

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

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Author Note

The research reported herein was performed pursuant to a grant from Policy Research, Inc. as part of the U.S. Social Security Administrations (SSA's) Analyzing Relationships Between Disability, Rehabilitation and Work. The opinions and conclusions expressed are solely those of the author(s) and do not represent the opinions or policy of Policy Research, Inc., SSA or any other agency of the Federal Government.

Abstract

Objective: This study divides Vocational Rehabilitation consumers into groups based on Social Security Administration (SSA) benefit receipt and chronicles the characteristics of vocational rehabilitation (VR) consumers, the services they receive and their program outcomes. It also determines which personal characteristics and services are most strongly associated with exiting with competitive integrated employment (CIE).

Methods: Adults in the United States RSA-911 Case Service report data for program years 2017 and 2018 were analyzed to provide descriptive statistics for personal characteristics, receipt of services and program outcomes for VR applicants. This applicant pool was divided into participants and non-participants. The participants were compared across four groups based on the type of SSA benefits received (i.e., Social Security Disability Insurance (SSDI), Supplemental Security Income (SSI), both SSDI and SSI (referred to as concurrent SSA benefits) and no SSA benefits). Binary logistic regression models were developed for all four SSA benefit groups to measure associations between personal characteristics, services and likelihood of CIE.

Results: Descriptive comparisons within the different VR groups and the U.S. labor force for basic demographics and education level indicate the VR populations were not representative of the U.S. labor force. Age, primary impairment and referral source had small differences across the different types of SSA beneficiaries. Employment status at program entry, presence of supported employment goals, state's contribution to VR population relative to the U.S. labor force, disability significance classification, living arrangement and types of employment barriers had larger variations across the different types of SSA beneficiaries. About 30% of participants regardless of SSA benefit status did not receive any VR services. CIE rates increased in all SSA benefit groups, along with an increased reliance on personal income. Receipt of SSDI benefits between application and exit modestly increased, and receipt of the other types of financial supports and benefits decreased. The four logistic regression models indicated the strongest associations with CIE include employment at program start and absence of a supported employment goal. Requiring services for maintaining employment was associated with increased odds of exiting with CIE for SSDI, SSI and concurrent SSA beneficiary participants. Requiring services for gaining employment was associated with increased odds of exiting with CIE for SSI and concurrent SSA participant beneficiaries.

Conclusions: Future research should conduct separate analyses on the participants employed and unemployed at program entry. It should also consider conducting separate studies for participants with supported employment goals. To reduce the large percentages of VR consumers who do not exit with CIE, both VR and SSA would benefit from targeting program retention and deeper investigation into the relationships between VR services and exit employment outcomes.

Keywords: Vocational rehabilitation, employment outcomes, Social Security Administration.

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Background

People with disabilities who are unemployed, underemployed or at risk of losing employment may access the Vocational Rehabilitation (VR) program. It is jointly-funded by the federal government and by the states and territories. Each state and territory has either a combined program which serves all people with disabilities or a pair of programs: a blind program for people with visual impairments and/or blindness and a general program for all other disabilities. To participate, the person with a disability must apply and meet eligibility requirements. Once accepted, the applicant, known as a consumer, works with their Vocational Rehabilitation Counselor (VRC). They develop an individualized plan for employment (IPE) which includes the employment goal, services needed to attain it, who is responsible for providing them, how they will evaluate progress and the specific responsibilities of the consumer and counselor. The goal is usually either competitive integrated employment (CIE) or supported employment. CIE is any employment where compensation, job duties and the environment are the same for the person with a disability as they are for people without disabilities. Supported employment is CIE when the consumer receives extra supports because of the severity of their disability. These might be either through a person helping (e.g., job coach) or customization of the job in alignment with the consumer's strengths, abilities and interests (State Vocational Rehabilitation Services Program, Applicable Definitions, 2021, paras. 9, 53). Thirty-one services are available to VR consumers. These fall into three categories—12 education and training services (e.g., college and university training, technical education and apprenticeship training), 11 career services (e.g., assessments, job placement, short-term job supports) and 8 other services (e.g., transportation, rehabilitation technology and maintenance). VR considers the consumer successfully rehabilitated when they maintain employment aligning with their IPE goal for 90 consecutive days concluding with exit from the program. A case could also close if the consumer is unable to continue to work towards getting a job, either because of personal matters, or decisions related to concerns about losing benefits. A conceptual timeline of the VR process and the targets are presented in Figure 1.

Previous studies have evaluated some of the relationships between individual factors and employment achievement for individuals who participate in the VR program. For example, race, ethnicity, age and co-morbid impairments can have a significant impact on CIE rates for different disabilities (Ahonle et al., 2019; Glynn & Schaller, 2017; Lee et al., 2020; Sung et al., 2014; Dutta et al., 2008). Applicants with higher education levels have been shown to be associated with increases in CIE rates in studies of people with attention deficit hyperactive disorder (ADHD) (Glynn & Schaller, 2017), traumatic brain injury (TBI) (Ahonle et al., 2019), cerebral palsy (CP) (Huang et al., 2013), youth with intellectual disabilities (ID) (Kaya, 2018) and youth with autism spectrum disorder (ASD) (Kaya et al., 2016). Last, employment status at application has an effect. In one unspecified state, people who are employed at application have 2.3 times higher likelihood of exiting with CIE (Ufere et al., 2019). Nationally, employment at application for people with mental impairments, sensory impairments, and physical impairments were 1.53, 4, and 2.7 times, respectively, to be more likely to achieve CIE than those unemployed at the start of the program (Dutta et al., 2008).

Some service and job-related factors are also associated with employment success, and these have been documented largely for individuals with certain types of disabilities. For example, job placement, short-term job supports and job search assistance are associated with increased CIE rates for people with affective disorders (Sánchez, 2018). Higher CIE rates for consumers with TBI are associated with short-term job supports, job placement and on-the-job

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training (Ahonle et al., 2019). For youth with ID, a combination of short-term job supports, on-the-job training and maintenance services have the strongest association with CIE rates (Kaya, 2018). For the Deaf-Blind, job search assistance, job placement assistance, short-term job supports and vocational rehabilitation counseling guidance all are positively associated with CIE rates (McDonnall & Cmar, 2019). Receipt of short-term job supports, job placement, on-the-job training, maintenance services and rehabilitation technology are positively associated with CIE achievement for people with CP (Huang et al., 2013). For people with orthopedic impairments, job placement, rehabilitation technology and vocational rehabilitation counseling/guidance are associated with increased likelihood of CIE achievement (Chan et al., 2006). Increased CIE rates for youth with ASD are associated with receipt of short-term job supports, job placement services, vocational rehabilitation counseling/guidance and job readiness training (Kaya et al., 2016). Job related services are associated with increased CIE rates for people with epilepsy (Sung et al., 2014). Job placement, physical restoration, vocational rehabilitation counseling/guidance and rehabilitation technology are associated with increased CIE rates among people with spinal cord injuries (SCI) (Marini et al., 2008).

There is some evidence that public monetary or health benefits may serve as work disincentives to decrease CIE rates. Receipt of disability-related medical or cash benefits was negatively associated with employment for people with MS (Chiu et al., 2013). Although youth with ASD have higher CIE rates as they receive more services, those with ASD receiving SSI are less likely to achieve CIE (Ditchman et al., 2018). For people with learning disabilities (LD), those receiving Social Security Administration (SSA) benefits are half as likely to achieve CIE (Rumrill et al., 2017). Receiving either SSA benefit—SSI or SSDI—has been found to be associated with a decreased likelihood of employment for people with orthopedic impairments (Chan et al., 2006), youth with ID (Kaya, 2018), youth with ASD (Kaya et al., 2016), non-Asian Americans with psychiatric disabilities (Lee et al., 2020) and people with epilepsy (Sung et al., 2014). People with ADHD on any form of public support—SSI, SSDI, Temporary Assistance for Needy Families (TANF) or state General Assistance—have lower CIE rates (Glynn & Schaller, 2017).

While we have some understanding of how demographic characteristics and VR services relate to CIE achievement for specific disabilities, we don't have a broad understanding of the entire VR consumer population, the types of services they receive and their program outcomes.

Our Gap in Knowledge

The Rehabilitation Services Administration (RSA) collects data to evaluate the VR program. The nearly four hundred variables can be divided into domains of individual characteristics (including age, sex, race, ethnicity and living arrangements), supports (i.e., student supports, public financial supports and medical insurance), disability information, employment status, Workforce Innovation Opportunity Act (WIOA) core program involvement, employment barriers, education information, pre-employment transition services, VR training services, VR career services, VR other services, employment outcomes, exit outcomes and post-exit employment data.

Effective July 1, 2017, data collection practices were updated. Nobody has yet characterized the VR population using the new information included in this dataset. Reports to the U.S. Congress do not typically describe additional personal characteristics of VR consumers related to receipt of public support, education level and employment status at program entry nor, referral sources and types of residence, all of which might also influence reaching employment goals. These reports do not describe information about the specific receipt of services or

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program outcomes related to time VR consumers spend in the program and changes in primary financial support. They do not systematically compare program outcomes between those eligible who use VR program services and those who do not. These shortcomings make it difficult to fully understand the true impacts of the VR program on successful employment outcomes. Furthermore, nobody has considered these characterizations in the context of the different SSA benefits received, therefore, we also lack an understanding of the relationships between SSA benefits and VR program outcomes.

Objective

The objective of this report is to first chronicle characteristics of VR consumers, the services they receive and their program outcomes (for all VR applicants and for participants within different forms of SSA benefits) to provide researchers, VR program administrators and the SSA with fundamental information about the VR system beyond what is typically reported in reports to the U.S. Congress. The information can be used to inform hypotheses about the relationships between potential variables that influence VR consumer employment outcomes or identify gaps in VR services. The second objective is to determine which of these characteristics and services are most strongly associated with exiting with CIE and how they vary with SSA benefit receipt. This will provide SSA and VR administrators with suggestions on where additional research can be directed to improve their program.

Methods

Descriptive Analysis

The United States RSA-911 Case Service Report data for program years 2017 and 2018 was cleaned and organized using rules developed from the VR process and published rules and standards. The data was then filtered to only include adults 26 to 80 years-old and non-secondary education students, developing the population of *applicants*. Two subsets of VR consumers were also created—*participants* who went through the eligibility process, developed and signed their individualized plan for employment (IPE) and *non-participants* who exited prior to developing their IPE. A descriptive statistical analysis of personal characteristics, receipt of VR services and program outcomes was conducted. When relevant, the descriptive statistics were compared to similar populations in the United States labor force which include all the people in the U.S., in this case over 25, who are employed or actively seeking employment.

After conducting the initial descriptive statistical analysis, the participants were divided into four mutually exclusive groups: SSDI participant beneficiaries (68,024 cases or 19% of participants), SSI participant beneficiaries (47,138 cases or 13% of participants), concurrent SSA participant beneficiaries, i.e., they receive both SSDI and SSI benefits, (14,339 cases or 4% of participants) and participants without SSA benefits (221,733 cases or 63% of participants). The descriptive statistics for the personal characteristics, VR services and program outcome variables were analyzed conditional on each type of SSA benefit. Relevant changes from the whole VR participant population were noted. All statistics were calculated using IBM SPSS Statistics 26.

Logistic Regression

Prior to conducting logistic regression, some of the demographics and VR service-related variables were collapsed to reduce the number of categories. This collapsing was based on the distributions from the descriptive statistics and is therefore detailed within the results section as

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applicable. The thirty-one services were collapsed into five groups after consideration of their description. The groups align with when a service would typically be provided in the VR process and the purpose of the service. There are services for planning the IPE, preparing for employment, gaining employment, maintaining employment and support services that can aid in any of the steps in the process or the receipt of services. Table 1 details which services fall in each new category.

