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The Impact of Work Incentives Benefits Counseling on Employment Outcomes: A National Vocational Rehabilitation Study

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Abstract
Background: Millions of Americans receiving Social Security Administration (SSA) disability benefits aspire to work and reduce reliance on disability benefits, but find the rules about entering or rejoining the workforce too complex or confusing and fear that working will cause loss of important benefits. Purpose: A case control study was conducted to investigate the impact of receiving work incentives benefits counseling (WIBC) on employment outcomes, and its relationship with demographic covariates for U.S. vocational rehabilitation (VR) clients who are SSA disability benefit recipients. Method: Data for this study were extracted from the Rehabilitation Service Administration (RSA-911) database. Mahalanobis distance matching procedures were used to match clients who received WIBC with those who did not receive it. Chi-square independence tests and independent samples t tests were used to compare receipt of WIBC and employment outcomes based on the demographic variables. Additionally, chi squared automatic interaction detection (CHAID) analysis was used to divide VR clients into homogeneous groups based on the covariates. Results: Clients who received WIBC were more likely to obtain competitive integrated employment (CIE). Impairment type, referral source, long-term employment and education level were significantly associated with CIE for clients who received WIBC. Additionally, VR clients with sensory/communicative impairments and low-income status were less likely to receive WIBC. Conclusion: Modifying VR structure to be more inclusive; understanding of stigma; and increasing the functioning, psychological well-being and self-efficacy of VR clients might improve employment outcomes.

Keywords Vocational rehabilitation · Benefits counseling · Impairment · Rehabilitation Service Administration · Mahalanobis distance matching

Approximately 12 million Americans aged 18–64 years receive benefits from the Social Security Administration (SSA) disability programs on the basis of their disability, accounting for approximately $200 billion in federal funding annually [1–3]. The SSA program considers eligibility for individuals who are unable to perform job tasks that they previously performed, and who cannot adapt to new job tasks due to a serious medical condition that has persisted for at least a year or is expected to persist one year or result in death as people with disability (PWD) [1]. There are two SSA disability programs provided for adults, Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI). SSDI is disability insurance for workers (and their dependents) who have paid into the SSA system through payroll deductions or through direct payments for self-employed workers. SSI is a disability income support program for low-income individuals who meet the same eligibility requirements for SSDI but did not contribute sufficient Federal Insurance Contributions Act (FICA) payments to qualify for SSDI benefits [3]. Applicants found eligible for the SSI and/or SSDI receive benefits including monthly payments, health insurance, and eligibility for vocational rehabilitation (VR) [3].

Once applicants have been granted SSA disability benefits, a very small proportion of individuals leave the program [4]. Research suggests that few beneficiaries ever return to

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full-time work, receive monthly earnings above substantial gainful activity (SGA), or leave the disability rolls due to work above SGA, prior to converting to retirement benefits at retirement age [5]. A person who is earning more than $1,350 per month, or $2,260 for individuals who are blind (net of impairment-related work expenses) for the year 2022 is ordinarily considered to be engaging in SGA. Individuals who are blind are considered to have more adverse employment experiences and are therefore provided with a higher cut-off level for SGA. In a longitudinal study, Stapleton and colleagues examined the return-to-work rate of SSDI recipients by tracking beneficiaries first awarded benefits in 1996 for 10 years and found that benefit termination due to work was close to 4% [5]. Frey and colleagues reported that 40% of beneficiaries report that they cannot work due to their medical condition and do not feel that they can take advantage of available employment support programs [6]. Other beneficiaries report wanting to work or feeling they need to work, but find the SSA return-to-work rules too complex or confusing to make working worthwhile, or they fear that working will lead to a loss of benefits [7–10].

Vocational Rehabilitation and WIBC

According to the U.S. Bureau of Labor Statistics, in July 2021, 19.4% of PWD were employed, which was less than one-third of the employment-population ratio for people without disabilities (64.9%) [11]. The state-federal Vocational Rehabilitation (VR) program, which is established in all 50 states and U.S. territories, aims to help PWD to obtain or retain employment [12]. This program offers a variety of services to PWD to increase employment outcomes, including assessment, job placement, on-the-job support, vocational and rehabilitation counseling, job search assistance, and assistive technology, as well as education and training and post-secondary education services [13]. PWD who need help preparing for, entering, engaging in, or maintaining gainful work can benefit from these services. Individuals receiving SSI or SSDI are presumed to be eligible for receiving VR services if future employment is possible following the receipt of the services. However, state VR is an eligibility-based program and VR agencies vary in order of selection status, which affects wait lists and priority based on level of disability [13].

Currently, one of the services that the VR programs provide to PWD is work incentives benefits counseling (WIBC). The Rehabilitation Services Administration (RSA) has defined WIBC as support services provided to clients who are unsure of how employment might impact their disability benefits (e.g., SSI and SSDI) and entitlements being received, and/or who are not aware of the services that support competitive integrated employment. It involves exploring the individual's current benefits, such as SSI and SSDI, monetary situation, and impact of different levels of earnings on support services over time. The goal of this service is to help clients make an informed choice in pursuit of employment. WIBC is provided by VR agency staff or through VR agency purchase, or by comparable service and benefits providers after VR clients start to receive VR services. Additionally, support may continue if the individual decides to receive the services after employment.

Research has indicated that WIBC has been linked to higher employment outcomes for PWD [14–19]. The first empirical data to demonstrate the positive impact of benefits counseling for individuals receiving SSA benefits revealed that VR services combined with benefits counseling lead to better employment outcomes and significant increases in mean earnings compared to VR services alone, even after controlling for demographic and work history variables [17, 18]. Subsequently, Delin and colleagues explored the impact of WIBC on both income and participant earnings. Individuals who received WIBC services had both a larger increase in income and significantly higher earnings [14]. In a recent study investigating the impact of WIBC services targeting transition-age youth receiving SSI benefits and their families, youth who received WIBC services had significantly higher work activity and explored a greater number of job opportunities than youth who did not receive WIBC services [20]. Similar findings have been reported among transition-age and young adult SSI recipients with intellectual disabilities.

