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Predictors of Competitive Employment for Blind and Visually Impaired

Vocational Rehabilitation Consumers

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Abstract

This study investigated the variables that are associated with competitive employment outcomes for blind and visually impaired vocational rehabilitation (VR) consumers. Utilizing logistic regression, a model that included nine demographic and personal characteristics of consumers and two service-related variables was tested. Findings differ from previous research in this area, with only four variables having a significant association with successful employment: (a) receiving education as a service resulting in an educational certificate or degree, (b) having worked since disability began, (c) reason for applying to VR related to obtaining a job, and (d) the relationship between the counselor and the consumer being rated as high quality.

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People who are blind or visually impaired have traditionally had difficulties obtaining

employment. Current statistics on the employment status of blind and visually impaired persons,

obtained from the 1994-95 National Health Interview Survey on Disability (NHIS-D), are

reported on the American Foundation for the Blind's website. According to this source, in the

United States an estimated 40 to 45% of working-age blind and visually impaired persons are

employed (American Foundation for the Blind, n.d.). Although this percentage is actually higher

than the dismal numbers traditionally reported (Dickerson, Smith, & Moore, 1997), it is still very

low. It is lower than for those with other disabilities, and of course much lower than the

employment rate of the general population (Kirchner, Schmeidler, & Todorov, 1999). For this

reason, research on employment issues for persons who are blind or visually impaired has been

popular.

Specifically, a considerable amount of research has been conducted on the employment

outcomes of blind and visually impaired persons, particularly vocational rehabilitation (VR)

consumers (e.g., Giesen et al., 1985; Giesen & Ford, 1986; Hill, 1989; Kirchner & Johnson,

1997; Kirchner & Peterson, 1982; Knowles, 1969). Generally the purpose of this type of research

is determining the consumer characteristics or variables that are associated with successful

outcomes for these consumers. This information can then be used to help rehabilitation providers

identify those consumers who may have more difficulty achieving a successful outcome, and

intervene to increase the likelihood of success for these consumers. Additionally, if specific

service-related factors are identified as being related to successful outcomes, this information can

be used by rehabilitation counselors in deciding which services to provide to consumers. Until

recently, the only large source of data on VR consumers has been the yearly dataset published by the Rehabilitation Services Administration: the RSA-911 database. Now a longitudinal dataset of VR consumers has become available for public use, referred to as the Longitudinal Study of the Vocational Rehabilitation Services Program data. A multitude of research studies are possible with this data, but of particular interest to the field of blindness is the issue of competitive employment for VR consumers.

<center>Literature Review</center>

In one of the earliest research studies on employment issues for blind VR consumers, Knowles (1969) used VR data from southern California to investigate differences between consumers who were successfully rehabilitated versus those who were not. His sample consisted of 461 legally blind consumers in the Los Angeles area. Knowles used both univariate and multivariate techniques to analyze his data, and determined that the five variables that had the most important relationship to success of VR were: (a) good orientation and mobility skills, (b) higher level of vocational classification prior to rehabilitation, (c) younger age at which blindness occurred, (d) greater number of years of blindness, and (e) younger age at rehabilitation.

Kirchner and Peterson (1982) evaluated the VR outcomes of blind and visually impaired consumers during fiscal year 1980, utilizing nationwide VR data (from the R-300 form, which was the predecessor to the RSA-911 data). They primarily focused their investigation on consumers closed in homemaker status, but included a comparison to those closed in competitive employment and sheltered workshops. Based on comparisons of percentages across these groups, they found that consumers who were closed in competitive employment were more likely to: (a)

have a less severe visual loss, (b) have only one disability (i.e., blindness), (c) be male, (d) be younger, (e) not receive Social Security benefits, and (f) be employed at application.

A comprehensive study that addressed the issue of employment outcomes for blind and visually impaired VR consumers was conducted by Giesen et al. (1985). In addition to their own analyses, the researchers provided a thorough literature review of employment outcomes for blind individuals through the early 1980s. Their sample consisted of 619 consumers from four strategically selected state VR agencies for the blind. Their study incorporated approximately 100 potential predictor variables into the stepwise discriminate analysis of type of employment outcome (competitive, homemaker, sheltered workshop, or unemployed). A total of 52 significant variables were identified from this analysis, with the most important predictors of type of employment outcome being (in order): age at onset of blindness, job difficulty index number of the original occupational goal, expenditures for personal or vocational adjustment training, sex, primary source of support at referral, highest grade completed, receipt of non-institutional training, receipt of institutional training (i.e., education or business/vocational school training), receipt of physical restoration services, and number of additional disabilities. Other variables that also significantly predicted employment were receipt of SSDI during the rehabilitation process, number of occupations held prior to referral, time in months from previous occupation and referral, length of employment in last occupation, and race. Those consumers who were closed into competitive employment were significantly different from the other closure groups in the following ways: more likely to have personal sources of support at referral, had highest number of years of education at application, received more institutional training, had fewest number of additional disabilities, and had a higher job difficulty index for their original vocational goal. Giesen and Ford (1986) conducted a similar study with the same