A forward stepwise logistic regression model was developed for each of the four different SSA participant groups (i.e., SSDI participant beneficiaries, SSI participant beneficiaries, concurrent SSA participant beneficiaries and participants without SSA benefits) to predict exiting with CIE. Each included the following covariate variables: age, sex, race, ethnicity, education, employment status at program entry, disability significance, primary impairment, primary source of income at application, whether or not there is a supported employment goal, number of employment barriers, referral source, type of residence, involvement in core WIOA programs, number of insurance sources, geographic region and the number of public supports received at application. The independent variables were the five services groups: planning services, preparation for employment services, gaining employment services, maintaining employment services and support services. The dependent variable was the dichotomous CIE at exit or not. Due to the large sample sizes, a small alpha value was chosen to create tight confidence intervals. The odds ratios were calculated with 99.5% accuracy and variables were included in the model when $p < 0.005$. All models were calculated using IBM SPSS Statistics 26.

Results

Consumer Characteristics

Basic Demographics — Age, Race, Sex and Ethnicity. The age distribution of VR consumers was relatively consistent between 26 and 50, peaked in the mid-fifties and then quickly declined after the mid-fifties as shown in Figure 2. The median age for VR participants and non-participants at all stages of the process was the mid-forties. SSDI participant beneficiaries tended to be slightly older with their median age in the late 50s throughout the process. SSI and concurrent participant SSA beneficiaries were slightly younger with their median age in the early forties. Table 2 indicates there were similar proportions of men and women¹ in VR as were in the 2019 U.S. labor force for all groups except concurrent SSA beneficiaries who had equal proportions of men and women. Compared to the 2019 U.S. labor force, the VR participants were more likely to be Black and less likely to be White. This disparity was even greater with non-participants, SSI beneficiary participants and concurrent SSA beneficiary participants. The VR population had lower Hispanic proportions than the U.S. labor force—SSDI and concurrent SSA participant beneficiaries had the lowest proportions of Hispanics at 8% and 7% respectively (U.S. Bureau of Labor Statistics & Current Population Survey, 2020). For logistic regression analysis these results suggested collapsing the variables to

¹ The dataset describes this variable as sex with no explanation/definition and three categories: female, male, other. Based on these categories, it is assumed it refers to sex assigned at birth, not a mis-classification of gender identity nor sexual orientation.

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make sex dichotomous with female and male only. Race was divided into three categories: Black, Other, White.

Geographic Region. Analyzing the country in regions based on specific geography such as the Midwest, Rocky Mountains and Northeast did not provide any insight because of the variations in population and structure of VR programs from state to state. Instead, it was more appropriate to compare the state's contribution to the VR population with its contribution to the U.S. labor force and summarize findings as three groups. The three groups were: 1) contributions similar to VR and the labor force (i.e., state's contribution to VR is within 25% more or less than the state's labor force contribution), 2) contributions more to VR than the labor force (i.e., state's contribution to VR is more than 25% greater than their contribution to the labor force) and 3) contributions less to VR than the labor force (i.e., state's contribution to VR is more extreme than 25% less than their contribution to the labor force). Individual state contributions to the 2020 U.S. labor force were generally in alignment with their contribution to the country's population (*Annual Average Series: Employment Status of the Civilian Noninstitutional Population, 1976 to 2020 Annual Averages*, 2021). California, Texas, Florida and New York together contributed to about 33% of the U.S. labor force, Table 3. While data for the U.S. Territories was not included in the labor force dataset, of the 50 states and Washington D.C., 17 states' contributions to VR participants were within 25% above or below their contribution to the labor force. Eleven states' contribution to VR was more extreme than 25% less than their contribution to the labor force—Montana had the lowest at -58% of their labor force contribution. Twenty-three states' contribution to the VR participants population was more than 25% more than to the labor force—the greatest came from Vermont, Washington D.C. and Mississippi who respectively contributed 399%, 178% and 173% more than they did to the labor force. Non-participant proportions did not always align with the participant proportions; nine states had non-participant contributions in the opposite direction of their participants (e.g., Nebraska contributed 59% more to VR participants and 97% less to VR non-participants than it did to the labor force). The four SSA beneficiary subgroups varied widely in how they related to each state's comparison between contribution to VR and contribution to the labor force.

Education, Employment at Program Entry and Employment Goals. The levels of education achieved at the time of VR application were low among VR consumers, Table 2. Eighteen percent of VR participants and 31% of non-participants did not achieve a high school education, compared to 6% of the 2020 U.S. labor force (U.S. Bureau of Labor Statistics & Current Population Survey, 2021). SSI (25%) and concurrent SSA (22%) participant beneficiaries had the highest proportions, and SSDI (15%) participant beneficiaries had the lowest proportion without a high school diploma or equivalent. Fifty-one percent of VR participants and 44% of non-participants had their high-school diploma or equivalent, compared to 25% of the 2020 labor force. Concurrent SSA participant beneficiaries had the highest proportion of high school diploma or equivalent (57%) compared to 55% of SSI participant beneficiaries and 50% of SSDI beneficiaries and participants without SSA benefits. Post-secondary education not resulting in a degree was received by 11% of participants and 8% of non-participants, which was less than the 2020 U.S. labor force (15%). Within subgroups the distribution was similar, SSI participant beneficiaries (9%) were least likely to have received and SSDI participant beneficiaries (12%) were most likely to receive some post-secondary education without earning a degree. Seventeen percent of participants and 14% of non-participants earned a post-secondary degree (i.e., associate, baccalaureate or graduate degree) compared to 54% of the 2020 labor force. Participants not receiving SSA benefits (19%) and SSDI participant

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beneficiaries (18%) were most likely to have a college degree and SSI participant beneficiaries (9%) and concurrent SSA participant beneficiaries (9%) were least likely to have a college degree. For logistic regression analysis all the degree options were collapsed into four categories: less than a high school diploma, high school diploma or equivalent, some post-secondary education without receiving degree and post-secondary education degree.

Seventy percent of participants and 95% of non-participants were unemployed at the start of the program. Twenty-four percent of participants and 4% of non-participants had CIE at the start of the program, Table 4. Lower percentages of participants with SSDI, SSI and concurrent SSA benefits were employed at program start (13%, 10% and 7% respectively). VR participants without any SSA benefits were more likely to be employed with CIE at program start (31%). It is reasonable to assume people with CIE at program entry had goals to either maintain or improve their employment.

Thirteen percent of applicants (14% of participants and 0% of non-participants) had a supported employment goal, Table 4. Part of the Rehabilitation Act includes a specific supported employment program with specific funds for consumers seeking to achieve supported employment (What Is the State Supported Employment Services Program?, 2021). Seventeen percent of participants with supported employment goals achieved CIE, 29% achieved supported employment and 54% did not achieve employment. As noted previously, a supported employment goal is providing extra support, often through a job coach or customization to the job to help the VR consumer work in competitive integrated employment, contrary to CIE which doesn't have the added expense of the supports. The two different goals on the IPE may trigger different services and approaches from the VR counselor. SSI and concurrent SSA participant beneficiaries were most likely to have a supported employment goal (29% and 31% respectively). SSDI participant beneficiaries were less likely to have a supported goal (19%), but this was still higher than the population total. Only 8% of participants without SSA benefits had supported employment goals in their IPE.

Impairment. Primary disability refers to the impairment that is most interfering with the consumer's ability to work. There are 19 types of impairment divided into three main categories: mental, sensory/communicative and physical. The most common primary impairments were mental impairments (54% of applicants) categorized as psychosocial, cognitive or other, Table 4. The remaining sensory and physical impairments were much less prevalent. Twenty-six percent of applicants had either hearing loss and communicated with auditory methods or had an *other physical impairment*, mobility related orthopedic/neurological impairment, or general physical debilitation. Fifty-four percent of the applicants had a secondary impairment (comorbidity) as well. The most common comorbidity was psychosocial impairments (21% of applicants). Concurrent SSA participant beneficiaries (64%) were most likely to have a comorbidity and participants without SSA benefits (50%) were least likely to have one.

The biggest differences between participants and non-participants were no impairments (0% participants vs 9% non-participants), hearing loss with auditory communication (10% participants vs 2% non-participants) and psychosocial impairments (30% participants vs 34% non-participants). The distribution of the primary impairment varied little with the type of SSA benefit. SSDI, SSI and concurrent SSA participant beneficiaries had a low likelihood of hearing loss while communicating auditorily (2%, 4% and 1% respectively), but this impairment was more prevalent in participants without SSA benefits (15%). Cognitive impairments appeared to be less prevalent with SSDI participant beneficiaries and participants without SSA benefits than

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with SSI participant beneficiaries and concurrent SSA participant beneficiaries. Other disability differences were much smaller—typically ranging a couple percentage points.

People with *significant disabilities* have impairments that seriously limit one or more functional capacities related to employment, are expected to need multiple services over an extended period and have one or more physical or mental disabilities. Each state sets their own definition of a *most significant disability*. Anyone receiving SSA support should be classified with at least a *significant disability*. (State Vocational Rehabilitation Services Program, Applicable Definitions, 2021, paras. 29, 30). In terms of reporting the significance of their disability, about half of the participants were classified as having a *most significant disability*, while 43% were classified as having a *significant disability*. Slightly lower percentages of non-participants' disabilities were classified as *most significant* and *significant*. A greater proportion of participants with SSI, SSDI and concurrent SSA benefits were classified as having a *most significant disability* than in the overall population (59 to 67% vs 49%).

Referral Source. There were a variety of ways that individuals were referred to the VR program, and these were generally the same for participants and non-participants, Table 4. The most common ways of entering the VR program for applicants were through self-referral (38%), *other sources* not included in the extensive list (12%), medical health provider (10%) and mental health provider (8%). A self-referral could be an indication of self-motivation, family and friend referrals possibly indicate a presence of a support-system for the consumer. SSA participant beneficiaries were slightly more likely to be referred by a mental health provider than by a medical health provider. Considering these results for the logistic regression analysis, the variable categories were collapsed forming six groups of referral sources: self-referral, medical health provider, mental health provider, community rehabilitation program, family/friends, and all other sources.

Residence/Living Arrangement. The majority (87%) of VR applicants lived in a private residence, Table 4. Four percent lived in community rehabilitation facilities or group homes and 3% were homeless or lived in a shelter. The support system and resources available to someone are different with each living arrangement. For example, a community rehabilitation facility may have their own accessible transportation that is shared by the residents, which could be more accessible than public transportation, but may be more limited than a personal vehicle. Living arrangements also affect SSI benefit amounts. There was very little difference in distributions between participants and non-participants, however, SSI (8%) and concurrent SSA (9%) participant beneficiaries were more likely to live in a community rehabilitation facility than SSDI participant beneficiaries (4%) and participants without SSA benefits (2%). For logistic regression analysis, this category was collapsed into a dichotomous variable (i.e., private residence, not private residence).

Employment Barriers. Participants and some non-participants report barriers to employment at some point between application and finalizing their first IPE, Table 4. The most common reported barriers to employment reported by participants were low income (52%), long-term (six or more months) unemployment (36%), reporting as an ex-offender (15%) and deficiencies in basic skills or literacy (14%). SSA participant beneficiaries were more likely to have deficiencies in basic skills or literacy than they were to report being an ex-offender. Other barriers included English language deficiencies, single parent status, cultural barriers, homelessness. Barriers were reported much less frequently by non-participants because of the variability of when they left the program prior to finalizing (i.e., signing) their IPE and variability between VRCs for when they collect this information. Forty-seven percent of

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participants reported two or more barriers. This proportion is higher for SSA participant beneficiaries: SSDI (50%), SSI (63%) and concurrent SSA (68%).