However, research has indicated not all VR clients receive WIBC at the same rate, and early research suggested that some demographic and disability characteristics may be associated with likelihood of receiving WIBC. For example, Whites have been found to be more likely to receive WIBC than Hispanic and other VR clients. Individuals with higher school or college degrees were more likely to receive WIBC than individuals with less than high school education, individuals living in private residences were more likely to receive WIBC than individuals living in community residences, and individuals with physical disabilities were more likely to receive WIBC than clients with sensory disabilities [21]. Additionally, younger individuals, those with higher average SSA benefits, and people with mental illness are more likely, and individuals with musculoskeletal conditions and SSI-only recipients are less likely to receive benefits planning and outreach services [22].

Rationale and Purpose of the Study

The state-federalVR program has been successfully assisting approximately one million PWD each year to transition from public support to employment [23–25]. Previous research has indicated that some VR services, including job placement, job search, job support, workplace modifications, and psychological support, have all been effective in increasing employment outcomes for PWD [26, 27].

Recently, initiatives to increase the employment outcomes of SSA beneficiary VR clients have been implemented. For example, the trial work period (TWP) is the primary work incentive offered to SSDI beneficiaries. During the TWP, beneficiaries can work and earn at any level without loss of benefits, as long as they continue to meet medical eligibility requirements [4]. In addition, SSA disability programs offer the Ticket to Work program to both SSDI beneficiaries and SSI recipients to enroll for employment services (ES). Under Ticket to Work, beneficiaries and recipients can obtain services by presenting a "ticket" to any qualified provider in an employment network that includes all state vocational rehabilitation agencies and other private and public vocational service providers that meet the criteria set by SSA [28]

However, many PWD and their families continue to lack sufficient benefits-related knowledge and remain fearful of losing benefits if they work. As a result, they may not take advantage of work incentives. To solve this barrier, the SSA initiated WIBC services to help PWD make informed choices about work incentives and CIE. However, for almost two decades, there have been no studies conducted on the relationship between WIBC and employment outcomes for VR clients receiving SSI and/or SSDI. Currently, it is not known to what extent WIBC has been effective or whether there are certain demographic variables significantly associated with competitive integrated employment (CIE) and its relationship with receipt of WIBC.

The threefold purpose of this study was to investigate (a) the impact of receiving WIBC on employment outcomes, (b) the relationship between demographic variables and CIE for VR clients receiving SSA disability benefits who received WIBC, and (c) the relationship between demographic variables and receipt of WIBC. It was hypothesized that WIBC counseling would significantly influence employment outcomes; that demographic and disability variables (i.e., age, gender, race, education level, income level, impairment type, referral source, long-term employment, cultural barriers, English language learner status) would have a significant relationship with CIE for clients who received WIBC services; and that receipt of WIBC would significantly vary based on the demographic variables. The specific research questions that guided this study were as follows:

1. Is there a significant difference in employment outcomes between SSI and/or SSDI beneficiary VR clients who receive WIBC and those who do not?
2. To what extent do demographic variables impact CIE rates of VR clients who receive WIBC?
3. Is there a significant difference relationship between demographic variables and the receipt of WIBC services?

Method

Data Source

This study was found to be exempt from IRB review. The current study used the Rehabilitation Service Administration (RSA-911) data set. Vocational rehabilitation agencies collect detailed demographic information such as age, gender, race, education level, receipt of SSI, (SSDII), referral source, types of VR services received, and employment outcomes for PWD receiving state VR services across the country. The Department of Education Rehabilitation Services Administration gathers this state information and combines the data into one data set and makes it available for public and research purposes. This study employed the (RSA-911) data set for fiscal year 2018, which included cases closed by the state VR program in fiscal year 2018, the most recent database available at the time of the investigation. It is important to note that starting from 2017, there were major changes in some of the recorded variables in the RSA data sets; which limited matching the data set with previous years and using multiple-year data.

Participants

To be included in the analysis, participants (a) had to have a sensory/communicative impairment, physical impairment or mental impairment, (b) received at least one VR service, and (c) received SSI or SSDI. Those whose impairment type, gender, or race were not reported or who were admitted to receive VR services but did not receive at least one VR service were excluded.

The RSA-911 data set for fiscal year 2018 included case records for 833,150 VR clients, of whom 30.3% (N = 252,293) received SSA disability benefits (i.e., SSI and/or SSDI). Among the recipients of the benefits, 42% (N = 107,506) had received at least one VR service. After deleting cases with missing information in the sample, 94,706 VR clients' cases had been closed in 2018 and were included in the analyses.

Mean age of the participants was 37.69 (SD = 15.55). Most of the participants were between 25 and 49 years old

Table 1 Demographic Variables of the Participants (N = 94,706)

Variables	*N* (94,706)	*%*
Age		
< 24	26,876	28.4
25–49	41,119	43.4
50–65	23,625	24.9
>65	3,086	3.3
Gender		
Male	52,788	55.7
Female	41,918	44.3
Race		
White	51,786	54.7
Non-White	42,920	45.3
Education Level		
No formal education	24,587	26.0
Secondary school	46,870	49.5
Postsecondary Education	16,497	17.4
Bachelor`s or higher	6,752	7.1
Impairment		
Sensory/communicative Impairment	12,910	13.6
Physical Impairment	21,568	22.8
Mental health Impairment	60,228	63.6
Referral Source		
Self-referral	37,115	39.2
Other sources	57,591	60.8
Income Level		
Not Low income	33,335	35.2
Low income	61,371	64.8
Social Security		
Only SSI	48,291	51.0
Only SSDI	37,687	39.8
SSI and SSDI	8,728	9.2
Unemployment		
Not Long term	49,065	51.8
Long term	45,641	48.2
English Learner		
No	84,540	89.3
Yes	10,166	10.7
Cultural Barriers		
No	88,640	93.6
Yes	6,066	6.4

(43.4%), male (55.7%), White (54.7%), and had a high school degree or equivalency (49.5%). 63% of the clients had mental impairments, 22.8% had physical impairment, and 13.6% had sensory/ communicative impairment. 51% (51.3%) were recipients of only SSI, 39.8% were recipients of only SSDI, and 9.2% were recipients of both SSI and SSDI. 39% of the clients (39.2%) were self-referred to the agency, and 60.8% were referred by other sources (e.g., mental health provider, community health organizations). Further information regarding the demographic characteristics of the sampling frame is provided in Table 1.

