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THE USE OF VA DISABILITY BENEFITS AND SOCIAL SECURITY DISABILITY INSURANCE AMONG VETERANS

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Abstract

Although there is substantial functional limitation and disability among veterans of all ages, relatively little is known about veterans' uptake of Department of Veterans Affairs (VA) Disability Benefits and Social Security Disability Insurance (DI). This project uses data from the 1992, 1993, 1996, 2001, 2004, and 2008 *Survey of Income and Program Participation* (SIPP) to examine veterans' participation in VA and DI programs. The results indicate that the majority of veterans do not receive VA or DI benefits, but veterans' use of these programs has been increasing over time. A higher percentage of veterans receive VA compensation only, which ranges from 4.9 percent in 1992 to 13.2 percent in 2008, than DI compensation only, which ranges from 2.9 percent in 1992 to 6.7 percent in 2008. Furthermore, the rate of joint participation in these two programs is low, ranging from less than 1 percent in 1992 to 3.6 percent in 2008. Veterans experience relatively few within-panel transitions between VA and DI programs. Overall, the likelihood of any disability program use is higher among veterans who served during multiple time periods, are older, black or Hispanic, currently married, and have less than a high school education. Among users, the likelihood of any VA use in contrast to only DI use is higher among veterans who served since 1990, are younger, Hispanic, highly educated, and currently married. Among users, variation in the likelihood of any DI use relative to only VA use generally mirrors variation in the likelihood of any VA use, although there are differences in associations with race/ethnicity, education, and marital status.

Introduction

The majority of research on U.S. disability programs examines Social Security Disability Insurance (DI), which enrolled 7.8 million disabled adult beneficiaries in 2009 (Social Security Administration 2010). Much less research has been conducted on the Veterans' Administration (VA) Disability Compensation program (Bound and Burkhauser 1999; Duggan, Rosenheck, and Singleton 2010), even though it is the third largest disability program in the U.S., with nearly 3.4 million beneficiaries in 2009 (Social Security Administration 2010). Enrollment and expenditures in both disability programs have grown in recent years. However, to our knowledge, no study has examined how receipt of VA disability compensation benefits is related to participation in DI or the extent to which participation in these two programs varies across cohorts who served in the military during different historical time periods.

Examining participation in these programs is important at least in part because recent research using data from the *Survey of Income and Program Participation* (SIPP) indicates that disabled veteran households are at a distinct disadvantage in terms of economic well-being relative non-disabled veteran households (Heflin, Wilmoth, and London 2012; London, Heflin, and Wilmoth 2011). For example, 13.19 percent of disabled veteran households have incomes below the federal poverty threshold compared to 5.51 percent of non-disabled veteran households. Furthermore, net of income-to-needs and demographic controls, disabled-veteran households are significantly more likely to experience material hardship (i.e., home, medical, bill-paying, and food insufficiency) than non-disabled veteran households. Similarly, one recent study that used the 2007 *American Community Survey* (ACS) documents that disabled veterans had substantially lower income relative to persons without disabilities and nonveterans who reported the same number of disabilities (Fulton, Belote, Brooks, and Coppola 2009). Coleman-Jensen and Nord (2013: 24) used *Current Population Survey* (CPS) data to examine food insecurity among households with working-aged adults with disabilities and conclude that: "any protective effect of veteran status for those with disabilities is not statistically significant once the characteristics of the disability and other household characteristics were taken into account." Taken together, the results of these studies raise important questions about veterans' utilization, as well as the adequacy, of veteran and civilian programs that aim to mitigate the economic consequences of disability among working-aged adults.

In this paper, we use data from six panels of the SIPP to examine the relationship between veterans' receipt of VA service-connected disability compensation and participation in DI. There are three primary research aims:

1) To identify levels of participation in VA disability compensation and DI benefit programs within six SIPP panels.
2) To compare patterns of VA and DI benefit use across military service cohorts defined by period of service, taking into account age and time period effects.
3) To identify which groups of veterans are more likely to participate in VA and DI.