Provision of VR Services

Training Services. A small percentage of VR participants received one or more of a variety of training services intended to improve employability. Eleven percent of the participants received one training service and 1% receive two. The distribution of both the number and type of training services was similar for all SSA participant beneficiaries and participants without SSA benefits, Table 4. None of the non-participants received training services. The most commonly provided training service was job readiness training_{preparation}² (i.e., “training provided to prepare an individual for work such as work behaviors, getting to work on time, dress and grooming, increasing productivity” (Rehabilitation Services Administration, 2017, p. 70), which was received by 5% of participants. Three percent received occupational or vocational training_{preparation} and 2% received miscellaneous training_{preparation}. Occupational or vocational training is a training designed to help a consumer gain employment in a specific occupation that doesn’t lead to a degree (Rehabilitation Services Administration, 2017, p. 66). Miscellaneous training refers to “any training not recorded in the other categories listed, including GED or secondary school training leading to a diploma, or courses taken at four-year, junior or community colleges not leading to a certificate or diploma” (Rehabilitation Services Administration, 2017, p. 72). One percent or less of consumers received each of the remaining eight forms of training available including college_{preparation}, apprenticeships_{gaining}, on the job training_{maintaining}, disability skills related training_{preparation} and customized training_{gaining}. These patterns held for all SSA groups.

Career Services. Career services are those that are intended to help the consumer find and keep a job. The most common career services were VR counseling and guidance_{support} (52% of participants, 11% of non-participants), assessment_{planning} (26% of participants, 33% of non-participants), job placement assistance_{gaining} (17% of participants), job search assistance_{gaining} (17% of participants) and diagnosis and treatment of impairments_{preparation} (17% of participants, 6% of non-participants), Table 4. Lower proportions of participants received information and referral_{planning} services (7%), short-term job supports_{maintaining} (6%), supported employment services_{maintaining} (4%) and benefits counseling_{planning} (4%). Participant beneficiaries of SSDI (11%), SSI (8%), concurrent SSA (8%) were more likely to receive benefits counseling_{planning} than participants without SSA benefits (2%). Supported employment services_{maintaining} were also unevenly distributed; SSI participant beneficiaries (11%) and concurrent SSA participant beneficiaries (11%) were most likely to receive them compared to 8% of SSDI participant beneficiaries and 3% of participants without SSA benefits.

Twenty-three percent of participants and 34% of non-participants received one career service. Participants were more likely than non-participants to receive multiple services. The percentage of participants receiving two, three, four and five services were 18%, 14%, 8% and 3% respectively. The proportion of non-participants receiving two and three career services were 7% and 2% respectively.

² Subscripts indicate which category of services this service was placed in (planning services, preparing services, gaining services, maintain services, and support services) for logistic regression analysis as were discussed in the methods section on page 6.

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Other Services. Other services are those that support career and training services and can be provided any time in the process. The most common other services (Table 4) were transportation_{support}, other (unspecified)_{support}, maintenance_{support} and rehabilitation technology_{support}. Fifteen percent of program participants received transportation services to support travel and related expenses necessary to participate in VR services including public transportation, purchase and repair of vehicles and relocation expenses (State Vocational Rehabilitation Services Program, Applicable Definitions, 2021, para. 56). Next most common was other unspecified services, which includes miscellaneous support such as funds for occupational licenses, tools, equipment and startup stocks and supplies received by 11% of program participants (Rehabilitation Services Administration, 2017, p. 56). Ten percent of the program participants received maintenance_{support} services and a similar proportion received rehabilitation technology_{support}. Maintenance includes financial support for food, shelter and clothing beyond normal expenses which are necessary for participation in VR services (e.g., money for uniforms, interview clothing or food/shelter while receiving training). Rehabilitation technology includes the assistive technology devices and rehabilitation engineering/assistive technology services (State Vocational Rehabilitation Services Program, Applicable Definitions, 2021, paras. 34, 45). Thirty-two percent of participants and 7% of non-participants received one, two or three other services.

Other Service utilization rates were relatively consistent across all four SSA categories of SSA benefit receipt, except for rehabilitation technology. Participants that did not receive any SSA benefits were more likely to receive rehabilitation technology services (12%) than participants that received SSDI, SSI, or concurrent benefits (7%, 6% and 4% respectively).

Number of Services Received. Across all three previously discussed categories of services (Training, Career and Other), 30% of program participants did not receive any VR services, Table 4. Seventeen percent received one VR service and another 14% and 13% received a combination of two and three services respectively. A tenth of the participants received four services, then the number of people receiving between 5 and 31 services steadily declined as the number of services increased, accounting for the remaining 15% of the participants. These proportions were similar for all types of SSA participant beneficiaries. A received service includes services given in-house, purchased by an agency and comparable services given by another agency—this applies to all 31 VR services.

Non-participants may receive services to assist with determining eligibility or sometimes preparing to plan the IPE. Forty-four percent of non-participants received VR services, 32% received one and 12% received more than one.

Program Outcome Measurements

Exit Employment Outcomes and Exit Reason. Just over half (52%) of program participants exited unemployed, 42% achieved CIE and 5% exited with supported employment, Table 4. The proportion of CIE achievement was highest in participants without SSA benefits (53%) and SSDI participant beneficiaries (35%). Respectively, 27% and 25% of SSI participant beneficiaries and concurrent SSA participant beneficiaries achieved CIE. Supported employment achievement was highest for SSI participant beneficiaries (9%) and concurrent SSA participant beneficiaries (10%). Employment outcomes are the goals in the IPE and therefore only participants may have an employment outcome (State Vocational Rehabilitation Program, Assessment for Determining Eligibility and Priority for Services, 2021, para. (a)(4); State Vocational Rehabilitation Services Program, Applicable Definitions, 2021, para. 15). The only outcomes possible for a non-participant are the ones we created for research purposes based on

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exit type: no-outcome, exit ineligible/pre-eligible and no-outcome, exit pre-program. The latter accounted for nearly two-thirds of non-participants.

The three most common reasons for exit were achievement of CIE/supported employment, VR consumer lost interest in the program, and program lost ability to contact the consumer. There are specific codes for an additional fourteen reasons that must be ruled out before selecting “all other reasons” including; health/medical, institutionalization, called to active duty from reserves, foster care placement triggers moving out of the area, ineligibility, criminal offender, no employment impediment, too significant of a disability for the consumer to benefit, lack of resources to provide long-term extended services, transfer to another agency, extended employment and lack of availability for extended employment services. Those fourteen reasons combined accounted for a smaller proportion of participants and non-participants than the all other reasons category. The proportions of participants were similar for each exit reason, regardless of SSA benefits.

Changes in Primary Financial Support. There were increases in the percentages of participants and non-participants whose primary source of financial support was personal income between time of application and time of exit. At exit, the difference in those relying primarily on personal income at application versus exit increased from 25% to 48% for participants and from 17% to 19% for non-participants. Both, SSDI and SSI participant beneficiaries rose from 6% to 25%, concurrent SSA participant beneficiaries rose from 3% to 21% and participants without SSA benefits rose from 37% to 61%. The proportion of SSA beneficiaries relying on public support modestly decreased from approximately 80% to approximately 65% and reliance on family and friends nearly halved for participants regardless of SSA benefit status. For non-participants, the change in reliance on public support, family/friends and other sources was stable, with a change of 1% or less.

Changes in Public Financial Supports. Participation in the VR program was associated with small reductions in participation in several public services and very modest increases in SSDI benefits. The largest decrease in public support between application and exit is *unspecified other supports* decreasing from 10% to 6% for participants and decreasing from 11% to 8% for non-participants. Within the different SSA benefit groups, reliance on *unspecified other supports* decreased from 8% to 4% for SSDI participant beneficiaries, 9% to 5% for SSI participant beneficiaries, 11% to 6% for concurrent SSA beneficiaries and from 11% to 7% for participants without SSA benefits.

Overall, SSDI benefit receipt increased from 19% at the time of application to 21% at exit for participants and 16% at the time of application to 17% at exit for non-participants. It decreased from 100% to 88% for SSDI beneficiaries and increased from nobody to 8% and 4% respectively for SSI participant beneficiaries and participants without SSA support. There was an increase from 0% to 14% for concurrent SSA participant beneficiaries, indicating they changed their status from concurrent SSA to SSDI benefits alone. SSI benefits increased from 0% to 3% for SSDI participant beneficiaries, indicating they either stopped receiving their SSDI benefits, or more likely became recipients of concurrent SSA benefits. It also increased from 0% to 6% for concurrent SSA participant beneficiaries, indicating they changed from concurrent SSA benefits to only SSI benefits. SSI benefits were also added by 2% of participants without any SSA benefits at application. Overall, these changes indicated a decrease from 100% to 79% in SSI participant beneficiaries.

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Logistic Regression Models

Each of the four logistic regression models excluded cases with missing data for any of the variables entered in the modeling tool. This resulted in approximately 85% of the cases used in the analysis for each type SSA participant beneficiary and 88% of the cases in the model of participants without SSA benefits. The simplest model, with only a constant, had overall prediction accuracy (i.e., correctly predicting CIE and No CIE) ranging from 66% for the participants without SSA benefits to 75% for SSI participant beneficiaries. The most complex models had 16 steps (concurrent SSA participant beneficiaries) to 21 steps (participants without SSA benefits). Overall prediction accuracy ranged from 71% for SSDI participant beneficiaries and participants without SSA benefits to 78% for SSI participant beneficiaries. Two models were chosen for each group: a simple model and a more complex model. The simple model had three to five steps and the complex model had 10-13 steps. Each model was chosen after considering prediction accuracy and the Cox & Snell Pseudo R-square approximation. The models and variable details are presented in Table 5.

In the simple models, employment status at program entry was significant for all four models, as was whether or not the individual had a supported employment goal. Depending on the category of SSA benefits used, the odds of achieving CIE were 3.6 to 5.7 times higher for those who entered the program with CIE than those who entered the program without CIE. The odds of achieving CIE were 0.17 to 0.29 times lower for people with supported employment goals than those without supported employment goals.

Primary impairment was significant for SSI participant beneficiaries and participants without SSA benefits, although not all impairments were significant. Notably, SSI participant beneficiaries with hearing impairments who communicate auditorily were 5.1 to 7.8 time more likely to exit with CIE than those with psychosocial impairments (the most prevalent impairment). Participants without SSA benefits with cognitive impairments had 1.2 to 1.3 times higher odds of exiting with CIE than those with psychosocial impairments.

Services for maintaining employment were significant for all three types of SSA participant beneficiary (associated with increased odds of exiting were CIE 1.8 to 3.0 times higher compared to those who did not require a maintaining employment service), but not for participants without SSA benefits. Services for gaining employment were significantly associated with CIE for SSI participant beneficiaries and concurrent SSA participant beneficiaries. The odds of exiting with CIE were 1.4 to 2.0 times more likely if the participant received services for gaining employment than if they did not require that type of service. Support services were only significantly associated for participants without SSA support. The odds of exiting with CIE increased between 1.6 and 1.7 times for participants without SSA benefits who received support services, compared to those who did not require support services. These simple models had 71% prediction accuracy for SSDI participant beneficiaries, 77% for SSI participant beneficiaries, 77% for concurrent SSA participant beneficiaries and 68% for participants without SSA supports. The Cox and Snell Pseudo R-square approximations were 0.114, 0.158, 0.094 and 0.213 respectively. Note, while this prediction accuracy helped determine the strength of the model, only association and not causation could be determined from the models.

