to deviate from occupational goals or from a career that is already in place. For some individuals with expertise and advanced skills, careers are well established when they become visually impaired. Therefore, the goal of identifying those things which would perpetuate the employment of an individual after becoming visually impaired is of paramount importance.

Previous research in the area of competitive employment routinely took certain avenues. Some research sought to identify those characteristics of an individual that would make them most likely to be closed successfully. This is in the form of a predictive model that would give vocational rehabilitation (VR) counselors some insight into the potential of clients prior to implementing services. Other forms of research attempted to identify the most important services for achieving successful case closure. With both of these models, personal characteristics tended to be fairly consistent across time with deviation seen primarily in the services which are identified as being the most effective for a positive outcome of successful closure. Most of this research has dealt with successful closures that did not necessarily place the individual into a competitive work setting. It can be argued that a work setting is not truly competitive until it includes job locations that hire visually impaired individuals as well as sighted individuals. The final avenue of research identified in reviewing literature was that of employer attitudes and placement of clients into the work setting.

Client Characteristics

In identifying characteristics of individuals experiencing successful VR closure following the onset of visual impairment, the sample used is normally one which is based on initial placement of clients rather than the retention of clients in a currently competitive career or occupation. This is then considered job placement research. An example of this type of research is the work of Knowles (1969). In this study, data from 245 successful closures and 216 unsuccessful closures were analyzed; significant variables for prediction of outcomes were orientation and mobility training and the employment status of the client prior to referral into the program. The only other significant variables were age at onset of vision loss, age of the client while participating in rehabilitation, and total years of blindness.

Conversely, Scholl, Bauman, and Crissey (1969) found that an individual's IQ was the most significant variable for predicting success. A higher level of education was also important.

In 1963, DeMann conducted research on whether or not client outcomes could be predicted at the onset of rehabilitation. The research included a sample of 378 client cases which had previously been closed out of the rehabilitation system. Some of the clients were closed as non-rehabilitated while a portion were considered successfully rehabilitated. DeMann identified

20 predictive variables for those individuals who were most likely to be successfully rehabilitated. Specifically, he found that they tended to be individuals who were expected to be easier to rehabilitate as they were "younger, better educated, and less likely to be welfare recipients" at the time they entered the rehabilitation system (p. 341). Following identification of these variables, DeMann applied his method of prediction to new samples of clients prior to rehabilitation intervention and found that his prediction of outcome was accurate in 65% of the cases.

Giesen et al. (1985) also pursued this avenue of research when predicting work status outcomes of rehabilitation clients who were blind or severely visually impaired. This was achieved by analyzing data collected from four states of 619 cases of persons who were blind and visually impaired and who were closed in either status 26 or 28 during 1978, 1979, and 1980. Findings regarding competitively employed outcome groups from this study suggested that certain characteristics existed prior to rehabilitation services which would be strong indicators for competitive employment closure.

Pfouts and Nixon (1982) looked at closed case files of clients who were totally blind to identify the relationship of personal characteristics to family income, skills associated with independence, and employment status. Not unlike research in previous years, they too found that key factors in employment were education, gender, skills of independence, and a generally younger age. As an interesting point of this study, they found that clients who were blind with a blind or visually impaired spouse were significantly more likely to be employed than any other group. Pfouts and Nixon also found that individuals who were blind before the age of 18 were most likely to be employed as compared with those who became visually impaired later in life. This was thought to be due to the ability of those who were younger to adapt their skills of independence more readily than older individuals. Attendance at a school for the blind was also linked directly with higher employment and greater job satisfaction. However, those who attended schools for the blind were more likely to experience job segregation and work in sheltered workshops, stand operations, traditional private sector businesses (e.g., piano tuning), and for agencies for the blind. The final analysis of the study showed that, "Subjects who have more education, who are male, who are white, who attended the school for the blind, who are married, and who are younger, do better in obtaining employment" (p. 47).

Hester and Decelles (1985) attempted to go beyond identifying personal characteristics by reviewing insurance case files. Their results showed that workers with ophthalmologic disorders who initially stayed off work for 5 months or more, eventually retired 50% of the time, died (15%), or returned to work (35%). The average age of those who returned to work was 46 years.

In a similar study, factors which affected the use of Social Security Disability Insurance (SSDI) in relation to eventual return to work were analyzed (Kamkar & Tenney, 1991). It was found that the longer beneficiaries had been unemployed at the time of enrollment for SSDI, the less successful they were in eventually returning to work.

Employer Attitudes

Although there is little question that individual characteristics and service profiles have a great influence on employment, an employer has significant control over the outcome of employment of individuals with disabilities. Greenwood and Johnson (1985) offered some insight into this particular area when addressing concerns of employers in relation to workers with disabilities. They reviewed and analyzed 90 surveys of employers which had been collected over a period of 40 years. Their end product was suggestions for rehabilitation counselors about the most effective methods for dealing with employers for a positive outcome of employment for clients.

During the course of the study, they captured a great deal of data regarding the attitudes of employers toward the employment and perceived work skills of individuals with disabilities. In one particular study conducted by Bressler and Lacy (1980), (cited in Greenwood and Johnson, 1985), 808 Air Force civil service employees' performance evaluations were reviewed and matched against a randomly selected sample of a similar population. It was found that workers who were visually impaired received the highest average performance ratings of all groups within the study. Conversely, Eggers (1960) found that 9 of 15 firms believed that their productivity would be hurt if they employed individuals with disabilities. As another example, one study concluded that teachers who were blind or deaf would have problems maintaining discipline in a classroom (Greenwood & Johnson, 1985).

The lack of adaptability to new jobs within a work setting was viewed as a possible hindrance when making the decision to employ an individual with a disability (Greenwood & Johnson, 1985; Mithaug, 1980). However, it was also found that most firms would accommodate individuals who became disabled while in their employ and would make appropriate accommodations for that individual. However, these same firms made overt attempts to employ individuals who would not place them in a position of having to make accommodations. It should be noted that most of these accommodations were pertinent to medical problems, such as cardiac disease rather than sensory deficits, such as visual impairment.

The general outcome of their analysis was that employers persist in stereotyping individuals with disabilities. Although employers varied in their attitude, they continued to question the ability of individuals with disabilities to work effectively in a competitive market (Greenwood & Johnson, 1985; Johnson, Greenwood, & Schriner, 1988). In conclusion to their research, 23 suggestions were developed for counselors dealing with employment of clients; some were directly linked with efforts to retain current employment for clients in competitive occupations.

Attitudes regarding the employment of visually impaired individuals were also studied by Wacker (1976) who contacted seven firms for the purpose of developing employment opportunities for visually impaired workers within those firms. After devoting a cumulative total of approximately 100 manhours, only one firm eventually hired a clerk-typist who was visually impaired.

Upon examining the reasons for the nonparticipating companies, there was a predominant

attitude that individuals who were blind were not able to fit into the work environment. Specifically, sighted individuals were not able to identify with visually impaired peers and tended to feel ill at ease. Further, some firms appeared to view the employment of individuals with visual impairments as a form of charity.

Only 4 years later, however, Ellner and Bender (1980) found that employees with visual impairments could be effectively moved into the work setting with some sensitivity training of coworkers and supervisors. Initial communication barriers were easily remedied by appropriate adaptive equipment. It was also concluded by the majority of employers that the cost of barrier-free work environments was not normally prohibitive. Despite these accolades for change, they found that individuals with severe handicaps comprised only about 1% of the workforce of any organization. The stated reaction of employers rarely matched their actual efforts to hire visually impaired employees. In fact, 60% of the employers said they would hire workers with impairments whereas only one third of them did so (Research and Program Development Institute, no date). Overall, employers appeared to lack knowledge of workers with disabilities and were prone to stereotype their behavior.

Additional research into attitudes towards current workers completed by Greenwood, Schriner, and Johnson (1991) found that 87% of 102 Partnership with Industry firms rated employees who were blind as either inferior to or somewhat below average in comparison to nondisabled workers.

Some studies identified additional concerns of potential employers of individuals with disabilities to include workman's compensation costs, productivity, and fear of accidents (Fuqua, Rathbun, & Gade, 1984). Although these concerns were basically consistent with the study by Johnson et al., (1988), there were also concerns about flexibility and the ability of an individual to advance in the organization, and only moderate concerns about safety. This particular study also suggested that employer judgements are often based on their perception of how an individual would respond to supervisory input, accept the work role, and perform the job.