Background and Previous Research

Disability in the Veteran Population

Veterans are a sizeable and policy-relevant demographic group in the United States. In 2010, approximately 22 million Americans were veterans (U.S. Census Bureau 2010). The population of veterans includes 9.1 million people aged 65 years and older, 9.0 million people aged 45 to 54 years, and 4.1 million people aged 18 to 44 years, which represents 23 percent, 11 percent, and 4 percent of the total population in these age groups, respectively (Wilmoth and London 2011). The majority of older veterans are men; however, in the past few decades, women's participation in the military has increased substantially. In 2010, nearly 1.6 million American women were veterans (U.S. Census Bureau 2010). The majority (82.5 percent) of veterans served during wartime: 9.5 percent during World War II, 11.8 percent during the Korean War, 34.9 percent during the Vietnam War, 15.8 percent during the Gulf War (8/1990 to 8/2001), and 10.5 percent during the more-recent Gulf War operations (9/2001 or later) (U.S. Census Bureau 2010).

All persons who serve in the military are at risk of service-related, disabling injuries, and the high rate of injury among military personnel has been a long-standing concern among military and civilian health policy makers and researchers (Lincoln, Smith, and Baker 2000; Sleet and Baldwin 2010; Sleet, Jones, and Amoroso 2000; Songer and LaPorte 2000).[1] For

[1] For example, Songer and LaPorte (2000: 33) summarize the findings from their study as follows: "Disability generally appears to be significant across the services, ranging from 10 to 30 events per 1000 personnel per year depending on the service. Evidence from the data reviewed indicates that 30 percent to 50 percent of disability cases may be due to injury. The leading conditions that bring about board reviews and lifetime compensation appear to be lower back and knee conditions, both commonly thought to be due to injuries. Total direct costs of compensation reached $1.5 billion for fiscal year 1990."

women in particular, disabilities related to military sexual assault are a specific concern (Frayne et al. 2006; Goldzweig et al. 2006; Suris et al 2004; Turner et al. 2004). Wartime service carries substantially higher risks of disability due to the physical and psychological traumas that are often associated with combat exposure (MacLean 2010, 2013). Overall, recent research using the 2000 Census documents substantial levels of functional limitation and disability among both male and female veterans relative to nonveterans (Wilmoth, London, and Parker 2011). Considering six specific functional limitations and disabilities, 30.10 percent of veteran women and 29.75 percent of veteran men have some limitation/disability (compared to 23.80 percent and 21.65 percent of nonveteran women and men, respectively). Findings based on research using data from the Health and Retirement Study (HRS) to examine men's later-life trajectories in number of conditions, activity of daily living limitations, and self-rated health indicate that, compared to nonveterans, veterans are in better health around retirement age, but experience steeper age-related health declines (Wilmoth, London, and Parker 2010). Later-life health declines are particularly notable among war service veterans, who constitute the majority of the veterans in the cohorts represented in the HRS. These results suggest that military service has a long-lasting impact on the health and disability status of veterans, particularly for those who served during wartime, which may shape use of public disability compensation programs offered through the Department of Veterans Affairs and the Social Security Administration.

Disability Programs and Eligibility

According to online information provided by the Department of Veterans Affairs (2013), "disability compensation is a monthly tax-free benefit paid to Veterans who are at least 10 percent disabled because of injuries or diseases that were incurred in or aggravated during active duty, active duty for training, or inactive duty training." Service-connected disability ratings are assigned on a 100 percent scale (in 10 percent increments) depending on the nature and severity of the physical or mental condition. To obtain a service-connected disability rating, the veteran must provide medical evidence of current disability and demonstrate it is related to an injury, disease, or event that occurred during military service. Generally, service-connected disability ratings are assigned at the time the service member transitions from active-duty to veteran status, although some veterans with service-connected disability ratings remain on active-duty and policy changes sometimes allow veterans to qualify for VA disability much later (Duggan,

Rosenheck, and Singleton 2010). For those who qualify, the compensation rate is determined on the basis of the veteran's service-connected disability rating and dependent status. In 2013, the monthly compensation rates for veterans without dependents range from $129 for those with a 10 percent rating to $2,816 for those with a 100 percent rating. Veterans with a rating of 30 percent or higher are entitled to additional payments for dependents, depending on the severity of the disability and the number/type of dependents. For example, the monthly compensation in 2013 for a veteran with a 50 percent rating and no dependents is $810 per month, whereas the compensation for a married veteran with one child and a 50 percent disability rating is $946. The comparable monthly compensation amounts increase to $2,816 and $3,088, respectively, for a veteran with a 100 percent rating (Department of Veterans Affairs 2012).