The more complex models increased prediction accuracy from 77% to 78% for SSI participant beneficiaries and from 68% to 71% for participants without SSA benefits and did not change for the other groups of participants. These were the same prediction accuracies as the most complex models derived. The Cox and Snell Pseudo R-square approximations were 0.139,

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0.173, 0.114 and 0.237 for participant beneficiaries of SSDI, SSI, concurrent SSA and no SSA benefits respectively, which was fairly similar to the values for the most complex models derived. The variables that were significantly associated with exiting with CIE for all models includes adding primary impairment, the number of employment barriers and the primary source of income at application. Significance of disability was important for SSDI participant beneficiaries, SSI participant beneficiaries and participants without SSA benefits. Referral source was important for SSI and concurrent SSA participant beneficiaries and participants without SSA benefits. For SSI participant beneficiaries, the education level at program entry and being from a region which contributed less participants to VR than to the labor force was also important. Age was only significant for concurrent SSA participant beneficiaries. The fact that adding all these variables had such a small difference in the accuracy of the model indicates there may be collinearity between many of the personal characteristic covariates, even though they were controlled as much as possible in the model development.

The complex models also included more of the services. All four models found services to gain employment, maintain employment and support the VR process to be significantly associated with increased odds of exiting with CIE compared to not requiring them. Planning services were significant for all participants except for SSDI participant beneficiaries. For SSI and concurrent SSA participant beneficiaries, and participants without SSA benefits, requiring planning services was associated with reduced odds of exiting with CIE compared to not requiring them. This may be because these participants had a more complex set of needs, so the path to their goal was not clear without the services. Services to prepare for employment were also significant for all participants except for SSDI participant beneficiaries and were associated with increased odds of exiting with CIE compared to not receiving them.

SSDI Participant Beneficiaries. A simple three variable model provided 71% overall prediction accuracy and geometric mean squared improvement per observation of 0.114 (i.e., Cox & Snell Pseudo R-square). The most complex model had the same overall prediction accuracy and $R_{CS}^2 = 0.141$. The strongest association was found when a participant did not have a supported employment goal. As noted earlier, nearly 20% of SSDI participant beneficiaries had a supported employment goal. Participants without a supported employment goal had 4.8 to 5.9 times greater likelihood of exiting with CIE than those who had a supported employment goal. CIE at program entry also had a strong association with CIE at program end. SSDI participant beneficiaries who were employed with CIE at program entry had a 3.9 to 4.5 times higher chance of exiting with CIE than those who did not have CIE at program entry. The smallest impact was from services to maintain employment. Participants who required these services had 2.6 to 3.0 times higher odds of exiting with CIE than those who did not require services for maintaining employment.

SSI Participant Beneficiaries. A five variable model provided 77% overall prediction accuracy and $R_{CS}^2 = 0.158$. The most complex model had a 78% overall prediction accuracy and $R_{CS}^2 = 0.178$. The strongest predictor of exiting with CIE was whether or not the participant had CIE at program entry. SSI participant beneficiaries with CIE at program entry had 4.6 to 5.7 times higher odds of exiting with CIE than those who did not. Supported employment goals were also strong; people without a supported employment goal had 3.5 to 4.3 times higher odds of exiting with CIE than participants with a supported employment goal. Approximately 30% of SSI participants had supported employment goals. Most impairments had small associations with CIE, increasing odds of exiting with CIE by 1.04 to 1.7 times compared to participants with psychosocial impairments. However, sensory impairments had a stronger association with CIE

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at exit. Hearing impairments were strongest—having a hearing impairment increased the odds of exiting with CIE by 5.1 to 7.8 times for those who communicate auditorily and 3.8 to 9.4 times for those who communicate visually, compared to participants with psychosocial impairments. *Other hearing impairments* (Odds Ratio: 2.5-11.3), and Deaf participants [both those who communicate visually (Odds Ratio: 1.7-2.5) and those who communicate auditorily (Odds Ratio: 1.9-3.6)] increased odds of CIE achievement compared to psychosocial impairments. Visual impairments also had slightly stronger effect, increasing odds up to 1.9 times compared to psychosocial impairments. Impairments without significant effects include: no impairment, deaf-blindness, expressive/receptive communication impairments, manipulation/dexterity impairments, other orthopedic impairments and other mental impairments. Both services for gaining and maintaining employment were associated with improved odds of exiting with CIE. Participants requiring services for maintaining employment had 2.0 to 2.4 times higher odds of exiting with CIE than those who did not. Participants requiring services to gain employment had 1.4 to 1.6 times higher odds of exiting with CIE than those who did not.

Concurrent SSA Participant Beneficiaries. A four variable model provided 77% overall prediction accuracy and $R_{CS}^2 = 0.094$. The most complex model had the same overall prediction accuracy and $R_{CS}^2 = 0.116$. The strongest variables associated with exiting with CIE were whether or not the participant had CIE at program entry and if they had a supported employment goal. Concurrent SSA participant beneficiaries with CIE at program entry had 3.2 to 4.9 times higher odds of exiting with CIE than those who did not. Not having a supported employment goal was associated with 3.5 to 5.0 times higher odds of exiting with CIE compared to those who had a supported employment goal. Both services for gaining and maintaining employment were associated with improved odds of exiting with CIE. Participants requiring services for maintaining employment had 1.8 to 2.5 times higher odds of exiting with CIE than those who did not. Participants requiring services to gain employment had 1.5 to 2.0 times higher odds of exiting with CIE than those who did not.

Participants Without SSA Benefits. A four variable model provided 68% overall prediction accuracy and $R_{CS}^2 = 0.213$. The most complex model had a 71% overall prediction accuracy and $R_{CS}^2 = 0.238$. Again, the strongest associations were with employment at program entry and supported employment goals. Participants with CIE at program entry were 3.6 to 3.9 times more likely to exit with CIE compared to those who did not have CIE at the start of the VR process. The participants without a supported employment goal were 3.5 to 3.9 times more likely to exit with CIE than participants with a supported employment goal. Primary impairment had varied associations. Deaf-blindness, mobility impairments, manipulation/dexterity impairments, mobility and manipulation dexterity impairments, and other mental impairments were all insignificant when compared to psychosocial impairments. People with hearing impairments had the highest odds of exiting with CIE (Odds Ratio: 3.8-6.0) compared to people with psychosocial impairments. People who communicate auditorily with hearing loss (Odds Ratio: 5.1-5.8), or profound deafness (Odds Ratio: 3.3-4.4) also had higher odds of exiting with CIE compared to psychosocial impairments relative to other impairments. Most other impairments had odds ratios between 1.1 and 2.5. Last, the only significant service was support services, which were not significant for any of the SSA beneficiary models. Participants who required support services had 1.6 to 1.7 times higher likelihood of exiting with CIE than those who did not.

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Discussion

The chronicled characteristics of the VR population provide context to understand the practical implications of the logistic regression models. It is interesting that while there were some large racial disparities in some of the SSA beneficiary populations relative to the labor force, this factor did not have a significant association with exiting with CIE. Similarly, the low education levels of VR participants relative to the labor force did not have a significant association except in the more complex models for SSI participant beneficiaries and participants without SSA benefits. Those complex models only accounted for an additional 1% and 3% improvement in overall prediction accuracy.

It is not surprising that having CIE at program entry was one of the biggest predictors of exiting with CIE. Holding a job, indicates a baseline of employment skills, particularly soft-skills that will be useful to the VR process. Intuitively, individuals starting with CIE have goals to maintain or improve their employment, whereas the unemployed participant's primary goal would be to gain employment. The services needed to maintain or improve employment would likely be different from the services to gain employment. It is anticipated that a participant trying to gain employment would consider planning, preparation, gaining and support services, whereas someone trying to maintain their employment might benefit from maintaining employment services more than gaining employment services. A person trying to improve their employment may benefit from services from any or all of the five categories. It is suspected that as the participant's purpose for enrolling in VR changes, the services required will change. To investigate this, future models should split the participant populations into those who were and were not employed at the start of the process.

Supported employment goals can be attributed to nearly 30% of SSI and concurrent SSA participant beneficiaries and approximately 20% of SSDI participant beneficiaries. Almost a fifth of participants with a supported employment goal achieved CIE instead of supported employment. With presence of a supported employment goal also having a strong association with exiting with CIE, this again bears consideration in future models. While it would be valuable to understand what makes the difference between the employment outcomes for people with supported employment goals, achieving that goal is outside the domain of predicting CIE at exit. Future studies could target participants with supported employment goals specifically. Future models aimed at predicting CIE at exit should consider excluding participants with supported employment goals.

All of the models indicated one or more types of services were significantly associated with CIE at exit. Why didn't approximately 30% of all types of participants receive any services, and is that important? It is unclear whether it is the service itself that is associated with CIE or hidden factors not in the dataset that warrant the need for the service. However, these results provide a launch pad for future investigation. Specifically, services for maintaining employment and their association with program outcomes should be investigated more thoroughly for all SSA beneficiaries. Understanding this relationship for both those employed and unemployed at program entry will be particularly useful and might result in implications for improving VR service provision to SSA beneficiaries. Similarly, services to gain employment and their association with program outcomes should be investigated more thoroughly for SSI and concurrent SSA participant beneficiaries.

Overall, there were some promising program outcomes. All SSA beneficiary groups had an increase in the proportion of participants with CIE at application and exit. SSDI participant

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beneficiaries increased the CIE rate from 13% to 35%, SSI participant beneficiaries increased from 10% to 27%, concurrent SSA beneficiaries increased from 7% to 25% and participants without SSA benefits increased from 31% to 53%. While some might consider these proportions low, the overall gains in CIE are very promising. All of the groups also had increases in proportions of participants relying on personal income after going through the program as well. Hopefully, future investigations into some of the relationships between services and outcomes can lead to program recommendations that could further improve these increases.

Conclusion

Perhaps the most important limitation of this study is that the dataset that was used was designed for program evaluation instead of for research, and therefore isn't structured to facilitate a large-scale longitudinal analysis of VR services and program outcomes among VR consumers. Additionally, the heterogeneity of the VR population made it challenging to develop strong models to explain associations between the variables and CIE. However, the data provided information that allowed us to carefully chronicle the VR user population, services provided and employment outcomes. We also were able to investigate the characteristics in more detail for different types of SSA beneficiaries. Future research could focus on studying the relationships between these variables in order to develop hypotheses about which services are more likely to result in successful program outcomes for different VR consumer SSA beneficiaries.

The results of this study also suggest that the VR consumers, especially within each of the different SSA beneficiary groups, are not representative of the U.S. workforce in terms of many demographic characteristics. Future research could further explore how services provided to VR consumers differ across demographic variables to better understand who is using VR services and potentially identify areas where services are not being deployed equitably to the VR consumer population.

Finally, this study suggests that there are large percentages of VR consumers (participants and non-participants) who are unable to achieve successful employment outcomes by the end of their program; this happens with all categories of SSA benefit receipt. If the goal is to improve program outcomes, research should focus on program retention for both participants and non-participants and the relationships between VR services and program outcomes. With 31 types of services offered, there are opportunities to strategically overcome barriers associated with reduced likelihood of both finishing the program and exiting with CIE.

While these areas of future research can all be applied to the VR population as a whole, the disparities within each of the SSA beneficiary groups imply an opportunity for the SSA to collaborate with VR to encourage research in these three areas in ways that can help both programs simultaneously. As the knowledgebase in these areas develops, there are opportunities for the SSA and VR programs to pilot initiatives together that mutually improve achievement of employment and termination of SSA benefits.