Training and Placement

The ability to perform a job can be addressed best by looking at training practices for desired occupations. Heiden (1989) studied 169 students of a residential school for a period of 10 years to ascertain their employment status and to identify those elements of training that were considered most valuable. Adaptive daily living, O & M, and word processing classes were found to be the most useful for the students. Training in the use of adaptive devices for students who were visually impaired was also considered quite helpful. Of the 169 students, 44% were employed, 31% were enrolled in postsecondary educational programs, 19% were unemployed, 2% were participating in college preparatory programs, and 2% did not respond.

The only other pertinent issue which should be addressed is that of placement of clients. Kirchner (1985) identified that 6 of every 1,000 individuals in the United States were visually impaired. Of that number, 35% of males and 17% of females were employed. When records of occupation at the time of closure were reviewed, 57% were competitive closures, 3% were in sheltered workshops, and 40% were homemakers. As a reflection of retention of competitive

employment following visual impairment, 34% of the 57% closed into competitive employment were competitively employed at the time of referral into a VR program.

Jeppsson-Grassman (1989) studied 261 persons in Sweden who were employed at the time of visual impairment to identify their work status following onset of visual impairment. Seventy-five percent returned to work either with their current employer or with another employer. Of this group, "44 percent had changed employers in spite of the law. 80 percent had partially or entirely changed job tasks, 68 percent had changed their formal professional status, and 39 percent had changed in all three respects" (p. 243). Although their results support the concept that the majority of adults who become visually impaired while in a competitive occupation return to work, there are often dramatic changes in their responsibilities, as well as the perceived value placed on their new job. There was also a significant problem with underemployment.

Purpose of Study

The decision to research the area of retention of competitive employment was in response to priorities set forth by the National Institute on Disability and Rehabilitation Research (NIDRR). The concern set forth by NIDRR was quite valid given today's competitive market and the need to incorporate as many individuals with visual impairments as possible into the work environment. Specifically, the implied goal expressed by NIDRR was to understand the methods by which an individual could retain competitive employment following a diagnosis of visual impairment. This included active intervention in the areas of (a) job restructuring, (b) job site modifications, (c) cooperative efforts with organized labor, and (d) retraining of clients.

These topics were designed as a 5-year program of research. Specifically, it includes a three phase program of which this is the first and the least time consuming on the 5-year clock. The method of research is step-wise in fashion beginning with an understanding of the client characteristics as well as service profiles for those individuals able to retain competitive employment following onset of a visual impairment.

Research Questions

The questions addressed during this phase of research included:

1. What is the profile of personal characteristics, rehabilitation service interventions, job site modifications, job restructuring, cooperative efforts with organized labor, and retraining for clients achieving successful retention of competitive occupations upon case closure?
2. What is the profile of personal characteristics, rehabilitation service interventions, job site modifications, job restructuring, cooperative efforts with organized labor, and retraining for clients failing to achieve successful retention of competitive occupations upon case closure?
3. What are the discriminating case characteristics when comparing individuals achieving

successful retention in competitive occupations to those with unsuccessful retention closures?

For the purpose of the project, *competitive employment* was defined as occupations which were available to all individuals regardless of their level of vision. Therefore, sheltered workshops, Business Enterprise Programs (BEPs), and homemakers were specifically excluded from the group considered as competitive closures. This narrowed the field of possible participants to those individuals who were self-employed and wage competitive in the workforce.

METHOD

Sample and Subjects

The sample was selected to obtain a sufficient sample of clients to validate any conclusions drawn and to contain costs. In order to achieve both goals, the decision was made to access an existing database. The database selected is one housed at the Rehabilitation Research and Training Center on Blindness and Low Vision (RRTC) at Mississippi State University, known as the National Blindness and Low Vision Employment Outcomes Database (NBLVEO). The database consists of 971 client cases collected in two sets starting in 1978 and ending in 1986. The first set of client data was collected during federal fiscal years 1978 to 1980 from Florida, Kansas, Mississippi, and Ohio. The second set of data was collected in fiscal years 1985 and 1986 from Arizona, Mississippi, New Jersey, and Washington. These states were considered to be nationally representative because they showed diversity in geographic distribution, rural vs. urban populations, and state program models (Giesen, 1992).

A systematic quota sampling technique was utilized in each state after obtaining a master list of all possible clients closed during that particular fiscal year. With this method, every 17th case was selected in the first dataset and every 14th case in the second set. Upon selection of the sample, a group of data collection specialists utilized case files to gather essential information. This particular sampling technique allowed each state to be included in the database in proportion to the number of clients for whom they had provided services.

Variables Within the Database

Variables were obtained from case file reviews and consisted of 136 core variables. These core variables consisted of 71 "R" variables which were obtained from the R-300 form or a similar form from each state, 32 "C" or case file variables, and 28 "E" or case expenditure variables.

The "R" variables consisted of such data as client demographics, educational background, rehabilitation intervention history, income, and occupation history.

Case file or "C" variables included information on visual as well as nonvisual disabilities; training in the areas of mobility and the use of adaptive aids; test scores on achievement and ability; occupational history; job titles from the Dictionary of Occupational Titles (DOT) codes (U.S. Department of Labor, 1977); addresses and general information on facilities and counselors; and demographic information on counselors (e.g., training and experience).

Initial core variables were recoded or regrouped in order to explore new ideas, provide increased internal validity, and enhance data analysis possibilities.

For example, the initial core variable identified the Referral Source (R6) of a client. When recoded, R6 became an indicator variable and R6A, R6B, R6C, R6D, and R6E were created to identify each possible response category (i.e., R6A indicated whether or not the client was referred by an individual). Upon completion of the recoding and regrouping of core variables,

the database consisted of 265 variables for each client (Giesen, 1992). A list of the variables utilized for this study is included in the Appendix.

Definitions

Competitive. The criteria for considering a client to be competitively employed was weighed carefully for this study. Following a review of literature and input from the field, competitive employment was defined as employment in a field which was available to individuals who were visually impaired or sighted. Sheltered workshops and BEP vendors were excluded because these occupations, although wage based, are closed to sighted individuals. Therefore, those individuals considered as competitively employed for the purpose of this study were those who were self-employed and wage competitive. Homemakers, although considered successful closures by counselors, were also omitted for the same reasons.

Retention. Retention of a competitive occupation is the focus of this research and is defined as an individual who is wage competitive prior to initiation of VR and remains competitively employed upon closure.

Sample Selection

For the purpose of selecting the appropriate sample of clients from the NBLVEO Database, the following procedure was applied.

Selection of Broad Sample

The DOT (U. S. Department of Labor, 1977) was utilized to identify those occupations considered competitive in nature. The classification of an occupation as competitive was based solely on the occupational code number assigned to the job. The coding method utilized clusters of occupations by broad category, divisions within the category, occupational groups, worker function ratings of tasks to be performed, and an alphabetical designation to complete the code (U. S. Department of Labor, 1977).

The variable which most clearly identified a client as competitively employed was C13 which addressed the client's previous and most recent occupation. This particular variable was not initially obvious; the original proposal projected that the client's work status at referral into VR would indicate competitiveness. This variable did, however, prove less than acceptable because work status at referral included only those occupations in which the individual was working 7 days prior to program admission. Consequently, there was a high number of clients who were temporarily not in the competitive arena at the time of rehabilitation admission due to sudden changes in vision or other considerations which did not allow continued employment. These individuals were, nonetheless, competitively employed at the time of visual impairment and admission into VR.