Regardless of service-connected disability rating or level of VA disability compensation, military personnel and veterans may also apply for compensation under the civilian Social Security Disability Insurance program. However, having a service-connected disability rating does not guarantee that a veteran will qualify for DI benefits given differences between the programs in eligibility criteria. In order to quality for DI benefits, veterans must meet the standard program requirements, which include two earnings tests related to "recent work" and "duration of work." Work activity includes employment in both the civilian and military sectors. Like other applicants, veterans must also provide evidence of a work-limiting "medical condition that is expected to last at least one year or result in death" (Social Security Administration 2012a). The requirement that DI recipients have a long-term work-limiting disability limits program receipt to persons with severe disabilities.

It is possible for military personnel and veterans to be "dually eligible" for VA disability and DI programs (Street and Hoffman 2013). Military pay counts toward the credits earned for Social Security programs, which are used to determine the earnings tests. It is also considered Social Security covered earnings, which are used to calculate the average lifetime earnings that determine benefits. Wounded warriors who remain on active-duty status and are receiving military pay can qualify for DI under certain circumstances (Social Security Administration 2012b). Recently, the Social Security Administration established several programs designed to reach out to wounded warriors, including: expediting the processing of DI claims for military personnel and veterans who became disabled while on active-duty service on or after October 1, 2001; electronically accessing VA medical records for veterans applying for DI; placing Social

Security employees in major military medical centers and assigning liaisons to work with the VA's Transition Patient Advocates; providing traumatic brain injury identification training to Social Security disability examiners; and developing additional print and online informational materials for wounded warriors (Social Security Administration 2007, 2010). Such programs and services have not consistently been in place in other historical periods, if they have been in place at all. Consequently, DI use may be lower among veterans from older cohorts.

Program participation varies in relation to historical time period (due to policy changes regarding eligibility and overall expansion of the programs), the age of the veteran, and the military service experiences of cohorts that served during different conflicts, wars, and periods of peace. For example, both VA disability compensation and DI enrollment has increased over time. However, since 2001, enrollment in the VA disability compensation program increased more rapidly among Vietnam-era veterans due to a policy change that allows veterans who served in the Vietnam Theater to qualify for disability compensation on the basis of diabetes (Duggan, Rosenheck, and Singleton 2010). Given this, reliance on VA disability compensation may be higher among Vietnam-era veterans compared to veterans who served during other time periods. Compared to older veterans, use of DI might be lower among younger veterans who do not have the work credits to qualify for DI despite their military service. Given improvements in military medicine that have increased the survival of wounded warriors, these younger veterans who are returning from Iraq and Afghanistan might also be able to establish their service-connected disability differently than veterans of earlier conflicts, which might enhance their utilization of VA disability benefits. Therefore, in considering the use of VA disability and DI programs among veterans, it is important to take into account the service period cohort, the historical time period of the observation, and the age of the respondent.

Data and Methods

Data

This research uses data from the 1992, 1993, 1996, 2001, 2004, and 2008 panels of the *Survey of Income and Program Participation* (SIPP), a nationally representative household survey conducted in the United States by the U.S. Census Bureau. Each interview in the panel consists of a core interview, with standard questions on demographics, labor force participation, and income, and a topical module interview, with questions on topics that change from one

interview (wave) to the next. Interviews (waves) are conducted every four months. When survey weights are used, results from analyses of SIPP data are representative of the civilian (nonveteran and veteran), non-institutionalized population of the United States. We focus on using the core files in all 9 waves for the 1992 panel (36 months total), all 9 waves for the 1993 panel (36 months total), all 9 waves for 2001 panel (36 months total), all 12 waves for 2004 panel (48 months total), and 10 waves for the 2008 panel (40 months total). Respondent and proxy interviews are retained in the analytic sample.

We identify veterans on the basis of a self- or proxy-report of ever having served on active duty. The analysis is restricted to the sample respondents who are veterans under the age of 65 years. Veterans over the age of 65 years are not included in the sample because individuals are transferred off of DI and onto Social Security retirement benefits when they reach full retirement age. For the majority of older subjects in the SIPP, full retirement age is age 65 years. We also only include respondents who are present in the first wave of the panel and at least one additional panel wave, who have a completed interview, and whose age and period of service align. Overall, the analytic sample equals 24,801.