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Tables

Table 1: Description of the five large groups of VR services and which services have been placed in each group

| Service Group | Descriptions | Included Services |
|---------------|--|--|
| Planning | Planning for employment including developing the specific job goal in employment for the IPE, knowing desired wages and work hours and what services are needed to prepare and reach the goal. | <ul style="list-style-type: none"> • Assessment • Benefits counseling • Information and referral |
| Preparation | Preparation for employment are services that are designed to bridge the skill and ability gap to be a competitive candidate for the job goal | <ul style="list-style-type: none"> • Graduate college university training • Four-year college university training • Diagnosis and treatment of impairments <i>could also go in planning, but the type of treatment is geared toward employment, so the employment goal assists with the treatment plan</i> • Job readiness training • Basic academic remedial and literacy training • Disability related skills training • Junior/community college training • Occupational/vocational training • Technical assistance services • Randolph-Sheppard entrepreneurial training • Miscellaneous training |
| Gaining | Gaining employment services are those that are designed for the person to find and get hired at a job that matches their skills, abilities and goals | <ul style="list-style-type: none"> • Job search assistance • Customized training • Registered apprentice training • Job placement assistance • Customized employment services |
| Maintaining | Maintaining employment services are those that are designed for the individual to succeed at their job that they have | <ul style="list-style-type: none"> • Supported employment services • On the job training • Extended services • Short-term job supports |
| Support | Support services are those that could be provided to support the individual to succeed in any of the four other service categories | <ul style="list-style-type: none"> • Transportation • Interpreter services • Other services • Rehabilitation technology • Reader services • Personal assistance services • Vocational rehabilitation counseling and guidance <i>more appropriate here than for preparing because the counselor may help the individual advocate for themselves while having employment or provide counseling on challenges within receipt of services and other guidance throughout the process</i> • Maintenance services |

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Table 2: Frequency proportion of consumer characteristic for all VR populations and the U.S. Labor Force

| Characteristic | 2019 Estimated U.S. Labor Force | Applicants | Non-Participants | All VR Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|--|---------------------------------|------------|------------------|---------------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Sex | | | | | | | | |
| Female | 47% | 46% | 46% | 47% | 46% | 46% | 50% | 47% |
| Male | 53% | 53% | 54% | 53% | 54% | 54% | 50% | 53% |
| Unknown | | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Race | | | | | | | | |
| White | 77%* | 70% | 66% | 72% | 71% | 60% | 64% | 75% |
| Black | 13%* | 26% | 30% | 25% | 27% | 37% | 34% | 22% |
| Asian | 6%* | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| American Indian/Alaska Native/Indigenous | 1%* | 3% | 3% | 2% | 2% | 3% | 3% | 2% |
| Hawaiian | <1%* | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Number of Races | | | | | | | | |
| No Race Identified | n/a | 1% | 2% | 1% | 1% | 0% | 1% | 1% |
| One Race Identified | n/a | 97% | 95% | 97% | 97% | 97% | 97% | 97% |
| Two or More Races | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% |
| Ethnicity | | | | | | | | |
| Hispanic | 18% | 11% | 10% | 11% | 8% | 11% | 7% | 12% |
| Education Level at Program Entry* | | | | | | | | |
| Didn't Complete High School or Equivalent | 6% | 18% | 31% | 18% | 15% | 25% | 22% | 17% |
| High School Diploma | 25% | 40% | 18% | 40% | 40% | 39% | 41% | 40% |
| GED | n/a | 9% | 25% | 9% | 8% | 10% | 10% | 9% |
| Certificate of Completion of IEP | n/a | 2% | 1% | 2% | 2% | 6% | 6% | 1% |
| Post-Secondary Ed Certificate (non-degree) | n/a | 4% | 4% | 4% | 4% | 2% | 3% | 4% |
| At least 1 year of Post-Secondary Ed | 15% | 11% | 8% | 11% | 12% | 9% | 10% | 10% |
| Associate's Degree | 11% | 6% | 7% | 6% | 6% | 3% | 4% | 6% |
| Bachelor's Degree | 27% | 8% | 6% | 8% | 9% | 4% | 4% | 9% |
| Higher than Bachelor's | 16% | 3% | 2% | 3% | 3% | 1% | 1% | 4% |

Note: * Education Level at Program Entry is compared to the 2020 Labor Force. The 2020 U.S. labor force provided statistics for high school diploma and equivalent (this is assumed to include GED, Certificate of Completion of IEP and some post-secondary education without a degree).

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Table 3: Percent difference in state's contribution to VR from their contribution to the U.S. Labor Force. Positive values indicate that a state's proportion of the VR population is higher than the state's proportion of the U.S. working population. Negative numbers indicate that the state's proportion of the VR population is lower than the state's proportion of the U.S. working population.

| State/Territory | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|-----------------|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Montana | 10% | -100% | -58% | -46% | -69% | -45% | -61% |
| Georgia | -46% | -34% | -49% | -58% | -20% | -49% | -52% |
| Tennessee | -42% | -36% | -43% | -15% | 4% | -19% | -63% |
| Arizona | -31% | 6% | -41% | -37% | 2% | -38% | -51% |
| New York | -23% | 36% | -40% | -40% | -30% | -34% | -42% |
| California | -42% | -52% | -39% | -54% | -5% | -33% | -42% |
| Colorado | -31% | -1% | -39% | -42% | -28% | -48% | -40% |
| Hawaii | -27% | 7% | -36% | -32% | -8% | -38% | -44% |
| Illinois | -39% | -50% | -35% | 4% | -37% | -2% | -49% |
| Nevada | -36% | -52% | -31% | -15% | -40% | -12% | -35% |
| Louisiana | -4% | 71% | -26% | -38% | -29% | -64% | -19% |
| Maryland | -17% | 2% | -22% | 4% | 16% | 12% | -40% |
| Florida | -20% | -18% | -20% | -5% | -37% | -8% | -22% |
| Oklahoma | -22% | -28% | -19% | -25% | 18% | -67% | -22% |
| Washington | -7% | 24% | -16% | 29% | -14% | -23% | -29% |
| Iowa | -17% | -38% | -10% | 36% | -18% | 58% | -27% |
| Kentucky | 17% | 103% | -7% | -23% | -11% | -16% | 0% |
| Virginia | -14% | -37% | -6% | 41% | -12% | 64% | -24% |
| New Jersey | -1% | 17% | -5% | -1% | 8% | -47% | -7% |
| Connecticut | -15% | -55% | -3% | 20% | -8% | -17% | -8% |
| Massachusetts | -9% | -37% | 1% | 48% | 30% | -5% | -20% |
| Minnesota | -12% | -57% | 2% | 84% | -11% | 60% | -25% |
| Utah | 25% | 103% | 3% | -1% | -33% | 7% | 12% |
| New Hampshire | 2% | -5% | 5% | 57% | 10% | -18% | -10% |
| Indiana | 3% | -5% | 6% | 23% | -5% | 22% | 1% |
| Texas | -4% | -37% | 7% | -30% | -50% | -68% | 36% |
| Rhode Island | 15% | 27% | 13% | 29% | 86% | 68% | -11% |
| Kansas | 20% | 37% | 16% | 69% | -7% | 79% | 1% |
| North Carolina | 43% | 99% | 28% | 32% | 45% | 54% | 22% |
| Ohio | 27% | 22% | 30% | 91% | 27% | 146% | 4% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| State/Territory | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|----------------------|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Pennsylvania | 22% | -4% | 30% | -6% | 13% | -34% | 49% |
| West Virginia | 37% | 45% | 36% | 14% | 8% | -21% | 52% |
| Arkansas | 34% | 11% | 42% | -23% | 80% | -15% | 58% |
| North Dakota | 39% | 28% | 44% | 11% | -1% | 173% | 55% |
| Alabama | 38% | 6% | 49% | 58% | 56% | 62% | 43% |
| Michigan | 42% | 24% | 49% | 7% | -16% | 27% | 76% |
| New Mexico | 64% | 100% | 55% | 51% | 71% | 23% | 54% |
| Alaska | 70% | 121% | 56% | 3% | 26% | 5% | 82% |
| Delaware | 46% | 13% | 56% | 91% | 35% | 15% | 53% |
| Nebraska | 91% | -97% | 59% | 20% | -19% | -50% | 94% |
| Wisconsin | 55% | 40% | 61% | 103% | 91% | 171% | 35% |
| Maine | 74% | 101% | 67% | 98% | 149% | 206% | 31% |
| Oregon | 75% | 62% | 80% | 82% | 131% | 131% | 66% |
| Missouri | 80% | 43% | 92% | 82% | 150% | 54% | 85% |
| South Carolina | 111% | 129% | 108% | -14% | -57% | -23% | 189% |
| Idaho | 140% | 185% | 129% | 64% | 40% | 152% | 167% |
| South Dakota | 124% | 88% | 137% | 253% | 74% | 374% | 99% |
| Wyoming | 177% | 213% | 169% | 70% | 248% | 107% | 187% |
| Mississippi | 150% | 75% | 173% | -54% | 6% | -67% | 294% |
| District of Columbia | 161% | 114% | 178% | 101% | 519% | 168% | 129% |
| Vermont | 353% | 209% | 399% | 375% | 321% | 587% | 411% |

Note: Percent difference from labor force was calculated as:

$$\frac{VR \text{ Contribution} - Labor \text{ Force Contribution}}{Labor \text{ Force Contribution}}$$