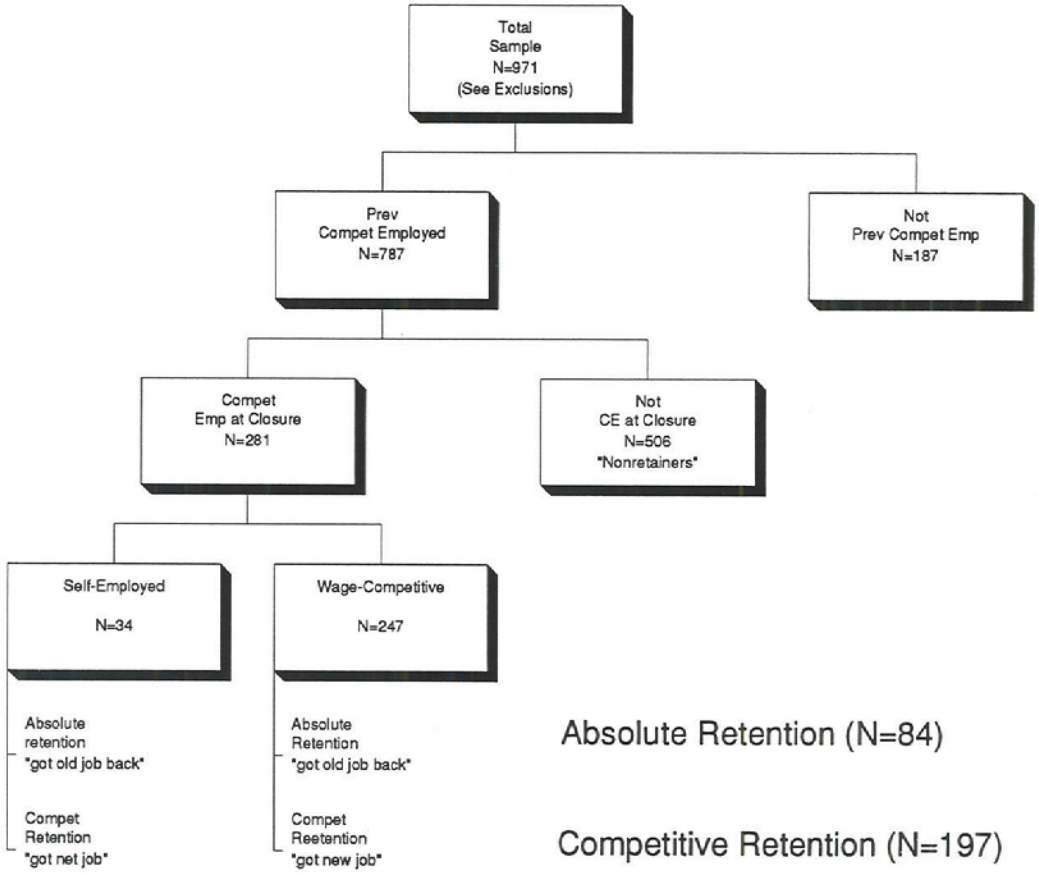
The sample was split into those who were previously competitively employed (*n*=787) and those who were not previously employed in a competitive occupation (*n*=184). The group of 184 were eliminated from the study.

The previously competitive group was split again into those who were competitively employed at the time of closure and those who were not. This yielded a sample of 506 clients who were competitively employed prior to rehabilitation, but were not closed competitively according to the definition for this study. Some examples of those occupations which allowed for successful closure, but were not considered competitive included wage-sheltered, BEP participants, homemakers, unpaid family workers, unemployed students, trainees, homebound individuals, and others not working.

The remaining sample totalled 281 individuals. This included 247 persons classified in wage-competitive occupations and 34 who were self-employed. When broken down further, 84 of these clients achieved absolute job retention (based on the DOT classification) and the remaining group of 197 retained a competitive occupation, but the occupational title did not perfectly match at closure when compared to the previous occupation (Figure 1).

Upon completing the sample selection, crosstabs were run for each sample group. The three sample groups were: those who were competitive at admission, but closed noncompetitively; those who were competitive at the time of admission and closed with the same competitive DOT at closure; and those who entered the system competitively employed and who were closed into a different competitive occupation.

Figure 1. Sample Selection



RESULTS

Data analysis identified three distinct groups within the sample who had been competitively employed prior to rehabilitation intervention. Specifically, these were: (a) A noncompetitive group which represented those who were unable to retain competitive occupations upon closure; (b) a competitive group which included those who were able to close competitively, but retained a different job title from the time they entered rehabilitation; and (c) the perfect retention group which included those who were able to retain the same occupation (based upon their job title) upon closure. Specific characteristics of each group were then analyzed and placed into clustered categories.

Demographic Characteristics

Gender. There was no gender relationship for noncompetitive closures, but there was a minor increase in males who achieved competitive closure. In the case of perfect retention, males were 21% more likely to retain the same job title (Table 1).

Race. White individuals were more likely to be referred into VR and were consequently, represented in large numbers at all three levels of closure.

Age at referral. The age of clients at the time they were referred for rehabilitation did not impact noncompetitive closures or perfect retention cases. In each of these, the ages were distributed evenly across the life span. However, in cases where competitive retention of a different job title were achieved, individuals who were 35 years of age or younger were more likely to achieve successful closure. This implied that: (a) Younger clients were more flexible in changing occupations; (b) younger individuals were not yet established in their careers, and changing to a new occupation was more appealing; and (c) more established careers were found among the older groups, making it more important to find occupational alternatives rather than changing to new careers (Figure 2).

Marital status. Marital status revealed no significant patterns. However, those individuals who were competitively closed had the highest incidence of being single (never married).

Total number in family. The majority of families had one to four family members regardless of their status at the time of case closure.

Number of dependents. The majority of clients had either one or no dependents. However, the perfect retention group was the least likely to have zero dependents.

Educational level. Individuals closing in the noncompetitive group were less educated overall; 85% had no more than a 12th-grade education. Comparatively, 70% of those closing competitively and 56% of those achieving perfect retention had no more than a 12th-grade education. This discrimination

Table 1. Demographic Characteristics Reported by Percentage within Each Group

	Noncompetitive	Competitive	Perfect retention
Gender			
Male	51.6	59.1	60.7
Female	48.4	40.9	39.3
Race			
White	73.3	80.2	64.3
Black	25.7	16.2	32.1
Indian	.6	.5	--
Other	.4	3.0	3.6
Age at referral			
35 or younger	37.4	66.5	34.5
36-55 years	31.8	24.9	33.3
Over 55 years	30.8	8.6	32.1
Marital status			
Married	38.9	29.4	44.0
Widowed	13.2	4.6	11.9
Divorced	9.9	7.6	11.9
Separated	6.3	8.1	9.5
Never married	31.2	49.7	21.4
Total number in family			
1	31.2	27.4	36.9
2	28.1	21.3	21.4
3	15.0	16.8	14.3
4	12.3	15.2	11.9
5	7.1	8.6	8.3
6 or more	4.2	6.6	4.8

(continued)

Table 1. (continued)

	Noncompetitive	Competitive	Perfect retention
Number of dependents			
0	61.3	68.0	47.6
1	19.6	14.2	22.6
2	8.5	8.6	10.7
3	5.1	4.6	9.5
4 or more	5.6	4.0	9.6
Educational level			
Less than 12th grade	52.6	33.0	33.3
12th grade	33.0	37.1	23.8
Some college (13-15)	8.9	15.2	14.3
College graduate or more	5.5	13.7	28.6
Previous closure within 36 months			
No	89.5	88.3	85.7
Yes-outcome rehabilitated	8.1	9.6	14.3
Yes-not rehabilitated	2.4	2.0	--
Years disabled prior to referral			
Less than 1 year	13.6	8.6	16.7
1 year	8.1	5.6	6.0
2 years	5.9	6.6	10.7
3-5 years	14.6	5.0	17.9
6-10 years	12.2	11.0	8.4
11-20 years	21.0	25.9	7.2
21-30 years	12.4	20.7	14.4
More than 31 years	12.2	16.6	18.7