Dependent Variables

The core SIPP files contain information on sources of income, which is used to determine receipt of VA service-related disability payments and Social Security Disability Insurance. This information is used to identify whether subjects do not receive VA or DI benefits, receive VA benefits only, receive DI benefits only, or receive VA and DI benefits. With this information, we code a dichotomous variable of any use (0=no, 1=yes) among all veterans that can be used to determine how veterans who receive VA and/or DI benefits are different from veterans who do not receive these benefits. Then, among users, we use two dichotomous variables: VA use (0=DI use only, 1=any VA use) and DI use (0=VA use only, 1=any DI use). Restricting the analysis to users enables us to focus on the portion of the sample that has met the stringent criteria for participating in these programs and identify whether the characteristics of veterans who receive VA are different from those of veterans who receive DI benefits.

Period of Service

It is important to consider period of military service because rates of service-connected disability vary across cohorts due to the nature of particular conflicts. Also, the VA takes into account period of service in determining service-connected disability ratings for particular conditions (Department of Veteran Affairs 2013). We are able to distinguish between veterans who served: before 1964 (i.e., during World War II, the Korean War, and the Cold War eras); from 1964 and 1974 (i.e., Vietnam War era); from 1975 to 1990 (i.e., early years of the All-Volunteer Force (AVF); after 1990 (i.e., Gulf War era); and during multiple periods. Active-duty personnel and veterans who do not provide era of service information (N=269) are excluded when the sample descriptive statistics are generated and the multivariate models are estimated.

Sociodemographic Control Variables

In multivariate analyses of program use, we include sociodemographic control variables. In addition to period of service, we control for age category, survey year, and a set of demographic characteristics that include: gender (1=female); race/ethnicity (White and other = reference, black, Hispanic, and Asian); Education (less than high school = reference, high school graduate, some college, and college graduate); and marital status (currently married = reference, never married, divorced or separated, and widowed).

Analytic Plan

The first part of the analysis examines within-panel levels of receipt of VA disability compensation and DI benefits among veterans. Then, we combine the six panels to examine within-panel transitions in receipt. Given that researchers have noted that SIPP respondents are more likely to report transitions between interview waves and less likely to report transitions between months within waves, resulting in "seam bias" (Young 1988), we carefully compared transition estimates based on monthly versus tri-annual data. Our supplemental analysis provided evidence of seam bias.[2] Therefore, we examine tri-annual, rather than monthly,

[2] For example, in 2008 panel, we inspected the monthly reports of receipt for DI and VA disability. Given that one-fourth of the sample begins in each month, the seam was observed in different months for different sets of cases. But, it was still very visible in the raw data. We also calculated receipt of benefits based on monthly and quarterly reports. We found that we do pick up more receipt with the monthly data, but not much more. A lot of potential inconsistencies in reporting are also evident in the monthly data, which makes us suspect that the monthly data may over-estimate transitions.

transitions, with each individual observation contributing up to 9 or 12 data points. Unfortunately, because we find that transitions over the observation period are rare, we are unable to estimate multivariate models predicting transitions.

In the final part of the analysis, we focus on estimating a two-part logistic regression model predicting: (1) any receipt of VA disability compensation or DI benefit use (0=no use, 1=any use); and (2) among users, use of VA disability compensation (0=DI use only, 1= VA use) and DI benefit use (0=VA use only, 1=DI use). Note that the VA use and DI use models are not exact mirror images of one another because the small number respondents who use both VA and DI benefits are assigned to the 1 category of the dependent variables in both the VA use and the DI use models.

All multivariate models control for period of service, age, survey year, and demographic characteristics. Standard errors are corrected for the violation of the independence of error terms assumption.

Results

Sample Characteristics

As shown in Table 1, among the veterans in the analytic sample: 18.6 percent served before August 1964; 39.9 percent served between August 1964 and April 1974; 19 percent served between May 1975 and July 1990; 8.9 percent served since August 1990 (reference group); and 13.6 percent served during multiple time periods. The distribution of age categories across the subjects is fairly even, with: 13.4 percent aged 18-34 years; 20.2 percent aged 25-44 years; 21.7 percent aged 45-54 years; and 34.7 percent aged 55-64 years. Approximately 13.6 percent of the sample is from the 1992 panel, 13.2 percent is from the 1993 panel, 20.1 percent is from the 1996 panel, 14.8 percent is from the 2001 panel, 20.1 percent is from the 2004 panel, and 16.9 percent is from the 2008 panel. The majority of the veterans are male (<7 percent are

Supplemental Table 1: Observed transitions in receipt based on monthly and quarterly reports in the 2008 SIPP panel.