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

Table 4: Frequency proportion of consumer characteristic for all VR populations

| Characteristic | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|--|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Employment at Program Entry | | | | | | | |
| Not - Other | 71% | 95% | 70% | 81% | 84% | 87% | 63% |
| CIE | 23% | 4% | 24% | 13% | 10% | 7% | 31% |
| Not - Other Student | 2% | 0% | 2% | 2% | 2% | 2% | 2% |
| Not-Trainee, Intern, Volunteer | 2% | 0% | 2% | 2% | 1% | 1% | 2% |
| Has a Supported Employment Goal | 13% | 0% | 14% | 19% | 29% | 31% | 8% |
| Primary Impairment | | | | | | | |
| Psychosocial Impair. | 31% | 34% | 30% | 28% | 31% | 34% | 30% |
| Cognitive Impair. | 14% | 12% | 14% | 16% | 25% | 26% | 10% |
| Other Mental Impair. | 9% | 10% | 9% | 7% | 8% | 8% | 10% |
| Hearing Loss (Communicates Auditorily) | 9% | 2% | 10% | 2% | 4% | 1% | 15% |
| Other Physical Impair. | 8% | 9% | 8% | 10% | 7% | 7% | 7% |
| Mobility Orthopedic/Neuro Impair. | 5% | 6% | 5% | 7% | 4% | 4% | 4% |
| General Physical Debilitation | 5% | 5% | 4% | 6% | 4% | 4% | 4% |
| Other Orthopedic Impair. | 3% | 4% | 3% | 4% | 2% | 2% | 3% |
| Mobility and Manipulation Dexterity | 3% | 4% | 3% | 5% | 3% | 3% | 3% |
| Blindness | 3% | 1% | 3% | 5% | 4% | 3% | 2% |
| Other Visual Imp. | 3% | 1% | 3% | 3% | 2% | 2% | 3% |
| No Impairment | 2% | 9% | 0% | 0% | 0% | 0% | 0% |
| Deaf (Communicates Visually) | 2% | 1% | 2% | 4% | 3% | 2% | 1% |
| Manipulation/Dexterity Ortho/Neuro Impair. | 2% | 2% | 2% | 2% | 1% | 1% | 2% |
| Deaf (Communicates Auditorily) | 1% | 1% | 1% | 1% | 1% | 1% | 2% |
| Respiratory Impair. | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Hearing Loss (Communicates Visually) | 1% | 0% | 1% | 0% | 1% | 0% | 1% |
| Other Hearing | 1% | 0% | 1% | 0% | 0% | 0% | 1% |
| Communication-Expressive/Receptive | 1% | 0% | 1% | 1% | 1% | 1% | 1% |
| Deaf-Blind | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Comorbid Impairment | 54% | 56% | 54% | 60% | 58% | 64% | 50% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Characteristic | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|--|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Significance of Disability | | | | | | | |
| Most Significant | 49% | 46% | 50% | 60% | 66% | 69% | 42% |
| Significant | 43% | 40% | 43% | 40% | 33% | 31% | 47% |
| Not Significant | 8% | 15% | 7% | 0% | 1% | 0% | 11% |
| Referral Source | | | | | | | |
| Self-referral | 38% | 40% | 38% | 47% | 40% | 41% | 34% |
| Other Sources | 12% | 12% | 12% | 10% | 11% | 9% | 12% |
| Medical Health Provider (Public or Private) | 10% | 6% | 11% | 5% | 6% | 3% | 15% |
| Mental Health Provider (Public or Private) | 8% | 8% | 8% | 7% | 9% | 11% | 8% |
| Community Rehabilitation Programs | 6% | 5% | 7% | 6% | 9% | 9% | 6% |
| Family/Friends | 6% | 7% | 6% | 5% | 5% | 4% | 7% |
| Other One-stop Partner | 3% | 4% | 2% | 2% | 2% | 2% | 3% |
| Intellectual and Developmental Disabilities Providers | 2% | 2% | 2% | 4% | 6% | 8% | 1% |
| Other State Agencies | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| State Department of Correction/Juvenile Justice | 2% | 3% | 2% | 0% | 1% | 1% | 3% |
| Social Security Administration (Disability Determination Service or District office) | 2% | 2% | 2% | 4% | 2% | 3% | 1% |
| Welfare Agency (State or local government) | 1% | 1% | 1% | 1% | 2% | 2% | 1% |
| Educational Institutions (Postsecondary) | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Consumer Organizations or Advocacy Groups | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Other VR State Agencies | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Department of Labor Employment and Training Service Programs for Adults, Dislocated Workers, and Youth | 1% | 1% | 1% | 1% | 1% | 0% | 1% |
| Worker's Compensation | 1% | 1% | 1% | 0% | 0% | 0% | 1% |
| Employers | 1% | 0% | 0% | 0% | 0% | 0% | 1% |
| Veteran's Benefits Administration (which includes VA Vocational Rehabilitation) | 0% | 0% | 0% | 0% | 0% | 0% | 1% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Referral Source (cont'd) | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|---|-------------------|-------------------------|---------------------|---------------------------------------|--------------------------------------|-------------------------------------|------------------------|
| Educational Institutions (Elementary/Secondary) | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Faith Based Organizations | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Wagner-Peyser Employment Service Program | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| American Indian VR Services Program | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Centers for Independent Living | 0% | 0% | 0% | 0% | 0% | 1% | 0% |
| Public Housing Authority | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Veteran's Health Administration (the VA hospital system, as well as the VA transitional living, transitional employment, and compensated work therapy programs) | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| 14(c) Certificate Holders | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Child Protective Services | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Extended Employment Providers | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Temporary Assistance for Needy Families (TANF) | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adult Education and Literacy Programs | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Other WIOA-funded Programs including Job Corps, Youth Build, Indian and Native Americans, and Migrant and Seasonal Farmworker Programs | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Living Arrangement | | | | | | | |
| Private Residence | 87% | 84% | 88% | 92% | 86% | 86% | 87% |
| Community Rehabilitation Facility /Group Home | 4% | 4% | 3% | 4% | 8% | 9% | 2% |
| Homeless/shelter | 3% | 4% | 2% | 1% | 2% | 2% | 3% |
| Other | 2% | 2% | 2% | 2% | 2% | 3% | 2% |
| Halfway House | 2% | 2% | 2% | 0% | 1% | 1% | 2% |
| Substance Abuse Treat Center | 2% | 2% | 2% | 0% | 1% | 0% | 3% |
| Rehab Facility | 1% | 1% | 1% | 0% | 0% | 0% | 1% |
| Correctional Facility | 1% | 1% | 1% | 0% | 0% | 0% | 1% |
| Mental Health Facility | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Nursing Home | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Characteristic | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|--|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Employment Barrier | | | | | | | |
| Low Income | 51% | 7% | 52% | 57% | 70% | 75% | 45% |
| Long-Term Unemployed | 36% | 5% | 36% | 44% | 49% | 54% | 30% |
| Ex-Offender | 15% | 2% | 15% | 10% | 14% | 14% | 17% |
| Basic Skill Deficient/ Low Literacy | 14% | 1% | 14% | 16% | 27% | 28% | 10% |
| English Language Learner | 9% | 1% | 9% | 8% | 10% | 10% | 9% |
| Single Parent | 8% | 1% | 8% | 6% | 7% | 8% | 9% |
| Cultural Barriers | 7% | 0% | 7% | 6% | 9% | 7% | 6% |
| Homeless | 5% | 0% | 5% | 4% | 5% | 4% | 6% |
| Displaced Homemaker | 3% | 0% | 3% | 2% | 3% | 3% | 3% |
| Foster Care/Aged Out | 2% | 0% | 3% | 2% | 4% | 4% | 2% |
| Will Exhaust TANF within 2yrs | 2% | 0% | 2% | 1% | 2% | 2% | 2% |
| Migrant/Seasonal Farmworker/Dependent of One | 1% | 0% | 1% | 1% | 1% | 1% | 1% |
| Number of Employment Barriers | | | | | | | |
| 0 | 32% | 90% | 30% | 24% | 18% | 12% | 36% |
| 1 | 23% | 4% | 23% | 27% | 20% | 20% | 23% |
| 2 | 23% | 3% | 23% | 29% | 29% | 33% | 20% |
| 3 | 14% | 2% | 14% | 14% | 21% | 22% | 13% |
| 4 | 6% | 1% | 6% | 5% | 9% | 9% | 5% |
| 5 | 2% | 0% | 2% | 2% | 3% | 3% | 2% |
| 6 | 1% | 0% | 1% | 1% | 2% | 1% | 1% |
| Training Services | | | | | | | |
| Job Readiness Training | 4% | 0% | 5% | 5% | 6% | 6% | 5% |
| Occupational/Vocational Training | 3% | 0% | 3% | 3% | 3% | 3% | 3% |
| Miscellaneous Training | 2% | 0% | 2% | 3% | 3% | 3% | 2% |
| Disability Related Skills Training | 1% | 0% | 1% | 2% | 1% | 1% | 1% |
| Junior/Community College | 1% | 0% | 1% | 1% | 1% | 1% | 1% |
| 4yr College / University | 1% | 0% | 1% | 1% | 1% | 1% | 1% |
| On the Job Training | 1% | 0% | 1% | 1% | 1% | 1% | 1% |
| Graduate College/University | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Customized Training | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Basic Academic Remedial or Literacy Tr. | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Registered Apprenticeship | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Randolph-Sheppard Entrepreneurial Program | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Characteristic | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|------------------------------------|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Number of Training Services | | | | | | | |
| 0 | 88% | 100% | 90% | 87% | 87% | 87% | 88% |
| 1 | 11% | 0% | 9% | 11% | 12% | 12% | 11% |
| 2 | 1% | 0% | 1% | 2% | 2% | 1% | 1% |
| 3 | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Career Services | | | | | | | |
| VR Counseling & Guidance | 43% | 11% | 52% | 50% | 50% | 47% | 53% |
| Assessment | 27% | 33% | 26% | 25% | 25% | 26% | 26% |
| Job Placement Assistance | 15% | 0% | 19% | 23% | 22% | 23% | 17% |
| Diagnosis and Treatment of Impair. | 14% | 6% | 17% | 14% | 12% | 12% | 19% |
| Job Search Assistance | 13% | 1% | 17% | 20% | 20% | 23% | 15% |
| Information and Referral | 7% | 3% | 8% | 8% | 7% | 8% | 8% |
| Short Term Job Supports | 6% | 0% | 8% | 10% | 9% | 10% | 7% |
| Benefits Counseling | 4% | 1% | 5% | 11% | 8% | 11% | 2% |
| Supported Employment Services | 4% | 0% | 6% | 8% | 12% | 12% | 3% |
| Customized Employment | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Extended Services | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Career Services | | | | | | | |
| 0 | 38% | 57% | 33% | 32% | 32% | 32% | 34% |
| 1 | 25% | 34% | 23% | 21% | 22% | 20% | 24% |
| 2 | 15% | 7% | 18% | 17% | 17% | 17% | 18% |
| 3 | 11% | 2% | 14% | 14% | 14% | 14% | 13% |
| 4 | 6% | 0% | 8% | 9% | 9% | 10% | 8% |
| 5 | 3% | 0% | 3% | 4% | 4% | 5% | 3% |
| 6 | 1% | 0% | 1% | 2% | 1% | 2% | 1% |
| Other Services | | | | | | | |
| Transportation | 13% | 3% | 15% | 15% | 18% | 19% | 14% |
| Other Services | 9% | 2% | 11% | 10% | 11% | 11% | 11% |
| Maintenance | 9% | 1% | 11% | 11% | 12% | 13% | 10% |
| Rehabilitation Technology | 8% | 0% | 10% | 7% | 6% | 4% | 12% |
| Interpreter Services | 1% | 0% | 1% | 2% | 1% | 1% | 1% |
| Technical Assistance Services | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Personal Assistance Services | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Reader Services | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Characteristic | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|---|------------|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Other Services | | | | | | | |
| 0 | 74% | 94% | 68% | 70% | 68% | 69% | 67% |
| 1 | 17% | 6% | 21% | 19% | 19% | 19% | 22% |
| 2 | 7% | 1% | 8% | 8% | 8% | 9% | 8% |
| 3 | 2% | 0% | 3% | 3% | 3% | 3% | 3% |
| 4 | 0% | 0% | 0% | 1% | 1% | 0% | 0% |
| Number of VR Services | | | | | | | |
| 0 | 35% | 56% | 30% | 29% | 29% | 29% | 30% |
| 1 | 21% | 32% | 17% | 16% | 17% | 16% | 18% |
| 2 | 13% | 9% | 14% | 14% | 14% | 13% | 15% |
| 3 | 11% | 3% | 13% | 13% | 13% | 13% | 13% |
| 4 | 8% | 1% | 10% | 11% | 10% | 11% | 10% |
| 5 | 6% | 0% | 7% | 8% | 7% | 8% | 7% |
| 6 | 3% | 0% | 4% | 5% | 5% | 5% | 4% |
| 7 | 2% | 0% | 2% | 3% | 3% | 3% | 2% |
| More than 7 | 2% | 0% | 2% | 2% | 2% | 3% | 2% |
| Exit Employment Outcome | | | | | | | |
| No Outcome (in program) | 38% | 0% | 53% | 56% | 63% | 65% | 43% |
| CIE | 35% | 0% | 42% | 35% | 27% | 25% | 53% |
| Supported Employment | 4% | 0% | 5% | 7% | 9% | 10% | 3% |
| Self-Employment | 1% | 0% | 1% | 1% | 1% | 0% | 2% |
| No Outcome (exit pre-program) | 15% | 64% | 0% | 0% | 0% | 0% | 0% |
| No Outcome (exit pre-eligible/ineligible) | 8% | 36% | 0% | 0% | 0% | 0% | 0% |
| BEP | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| State BEP | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Short-term Supported Employment | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Uncompensated Employment | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Exit Reason | | | | | | | |
| Achieved CIE | 39% | 0% | 51% | 44% | 37% | 36% | 57% |
| No longer interested | 26% | 41% | 21% | 27% | 28% | 31% | 17% |
| Unable to contact | 20% | 28% | 17% | 16% | 20% | 19% | 16% |
| All Other Reasons | 9% | 18% | 7% | 8% | 9% | 9% | 6% |
| Health/Medical | 1% | 2% | 1% | 2% | 1% | 2% | 1% |
| VR unneeded | 1% | 3% | 1% | 1% | 1% | 1% | 1% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Exit Reason (cont'd) | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|--|-------------------|-------------------------|---------------------|---------------------------------------|--------------------------------------|-------------------------------------|------------------------|
| Death | 1% | 0% | 1% | 1% | 1% | 1% | 1% |
| Criminal Offender | 1% | 1% | 1% | 0% | 0% | 0% | 1% |
| Disability too significant to benefit | 1% | 1% | 0% | 1% | 1% | 1% | 0% |
| Transferred to another agency | 1% | 1% | 1% | 1% | 1% | 1% | 0% |
| No disability | 1% | 2% | 0% | | 0% | | 0% |
| No employment impediment | 0% | 2% | 0% | 0% | 0% | 0% | 0% |
| Institutionalized | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Extended employment | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Ineligible | 0% | 1% | 0% | 0% | 0% | 0% | 0% |
| Reserves Active Duty | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Foster Care | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| No long-term source for extended services | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Extended services unavailable | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Application Primary Source of Financial Support | | | | | | | |
| Personal Income | 23% | 17% | 25% | 6% | 6% | 3% | 37% |
| Public Support | 38% | 41% | 37% | 81% | 80% | 84% | 11% |
| Family/Friends | 42% | 35% | 32% | 11% | 13% | 11% | 43% |
| Other Sources | 7% | 8% | 6% | 2% | 2% | 2% | 9% |
| Exit Primary Source of Financial Support | | | | | | | |
| Personal Income | 42% | 19% | 48% | 25% | 25% | 21% | 61% |
| Public Support | 32% | 40% | 30% | 67% | 65% | 71% | 9% |
| Family/Friends | 21% | 34% | 17% | 5% | 7% | 5% | 24% |
| Other Sources | 6% | 8% | 5% | 2% | 3% | 2% | 6% |
| Public Support at Application | | | | | | | |
| SSDI | 19% | 16% | 19% | 100% | 0 | 0% | 0% |
| SSI | 14% | 14% | 13% | 0% | 100% | 0% | 0% |
| Other Support | 10% | 11% | 10% | 8% | 9% | 11% | 11% |
| General Assistance | 5% | 5% | 5% | 2% | 3% | 4% | 6% |
| Concurrent SSA Supports | 4% | 4% | 4% | 0% | 0% | 100% | 0% |
| TANF | 3% | 4% | 3% | 1% | 3% | 4% | 3% |
| Veteran's Disability | 1% | 1% | 1% | 2% | 0% | 1% | 1% |
| Worker's Compensation | 1% | 1% | 1% | 0% | 0% | 0% | 1% |
| Unemployment Insurance | 1% | 1% | 1% | 0% | 0% | 0% | 1% |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| Characteristic | Applicants | Non-Participants | Participants | SSDI Participant Beneficiaries | SSI Participant Beneficiaries | Concurrent SSA Beneficiaries | No SSA Benefits |
|-------------------------------|---|------------------|--------------|--------------------------------|-------------------------------|------------------------------|-----------------|
| Public Support at Exit | | | | | | | |
| SSDI | 21% | 17% | 21% | 88% | 8% | 14% | 4% |
| SSI | 13% | 14% | 13% | 3% | 79% | 6% | 2% |
| Other Support | 6% | 8% | 6% | 4% | 5% | 5% | 7% |
| General Assistance | 2% | 3% | 2% | 1% | 1% | 2% | 2% |
| Concurrent SSA Supports | 4% | 4% | 4% | 2% | 3% | 74% | 0% |
| TANF | 2% | 2% | 1% | 1% | 1% | 1% | 2% |
| Veteran's Disability | 1% | 1% | 1% | 1% | 0% | 0% | 1% |
| Worker's Compensation | 1% | 1% | 0% | 0% | 0% | 0% | 1% |
| Unemployment Insurance | considered an "Other Support" if received at exit | | | | | | |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