sample of 619 VR consumers, but with the focus on persons with an unsuccessful closure and how they differed from those with a (a) competitive, (b) homemaker, and (c) sheltered workshop closure.

Hill (1989) conducted an investigation of the determinants of employment outcomes for blind and visually impaired consumers who are successfully rehabilitated by state VR agencies. She, like Giesen et al., wanted to look beyond simply "successful closures," to the specific categories of successful closure. Using national R-300 data from fiscal year 1982, Hill compared consumers closed in competitive employment, in sheltered workshops, and in self-employment to consumers closed as homemakers, using a multinomial logit model. She primarily evaluated the effects of individual consumer characteristics and VR services received on type of outcome. Overall, the most important predictors of work status were age at closure and sex, with younger age and being male associated with better employment outcomes. Other variables that specifically predicted competitive closure over homemaker closure were greater number of years of education completed, less severe visual impairment, having never been married, and the receipt of personal adjustment training, on-the-job training, or college. Presence of a major secondary disability reduced the likelihood that the consumer would be closed competitively, whereas presence of a minor secondary disability increased the likelihood.

Leonard, D'Allura, and Horowitz (1999) conducted a study investigating the factors associated with employment among blind and visually impaired consumers of vocational placement services from a private rehabilitation organization (Lighthouse International). The researchers collected their data by telephone interview, and were able to include many variables that were not available in other analyses of employment outcomes of persons with visual impairment. They used logistic regression to determine what factors could predict being

employed at follow-up, after the receipt of vocational placement services. Unfortunately, their

sample size was small ($N = 91$) and their analyses may not have had sufficient power. The only

significant predictors in their model were attending an integrated school, primary reading

medium being print, and receipt of technology training. These results are different from what has

been found in other research. This may be related to the fact that these researchers had many

unique variables to choose from for inclusion in their model, and only included those that had the

greatest bivariate correlation with employment status. Additional factors may be that a

population other than VR consumers was used and that long-term employment, rather than

employment at case closure, was evaluated.

Kirchner et al. (1999) also conducted a study utilizing a population other than VR

consumers. Using the nationally representative NHIS-D data, they conducted several analyses

that focused on employment in conjunction with age, health, and level of vision loss (blind or

legally blind versus other visual impairments). These variables were found to relate significantly

to whether a blind or visually impaired person was employed. They also identified additional

variables that had an influence on employment, which included whether the person had ever

worked for pay and whether the person had an additional disability. The individual's "interest in

working" was thought by the researchers to potentially be an important factor in whether they are

employed, but the NHIS-D database did not include a suitable variable to assess this. Self-

reported health status was found to have a profound effect on employment status, particularly for

those who were between the ages of 18 and 54. When the effects of both health status and

multiple impairments were combined for those aged 18 to 69, the results were dramatic. These

results were especially striking for those who are legally blind: only 30% of those who report

excellent or good health who have multiple disabilities were employed, whereas 70% who report

excellent or good health and a single disability (i.e., blindness) were employed. (It should be

noted that a large majority of legally blind persons in this study had multiple disabilities: 80%

versus 20% who did not.) The percentages for those with less severe visual impairments are 56%

and 73% respectively. Utilizing logistic regression, these researchers also evaluated the effects

of a larger combination of factors on the employment rate of these individuals. They determined

that race-ethnicity and education, in addition to age and health, were important predictors of

employment. Sex was not found to be a predictor of employment in their model.

The variables most commonly found to be associated with employment or employment

outcomes for blind and visually impaired consumers are sex, education level, having additional

disabilities, work history information, receipt of financial assistance, level of vision loss, age at

onset of vision loss, and current age, with race sometimes providing relevant information for the

analyses (Giesen et al., 1985; Giesen & Ford, 1986; Hill, 1989; Kirchner & Peterson, 1982;

Kirchner et al., 1999; Knowles, 1969). The results from the prior research in this area were used

to help determine which variables to include in this analysis. The research question being

investigated was: What variables are associated with employment outcome success for blind and

visually impaired VR consumers? Also of interest was determining the size of the effect (i.e.,

importance) of each variable to success in achieving competitive employment.