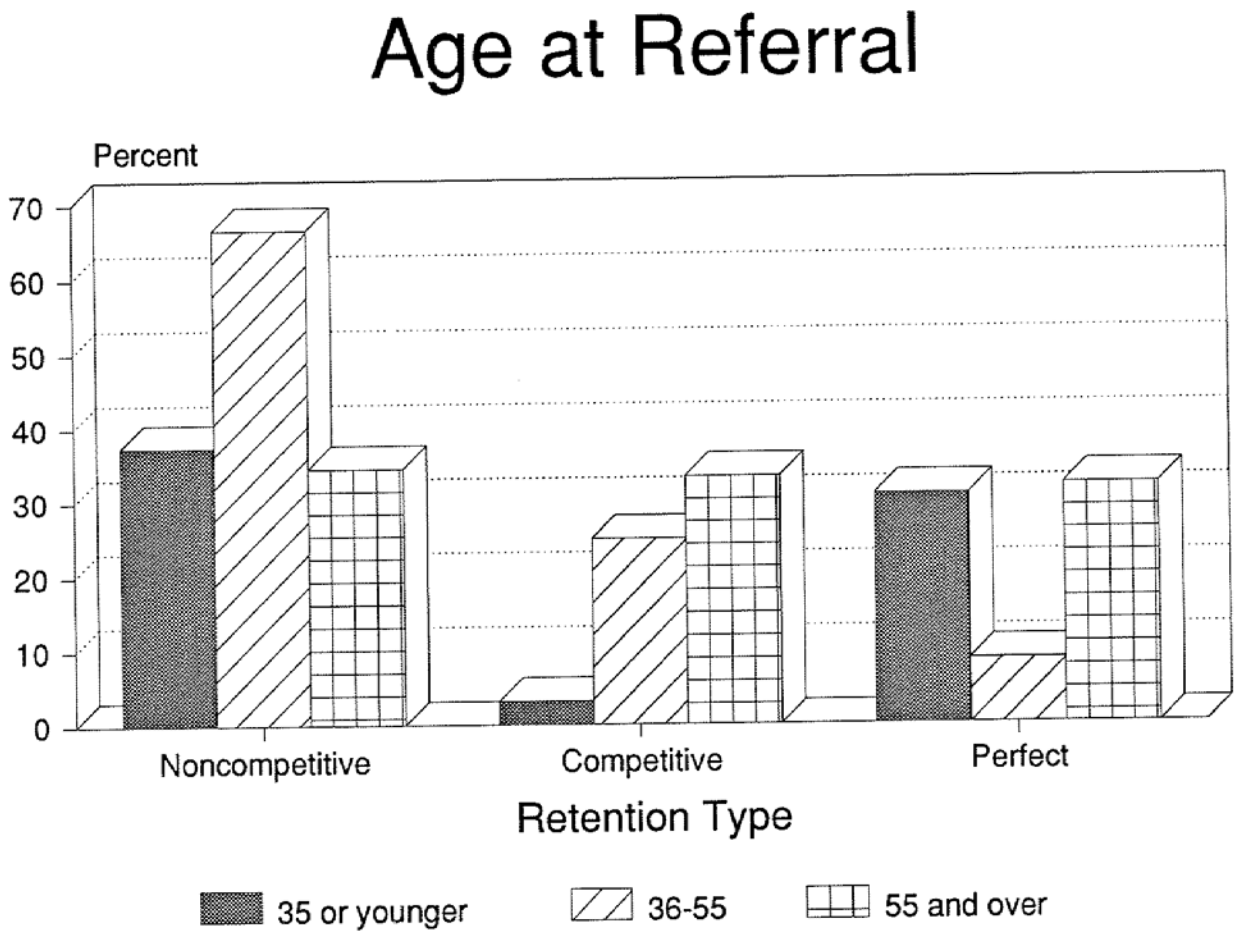

Age at Referral
Percent
70
60
50
40
30
20
10
0
Noncompetitive
Competitive
Perfect
Retention Type
35 or younger
36-55
55 and over

Figure 2

between groups implies a great deal in relation to long-term outcome. Specifically, the greater an individual's education base, the greater their probability of retaining the same occupation despite a visual impairment. It is also reasonable to assume that those individuals who were more highly educated were also more likely to be in office positions which would allow them to use technology to adapt the environment for low vision or blindness (Figure 3).

Previous closure within 36 months. Greater than 86% of the clients in each closure status were closed without achieving a positive rehabilitation outcome within the 36 months prior to this referral.

Years disabled prior to referral. Referrals were found to be more common during the first year of a disability in all categories of closures.

Eye disorders. The most prevalent diagnoses found within each group were:

Noncompetitive:	Diabetic retinopathy (16%)
	Cataract - Nonsenile or prenatal (10%)
	Retinitis pigmentosa (8%)
	Macular degeneration (7%)
	Glaucoma (6%)
Competitive:	Optic nerve atrophy (11%)
	Retinitis pigmentosa (8%)
	Cataract (8%)
	Other retinopathy (8%)
	Glaucoma (7%)
Perfect Retention:	Cataract (22%)
	Other retinopathies (15%)
	Retinitis pigmentosa (9%)
	Diabetic retinopathy (7%)
	Glaucoma (6%)

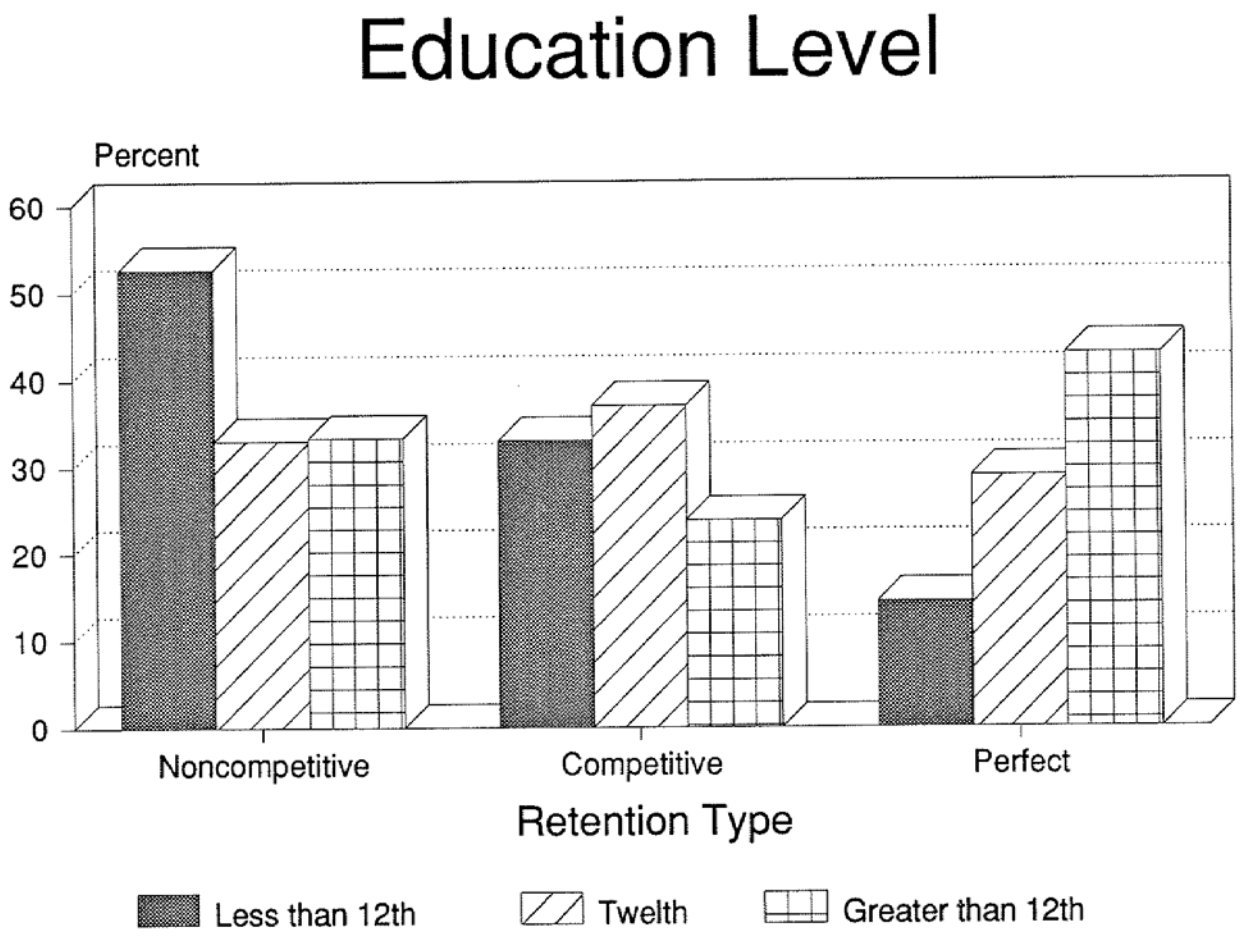

Education Level
Percent
60
50
40
30
20
10
0
Noncompetitive
Competitive
Perfect
Retention Type
Less than 12th
Twelth
Greater than 12th

Figure 3

Disability Characteristics

Age at onset of blindness. Forty-one percent of the individuals who achieved competitive closure and 24% of those who achieved perfect retention were visually impaired within the first year of life. Of those individuals who closed noncompetitively, 21% were within this age group (Table 2).

Primary eye disability groups. Both the noncompetitive and competitive closure clients had a 10% incidence of blindness in both eyes whereas the perfect retention clients experienced only 5%. This variable is of great importance because perfect retention clients appear to be less visually impaired than other clients profiled during this study.

Secondary disability groups. Diabetes mellitus and cardiovascular disease were the most prevalent secondary disabilities identified in all clients in the sample.