	Monthly Reports	Quarterly Reports
Veterans	853	795
DI	515	468
Both	178	169

female), White/other (85 percent), college educated (39 percent have some college and 23 percent are college graduates), and currently married (77 percent).

Prevalence of Benefit Receipt

Table 2 presents the percentage of veterans receiving no disability benefit, VA only, DI only, and both VA and DI, by SIPP panel. The majority of veterans do not receive VA or DI benefits, but veterans' use of these programs has been increasing over time. The percentage not receiving benefits systematically declines from a high of 91.5 percent in 1992 to a low of 76.6 percent in 2008. A higher percentage of veterans receive VA compensation only, which ranges from 4.9 percent in 1992 to 13.2 percent in 2008, than DI compensation only, which ranges from 2.9 percent in 1992 to 6.7 percent in 2008. Furthermore, the rate of joint participation in these two programs is low, ranging from less than 1 percent in 1992 to 3.6 percent in 2008.[3]

Transitions in Benefit Receipt

Tables 3 presents within-panel transitions in receipt of VA disability compensation and DI benefits among veterans pooled across the six SIPP panels. Overall, veterans experience relatively few within-panel transitions between VA and DI programs. Of the 21,993 veterans who did not receive benefits at the beginning of a SIPP panel, 21,422 continued to not receive any benefits, 241 transitioned onto VA, 300 transitioned onto DI, and 30 transitioned onto VA and DI during the subsequent panel waves. Among the 1,700 veterans who started a SIPP panel receiving only VA benefits, 848 continued to receive those benefits throughout the subsequent panel waves, 796 transitioned off VA benefits, 7 transitioned from VA benefits to DI only benefits, and 49 transitioned into using both VA and DI benefits. Of the 879 veterans who started a SIPP panel receiving only DI benefits, 405 continued to receive those benefits on

[3] Ideally, we would like to be able to distinguish patterns of VA and DI benefit receipt by whether veterans did or did not have a service-connected disability. However, those data are not available in more-recent SIPP panels. We did conduct a supplemental analysis based on the 1992 and 1993 panels, which asked veterans to report their service-connected disability ratings if applicable (not shown in table). A small percentage of the veterans (approximately 6 percent in both panels) report having a service-connected disability rating and the majority of those (approximately 80 percent in both panels) report a rating of 50 percent or less. Among the veterans who are using VA and/or DI benefits, the majority report a service-connected disability rating (60 percent in 1992 and 54 percent in 1993). Use of only VA benefits is more likely when there is a service-connected disability, whereas use of DI only is more likely when a service-connected disability rating is not reported. Joint receipt of VA and DI is most likely among veterans with a 100 percent disability rating. It is noteworthy that the majority of veterans (over 70 percent) who use VA disability benefits are employed and some veterans with service disability ratings above 50 percent are in the labor force.

subsequent waves of the panel, 459 report transitioning off DI benefits, 2 report switching from DI to VA benefits, and 13 transitioned to receiving both VA and DI benefits. Of the 229 who started a SIPP panel with both VA and DI use, 99 continued to have both VA and DI payments on subsequent panel waves, 121 moved off of both programs by the end of the panel, 8 report moving to having only VA benefits, and 1 reports moving to having only DI benefits. Overall, more transitions off VA and DI program are observed than transitions onto VA and DI programs. However, the number of observed program transitions is sufficiently small to preclude the use of methods, such multivariate regression and fixed effect models, which exploit the longitudinal nature of the data.