Method

Data Source

The data used in these analyses are public use data that were obtained from Cornell's

website for the Longitudinal Study of the Vocational Rehabilitation Services Program (LSVRSP;

School of Industrial and Labor Relations, 2003). The LSVRSP was a large-scale research project

initiated by Congress for the purpose of evaluating the performance of the state-federal VR

program. Data were collected over a period of five years from more than 8,500 VR consumers at all stages of the VR process, from application to three years after case closure. As the name implies, data were collected from each consumer at more than one point in time, usually for a three-year period. Data collection for the project began in January of 1995 and was completed in January of 2000. A multistage, complex design was used for sample selection, which resulted in a nationally representative sample of VR consumers from this time period. Data for each consumer were collected on work history, functioning, vocational interests and attitudes, community integration, psychological characteristics, and consumer perspectives on their VR experience. The methods for data collection were primarily abstraction from VR case records (which includes data found in the RSA-911 database) and personal interviews. This database represents the richest source of information on VR consumers ever assembled.

Sample

The population of interest in this study was VR consumers who are blind or visually impaired; therefore, only those with a primary or secondary disability code representing vision loss (i.e., between 100 and 149) were included in the analysis. Because competitive employment outcome was the dependent variable of interest in this study, age of the sample was limited to those aged 65 or younger. The sample was further limited to those who were not competitively employed at application, to determine the effect of VR on assisting consumers obtain employment, rather than retain employment. The sample also had to be limited to those persons who had data available on all of the variables being used in the analysis, which reduced the number of people included in the study to 181 (weighted count = 20,152). The demographic characteristics of the sample are presented in Table 1. **< Insert Table 1 here>**

Variables

The dependent variable in this analysis was employment outcome success, with success being considered working in competitive employment, self-employment, supported employment, or with the Business Enterprise Program at case closure. (Note: The generic term "competitive employment" will be used to describe anyone who was closed successfully, as defined here.) Those persons who were not closed in employment, who were closed as homemakers, in a sheltered workshop, or as an unpaid family worker were not considered to have had a successful employment outcome.

There were 11 independent variables used in this analysis. The LSVRSP is a very rich data source with many interesting options for variables to include in the model. The number of variables had to be limited, however, due to sample size. The variables were selected based on results from prior research (i.e., sex, age, level of vision loss, presence of a secondary disability, receipt of financial assistance, race, education level), being similar to significant variables in prior research (i.e., having worked since disability began, and receipt of education as a service and the result of this service) or on the hypothesis that they would be related to being closed in employment (i.e., reason for applying for services related to seeking employment and quality of the consumer-counselor relationship). Many of these variables, or variations of them, have been found to be significant predictors of successful employment in prior studies, as discussed in the literature review section. Nine of these variables are characteristics of the consumer, in existence at application to VR services, and two are directly related to VR services.

Demographic and Personal Characteristic Variables

Age and education level were the only continuous variables in the model. The remaining variables were categorical, primarily dichotomous. Level of vision loss was dichotomous, with those who were totally or legally blind in one group, and those with a lesser degree of vision loss

in the other group. Presence of a secondary disability was determined by the major disability and secondary disability codes. If two different categories of disability were listed for these variables (i.e., not just two types of visual impairment), secondary disability was coded as "yes" for the presence of an additional disability beyond visual impairment. Secondary disability has been found to be related negatively to successful outcomes in the past, and it is the variable in this dataset that is the most similar to health status, which was found to have a significant impact on employment by Kirchner et al. (1999). Consumer race was a categorical variable with three levels: White, Black, and Other. (The "Other" races – Asian/Pacific Islander, Native American, and Hispanic – were combined because their numbers were small.) Receipt of financial assistance, assessed at application, was a dichotomous variable taken directly from the LSVRSP database.

Having worked since disability began is a dichotomous variable that is a specific measure of work history, which has been found in the past to be related to employment outcomes for VR consumers. The reason for applying for services being related to obtaining employment, another dichotomous variable, could be considered a measure of "interest in working" as discussed by Kirchner et al. (1999). Kirchner and Johnson (1997) also called for the consideration of this factor when evaluating competitive employment. This variable was created from two variables found in the LSVRSP dataset, one obtained from an interview and one obtained from case file information. These variables related to specifying why the consumer applied for VR services. If the reason given in either of these answers related to help in getting a job or obtaining job placement services, then this variable was coded "yes."