Table 2. Disability Characteristics Reported by Percentage

	Noncompetitive	Competitive	Perfect retention
Age at onset of blindness			
Birth to less than 1 year	21.3	41.1	23.8
1-4 years of age	3.4	7.1	6.0
5-10 years of age	5.3	6.1	3.6
11-18 years of age	5.9	10.2	7.1
19-24 years of age	7.1	7.6	4.8
25-34 years of age	11.1	9.1	11.9
35-44 years of age	9.1	6.6	6.0
45-54 years of age	13.8	7.1	14.3
Primary eye disability groups			
Blind in both eyes	10.1	10.7	4.8
Blind both < 20	88.5	88.8	94.0
Blind one 20 over	--	.5	.4
Blind one eye only	.2	--	--
Other			
Secondary disability groups			
Diabetes melitus	30.3	15.6	22.0
Cardiovascular	15.4	16.7	40.0
Orthopedic	11.6	14.4	8.0
Hearing impairment	9.8	17.8	4.0
Mental retardation	6.4	2.2	--
Alcoholism	6.2	10.0	2.0
Neurological	4.1	2.2	2.0
Respiratory	3.9	1.1	6.0

Public Assistance Dependency

Time on public assistance at referral. Greater than 77% of all clients in the sample received no public assistance at the time of their referral for rehabilitation services (Table 3).

Receipt of social security benefits. The highest percentage of individuals who received social security benefits at the time of referral was in the perfect retention group (21%); competitive and noncompetitive were 13% and 8%, respectively.

Primary support from transfer payments. The noncompetitive group had a significantly higher use of transfer funds from federal and state programs (17%) than the competitive group (4%) and the perfect retention group (6%).

Public assistance type at referral. All three groups tended not to receive public assistance at referral. When they did receive public assistance, it was not likely to be SSI-Blind.

Table 3. Public Assistance Dependency Reported by Percentage

	Noncompetitive	Competitive	Perfect retention
Time on public assistance at referral			
Not receiving public assistance	79.6	77.2	86.7
Less than 6 months	--	8.5	3.5
6 months but less than 1 year	2.7	2.6	--
1 year but less than 2 years	3.1	4.2	2.4
2-3 years	2.5	1.6	1.2
3-4 years	2.1	2.6	--
4-5 years	1.9	1.1	4.8
More than 5 years	4.6	2.1	4.8
Receipt of Social Security	8.3	12.7	20.9
Primary support from transfer payments	17.2	3.6	6.0
Public assistance type at referral			
None	75.0	72.6	85.7
SSI-Blind	15.6	16.2	9.5
SSI-Disabled	3.0	2.5	3.6

Case Intervention Characteristics

Received restoration. The highest number of individuals who received restorative services was in the perfect retention group (61%). Those who did not retain competitive employment received restorative services only 40% of the time. This variable could well indicate that individuals in the perfect retention group are more likely to require less long-term alterations in their job environments, but need restorative services to continue employment (Table 4).

Received college training. The greatest percentage of rehabilitation clients who received college training was in the competitive group (30%). Only 7% of the perfect retention group and 8% of the noncompetitive group received college training (Figure 4).

Number of months in training. The perfect retention group had a significant number of clients who received training for no more than 3 months (70%). Forty-seven percent of noncompetitive closure clients received training for no more than 3 months, whereas competitive clients had 36% for this same period. During a 12 month time frame, noncompetitive clients received their training in 78% of the cases; in the competitive group, 57% fell within this time period compared to 87% of those having perfect retention. This data reflects that those in the perfect retention group were less visually impaired at the time of referral and benefited from short-term training, or that they were more likely to have an established career that allowed training to be limited to only adaptation skills.

Personal and vocational adjustment training. The lowest number of individuals receiving this service was in the perfect retention group whereas the highest was in the noncompetitive group.

Institutional training. The highest probability of receiving institutional training was found in the competitive group, with 44% receiving training in this manner.

Other academic training. All three groups had a low percentage of individuals who received other academic training. The percentages for each group were: 5% for competitive, 3% for noncompetitive, and 2% for the perfect retention group.

Business school training. The competitive group had the greatest number of individuals who received this training (5%).

Vocational school training. Eleven percent of those clients with competitive closures were given some form of vocational training. In converse, 4% of those who were noncompetitive and 4% of those who were perfect retainers received this training.

On-the-job training. Noncompetitive and competitive groups were nearly matched in their reporting of on-the-job training, with 14% and 15%, respectively. Conversely, 5% of those with perfect retention reported this form of training.

Mobility training. The highest percentage of clients who received mobility training did not close competitively (46%). This indicates that these clients were either more visually impaired than other clients or they had previously received

Table 4. Case Intervention Characteristics Reported by Percentages

	Noncompetitive	Competitive	Perfect retention
Received restoration	39.9	43.1	60.7
Received college training	8.3	29.9	7.1
Months in training			
0-3 months	46.8	36.1	70.3
4-6 months	15.3	10.6	8.4
7-11 months	15.6	10.5	8.4
1-2 years	10.6	12.0	6.0
2-3 years	4.8	10.0	2.4
3-4 years	2.4	4.5	1.2
More than 4 years	4.8	15.5	3.6
Personal and vocational	54.5	47.2	34.5
Institutional training	11.9	43.7	14.8
Other academic training	3.0	4.6	2.4
Business school training	1.6	5.1	--
Vocational school training	4.0	10.7	3.6
On-the-job training	14.2	14.7	4.8
Mobility training	45.8	36.0	24.1

(continued)

Table 1. (continued)

Table 4. (continued)

Used optical aid only	26.5	35.5	48.8
Used nonoptical aid only	20.8	15.7	11.9
Used optical and nonoptical aid	14.0	25.4	8.3
Low vision aid training	19.0	37.1	20.2
Reasons not rehabilitated			
Rehabilitated (26)	59.7	99.5	100.0
Unable to locate	10.7		
Disability too severe	5.5	.5	
Death	3.6		
Institutionalized	1.0		
Transferred	2.2		
Failure to cooperate	7.5		

Restoration and Training

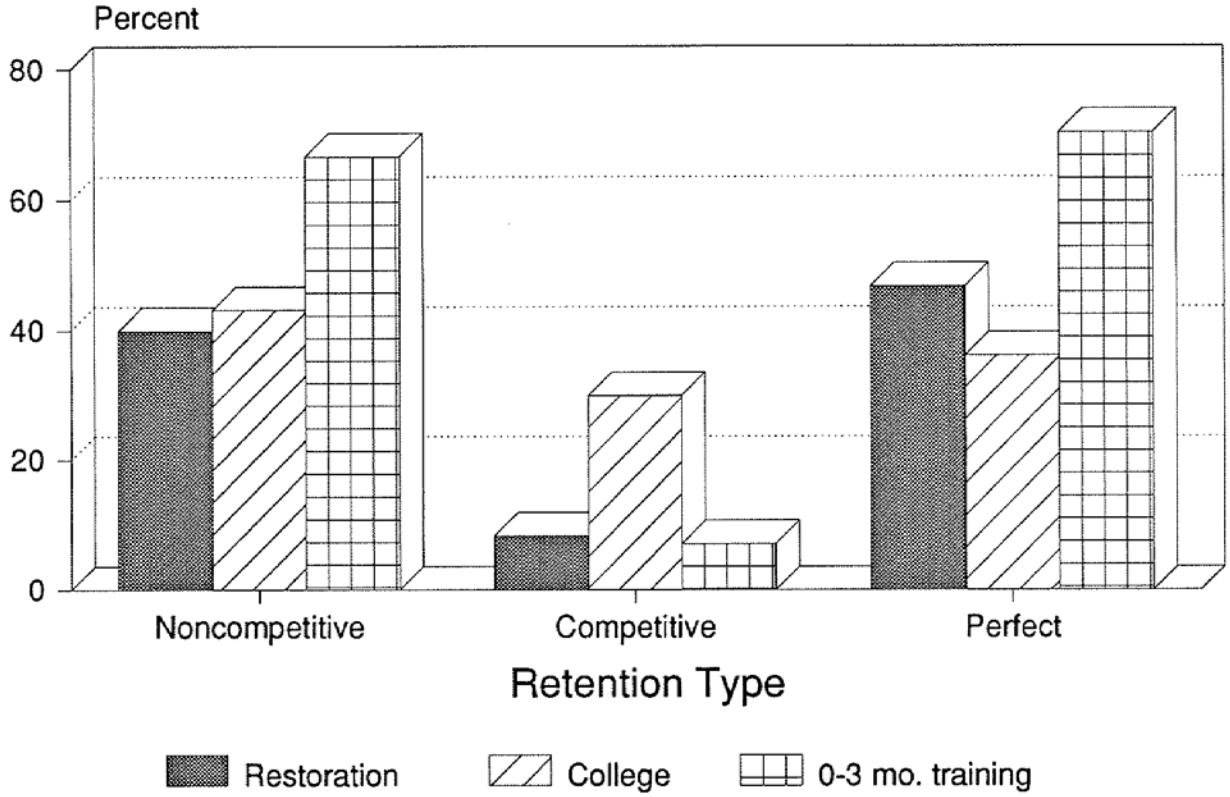


Figure 4

the least training in mobility.