Correlates of Program Use

The two models in Table 4 provide insight into the patterns of any VA and/or DI benefit use across military service cohorts defined by period of service, taking into account age, time period effects, and demographic characteristics. Model 1 presents the un-adjusted coefficients for period of service, which indicate that, compared to veterans who served after 1990, veterans who served before 1964 and during multiple time periods, respectively, are significantly more likely to use VA and/or DI benefits. In contrast, veterans of the early-AVF period, which spanned from 1975 to 1990, are significantly less likely to use VA and/or DI benefits than Gulf War-era veterans who served after 1990. In Model 2, which includes controls for age category, survey time period, and individual-level demographic characteristics, veterans who served prior to 1964 are no longer significantly different than those who served after 1990 (i.e., they have equally high odds of use) and the effect for those who served during multiple periods is substantially reduced, although still significantly different. The lower likelihood of VA and/or DI use among veterans from 1975-1990 relative to post-1990 veterans remains statistically significant and is relatively large. Additional factors that significantly increase the likelihood of VA and/or DI use among the general veteran population include being older, black or Hispanic, less educated, and currently married. It is interesting to note that the likelihood of any use of VA and/or DI is significantly higher in 1996, 2001, 2004, and 2008 relative to 1992, even after controlling for period of service, age, and other demographic characteristics.

The models in Table 5 are estimated on the subsample of respondents who report receiving any VA and/or DI benefits. The VA use models are not exact mirror images of the DI

use models because the veterans who use both programs are included in the 1 category of the dichotomous dependent variable in each model. However, because that group is small (see Table 2), the coefficients are generally similar in magnitude and statistical significance, but of opposite sign. Yet, there are some substantive differences by race/ethnicity, education, and marital status in the associations across the models. Taken together, the models indicate that among veterans who receive some type of disability compensation, use of VA benefits relative to only DI benefits is significantly higher among veterans who served since 1990, are younger, Hispanic, married, and have some college education or graduated from college. In contrast, use of DI benefits relative to only VA benefits is significantly higher among veterans who served prior to 1990, are older, Asian, not currently married, and have less than a high school education. The survey year coefficients suggest that veterans' use of DI relative to VA disability compensation is expanding over time, net the effects of period of service cohort, age, and the demographic controls.

Discussion

Drawing on data from six panels of the SIPP, this research indicates that disability program use among veterans has increased substantially over time. Receipt of benefits through VA and/or DI increased from 8.5 percent in 1992 to 23.5 percent in 2008. More veterans participate in VA disability than DI, and joint participation in both VA and DI programs is very low. Most likely, this is due to differences between the programs in eligibility rules, particularly related to definitions of partial service-related disability that are used to determine eligibility for VA disability programs versus definitions of long-term work-related disability that are used to determine eligibility for DI disability compensation.

Unfortunately, given the limited health and disability questions in the SIPP, we cannot tell if the disability covered by DI is related to military service or not. Likewise the service-connected disability may not be work-limiting. Therefore, eligibility for one program does not provide definitive information about eligibility for other program and there is no way to identify the eligible population. Due to data limitations we are also unable to fully examine how service-connected disability ratings relate to VA and DI program use. Supplemental analysis based on the 1992 and 1993 SIPP panels suggests that service-connected disability ratings are closely related to patterns of program use, which is not surprising given that these ratings are used to

determine eligibility for VA programs and are related to the ability to meet the long-term work-limiting disability criteria used by the DI program. In addition, a substantial portion of the veterans in the SIPP who have a service-connected disability are employed, which suggests that they are not able to meet the stringent disability requirements for DI eligibility or do not want to try to do so because they are able to fare relatively well in the labor market despite their impairment. Despite these compelling descriptive findings, the SIPP has limited power to test the relationship between service-connected disability ratings, employment, and program use. This underscores the importance of consistently including questions about service-connected disability ratings on national surveys that include veterans and specific measures of program participation.

Our analysis also indicates important differences in program use across military service cohorts. Net of controls, relative to those who served in the post-1990 period only, any use of a disability program is higher among those who served in multiple time periods, lower among those who served in the earliest part of the All-Volunteer Force (1975-1990), and no different among those who served prior to 1965. However, there are period of service differences in which program is used. Net of controls, among those who are enrolled in a disability program, those who served in periods prior to 1990 are significantly less likely to use VA and more likely to use DI relative to veterans who served since 1990. Veterans who served during multiple periods are no different from those who served since 1990 once controls are added to the model. A number of factors, such as the types of impairments with which veterans are returning, perceptions of deservingness, and the efforts that are being made to connect veterans of Iraq and Afghanistan to programs for which they are eligible, may account for the relatively high rate of VA disability benefits use among recent veterans. While some of these veterans may be dually eligible for VA and DI benefits, our data suggest that relatively few veterans of any era receive benefits through both programs. The extent to which disabled veterans are receiving all of the benefits for which they are eligible from both VA and civilian DI programs is an important question for researchers and policy makers. Analysis of program dynamics represents another important area for future research. In the six panels of the SIPP on which our analyses are based, we observe relatively few transitions on or off of VA or DI, or between programs.