Service-Related Variables

Receipt of education as a service was a categorical variable with three levels: (a) No education received, (b) Education received but no certificate/degree obtained, (c) Education received and an educational certificate or degree (e.g., custodial skills certificate, business school certificate, Associates' degree, Bachelor's degree) obtained. The quality of the counselor-consumer relationship was rated by an outside observer as low, average, or high. For this analysis the low and average ratings were pooled together, to form a dichotomous variable (i.e., high quality vs. low/average quality). Unfortunately, the codebook and information provided with the LSVRSP data do not provide specific criteria for how the outside observer answering this question was to make the determination of quality.

Data Analysis

Logistic regression was used to analyze the data. The LOGISTIC procedure in SUDAAN, Version 9.0 was the software used for the analysis. Use of a software package designed for the analysis of samples obtained through complex sampling designs is necessary with this data. SUDAAN allows the user to specify which type of sample design was used, the design stages, and the weight assigned to each person in the dataset. Logistic regression is a multivariate technique that allows evaluating each variable's impact on employment outcome success, while holding the other variables in the model constant. By evaluating the significance of each independent variable in the model, we know whether that variable has a significant impact on the dependent variable, when the other variables in the model are considered. Logistic regression also allows for the calculation of odds ratios, used to compare groups in terms of the response variables. An odds ratio provides information about how two people who are the same on all variables but one will differ, based on that one variable. The odds ratio is a measure of association and is generally the parameter of interest in logistic regression due to ease of

interpretation (Hosmer & Lemeshow, 2000). An odds ratio value greater than one for an independent variable indicates that the odds for a person exhibiting that characteristic to obtain the desired outcome (e.g., successful employment outcome) were greater than for a person not exhibiting that characteristic. Because of the small sample size and resulting low power, an alpha level of .10 was used for the analysis.

<div align="center">Results</div>

The overall model was statistically significant, Wald χ^2 (13, N=181) = 71.88, $p < .01$. This Wald χ^2 statistic tested the null hypothesis that none of the independent variables were related to a successful employment outcome. Because the Wald χ^2 value was significant, this null hypothesis was rejected. The Wald χ^2 statistic was also used to test the significance of each individual independent variable (i.e., to test the null hypotheses that the regression coefficient for each variable was equal to zero). Four independent variables were found to significantly predict whether a person would obtain a successful employment outcome: (a) having worked since disability began, Wald χ^2 (1, N=181) = 9.31, $p < .01$, (b) reason for applying to VR was related to obtaining a job, Wald χ^2 (1, N=181) = 6.31, $p = .01$, (c) the relationship between the counselor and the consumer was rated as high quality, Wald χ^2 (1, N=181) = 4.30, $p < .05$, and (d) the person received education as a service and obtained an educational certificate or degree, Wald χ^2 (2, N=181) = 5.95, $p = .05$. Full statistical results, including odds ratios, of the logistic regression model are reported in Table 2.

The total amount of variance explained by this model (Cox and Snell's R^2) was 28.3%. The four significant variables in the model explained 23.8% of the variance on their own. The fit of the model was assessed with Hosmer and Lemeshow's goodness-of-fit chi-square test and the ability of the model to correctly classify subjects as to successful employment outcome. The chi-

square value was not significant, indicating a good fit for the model, χ^2 (8, *N*=181) = 5.63, *p* = .69. The model was able to correctly classify 70% of the sample, with slightly greater sensitivity (71.9%) than specificity (68.5%). All of these results indicate adequate fit of the model.

Discussion

The results from this analysis are different than what has been found in the past, most likely as a result of having some additional variables to include in the model. Many variables that have traditionally had a significant influence on employment outcomes did not when all the variables in the model were taken into account (e.g., sex, age, level of vision loss, presence of a secondary disability, education level, receipt of financial assistance, and race). It should be noted, however, that age would have had a significant effect if it had not been limited to include only those who were under age 66. The variables that were found to be statistically significant in this model had not been found to be significant predictors of employment success for blind/visually impaired consumers before, although one was similar to significant variables in other research (i.e., having worked since disability began). This variable is a specific example of work history information, which has been found to be significantly related to employment outcomes (Giesen et al., 1985; Kirchner et al., 1999). The majority of the consumers in this sample had been employed since their disability began (56.9%). The fact that consumers who have been able to obtain employment prior to VR, but after experiencing vision loss, are more likely to obtain competitive employment with VR services makes sense. In fact, the odds of obtaining competitive employment for a consumer who has worked since becoming blind or visually impaired are more than three and a half times larger than the odds for a consumer who has not worked since experiencing vision loss. This means that holding all other variables in the

model constant, the odds of becoming competitively employed were greatly increased when the person had held a job after experiencing vision loss.