Using Mahalanobis Distance Matching (MDM) analysis, which is explained below in more detail, participants who received WIBC were matched with participants who did not receive benefits counseling based on the following covariates: age, gender, race, education level, impairment type, referral source, receipt of SSI and/or SSDI, long-term unemployment status, income level, English language learner status and experiencing cultural barriers. However, due to a possible high level of type I error rate, a subsampling method was utilized. Using the G* Power [48] analysis tool, taking the alpha level as 0.05 and power as 0.80, based on the preliminary analysis, with the proportion of people in the recipients of WIBC group that will have the outcome as 0.36 and the proportion of the people in the non-recipients of WIBC group that will have the outcome as 0.30, 1926 participants were needed for a chi-square test. Therefore, we randomly selected 963 participants who received WIBC and 963 participants as a matched group.

Variables

Independent Variables

Treatment variable. This study used receipt of WIBC as the treatment variable. WIBC has been described by RSA as support services provided to clients who are unsure of how employment might impact their disability benefits (e.g., SSI and SSDI) and entitlements being received and/or who are not aware of the services that support competitive integrated employment. The variable was recorded as follows: Recipient of WIBC (0 = not recipient of WIBC, 1 = recipient of WIBC provided by VR agency staff).

Covariates. The current study used the following variables as covariates, coded as indicated. For the purpose of analysis, and in some case due to relatively small subsamples, some categories, such as non-White race, were combined.

1. Age (0 = 16–24, 1 = 25–49, 2 = 50–65, 3 = > 65).
2. Gender (0 = male and 1 = female).
3. Race (0 = White, 1 = Non-White (African American, American Indian or Alaskan Native, Asian or Native Hawaiian, Hispanic or Latinx).
4. Education Level (0 = no formal education, 1 = a secondary school diploma or equivalency; or certificate of attendance completion, 2 = postsecondary education or associate degree, 3 = bachelor's degree or higher).
5. Impairment (0 = sensory/communicative impairment, 1 = physical impairment, 2 = mental health impairment).
6. Referral Source (0 = self-referral, 1 = referral from other sources (i.e., educational institutions, community rehabilitation programs, family, friends and mental health

providers [public or private], other sources including employers, other state agencies).

7. Income Level (0 = individual does not meet definition of low income and 1 = individual meets definition of low income; The RSA defines low income as receipt of assistance from supplemental nutrition assistance program (SNAP), temporary assistance for needy families program (TANF), supplemental security income program (SSI), free or reduced lunch, being an individual with disability whose income is above the poverty line but has a family under the poverty level, who has income under the poverty line or at or below 70% of the standard living income, is homeless, or youth who live in a high poverty area.
8. Receipt of SSI or SSDI benefits (0 = recipient of only SSI, 1 = recipient of only SSDI, 2 = recipient of SSI and SSDI).
9. Long-term unemployment (0 = individual has not been unemployed for 27 or more consecutive weeks, 1 = individual has been unemployed for 27 or more consecutive weeks).
10. English language learner (0 = individual does not meet the definition of English language learner, 1 = individual meets the definition of English language learner).
11. Cultural Barriers (0 = individual does not perceive himself or herself as possessing attitudes, beliefs, customs or practices that influence a way of thinking, acting or working that may serve as a hindrance to employment or individual did not self-identify; 1 = individual perceives himself or herself as possessing attitudes, beliefs, customs or practices that influence a way of thinking, acting or working that may serve as a hindrance to employment).

Outcome Variables

The current study had three outcome variables: (a) competitive integrative employment; (b) earnings per hour; and (c) number of working hours per week at the case closure. Competitive integrative employment has been defined by RSA as full-time or part-time work for which an individual is compensated at a rate specified in the Fair Labor Standards Act, or at least state or local minimum wage, or a payment not less than the customary rate paid for individuals without disabilities, or self-employment that yields an income comparable to that of people without disabilities who are self-employed, for which the worker is eligible to receive benefits provided to other employers. The work is performed at a location in the community where employees with disabilities interact with other employees, and the work provides opportunities for advancement as needed.

Statistical Analysis

MDM analysis has been widely used in the field of education and social science. It is considered an approach for a possible approximation to randomized control trials. It reduces the effect of covariates to estimate the treatment effect for observational and large secondary data sets. In the MDM analysis, a treatment group is matched with a control group based on observed baseline characteristics (i.e., covariates)[29]. Mathematically, the Mahalanobis distance is used to calculate the distance between two cases, and the closest data points are matched [30]. Participants who received WIBC were matched without replacement to participants who did not receive WIBC using the nearest neighbor matching method. The direction of the matching was from treated to untreated, as the treatment group had fewer participants. After matching, balance between the treatment and control groups was assessed using chi-square and t-tests. To compute effect size, Cohen's d and Cramer's V statistics were used. The treatment effect was analyzed using a chi-square independence test for the competitive employment outcome and t-tests for earnings per hour and work hours per week.

In addition, chi-square automatic interaction detector (CHAID) analysis was used to test the effect of covariates on competitive employment for clients who received WIBC. More specifically, CHAID analysis was used to create homogenous groups based on the covariates and to examine their relationship with competitive integrated employment. Finally, chi-square independent test and logistic regression was used to examine the relationship between demographic and environmental variables and receipt of WIBC services. All of the data cleaning and statistical procedures were performed using R studio statistical software version 2022.02.01 and SPSS version 24. Specifically, the matchIt package was used to analyze the data, and cobalt was used to draw the plots. Finally, descriptive statistics, including frequencies, chi-squares and odds ratios, were calculated to provide an overview of the sample.

Results

Participants

There were 10,071 VR clients who received WIBC. Overall, the largest proportion of participants were male (54.9%), between 25 and 49 years old (45.3%), white (59.7%), and had a high school degree or equivalency (51.5%). Among the participants, 40.4% self-referred to the agency 59.6% were referred by other sources, 46.2% of the participants were recipients of SSI, 44.3% were recipients of SSDI and

9.6% were recipients of both SSI and SSDI. 67% had mental impairments, 24.9% had physical impairment, and 7.1% had sensory/communicative impairment.

For the 963 participants who were randomly selected from 10,071 recipients of WIBC, similarly, the largest proportion of participants were male (52.4%), between 25 and 49 years old (46.4%), white (60.1%), and had a high school degree or equivalency (51.4%). Among the participants, 39.0% self-referred to the agency, 61% were referred by other sources, 47.8% of the participants were recipients of SSI, 44.1% were recipients of SSDI and 8.1% were recipients of both SSI and SSDI. 63% had mental impairments, 28.2% had physical impairment, and 8.1% had sensory/communicative impairment.