Table 5: Logistic Regression Models

| Simple Models | | | | | | | | | |
|---|--|---|--|-----------------|--------------|-----------------------|------------------|---------------|------------------|
| Model Fit | | SSDI Only | | SSI Only | | Concurrent SSA | | No SSA | |
| Total Cases | | 68024 | | 47138 | | 14339 | | 221733 | |
| % In Analysis | | 85% | | 86% | | 86% | | 88% | |
| % Missing | | 15% | | 14% | | 14% | | 12% | |
| # Steps in Model | | 3 | | 5 | | 4 | | 4 | |
| Cox & Snell R Square | | 0.114 | | 0.158 | | 0.094 | | 0.213 | |
| % CIE Correctly Predicted with Model | | 90% | | 95% | | 94% | | 74% | |
| % No CIE Correctly Predicted with Model | | 38% | | 32% | | 27% | | 64% | |
| Overall Percentage Correctly Predicted with Model | | 71% | | 77% | | 77% | | 68% | |
| 99.5% Odds Interval | | | | | | | | | |
| Variables Significant in Model ($\alpha = 0.005$) | | Compared to | | Lower | Upper | Lower | Upper | Lower | Upper |
| Constant | | | | 0.50 | | 0.246 | | 0.284 | 0.472 |
| CIE at Program Entry | | No CIE (Unemployed) at Program Entry | | 3.88 | 4.50 | 4.607 | 5.729 | 3.237 | 4.866 |
| SE Goal on Current IPE | | No SE Goal | | 0.17 | 0.21 | 0.234 | 0.287 | 0.201 | 0.283 |
| Maintain Services | | Not requiring and not receiving Maintain Services | | 2.55 | 2.96 | 1.995 | 2.436 | 1.794 | 2.542 |
| Gain Services | | Not requiring Gain Services | | | | 1.388 | 1.625 | 1.531 | 2.002 |
| Support Services | | Not requiring Support Services | | | | | | | 1.637 |
| No Impairment | | Psychosocial Impairments | | | | 0.000 | | | 1.461 |
| Blind | | Psychosocial Impairments | | | | 1.111 | 1.570 | | 1.209 |
| Other VI | | Psychosocial Impairments | | | | 1.171 | 1.915 | | 1.672 |
| Deaf-Visual | | Psychosocial Impairments | | | | 1.694 | 2.494 | | 1.926 |
| Deaf--Auditory | | Psychosocial Impairments | | | | 1.909 | 3.601 | | 3.286 |
| HOH-Visual | | Psychosocial Impairments | | | | 3.759 | 9.370 | | 2.919 |
| HOH-Auditory | | Psychosocial Impairments | | | | 5.172 | 7.793 | | 5.107 |
| Other Hearing | | Psychosocial Impairments | | | | 2.452 | 11.345 | | 3.831 |
| Deaf-Blind | | Psychosocial Impairments | | | | 0.437 | 2.868 | | 0.653 |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| | | | | | | | | | |
|---|--------------------------------------|------------------|--------------|------------------|------------------|-----------------------|--------------|------------------|------------------|
| Communication - Expr/Receptive | Psychosocial Impairments | | | 0.924 | 2.295 | | | 1.716 | 2.489 |
| Mobility | Psychosocial Impairments | | | 1.066 | 1.498 | | | 0.973 | 1.118 |
| Manipulation/Dexterity | Psychosocial Impairments | | | 0.938 | 1.751 | | | 0.990 | 1.237 |
| Mobility and Manipulation/Dexterity | Psychosocial Impairments | | | 1.035 | 1.558 | | | 0.995 | 1.188 |
| Other Orthopedic | Psychosocial Impairments | | | 1.064 | 1.689 | | | 1.050 | 1.225 |
| Respiratory | Psychosocial Impairments | | | 0.762 | 1.762 | | | 1.314 | 1.812 |
| General Phys. Debilitation | Psychosocial Impairments | | | 1.118 | 1.607 | | | 1.257 | 1.443 |
| Other Physical | Psychosocial Impairments | | | 1.130 | 1.488 | | | 1.294 | 1.447 |
| Cognitive | Psychosocial Impairments | | | 1.039 | 1.269 | | | 1.215 | 1.343 |
| Other Mental | Psychosocial Impairments | | | 0.888 | 1.167 | | | 0.949 | 1.048 |
| Complex Models | | | | | | | | | |
| Model Fit | | SSDI Only | | SSI Only | | Concurrent SSA | | No SSA | |
| Total Cases | | 68024 | | 47138 | | 14339 | | 221733 | |
| % In Analysis | | 85% | | 86% | | 86% | | 88% | |
| % Missing | | 15% | | 14% | | 14% | | 12% | |
| # Steps in Model | | 10 | | 15 | | 12 | | 13 | |
| Cox & Snell R Square | | 0.139 | | 0.173 | | 0.114 | | 0.237 | |
| % CIE Correctly Predicted with Model | | 89% | | 95% | | 96% | | 74% | |
| % No CIE Correctly Predicted with Model | | 39% | | 33% | | 21% | | 69% | |
| Overall Percentage Correctly Predicted with Model | | 71% | | 78% | | 77% | | 71% | |
| 99.5% Odds Interval | | | | | | | | | |
| Variables Significant in Model ($\alpha = 0.005$) | Compared to | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper |
| Constant | | 0.347 | | 0.287 | | 0.524 | | 0.483 | |
| CIE at Program Entry | No CIE (Unemployed) at Program Entry | 3.202 | 3.761 | 3.640 | 4.589 | 2.782 | 4.270 | 2.585 | 2.813 |
| SE Goal on Current IPE | No SE Goal | 0.208 | 0.251 | 0.273 | 0.339 | 0.203 | 0.294 | 0.235 | 0.269 |
| Maintain Services | Not requiring Maintain Services | 1.970 | 2.322 | 1.905 | 2.335 | 1.721 | 2.456 | 1.749 | 1.957 |
| Gain Services | Not requiring Gain Services | 1.437 | 1.626 | 1.298 | 1.542 | 1.463 | 1.976 | 1.177 | 1.271 |
| Support Services | Not requiring Support Services | 1.224 | 1.372 | 1.281 | 1.506 | 1.120 | 1.497 | 1.503 | 1.608 |
| Planning Services | Not requiring Planning Services | | | 0.771 | 0.912 | 0.709 | 0.952 | 0.845 | 0.909 |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| | | | | | | | | | |
|---|--|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Prepare Services | Not requiring Prepare Services | | | 1.015 | 1.212 | 1.004 | 1.379 | 1.233 | 1.329 |
| No Impairment | Psychosocial Impairments | 0.016 | 62.237 | 0.000 | | | | 1.431 | 2.296 |
| Blind | Psychosocial Impairments | 0.949 | 1.224 | 0.919 | 1.318 | 0.465 | 1.016 | 1.080 | 1.332 |
| Other VI | Psychosocial Impairments | 1.034 | 1.452 | 0.970 | 1.617 | 0.785 | 2.020 | 1.325 | 1.583 |
| Deaf-Visual | Psychosocial Impairments | 1.805 | 2.397 | 1.556 | 2.321 | 1.262 | 2.677 | 1.774 | 2.360 |
| Deaf--Auditory | Psychosocial Impairments | 1.309 | 2.295 | 1.569 | 3.052 | 1.276 | 6.067 | 2.667 | 3.590 |
| HOH-Visual | Psychosocial Impairments | 1.571 | 3.442 | 3.199 | 8.122 | 0.588 | 3.237 | 2.331 | 3.474 |
| HOH-Auditory | Psychosocial Impairments | 2.095 | 3.059 | 3.327 | 5.166 | 1.310 | 4.113 | 3.695 | 4.232 |
| Other Hearing | Psychosocial Impairments | 1.083 | 4.287 | 1.628 | 7.962 | 0.065 | 9.589 | 2.879 | 4.544 |
| Deaf-Blind | Psychosocial Impairments | 0.675 | 2.141 | 0.338 | 2.438 | 0.288 | 2.966 | 0.569 | 1.433 |
| Communication - Expr/Receptive | Psychosocial Impairments | 0.827 | 1.725 | 0.862 | 2.194 | 0.607 | 3.124 | 1.445 | 2.120 |
| Mobility | Psychosocial Impairments | 0.899 | 1.126 | 0.967 | 1.370 | 0.869 | 1.614 | 0.865 | 0.999 |
| Manipulation/Dexterity | Psychosocial Impairments | 0.883 | 1.294 | 0.850 | 1.606 | 0.863 | 2.569 | 0.884 | 1.111 |
| Mobility and Manipulation/Dexterity | Psychosocial Impairments | 1.026 | 1.335 | 0.939 | 1.425 | 0.867 | 1.804 | 0.892 | 1.072 |
| Other Orthopedic | Psychosocial Impairments | 0.983 | 1.303 | 0.975 | 1.562 | 0.726 | 1.739 | 0.917 | 1.076 |
| Respiratory | Psychosocial Impairments | 0.740 | 1.295 | 0.674 | 1.576 | 0.601 | 2.942 | 1.088 | 1.517 |
| General Phys. Debilitation | Psychosocial Impairments | 1.092 | 1.380 | 1.022 | 1.480 | 1.169 | 2.213 | 1.077 | 1.243 |
| Other Physical | Psychosocial Impairments | 0.920 | 1.113 | 1.028 | 1.363 | 0.965 | 1.600 | 1.097 | 1.233 |
| Cognitive | Psychosocial Impairments | 1.083 | 1.293 | 1.111 | 1.367 | 1.105 | 1.581 | 1.158 | 1.285 |
| Other Mental | Psychosocial Impairments | 0.985 | 1.231 | 0.899 | 1.184 | 0.716 | 1.181 | 0.971 | 1.076 |
| One Employment Barrier | No Employment Barriers | 0.776 | 0.898 | 0.765 | 0.955 | 0.612 | 0.950 | 0.762 | 0.827 |
| Two Employment Barriers | No Employment Barriers | 0.668 | 0.776 | 0.625 | 0.772 | 0.570 | 0.858 | 0.637 | 0.694 |
| Three Employment Barriers | No Employment Barriers | 0.653 | 0.784 | 0.579 | 0.732 | 0.535 | 0.833 | 0.605 | 0.669 |
| More than 3 Employment Barriers | No Employment Barriers | 0.589 | 0.747 | 0.544 | 0.708 | 0.461 | 0.759 | 0.598 | 0.671 |
| Personal Income (Primary Source at App) | Public Support (Primary Source at App) | 1.183 | 1.505 | 1.376 | 1.891 | 1.142 | 2.239 | 1.601 | 1.792 |
| Family/Friends (Primary Source at App) | Public Support (Primary Source at App) | 1.028 | 1.208 | 0.986 | 1.211 | 0.809 | 1.201 | 1.128 | 1.243 |
| Other Sources (Primary Source at App) | Public Support (Primary Source at App) | 0.730 | 1.066 | 0.700 | 1.182 | 0.357 | 1.045 | 1.120 | 1.274 |
| Not Significant Disability | Significant Disability | 0.702 | 2.160 | 1.289 | 3.156 | | | 1.627 | 1.840 |