Another significant predictor of competitive employment in this model was receiving education as a service resulting in an educational certificate or degree. Prior research in VR has indicated that the receipt of education as a service was associated with successful outcomes for some groups of consumers (Giesen et al., 1985; Moore, 2001). However, in this study, just receiving education as a service did not improve these consumers' chances of obtaining competitive employment. There was virtually no positive effect in terms of successful employment outcomes for those receiving education but not obtaining a certificate or degree, as the "no education" group and the "received education but no certificate/degree" group were very similar in likelihood of successful employment. These results indicate that only completing an educational program is valuable to consumers, at least in terms of employment. Kirchner et al. (1999) documented the important effect of having a college degree on employment outcomes for the general population of persons who are blind or visually impaired, with a much higher percentage of those with a college degree being employed. The effect of completing an educational program is powerful, as the odds of attaining competitive employment were *more than 9 times greater* for those who obtained an educational certificate or degree compared to than those who did not receive education as a service.

It seems logical that seeking help from VR in finding a job would be a significant predictor of obtaining competitive employment. Most of the people in this study indicated that they wanted help with obtaining employment (73.5%). Not all of them achieved this goal, but the odds of obtaining a successful employment outcome were almost three and a half times larger for those who stated this as a reason for seeking VR services. This variable could be considered a

rough proxy for motivation for employment, or "interest in work" as Kirchner et al. (1999) discussed. Obviously there would be a great deal of variation in level of motivation among those who indicated they wanted help in obtaining employment, but a safe assumption would be that those who reported wanting help were more motivated to achieve employment than those who do not report help obtaining employment as a reason for seeking VR services.

The relationship between the VR counselor and consumer has always been considered important in the VR process (Garske, 1997; Rubin & Roessler, 1987), yet little if any evidence existed for this supposition. The results of this study provide support for the importance of this relationship to the successful employment outcomes of VR consumers. Consumers who had relationships with their counselors rated as high quality had odds of achieving competitive employment that were almost two and half times larger than consumers who had relationships with their counselors rated as low or average quality. Remember, this difference is for people who are the same on all other variables (i.e., holding the other variables in the model constant). Therefore the counselor-consumer relationship alone substantially increases the odds for a successful outcome for consumers, and therefore is clearly important to VR.

Conclusions

These findings are surprising in that many variables traditionally considered to be important in predicting successful employment outcomes were not found to be statistically significant in this model, yet four variables that have not been used in this type of research were found to be statistically significant predictors of employment success for blind and visually impaired consumers. In order of effect size (i.e., odds ratio), those variables are: (a) receiving education as a service resulting in an educational certificate or degree, (b) having worked since disability began, (c) reason for applying to VR related to obtaining a job, and (d) the relationship

between the counselor and the consumer rated as high quality. With this sample, which is considered representative of the population, these new variables are more closely related to employment success, and their contribution to the prediction of it overshadows the other variables used in past research.

The findings from this study shed new light on the importance of different characteristics of consumers in terms of the likelihood of their success at obtaining employment. It also provides evidence for the importance of two aspects of VR services: receipt of education leading to a certificate or degree and the relationship between the counselor and consumer. Past research has indicated that the provision of education as a service to consumers was associated with better outcomes. Yet this research did not detect any positive effect on competitive employment of just providing educational services, but rather the outcome of the educational services being a certificate or degree that provided a significant increase in the odds that the person would be closed in competitive employment. It is common knowledge that persons with an advanced degree are more likely to be employed, but this category also included those with a certificate, such as floral design or custodial skills training. This finding about the value of educational certificates or degrees is an important one for VR counselors and administrators to take note of. It provides justification for counselors to allow their consumers to attend training or educational services that will result in a certificate or degree. VR professionals should realize the importance of letting consumers who want to complete an educational or training program do so, and also the importance of providing encouragement for them to do so. Of course some consumers who begin educational training with the goal of completing a degree program may not be able to achieve this goal for personal reasons, which the counselor has no control over.