There were 84,635 VR clients who did not receive WIBC. The largest proportion of the participants were male (55.8%), between 25 and 49 years old (43.2%), White (54.1%), and had a high school degree or equivalency (49.3%). Among the participants, 39.0% were self-referred to the agency, and 61.0% were referred by other sources (e.g., mental health provider, community health organizations), 51.6% of the participants were recipients of SSI, 39.3% were recipients of SSDI and 9.2% were recipients of both SSI and SSDI. 63% had mental impairment, 22.5% had physical impairment, and 14.4% had sensory/communicative impairment.

Mahalanobis Distance Matching

The MDM procedure was effective in matching clients who received WIBC services with clients who did not receive WIBC. The findings showed that before matching, the treatment group and the control group differed on the following nine key demographic covariates: age, race, education level, disability type, referral type, low-income status, receipt of cash benefits, long-term employment status, and experienced cultural barriers. However, after matching, there were no significant differences between clients who received WIBC and those who did not receive WIBC services for these covariates. The detailed results are shown in Table 2. Moreover, there was no more than a 10% absolute standardized difference between the treatment and control groups over the covariates. Therefore, no adjustment was performed for MDM treatment effects.

Related Outcomes

Competitive Integrated Employment

The chi-square results indicated that clients who received WIBC had significantly higher rates of CIE than clients who did not receive WIBC service. We further analyzed the impact of receiving WIBC on competitive employment, by dividing the participants based on their impairment types. The detailed results are shown in Table 3.

Rate Hourly Wage and Average Hours Worked per Week

For the hours worked per week and hourly wages outcomes, we conducted an independent sample t test for the participants. The detailed results are shown in Table 4.

Demographic Variables Impact on CIE Rates of VR Clients Who Receive WIBC

We examined the impact of covariates on CIE for clients who received WIBC using CHAID analysis. The analysis had a false classification rate of 36.3%, which was similar to findings in previous studies [31,32]. The results indicated that disability type was the first variable that created nodes. The detailed results are shown in Table 5.

The Relationship Between Demographic Variables and the Receipt of WIBC Services

The results indicated that among all of the participants, WIBC was provided to 10.6% of the clients. The detailed results for the relationships between the covariates and receipt of WIBC are shown in Table 2.

Discussion

The current study examined the impact of WIBC on employment outcomes, the association between demographic variables and CIE for Social Security beneficiary VR clients who received WIBC, and the relationship between demographic variables and receipt of WIBC. The results showed that receiving WIBC had a significant positive impact on competitive employment rates. However, the results indicated among those clients who achieved CIE, clients receiving WIBC had lower weekly working hours than clients not receiving WIBC. In addition, primary impairment type was the most impactful variable differentiating CIE rates for participants who received WIBC. Referral source was a differentiating factor for CIE rates of people with mental health impairment, and receiving only SSI was the differentiating factor for CIE among those with sensory/communicative and physical impairments, respectively. Social security beneficiary VR clients who were in prime working age, were not in low-income status, had mental impairments, and had higher education levels were more likely to receive WIBC service.

A large national data set was analyzed in the current study. The results supported that PWD continue to experience

Table 2 Comparison of the Work Incentives Benefits Counseling (WIBC) and No WIBC Groups before and after Matching

Before Matching ($N = 94{,}706$)	No WIBC $N = 84{,}635$		WIBC Group $N = 10{,}071$		Chi-Square p Level
Demographics		%		%	
Age					χ^2 (3, $N = 94{,}706$) = 148.435, $p < .01$, Cramer's V = 0.04
< 24	24,230	28.6	2,646	26.3	
25–49	36,552	43.2	4,567	45.3	
50–65	20,920	24.7	2,705	26.9	
>65	2,933	3.5	153	1.5	
Gender					χ^2 (1, $N = 94{,}706$) = 2.915, $p = .08$, Cramer`s V = 00
Male	47,255	55.8	5,533	54.9	
Female	37,380	44.2	4,538	45.1	
Race					χ^2 (1, $N = 94{,}706$) = 113.035, $p < .01$, Cramer`s V = 03
White	45,777	54.1	6,009	59.7	
Non-White	38,858	45.9	4,062	40.3	
Education Level					χ^2 (3, $N = 94{,}706$) = 181.311, $p < .01$, Cramer`s V = 04
No formal education	22,505	26.6	2,082	20.7	
Secondary school	41,684	49.3	5,186	51.5	
Postsecondary	14,484	17.1	2,013	20.0	
Bachelor`s or higher	5,962	7.0	790	7.8	
Impairment					χ^2 (2, $N = 94{,}706$) = 404.689, $p < .01$, Cramer`s V = 06
Sensory/communicative	12,191	14.4	719	7.1	
Physical	19,059	22.5	2,509	24.9	
Mental health	53,385	63.1	6,843	67.9	
Referral Source					χ^2 (1, $N = 94{,}706$) = 7.426, $p < .01$, Cramer`s V = 00
Self-referral	33,042	39.0	4,073	40.4	
Other sources	51,593	61.0	5,998	59.6	
Income Level					χ^2 (1, $N = 94{,}706$) = 353.751, $p < .01$, Cramer`s V = 06
Not Low income	28,938	34.2	4,397	43.7	
Low income	55,697	65.8	5,674	56.3	
Social Security					χ^2 (2, $N = 94{,}706$) = 109.117, $p < .01$, Cramer`s V = 03
Only SSI	43,640	51.6	4,651	46.2	
Only SSDI	33,229	39.3	4,458	44.3	
SSI and SSDI	7,766	9.2	962	9.6	
Unemployment					χ^2 (1, $N = 94{,}706$) = 35.251, $p < .01$, Cramer`s V = 01
Not Long term	43,566	51.5	5,499	54.6	
Long term	41,069	48.5	4,572	45.4	
English Learner					χ^2 (1, $N = 94{,}706$) = 0.416, $p = .51$, Cramer`s V = 00
No	75,569	89.3	8,971	89.1	
Yes	9,066	10.7	1,100	10.9	
Cultural Barriers					χ^2 (1, $N = 94{,}706$) = 3.931, $p < .05$, Cramer`s V = 00
No	79,168	93.5	9,472	94.1	
Yes	5,467	6.5	599	5.9	