Overall, older veterans are more likely to use one or the other disability program, which is not surprising given well-documented increases in disability with age. Among users of a

disability program, net of controls, younger age is associated with a higher likelihood of VA disability compensation, whereas older age is associated with higher likelihood of DI use. Furthermore, net the effect of age, more-recent cohorts are more likely to use VA disability compensation, while cohorts who served from World War II through the early years of the All-Volunteer Force are most likely to receive DI. Although these patterns are clear, it is actually difficult to ascertain age-based pattern of program participation within cohorts with the SIPP due to data limitations. Better longitudinal data that follows veterans over longer periods of time from military service separation to full retirement age are required to determine lifetime patterns of disability program use and other life course outcomes of military service (Teachman 2013). More detailed, time-varying measures of various medical conditions, functional limitations, and types of disability would also be helpful in determining how health status relates to disability program use.

It will be important for future research to examine the extent to which existing disability programs are effective in mitigating poverty and material hardship among veterans and their families. One recent study that uses the 2007 *American Community Survey* (ACS) documents that disabled veterans have substantially lower income relative to persons without disabilities and nonveterans who report the same number of disabilities (Fulton, Belote, Brooks, and Coppola 2009). Our prior research on veterans, work-limiting disability, poverty, and material hardship using the SIPP (Heflin, Wilmoth, and London 2012; London, Heflin, and Wilmoth 2011) indicates that non-disabled veteran households hold a distinct advantage in terms of economic well-being relative to all other household types, with only 5.51 percent having incomes below the federal poverty threshold. In contrast, disabled-nonveteran households have the highest poverty rate (32.53 percent), while disabled-veteran households have a relatively high rate of poverty (13.19 percent) that is above the rate for households that contain no person with disability or veteran (12.16 percent) (London, Heflin, and Wilmoth 2011). Furthermore, net of income-to-needs, disabled-veteran households are significantly more likely to experience material hardship (i.e., home, medical, bill-paying, and food insufficiency) than nondisabled-veteran households (Heflin, Wilmoth, and London 2012). These results focus on the presence of work-limiting disability in households that include working-age adults, but no one over the age of 64 years; similar results are observed when the sample is restricted to households that include at least one person aged 65 years or older and various measures of disability are taken into

account (Wilmoth, London, and Heflin 2011). All of these results are robust to controls for demographic variables that are typically associated with poverty and material hardship.

Our prior work suggests two conceptual puzzles that we believe are worth pursuing in future research. First, how is it that disability wipes out the veteran advantage when some veterans are dually entitled to benefits from the Department of Veterans Affairs and the Social Security Administration? Second, what accounts for the economic well-being advantage that non-disabled veteran households have over households that do not include either a veteran or a person with a disability? Answering these questions will provide insight into how the VA disability compensation and Social Security DI programs can better serve the men and women who have sacrificed precious years of their adulthood to protecting the interests of Americans at home and abroad.

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Table 1. Sample descriptive statistics (N=24,532)

Variable	percent
Period of Service	
Before 1964	18.60
1964 - 1974	39.86
1975 - 1990	19.05
After 1990	8.94
Multiple years	13.55
Age	
18-34	13.38
35-44	20.18
45-54	31.71
55-64	34.73
Year	
1992	13.65
1993	13.17
1996	20.79
2001	14.76
2004	20.68
2008	16.95
Female	6.86
Race/Ethnicity	
White and other	85.05
Black	10.14
Hispanic	3.98
Asian	0.83
Education	
Less than high school	6.59
High School Graduate	31.17
Some College	38.78
College Graduate	23.46
Marital Status	
Currently Married	76.78
Never Married	9.17
Divorced, widowed, separated	14.05

Table 2. SIPP within-panel levels of receipt of VA disability compensation and DI benefits among veterans

	No receipt	VA Only	DI Only	VA and DI	Total N
1992	91.52	4.91	2.89	.68	3368
1993	91.10	5.57	2.75	.58	3267
1996	84.68	6.21	7.66	1.45	5136
2001	84.44	8.98	4.76	1.81	3689
2004	80.82	10.68	6.99	1.51	5140
2008*	76.55	13.19	6.71	3.55	4201

* = unweighted

Table 3. Within-panel transitions in receipt of VA disability compensation and DI benefits among veterans, total number across the 1992, 1993, 1996, 2001, 2004, and 2008 SIPP panels.