Used optical aid only. Forty-nine percent of the clients in the perfect retention group used only an optical aid, whereas 36% of the competitive clients and 27% of the noncompetitive clients did so (Figure 5).

Used nonoptical aid only. The highest percentage of users of nonoptical aids only were those who closed noncompetitively (21%).

Used optical and nonoptical aids. The greatest number of users of both types of aids were those clients in the competitive group (25%).

Low vision aid training. Clients who closed competitively utilized low vision training more often than the remaining groups (37%).

Reasons not rehabilitated. Clients with noncompetitive closures could not be located (11%), failed to cooperate (8%), or had a disability too severe to rehabilitate (6%). Other reasons were death, institutionalization, or transfer out of the program.

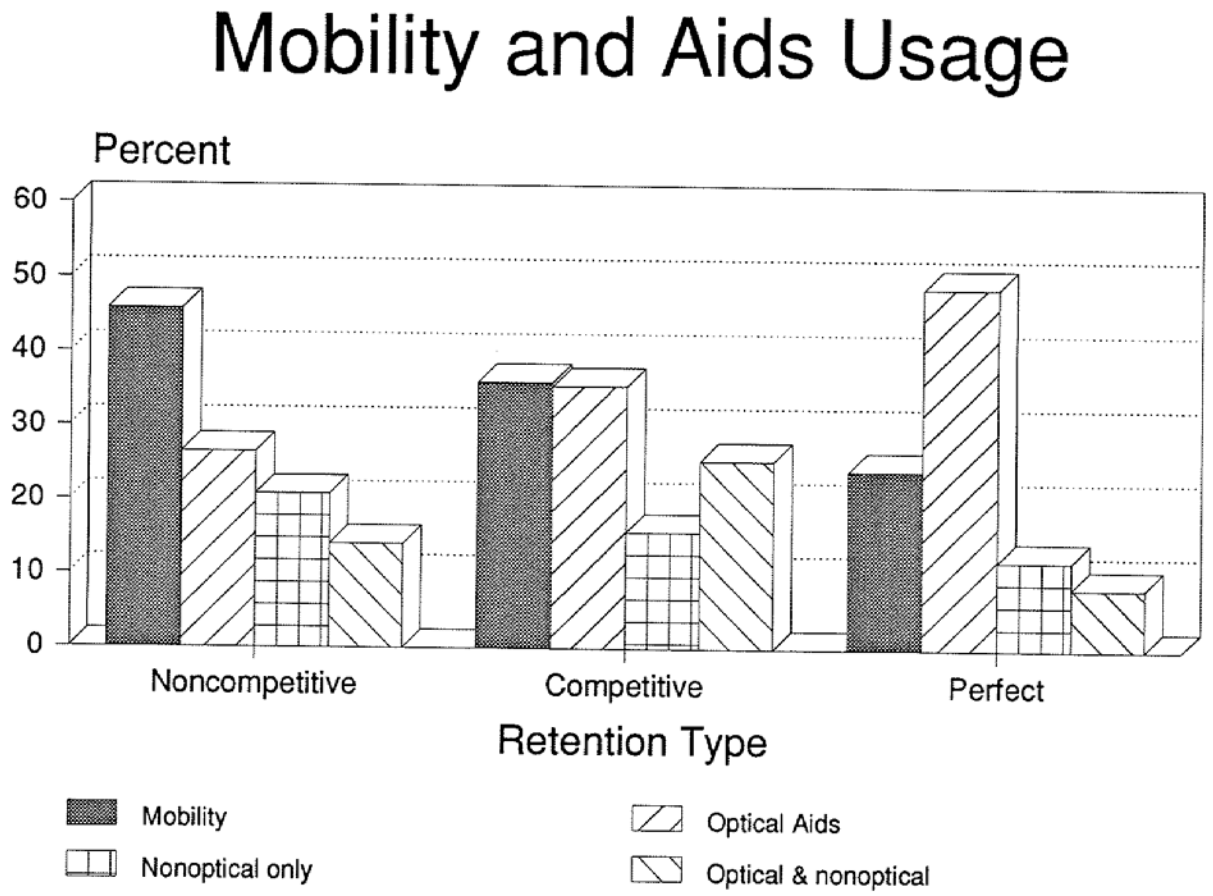

Mobility and Aids Usage
Percent
60
50
40
30
20
10
0
Noncompetitive
Competitive
Perfect
Retention Type
Mobility
Nonoptical only
Optical Aids
Optical & nonoptical

Figure 5

CONCLUSION

The profile of each of the groups (noncompetitive, competitive, and perfect retention) were similar in certain areas with distinct difference in others. The following profiles were established based upon data analysis in this study.

Noncompetitive closure clients. These individuals entered VR with a competitive job history, but were closed without placement in a competitive occupation.

1. No gender relationship.
2. Most commonly White (e.g., Caucasian).
3. No specific age.
4. Either currently married or never married.
5. Four or less in their family.
6. Zero to two dependents.
7. Twelfth grade education or less.
8. Early onset of blindness (i.e., birth to less than 1 year).
9. Secondary disability of cardiovascular disease or diabetes.
10. Not currently receiving public assistance.
11. Most likely of all clients to be receiving transfer payments from the federal or state government.
12. Received more personal and vocational adjustment training than the other two groups.
13. Received the most mobility training.
14. Used a nonoptical aid more often than any other group.

Competitive closure. These individuals entered VR under one job title and closed under another competitive title following rehabilitation.

1. Male.
2. Majority were White (e.g., Caucasian).
3. Thirty-five years of age or younger.
4. Either currently married or never married.
5. Four or less in their family.
6. Zero to two dependents.
7. An education level greater than 12th grade in 10% of the cases.
8. Highest incidence of onset of blindness at birth to less than 1 year of age.
9. Most common noneye diagnoses are cardiovascular disease and diabetes.
10. Not commonly found to be receiving public assistance.
11. Greatest incidence of college training or VR.
12. Most likely to stay in training for more than 4 years.
13. Highest incidence of institutional training.
14. Most likely to receive business school and vocational school training.

Perfect retention closures. These individuals entered VR with the same job title that they closed with.

1. Male.
2. Most commonly White (e.g., Caucasian).
3. No age relationship.
4. Either currently married or never married.
5. Four or less in their family.
6. More likely to have one or more dependents than clients in other groups.
7. Seventeen percent had more than a 12th-grade education.
8. Onset of blindness was most commonly at birth to less than 1 year.
9. Most common noneye diagnoses are cardiovascular disease and diabetes.
10. The majority did not receive public assistance.
11. Most likely to receive restoration services.
12. Received the least amount of training.
13. Least likely to be blind in both eyes.
14. Most likely to use only an optical aid.

The conclusions drawn from these data imply that the greatest distinctions between groups exist in the areas of: (a) age at the time of referral, (b) level of education prior to entry into VR, (c) education and training during VR, and (d) the level of visual impairment at the time of referral.

Age at referral. Two thirds of the competitive retention group were age 35 or younger, while only about one third of the perfect retention group were in this age range. As previously suggested, younger individuals may be more flexible in adapting to new jobs.

Level of education. Higher education level, particularly high school and college graduates, were more prevalent among those able to retain competitive employment, and the perfect retention closures were the most likely to be college educated. The pattern suggests a clear relationship for education beyond high school and retention of employment.

Visual and other disabilities. Age at onset within the first year was most prevalent for the competitive retention group. Otherwise, the pattern of the types of eye disorders, the severity of the visual disability, the receipt of restoration services, and use of optical aids only suggests the perfect retention group is characterized by greater prevalence of less severe eye disorders, such as cataracts; the lowest percent of total blindness; the highest percent of restoration services; and the highest percent of use of optical aids only. This group appears to have the least severe visual disabilities and lower incidence of other nonvisual disabilities.

In contrast, the competitive retention group had the highest incidence of "first year" onset, somewhat more severe visual and nonvisual disabilities, and were most likely to use optical and nonoptical aids. The noncompetitive closure group had a pattern suggesting most severe visual and nonvisual disabilities, and highest use of nonoptical aids.