substantially lower employment rates than people without disabilities. The overall employment rate was 34.3% for the VR clients who received WIBC in the current sample, consistent with the recent findings of the Bureau of Labor Statistics (compared to 72.5% for 16- to 64-year-old people without disabilities) [33]. Although more needs to be done to increase employment outcomes for PWD, the current study showed the promising positive impact of WIBC on CIE for recipients of SSI and/or SSDI. When other factors were statistically controlled, the clients who received WIBC had 4.9% higher competitive employment rates than clients who did not receive WIBC. Considering the multidimensional structure of employment influenced by impairments, personal and environmental factors, a 4.9% increase based on a single VR service is relatively potent. Small increases in CIE transform into substantial positive impacts on the physical health, mental health and quality of life of individuals with disability and on the financial and psychological well-being of the country. Considered in combination with the growing body of studies showing similar results in

Table 2 Comparison of the Work Incentives Benefits Counseling (WIBC) and No WIBC Groups before and after Matching

After Matching ($N = 20,152$)	No WIBC Group $N = 10,071$		WIBC Group $N = 10,071$		Chi-Square p Level
Demographics		%		%	
Age					
16–24	2647	26.3	2646	26.3	χ^2 (3, $N = 20,142$) = 0.05,
25–49	4572	45.4	4567	45.3	p = .99, Cramer's V = 0.00
50–65	2703	26.8	2705	26.9	
>65	149	1.5	153	1.5	
Gender					
Male	5533	54.9	5533	54.9	χ^2 (1, $N = 20,142$) = 0.00,
Female	4538	45.1	4538	45.1	p = 1.00, Cramer`s V = 00
Race					
White	6009	59.7	6009	59.7	χ^2 (1, $N = 20,142$) = 0.00,
Non-White	4062	40.3	4062	40.3	p = 1.00, Cramer`s V = 00
Education Level					
No formal education	2060	20.5	2082	20.7	χ^2 (3, $N = 20,142$) = 1.311,
Secondary school	5256	52.2	5186	51.5	p = .72, Cramer`s V = 00
Postsecondary	1997	19.8	2013	20.0	
Bachelors or higher	758	7.5	790	7.8	
Impairment					
Sensory/communicative	728	7.2	719	7.1	χ^2 (2, $N = 20,142$) = 0.07,
Physical	2499	24.8	2509	24.9	p = .96, Cramer`s V = 00
Mental health	6844	68.0	6843	67.9	
Referral Source					
Self-referral	4073	40.4	4073	40.4	χ^2 (1, $N = 20,142$) = 0.00,
Other sources	5998	59.6	5998	59.6	p = 1.00, Cramer`s V = 00
Income Level					
Not low income	4397	43.7	4397	43.7	χ^2 (1, $N = 20,142$) = 0.00,
Low income	5674	56.3	5674	56.3	p = 1.00, Cramer`s V = 00
Social Security					
Only SSI	4650	46.2	4651	46.2	χ^2 (2, $N = 20,142$) = 0.017,
Only SSDI	4464	44.3	4458	44.3	p = .99, Cramer`s V = 00
SSI and SSDI	957	9.5	962	9.6	
Unemployment					
Not Long term	5498	54.6	5499	54.6	χ^2 (1, $N = 20,142$) = 0.00,
Long term	4573	45.4	4572	45.4	p = .98, Cramer`s V = 00
English Learner					
No	8971	89.1	8971	89.1	χ^2 (1, $N = 20,142$) = 0.00,
Yes	1100	10.9	1100	10.9	p = 1.00, Cramer`s V = 00
Cultural Barriers					
No	9472	94.1	9472	94.1	χ^2 (1, $N = 20,142$) = 0.00,
Yes	599	5.9	599	5.9	p = 1.00, Cramer`s V = 00

the past decade, the results support expanded provision of WIBC with other VR services. It is important to note that, among competitively employed, clients receiving WIBC had lower weekly working hours than clients not receiving WIBC. Future research is needed to examine and validate this result.

The results revealed a significant association between impairment type and competitive employment for the Social Security beneficiary VR clients who received WIBC. Although the results indicated personal and environmental factors such as referral type and long-term employment were also significantly associated with competitive employment, the impairment type was the main differentiating factor in CIE rates. Specifically, the results indicated that clients with mental health impairments, representing the largest group among VR clients receiving Social Security benefits and WIBC services, were less likely to be employed at outcome than people with sensory/communicative and physical impairments. Despite ongoing efforts, people with mental health impairment continue to experience limited access to appropriate treatment and accommodations. Additionally, the dilemmas of self-disclosure, personal anxiety,

Table 3 Gainful Employment Outcomes

VR Clients (*N* = 20,152)	No WIBC	%	WIBC Group	%	Chi-Square *p* Level
VR clients with disability	963	50.0	963	50.0	χ^2 (1, *N* = 1926) = 5.28
Employed	283	29.4	330	34.3	*p* < .05, Cramer's V = 0.05)
Not Employed	680	70.6	633	65.7	
VR clients with sensory/ impairments	728	50.3	719	49.7	χ^2 (1, *N* = 1447) = 2.68
Employed	306	42.0	333	46.3	*p* = .10, Cramer's V = 0.04)
Not Employed	422	58.0	386	53.7	
VR clients with physical impairments	963	50.0	963	50.0	χ^2 (1, *N* = 1926) = 5.24
Employed	563	47.9	351	46.7	*p* < .05, Cramer's V = 0.05)
Not Employed	612	52.1	400	53.3	
VR clients with mental impairments	963	50.0	963	50.0	χ^2 (1, *N* = 1926) = 4.27
Employed	279	29.0	321	33.3	*p* < .05, Cramer's V = 0.04
Not Employed	684	71.0	642	66.7	

stigma, and preoccupation with discrimination continue to contribute to unemployment for people with mental health problems [34]. Nevertheless, even for this population, those receiving WIBC had a significantly higher rate of competitive employment outcomes.