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

| | | | | | | | | | |
|--|--|-------|-------|------------------|------------------|------------------|------------------|------------------|------------------|
| Most Significant Disability | Significant Disability | 0.800 | 0.896 | 0.733 | 0.857 | | | 0.850 | 0.907 |
| Private Residence | Other Residence | 1.194 | 1.476 | 1.056 | 1.322 | | | | |
| HS Diploma or Equivalent | Didn't Finish High School | | | 1.005 | 1.193 | | | 0.980 | 1.063 |
| Some Secondary Education - No Degree | Didn't Finish High School | | | 0.932 | 1.195 | | | 0.954 | 1.058 |
| Secondary Education Degree | Didn't Finish High School | | | 1.268 | 1.655 | | | 1.150 | 1.273 |
| Medical Health Provider Referral | Self-Referral | | | 0.872 | 1.216 | 0.457 | 0.999 | 1.154 | 1.280 |
| Mental Health Provider Referral | Self-Referral | | | 0.810 | 1.067 | 0.634 | 1.002 | 0.838 | 0.940 |
| Community Rehabilitation Program Referral | Self-Referral | | | 0.780 | 1.032 | 0.666 | 1.104 | 1.109 | 1.260 |
| Family/Friends Referral | Self-Referral | | | 0.942 | 1.278 | 0.725 | 1.311 | 0.982 | 1.115 |
| All Other Sources Referral | Self-Referral | | | 0.792 | 0.939 | 0.684 | 0.926 | 0.924 | 0.994 |
| Region Contributing Less Proportion of Participants to VR than to US Labor Force (less than -25% of Labor Force contribution) | Region Contributing Similar Proportions to VR and to Labor Force (25% Less to 25% More Than Labor Force) | | | 0.782 | 0.933 | | | | |
| Region Contributing Greater Proportion of Participants to VR than to US Labor Force (more than +25% of Labor Force contribution) | Region Contributing Similar Proportions to VR and to Labor Force (25% Less to 25% More Than Labor Force) | | | 0.892 | 1.068 | | | | |
| Age at application | continuous (range 26-80) | | | | | 0.984 | 0.996 | | |

Note: Categories that are insignificant at $\alpha = 0.005$ are ~~italicized and struck out~~ to indicate their insignificance. Blank cells indicate variables not included in the model.

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

Figures

Vocational Rehabilitation Process Timeline

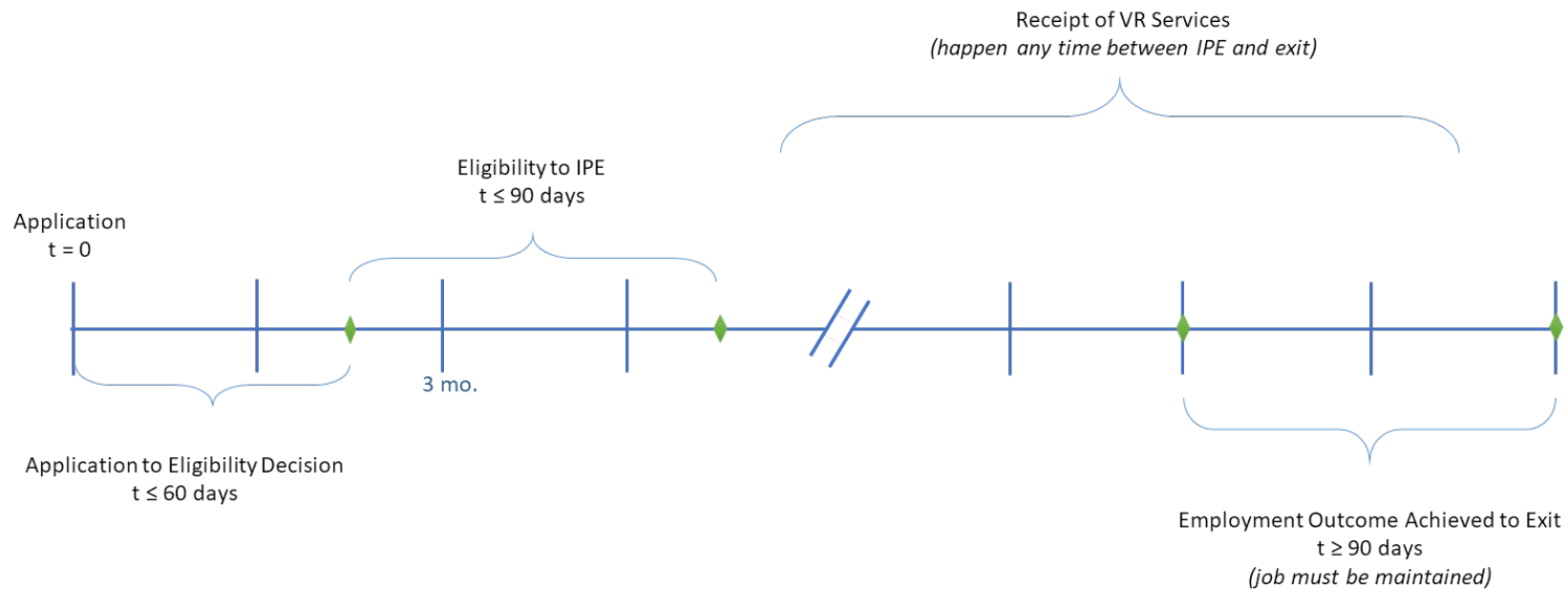


Figure 1: Conceptual timeline of the VR Process with process milestones and achievement benchmarks

Vocational Rehabilitation Program Outcomes for SSA Benefit Recipients

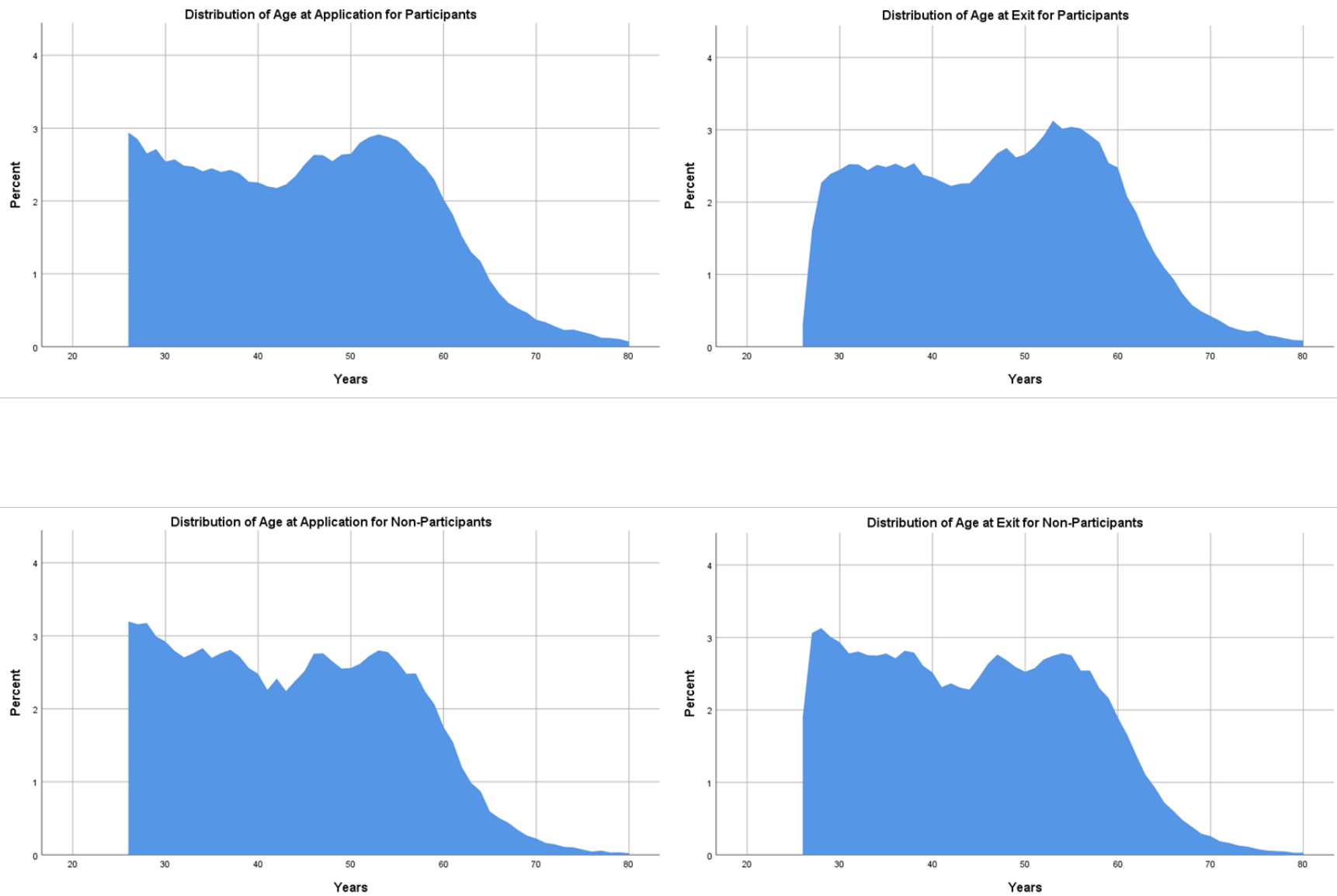


Figure 2: Distribution of age at application and exit for participants and non-participants