The finding that the quality of the relationship between the counselor and consumer is related to successful employment outcomes is an important discovery. It has long been suspected that this relationship exists, but little evidence of its significance has been available. This finding stresses the importance of appropriate training for VR counselors, including training that includes counseling skills. It is also valuable for counselors to realize the impact their relationship with the consumer may have on his or her employment outcome. Establishing a high quality relationship with consumers will be of benefit to them, presumably in many ways, as well as potentially benefiting the counselor him or herself in terms of greater productivity.

With that stated, it must be acknowledged that the lack of complete information about the rated quality of the relationship between counselor and consumer is a limitation of this research. We do not have access to the specific criteria or instructions that the data collectors used to rate the quality of this relationship. Therefore, the value of this variable cannot be fully determined, and the conclusions related to it must be considered with that in mind. However, because this data comes from a reliable source and the variable was one of interest to the determination of employment outcomes, it was included in the analysis, with that caveat. Another limitation of this study is the small number of blind and visually impaired consumers available for the analysis. Although the LSVRSP is a large database, it only includes 685 consumers who are blind or visually impaired. When restrictions are placed on that sample, as was done in this study, that number becomes even smaller, and the fact that many of the consumers in the database don't have data available on all variables further reduces the sample size. Sample size will, unfortunately, be a limitation when using this database to study persons who are blind or visually impaired, as it was in this study. Because of the small sample size, results should be interpreted with caution. A replication of the study is certainly warranted due to these sample

size issues. An additional limitation of this study was the fact that all variables that contribute to employment outcome success could not be included in the model. Part of this was due to the small sample size, and part was due to the lack of variables that would be of interest in the dataset. Although this database is the most comprehensive one of its kind available, it still has limitations, particularly when the interest is a sub-population such as persons who are blind or visually impaired.

Despite limitations of the LSVRSP dataset, it has great value and should be used for additional research. For example, other service or VR-related variables that have a significant influence on employment outcomes should be identified. This is the area that VR has the greatest ability to make changes that can then have a positive influence on their success rates for consumers. Another area that is important to investigate is the long-term effects of VR on the earnings and employment status of these consumers. With this newly available data source, there are many additional studies that can be conducted related to VR outcomes for blind and visually impaired consumers.

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Table 1

Demographic Characteristics of the Sample (N=181, Weighted N = 20,152)

Variable	Frequency	Weighted Frequency	Percent
Sex (Male)	101	10,643	52.8
Age:			
Under 30	44	4,954	24.6
30 to 39	39	4,691	23.3
40 to 49	42	4,435	22.0
50 to 59	34	3,908	19.4
60 to 65	22	2,163	10.7
Race:			
White	128	14,747	73.2
Black	34	2,751	13.65
Native American	1	98	0.5
Asian or Pacific Islander	2	638	3.2
Hispanic	16	1,917	9.5
Has a secondary disability	103	11,439	56.8
Level of visual loss (Blind or legally blind)	49	5,729	28.4

Table 2

Statistical Results of Employment Outcome Success Logistic Regression Model

Variable	β	SE of β	DF	Wald χ^2	Odds Ratio (95% CI)
Sex	0.61	0.48	1	1.57	1.83 (0.70 – 4.82)
Age	-0.02	0.02	1	1.67	0.98 (0.95 – 1.01)
Worked since disability	1.30	0.43	1	9.31*	3.66 (1.56 – 8.57)
Level of visual loss	-0.99	1.06	1	0.87	0.37 (0.04 – 3.11)
Receipt of financial assistance	-0.19	0.46	1	0.18	0.82 (0.33 – 2.07)
Has secondary disability	-0.95	0.85	1	1.27	0.39 (0.07 – 2.09)
Race:			2	0.25	
White vs. Black	-0.22	0.44	1	0.24	0.81 (0.34 – 1.93)
White vs. Other	0.00	0.47	1	0.00	1.00 (0.39 – 2.55)
Applied for employment help	1.23	0.49	1	6.31*	3.41 (1.28 – 9.08)
Quality of counselor–consumer relationship	0.87	0.42	1	4.30*	2.39 (1.03 – 5.52)
Number of years of education	0.11	0.09	1	1.51	1.12 (0.93 – 1.35)
Education received as service:			2	5.95*	
Not received vs. received	-0.13	0.57	1	0.05	0.88 (0.28 – 2.73)
Not received vs. got degree	2.24	0.95	1	5.54*	9.37 (1.40 – 62.81)

* $p < .10$