There was a significant positive association between self-referral and CIE for Social Security beneficiary VR clients with mental health impairments who received WIBC. This finding may be explained in the context of self-determination theory. Self-referral is explained by the RSA manual as the referral process where the VR applicant approaches the VR agency on his/her own. Self-determination theory indicates that people have fundamental psychological needs of autonomy, competence and relatedness. To the extent these needs are met during job search, people may experience increased autonomous motivation. Once clients have more autonomous motivation, they are more likely to engage in a variety of proactive job searching activities. Self-referral reflects more autonomous motivation and internal volition to obtain competitive employment [35]. However, further analysis indicated that clients who were White, older, with a higher level of education, and those who did not have low-income and long-term employment status were more likely to self-refer than other clients. It is also possible therefore that VR clients who self-referred had work-related advantages (e.g., higher education) and more recent work experience than clients who were referred by other sources. Beyond both of the above explanations, there might be a "why try?" effect: Once people believe that they are not worthy or capable of obtaining a job, they are less likely to pursue employment and independent living, and more likely to give up trying [36].

Although Social Security benefits are negatively associated with employment outcomes for VR clients [37, 38], the current study indicated that clients with sensory/communicative and physical impairments who received only SSI

Table 4 Employment outcomes: Hourly wage and hours worked per week

	No WIBC		WIBC group					
Outcome Variable	*M* (*Mdn*)	*SD*	*M* (*Mdn*)	*SD*	*df*	*t*	*p*	*Cohen's d*
Hourly wage[1]	$12.82 (11.75)	5.08	$11.87 (11.00)	5.11	597	-2.30	< 0.05*	0.18
h worked per week[1]	25.85 (25.00)	10.41	22.68 (20.00)	9.75	583	-3.88	< 0.01*	0.31
Hourly wage[2]	$2.57 (0.00)	5.24	$3.17 (0.00)	4.90	701	1.58	= 0.11*	0.11
h worked per week[2]	8.33 (0.00)	11.25	6.12 (0.00)	9.40	328	-2.36	< 0.01*	0.21

[1]VR clients who had CIE, [2]VR clients who did not have CIE, * Equal variance not assumed

Table 5 Decision Tree in Table Format for VR Clients Receiving Social Security Benefits

	Unsuccessful outcome		Competitive employment			
	n	%	*n*	%	X^2	*p*
VR clients who received SSI or SSDI and BC	6,417	63.7%	3,654	36.3%		
VR clients with sensory/communicative or physical impairments who received social security benefits and BC	1,822	56.4%	1,406	43.6%	108.730	0.000
VR clients with mental health impairment who received social security benefits and BC	2,248	32.9%	4,595	67.1%	108.730	0.000
VR clients with sensory/communicative or physical impairments who received only SSI and BC	676	62.5%	405	37.5%	24.527	0.000
VR clients with sensory/communicative or physical impairments who received only SSDI or both SSI and SSDI, and BC	1,146	53.4%	1,001	46.6%	24.527	0.000
VR clients with mental health impairment who received social security benefits and BC and had self-referral	1,457	62.0%	894	38.0%	43.485	0.000
VR clients with mental health impairment who received social security benefits and BC and had referral from other sources	3,138	69.9%	1,354	30.1%	43.485	0.000

had lower CIE rates than those who received only SSDI. It is possible that VR clients who received only SSI were less likely to have had enough job experience to develop the necessary skills and aptitude for CIE [21]. It is important to note that SGA rules do not apply to SSI benefits for people with blindness [46]. Also, the results indicated long-term unemployment was significantly negatively associated with CIE for clients who received only SSI, indicating the importance of work skills for CIE.

The results indicated that low-income clients were less likely to receive WIBC than other clients. This situation suggests that those with the most significant barriers to employment are less likely to receive this important service. A recent report indicated that the existing VR system is unable to address the multifaceted demands of low-income applicants [39]. Although consistent with research suggesting that clients with low income tend to continue to have disadvantages into the VR system [39] this finding suggests the need to more closely examine this issue.

Finally, clients with sensory/communicative impairments were less likely to receive WIBC services than clients with mental and physical impairments. The findings were in line with previous research, which was explained by the higher SGA level for people with visual impairment [21]. Also, clients with higher levels of education were more likely to receive WIBC than those clients with lower levels of education. Higher level of education may translate to ability to learn new skills, which leads to higher level of earnings and employment. Also, WIBC was provided more often to working age clients (25–65 years old). Although, non-White male recipients of SSI, and long-term unemployed clients were less likely to receive WIBC services than other clients, the effect sizes of these problematic relationships were relatively low compared to the above-mentioned variables.

Implications

The current study indicated that WIBC was effective in increasing employment rates for PWD. VR clients might receive WIBC from different sources, including but not limited to, from state VR agencies, through Employment Networks and Work Incentives Planning and Assistance Projects, even after finding a job [47]. VR clients who receive counseling regarding how working can impact their social security disability benefits and how they can transition to work without instantly losing benefits are more likely to achieve CIE. Providing VR clients with the sources and knowledge to comprehend the potential impact that earning money may have on healthcare, disability benefits, and other publicly financed benefits and the ability to obtain and maintain employment were beneficial to improve employment outcomes. However, recipients of WIBC reported fewer working hours than clients who did not receive WIBC. Currently, more research on these issues is needed. The findings might inform SSA regulations regarding SGA.

This study, though unique in its research questions and methodology, aligns with the growing body of recent research in suggesting the significant positive impact of WIBC, and suggesting that WIBC should be provided to VR clients at higher rates.

The current study confirmed that PWD who receive SSAbenefits continue to have lower employment rates than people without disabilities. Although many initiatives, such as the Ticket to Work (TTW) Program, the Expedited Reinstatement Rule, and the Trial Work Period (TWP), several demonstration projects, and the development of functional assessment batteries, have been taken to increase employment rates [4], the desired outcomes have not yet been achieved. However, a recent report showed a strong recovery in the labor market for PWD as of the end of 2021. For example, PWD were employed in a higher rate than ever in the information and systems field [40]. It is possibly the outcome of an overall increase in the availability of teleworking that enabled social distancing and mitigated accessibility and other types of barriers to worksites and employment during COVID-19 [40]. Changes in attitudes regarding home-based working that occurred during the pandemic might open up a venue for improving employment outcomes for PWD [41]. Advancements in technology and societal changes regarding normalization of home-based working might create more job opportunities and different means of working for VR clients. In this period of great potential for improving the employment participation of PWD, an increased focus on addressing the long-term problem of fear and confusion about working among SSA disability benefit recipients through benefits counseling would be a timely and effective one.