Other comparisons. Regarding college training, the perfect retention group received it the least and for the shortest duration--didn't need it as much--while the competitive retention group received the highest level, presumably in preparation for a new job. Also, the nonretention group was the most likely to receive mobility training, further emphasizing the severity of disability in that group.

Retention appears to be influenced by education level, lessened severity of visual and nonvisual disabilities, lack of disincentives from transfer payments, and appropriate training where a new work environment is encountered.

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Appendix: List of all Variables

Table Information

For each variable, the following information is given in the Table: VARIABLE NAME, VARIABLE LABEL, TYPE, CODING, and GROUP. VARIABLE NAME is the Statistical Package for the Social Sciences (SPSS, 1986) variable name for that variable. VARIABLE LABEL is the SPSS label or descriptive name for that variable. TYPE is the analytic or descriptive type of the variable. The designation "A" indicates the variable is analytic in level and can be used with most inferential statistical procedures. A type of "D" indicates that the variable is descriptive (usually nominal level of measurement) or multicategory and cannot be used coherently with parametric statistical procedures.

CODING explains how the variable may be coded, if it is coded. Codes for specific variables are explained as a footnote to the table. Units of measurement are indicated for uncoded variables. The absence of a coding designation indicates that the variable is not coded; that is, the variable is recorded in measurable units indicated such as dollars, years, etc.

GROUP indicates the database volume or category with which the variable is associated. The volumes are "C" for client-related variables; "S" for service-related variables, "E" for environment or geographic-related variables. Multiple letters indicates the variable is included in more than one database volume. "O" indicates the variable may be viewed as an outcome-related variable and is included in every database volume. "A" indicates the variable is in "all" database volumes.

Codings Key

The following list gives pertinent coding and explanatory information for the List of all Variables. Please refer to this section as an aid in understanding the coding approaches used for specific variables.

* Indicates extensive missing data.

1. See DISPLAY DICTIONARY output for specific VALUE LABELS and/or MISSING VALUES.

2. **Referral Time** (R5) is computed from referral month, day, and year to give a value on a numeric time line where "0" equals January 1, 1900. For example, 03/25/78 equals 78.32. Time variables computed in this manner permit addition and subtraction of dates. Also applies to R8, R14, R35, R43.

3. Indicator, Yes/No, or dichotomous variable coded 1/0 for presence/absence of variable attribute.

4. **Age at Referral** (R7) shows some ages outside VR-eligible age

range. These were verified cases and are accurately reported from the case files. (This is what we found in the case records).

5. **Disability as Reported** (R10) first 3 digits are the RSA disability coding system; 4th digit should be ignored. Also applies to R18, R19, R20.

6. **Wage Earner Group at Referral** (R27B) is coded into four groups: (1) competitive, (2) sheltered, (3) homemaker, and (4) unemployed. The lower the number, the greater the wage and employment level. Also applies to R46B.

7. **Total Monthly Family Income** (R29) is coded 0 to 9 in $50 increments beginning with 0 if $0.00 - $149.00 through 9 if $600 and over. The higher the code category, the higher the income. See DISPLAY DICTIONARY.

8. **Occupation at Closure** (DOT) Dictionary of Occupational Titles code (R50D) (First seven digits) has VALUE LABELS for most codes. Unsuccessful closures with previous work histories were coded as "98000xx" where "xx" is the number of months previously worked. Successful closures (status 26) who were reported as students were coded "99000xx" where "xx" indicated the grade level. These codes were added to provide additional information for optional use. Unlabeled DOT codes require reference to the DOT manuals for identification.

9. **Occupation at Closure TVQ** (R51) is the Total Vocational Quotient for the clients DOT occupation based on McCrosky, B.J. & Perkins, E. (1981). The manual for the McCrosky vocational quotient system. St. Cloud, MN: Vocationology. The higher the TVQ, the higher the "skill level" of the occupation. Also applies to C11, C14, C171, C191, C32.

10. Coded 10 if high school, 20 if B.S. or B.A., 25 if B.S./B.A. with CRC, 30 if B.S. in VR Services, 40 if masters, 45 if M.A. with CRC, 50 if M.A. in related area, 55 if M.A. in related area with CRC, 60 if M.A. in VR counseling, 65 if M.A. in VR counseling with CRC, 70 if doctorate.

11. **Disabling Condition ICD-9, One** (R72) is the Primary Disabling Condition (R18) coded according to the International

Classification of Diseases, 9th Revision (ICD-9), Clinical Modifications (Commission on Professional and Hospital Activities, 1980). This coding system (ICD-9) is also applied to two additional (a second and third) eye disorder, if present (R73, R74). The third digit after the decimal should be ignored.

12. **Disabling Condition ICD-9, Two** (2) (R75) is the Second Disabling Condition reported on the R-911 reporting form. It is not an eye-related condition and is coded using the ICD-9 system. The third Disabling condition reported (R76) is also not eye-related.

13. **Employment City, Proximity to Home** (C30) is the estimated milage between the client's place of employment and home.

14. **Years Disabled Prior to Referral** (YDPR) = Age at Referral (R7) minus Age at Onset of Blindness (C2).

15. **Hearing Impairment Severity Code** (HEAIMP) is coded 0 if no hearing impairment, 1 if mild, 2 if moderate, 3 if severe, and 4 if profound hearing loss.

16. **Severe Second Disability** (SEVDIS2) equals 1 if the person with the nonvisual disability is defined as "severely disabled" by the Statistical Reporting System of the Rehabilitation Services Administration Manual, MT #2, July 1974, 3005.03 (59-65). Also applies to **SEVDIS3.**

List of all Variables

VARIABLE NAME	VARIABLE LABEL	TYPE	CODING	GROUP
R2	State Agency Code	D		A
R5M	Referral Month	D	mo	A
R5D	Referral Day	D	day	A
R5Y	Referral Year	D	year	A
R5	Referral Time	A	2	C
R6	Referral Source	D	1	C
R6A	Referred by Individual	A	3	C
R6B	Referred by Educational Institution	A	3	C
R6C	Referred by Health Facilities	A	3	C
R6D	Referred by Welfare and Other	A	3	C
R6E	Referred by Private Organizations	A	3	C
R7	Age at Referral	A	4	C
R8M	Birth Month	D	mo	C
R8D	Birth Day	D	da	C
R8Y	Birth Year	D	yr	C
R8	Birth Time	A	2	C
R9A	Gender (Female/Male)	A	3	C
R10	Disability as Reported	A	5	C
R11	SSDI Status	D	1	C
R11A	SSDI Received at Referral	A	3	C
R12	SSI Status	D	1	C
R12A	SSI Status at Referral	A	3	C
R13	Race	D	1	C
R13A	White or Non-White	A	3	C
R14M	Month Referral Completed	D	mo	C
R14D	Day Referral Completed	D	da	C
R14Y	Year Referral Completed	D	yr	C
R14	Time Referral Process Completed	A	2	C
R15	Months in Statues 00-02	A	mo	C
R16	Spanish Surname	A	3	C

R17	Referral Outcome - Extended Evaluation	A	3	C
R18	Primary Disability	D	5	C
R18A	Primary Disability Groups	D	1	C
R19	Secondary Disability	D	5	C
R19A	Secondary Disability Groups	D	1	C
R20	Tertiary Disability	D	5	C
R20A	Tertiary Disability Groups	D	1	C
R21	Previous Closure	D	1	C
R21A	Months Since Previous Successful Closure	A	mo	C
R21B	Months Since Previous Unsuccessful Closure	A	mo	C
R22	Months Since Previous Closure	D	1	C
R23	Marital Status	D	1	C
R23A	Currently Married	A	3	C
R23B	Previously Married	A	3	C
R24	Number of Dependents	A	num	C
R25	Total Number in Family	A	num	C
R26	Highest Grade Completed	A	yr	C
R27	Work Status at Referral	D	1	C
R27B	Wage Earner Group at Referral	AD	6	C
R28	Weekly Earning at Referral	A	$	C
R29	Total Monthly Family Income at Referral	AD	7	C
R30	Public Assistance Type at Referral	D	1	C
R31	Public Assistance Monthly Amount at Referral	A	$	C
R32	Time on Public Assistance at Referral	AD	1	C
R33	Primary Source of Support at Referral	D	1	C
R33B	Primary Support at Referral = Family & Friends	A	3	C
R33C	Primary Support at Referral = Transfer Payments	A	3	C
R33D	Primary Support at Referral = Other (Private) Sources	A	3	C
R34	Type of Institution at Referral	D	1	C
R35M	Closure Month	D	mo	C
R35D	Closure Day	D	da	C