In terms of other key findings, given the positive relationship between self-referral, which may reflect autonomous motivation, higher job search and employment self-efficacy, and better employment outcomes [42–44]. VR professionals should pay attention to the degree of the working alliance and autonomy support provided to PWD. Informing clients about services and options, jointly deciding on individualized plans of employment, and providing options during the rehabilitation process are some of the intervention techniques that may increase the autonomous motivation and employment self-efficacy of VR clients. Understanding the impact of having a disability from clients' perspective and empowering them while collaboratively working with employers regarding the accessibility issues and disability management [45] might also improve efficacy of the VR services.

Limitations

The current study has several limitations that need to be considered when interpreting the results. The sample included clients who received social security benefits, and also at least one of the VR services. Also, this study used variables reported in the RSA-911 data set. Although a number of covariates were used in the MDM procedure, there might be other potential covariates and confounders not included in the study. For example, other VR employment service variables or the overall number of services received could be used as covariates as well. Although, multiple years of RSA 911 data or matching multiple years of RSA-911 data to SSA data set on actual SSI/SSDI beneficiary pay status at the time of VR application would provide more accurate and valid results, starting from 2017, there was major changes in between some of the recorded variables in the RSA data sets; therefore; only the data for fiscal year 2018 were analyzed. However, for future research conducting a similar study, employing the above mentioned procedure is recommended. This study used VR data on SSA status, however, VR data on consumers' SSA status has potential for error. The most valid data on SSA can be obtained from SSA administrative data. The effectiveness of VR services may vary depending on the functional level of clients and the need for VR services, however, the current data set lacks information about the client's functional limitations. This study used an ex post facto design. As a result, the findings simply show the association between the variables; no causal relationship can be determined. Finally, although the VR counselor checks the accuracy of data entry, there is a possibility of data entry mistakes.

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Code Availability Not applicable.

Declarations

Institutional Review Board (IRB)Institution University of Wisconsin-Madison.

Conflicts of Interest/Competing Interests We have no conflicts of interest to declare.

Ethics Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Consent to Participate Not applicable.

Consent for publication Not applicable.

References

1. Social Security Administration. Disability evaluation under social security. 12.0 mental disorders adult. Washington, DC: Social Security Administration; 2017.
2. Arnone W, Veghte B. Disability protection IS part of social security. Washington, DC: National Academy of Social Insurance; 2017.
3. Social Security Administration. Annual statistical report on the Social Security Disability Insurance program [Internet]. Washington, DC: Social Security Administration [SSA]; 2020. Available from:https://www.ssa.gov/policy/docs/statcomps/di_asr/2020/di_asr20.pdf.
4. Goldman HH, Frey WD, Riley JK. Social Security and disability due to mental impairment in adults. Annu Rev Clin Psychol. 2018;14:453–69.
5. Stapleton D. Liu S. Phelps D. Prenovitz S. Work activity and use of employment supports under the original Ticket to Work regulations: longitudinal statistics for new Social Security Disability Insurance beneficiaries, final report. In: Social Security Administration Office of Retirement and Disability Policy, Mathematica Policy Research [Internet]. Washington, DC; 2010. Available from: https://www.researchgate.net/profile/DavidStapleton-4/publication/254429695_Longitudinal_Statistics_for_New_Social_Security_Disability_Insurance_Beneficiaries_Washington_DC_Center_for_Studying_Disability_Policy_and_Mathematica_Policy_Research/links/54f8d1940cf2ccffe9df5e7d/Longitudinal-Statistics-for-New-Social-Security-Disability-Insurance-Beneficiaries-Washington-DC-Center-for-Studying-Disability-Policy-and-Mathematica-Policy-Research.pdf.
6. Frey W, Drake R, Bond G, Miller A, Goldman H. Mental health treatment study: final report. Social Security Administration [Internet]. Rockville, MD; 2011. Available from: https://www.ssa.gov/disabilityresearch/documents/MHTS_Final_Report_508.pdf.
7. MacDonald-Wilson KL, Rogers ES, Ellison ML, Lyass A. A study of the Social Security work incentives and their relation to perceived barriers to work among persons with psychiatric disability. Rehabil Psychol. 2003;48:301–9.
8. McQuilken M, Zahniser JH, Novak J, Starks RD, Olmos A, Bond G. The Work Project Survey: consumer perspectives on work. J of Voc Rehabil. 2003;18:59–68.
9. Livermore G, Prenovitz S. Work Activity and Use of Employment Supports Under the Original Ticket to Work Regulations Benefits Planning Assistance. Center for Studying Disability Policy [Internet]. 2010. Available from: https://www.ssa.gov/disabilityresearch/documents/TTW5_6_BPAO.pdf.
10. Taylor AB, Blackburn N. It makes me feel part of the society": return-to-work decisions of SSDI beneficiaries. J Voc Rehabil. 2020;53(3):319–33.
11. United States Bureau of Labor Statistic. Persons with a disability: barriers to employment and 0ther labor-related issues news release [Internet]. 2022. Available from: https://www.bls.gov/news.release/archives/dissup_03302022.htm.
12. Rehabilitation Services Administration. Reporting manual for the case service report (RSA-911. Washington, DC: 2013.

13. Rubin SE, Roessler RT, Rumrill PD Jr. Foundations of the vocational rehabilitation process Austin. TX: Pro-Ed In; 2016.
14. Delin BS, Hartman EC, Sell CW. The impact of work incentive benefits counseling on employment outcomes: evidence form two return-to-work demonstrations. J of Voc Rehabil. 2012;36:97–107.
15. Kregel J. Work incentives planning and assistance program: current program results document the program's ability to improve employment outcomes, reduce dependence on benefits, and generate cost savings for SSA. J of Voc Rehabil. 2012;36(1):3–12.
16. Tremblay T, Smith J, Xie H, Drake R. The impact of specialized benefits counseling services on social security administration disability beneficiaries in Vermont. J of Rehabil. 2004;70(2):5–11.
17. Tremblay T, Smith J, Xie H, Drake RE. Effect of benefits counseling services on employment outcomes for people with psychiatric disabilities. Psychiatr Serv. 2006;57(6):816–21.
18. Hartman EC, Anderson CA, Chan JY, Fried JH, Lui JW. An exploration of work incentive benefits specialists' experiences. J Appl Rehabil Counsel. 2015;46(3):25–34.
19. Leahy MJ, Chan F, Lui J, Rosenthal D, Tansey T, Wehman PM, et al. An analysis of evidence-based best practices in the public vocational rehabilitation program: gaps, future directions, and recommended steps to move forward. J Voc Rehabil. 2014;41:147–63.
20. Schlegelmilch A, Roskowski M, Anderson C, Hartman E, Decker-Maurer H. The impact of work incentives benefits counseling on employment outcomes of transition-age youth receiving Supplemental Security Income (SSI) benefits. J Voc Rehabil. 2019;51(2):127–36.
21. Nazarov ZE. Can benefits and work incentives counseling be a path to future economic self-sufficiency for SSI/SSDI beneficiaries? In: CRR WP 2013-17. Boston: Boston College Retirement Research Consortium; 2013.
22. Livermore G, Prenovitz S. Work activity and use of employment supports under the original Ticket to Work regulations benefits planning assistance. Center for Studying Disability Policy. Retrieved from: https://www.ssa.gov/disabilityresearch/documents/TTW5_6_BPAO.pdf, 2010.
23. Ditchman N, Wu M, Chan F, Fitzgerald S, Lin CP, Tu WM. Vocational rehabilitation. In: Strauser D, editor. Career development, employment, and disability in rehabilitation: from theory to practice. New York: Springer Publishing Company; 2014. pp. 343–60.
24. United States Department of Education. Rehabilitation services Fiscal Year 2019 budget request [Internet]. 2019. Available from: https://www2.ed.gov/about/overview/budget/budget19/justifications/i-rehab.pdf.
25. U.S. Government Accountability Office. Vocational rehabilitation: better measures and monitoring could improve the performance of the VR program (GAO-05-865). 2005.
26. Rinaldi M, Perkins R. Vocational rehabilitation for people with mental health problems. Psychiatry. 2007;6(9):373–6.
27. Fadyl JK, Anstiss D, Reed K, Khoronzhevych M, Levack WM. Effectiveness of vocational interventions for gaining paid work for people living with mild to moderate mental health conditions: systematic review and meta-analysis. BMJ Open. 2020;10(10):039699.
28. Social Security Administration. Ticket to work [Internet]. 2020. Available from: https://choosework.ssa.gov/about/work-incentives/.
29. King G, Nielsen R, Coberley C, Pope JE, Wells A. Comparative effectiveness of matching methods for causal inference. Cambridge: Institute for Quantitative Social Science, Harvard University;; 2011.
30. Blackwell M. Gov. 2002: 5. Matching [Internet]. 2015. Available from: https://mattblackwell.org/files/teaching/s05-matching-handout.pdf.
31. Kaya C, Hanley-Maxwell C, Chan F, Tansey T. Differential vocational rehabilitation service patterns and outcomes for transition-age youth with autism. J Appl Res in Intellect Disabil. 2018;31(5):862–72.
32. Sánchez J. Employment predictors and outcomes of U.S. state-federal vocational rehabilitation consumers with affective disorders: a CHAID analysis. J Affect Disord. 2018;239:48–57.
33. United States Bureau of Labor Statistics USB. Persons with a disability: Labor force characteristics—2021 [Internet]. 2022. Available from: https://www.bls.gov/news.release/pdf/disabl.pdf.
34. Elraz H. Identity, mental health and work: how employees with mental health conditions recount stigma and the pejorative discourse of mental illness. Hum Relat. 2018;71(5):722–41.
35. Vansteenkiste M, Broeck A. Understanding the motivational dynamics among unemployed individuals: Refreshing insights from the self-determination theory perspective. In: The Oxford handbook of job loss and job search. 2018. pp. 159–80.
36. Corrigan PW, Bink AB, Schmidt A, Jones N, Rüsch N. What is the impact of self-stigma? Loss of self-respect and the "why try" effect. J Ment Health. 2016;25(1):10–5.
37. Dutta A, Gervey R, Chan F, Chou CC, Ditchman N. Vocational rehabilitation services and employment outcomes for PWD: a United States study. J Occup Rehabil. 2008;18(4):326–34.
38. Kaya C, Iwanaga K, Hsu S, Akpinar EN, Bezyak J, Chen X, et al. Demographic covariates, Vocational Rehabilitation Services, and employment outcomes of working-age adults with anxiety disorders: a Multivariate Logistic Regression Analysis. J Occup Rehabil. 2022;1–10.
39. Reims N, Tophoven S. Double burden of disability and poverty: does Vocational Rehabilitation ease the school-to-work transition? Soc Incl. 2021;9(4):92–102.
40. Office of Disability Employment Policy [Internet]. 2022. Available from: https://www.dol.gov/sites/dolgov/files/ODEP/pdf/Employment_for_PWD-Analysis_of_Trends_during_COVID_2022.pd.
41. Holland P. Will disabled workers be winners or losers in the post-COVID-19 labour market? Disabil. 2021;1(3):161–73.
42. Gagné M, Deci EL. Self-determination theory and work motivation. J Organ Behav. 2005;26(4):331–62.
43. Kaya C, Chan F. Vocational rehabilitation services and outcomes for working age people with depression and other mood disorders. J Rehabil. 2017;83(3):44–52.
44. Petruzziello G, Mariani MG, Chiesa R, Guglielmi D. Self-efficacy and job search success for new graduates. Pers Rev. 2020;50(1):225–43.
45. Sainsbury R, Irvine A, Aston J, Wilson S, Williams C, Sinclair A. Mental health and employment. Crown; 2008.
46. Social Security Administration. Substantial gainful activity [Internet] 2022. Available from https://www.ssa.gov/oact/cola/sga.html.
47. Social Security Administration. Benefits counseling and the path to employment [Internet] 2020. Available from https://choosework.ssa.gov/Assets/cw/files/Library/2020/Fact-Sheet-Benefits-Counseling.pdf.
48. Faul F, Erdfelder E, Lang AG, Buchner A. G*Power 3: a flexible statistical power analysis for the social, behavioral, and biomedical sciences. Behav Res Methods. 2007;39:175–91.