R35Y	Closure Year	D	yr	C
R35	Closure Time	A	2	C
R36A	Referred by Social Security Administration	A	3	C
R37	Social Security Claim Type	D	1	C
R37A	Social Security Recipient at Referral	A	3	C
R39	All Services Total	A	$	S
R40	Rehabilitation Facilities Total	A*	$	S
R41	Social Security Trust Fund Total	A*	$	S
R42	Supplemental Security Income Total	A*	$	S
R43M	Extended Evaluation Status Month	D	mo	S
R43D	Extended Evaluation Status Day	D	da	S
R43Y	Extended Evaluation Status Year	D	yr	S
R43	Extended Evaluation Entry Time	A	2	S
R44	SSDI Status at Closure	D	1	CS
R44A	SSDI Received at Closure	A	3	CS
R45	SSI Status at Closure	D	1	CS
R45A	SSI at Closure	A	3	CS
R46	Work Status at Closure	D	1	O
R46B	Employment Outcome Group	AD	6	O
R47	Weekly Earnings at Closure	A	$	O
R48	Public Assistance Type at Closure	D	1	S
R49	Public Assistance Amount at Closure	A	$	S
R50D	Occupation at Closure DOT (7-digits)	D	1,8	O
R50T2	Occupation at Closure Category	D	1	O
R51	Occupation at Closure TVQ	A	9	O
R52	Number of Months in Extended Evaluation	A	mo	S
R53	Number of Months from Acceptance to Closure	A	mo	S
R54	Number of Months in Training	A	mo	S
R55	Number of Months Ready or In Employment	A	mo	S
R56	Outcome of Extended Evaluation or VR Services	A	3	O
R57	Reason Not Rehabilitated	D	1	OS

R57A	Reason Not Rehabilitated Category	D	1	OS
R57B	Not Rehabilitated due to Unable to Locate, Transferred	A	3	OS
R57C	Not Rehabilitated due to Severe Disability, Institutionalized, Death	A	3	OS
R57D	Not Rehabilitated due to Refused or Failed to Cooperate	A	3	OS
R58	Received Diagnostic Services	A	3	S
R59	Received Restoration	A	3	S
R60	Received College Training	A	3	S
R60A	Received Institutional Training (college, business, vocational school, or other academic instruction)	A	3	S
R61	Received Other Academic Training	A	3	S
R62	Received Business School Training	A	3	S
R63	Received Vocational School Training	A	3	S
R64	Received On-the-Job Training	A	3	S
R64A	Received Non-Institutional Training (OJT or Miscellaneous Training)	A	3	S
R65	Received Personal and Vocational Adjustment Training	A	3	S
R66	Received Miscellaneous Training	A	3	S
R67	Received Maintenance	A	3	S
R68	Received Other Services	A	3	S
R69	Received Services to Other Family Members	A	3	S
C1	Received SSDI During Service	A	3	S
C2	Age at Onset of Blindness	A	yr	C
C3	Visual Efficiency Percent Loss	A	%	C
C4	Mobility Training	A	3	S
C5	Use Optical-Nonoptical Aids	DA	1	S
C5A	Used Optical Aids Only	A	3	S
C5B	Used Nonoptical Aid Only	A	3	S
C5C	Used Both Optical & Non-Optical Aids	A	3	S
C6	Low Vision Aids Training	A	3	S
C7	Medications-Treatment Prescribed	D	1	S

C7A	Number of Types of Medication-Treatment	A	num	S
C7B	Kinds of Treatments	D	1	S
C8	IQ Measure	A	*	C
C10D	Occupational Goal at First IWRP (7-digits)	D	DOT	S
C10T2	Occupational Goal at First IWRP Category	D	1	S
C11	Occupational Goal TVQ	A	9	S
C12	Number of Changes in Occupational Goal	A	num	S
C13D	Previous Occupation DOT-Most Recent (7 digits)	D	DOT	C
C13T2	Previous Occupation Most Recent-Category	D	1	C
C14	Previous Occupation TVQ	A	9	C
C15	Time from Previous Occupation to Referral	A	mo	C
C16	Previous Occupation, First, Time	A	yrs	C
C17D	Previous Occupation DOT-Next most Recent (7 digits)	D	DOT	C
C17T2	Previous Occupation, Next Most Recent, Category	D	1	C
C171	Previous Occupation 2 TVQ	A	9	C
C18	Previous Occupation, Second, Time	A	yrs	C
C19D	Previous Occupation DOT-Least Recent (7 digits)	D	DOT	C
C19T2	Previous occupation, Least Recent, Category	D	1	C
C191	Previous Occupation 3 TVQ	A	9	C
C20	Previous Occupation, Third, Time	A	yrs	C
C22	Proximity of Nearest Vocational Rehabilitation Training Facility (VRTF)	A	mi	S
C24	Proximity of Nearest Sheltered Employment	A	mi	S
C26	Proximity to VR Counselor	A	mi	S
C27	Unemployment Rate in County of Residence 2 Mo Prior to Closure	A	%	E
C28	Counselor of Closure Years Experience	A	yrs	S
C29	Counselor Training Index	AD	1,10	S
E10	Expenditure for Diagnostic Evaluation	A	$	S
E21	Expenditure for Surgery/Treatment	A	$	S
E21A	Expenditure Sum for Surgery/Treatment and Other Physical Restoration	A	$	S

E22	Expenditure for Prostheses	A	$	S
E23	Expenditure for Hospital/Convalescence	A	$	S
E24	Expenditure for Other Physical Restoration	A	$	S
E31	Expenditure for Academic Training-College	A	$	S
E31A	Expenditure Sum for Instruction (E31+E32+E33+E34+E37)	A	$	S
E32	Expenditure for Elementary or High School	A	$	S
E33	Expenditure for Business Training	A	$	S
E34	Expenditure for Trade School	A	$	S
E35	Expenditure for On-the-Job Training (OJT)	A	$	S
E35A	Expenditure Sum of OJT and Miscellaneous Training	A	$	S
E36	Expenditure for Personal or Vocational Adjustment Training	A	$	S
E37	Expenditure for Technical Associate Degree	A	$	S
E38	Expenditure for Miscellaneous Training	A	$	S
E40	Expenditure for Maintenance	A	$	S
E50	Expenditure for Services to Family	A	$	S
E90	Expenditure for Other Services (miscellaneous)	A	$	S
E91	Expenditure for Travel/Transportation	A	$	S
E92	Expenditure for Reader Services	A	$	S
E93	"Other" Expenditures Total	A	$	S
R72	Disabling Condition ICD9-One	D	11	C
R72A	First Eye Disorder Categories-ICD9	D	1	C
R72B	First Eye Disorder Group	D	1	C
R72C	Primary Disorder of Eyeball	A	3	C
R72D	Primary Disorder of Cornea & Sclera	A	3	C
R72E	Primary Disorder of Lens	A	3	C
R72F	Primary Disorder of Uveal Tract	A	3	C
R72G	Primary Disorder of Retina	A	3	C
R72H	Primary Disorder of Optic Nerve Pathway	A	3	C
R721I	Primary Disorder of Vitreous Humor	A	3	C
R72J	Primary Disorder of Eye Not Specified	A	3	C

R73	Disabling Condition, Eye 2	D	11	C
R73A	Second Eye Disorder Categories-ICD9	D	1	C
R73B	Second Eye Disorder Groups	D	1	C
R74	Disabling Condition, Eye 3	D	11	C
R74A	Third Eye Disorder Categories-ICD9	D	1	C
R74B	Third Eye Disorder Groups	D	1	C
R75	Disabling Condition ICD9, 2 (Non-eye)	D	12	C
R76	Disabling Condition ICD9,3	D	12	C
C30	Employment City Proximity to Home	D	13,1	E
C31D	Occupational Goal at Last IWRP DOT (7 digits)	D	DOT	S
C31T2	Occupational Goal at Last IWRP Category	D	1	S
C32	Occupational Goal, Last, TVQ	A	9	S
NOCC	Number of Occupations (Prior to referral)	A	num	C
NDIS	Number of Nonvisual Disabilities	A	num	C
NEDIS	Number of Eye Disabilities	A	num	C
TOTDIS	Total Number of Disabilities	A	num	C
YDPR	years Disabled prior to Referral	A	14	C
UR	Residency Urban or Rural	A	3	C
HEAIMP	Hearing Impairment Severity Code	A	15	C
SEVDIS2	Severe Second Disability	A	3,16	C
SEVDIS3	Severe Third Disability	A	3,16	C
SDT	Number of Severe Nonvisual Disabilities	A	num	C