	Transitions from			
	No receipt	VA Only	DI Only	VA and DI
Transitions to				
No receipt	21,422	796	459	121
VA Only	241	848	2	8
DI Only	300	7	405	1
VA and DI	30	49	13	99

Table 4. Logistic models predicting receipt of VA disability compensation or DI benefits use among veterans (N=24,532)

	Any use[1]			
	Model 1		Model 2	
Variable	b (s.e.)	Odds Ratio	b (s.e.)	Odds Ratio
Period of Service				
Before 1964	.1709* (.07)	1.186	-.0607 (.12)	0.941
1964 - 1974	.1274 (.07)	1.136	-.1406 (.10)	0.869
1975 - 1990	-.2743*** (.08)	0.760	-.3407*** (.09)	0.711
After 1990 (reference)				
Multiple periods	.7422*** (.07)	2.101	.4877*** (.10)	1.629
Age				
18-34 (reference)				
35-44			.3612*** (.09)	1.435
45-54			.5594*** (.09)	1.750
55-64			.9459*** (.10)	2.575
Year				
1992(reference)				
1993			.0382 (.09)	1.039
1996			.6510*** (.07)	1.917
2001			.6289*** (.08)	1.876
2004			.8205*** (.08)	2.272
2008			1.0711*** (.08)	2.919
Female			.0768 (.07)	1.080
Race/ Ethnicity				
White and other (reference)				

Black			.4081*** (.05)	1.504
Hispanic			.1973* (.09)	1.218
Asian			.3279 (.19)	1.388
Education				
Less than high school (reference)				
High School Graduate			-.5593*** (.07)	0.572
Some College			-.4359*** (.07)	0.647
College Graduate			-.8811*** (.08)	0.414
Marital Status				
Currently Married (reference)				
Never Married			.2178*** (.06)	1.243
Divorced or Separated			.2253*** (.05)	1.253
Widowed			.4991*** (.12)	1.647
Intercept	-1.839*** (.06)	0.159	-2.4864*** (.12)	0.083

[1] Reference category = no receipt

Table 5. Logistic models predicting receipt of VA disability compensation and DI benefits use among veterans who participate in one or both programs (N=3,857)

	VA use[1]				DI use[2]			
	Model 1		Model 2		Model 1		Model 2	
Variable	b (s.e.)	Odds Ratio	b (s.e.)	Odds Ratio	b (s.e.)	Odds Ratio	b (s.e.)	Odds Ratio
Period of Service								
Before 1964	-3.7524*** (.25)	0.023	-2.312*** (.34)	0.099	3.6767*** (.21)	39.516	2.2854*** (.30)	9.830
1964 - 1974	-2.0708*** (.24)	0.126	-.9101** (.30)	0.402	2.1397*** (.19)	8.497	1.0321*** (.26)	2.807
1975 - 1990	-1.9954*** (.26)	0.136	-1.3348*** (.29)	0.263	1.7925*** (.21)	6.004	1.2143*** (.24)	3.368
After 1990 (reference)								
Multiple periods	-.7948** (.26)	0.452	.1071 (.31)	1.113	.9652*** (.20)	2.625	.1154 (.26)	1.122
Age								
18-34 (reference)								
35-44			-1.2981*** (.29)	0.273			1.2559*** (.24)	3.511
45-54			-1.6652*** (.30)	0.189			1.5679*** (.25)	4.797
55-64			-2.2223*** (.31)	0.108			2.2918*** (.27)	9.893
Year								
1992 (reference)								
1993			.0899 (.21)	1.094			-.1091 (.20)	0.897
1996			-.9343*** (.17)	0.393			.9605*** (.17)	2.613

2001	-.5008**	0.606	.5597**	1.750
	(.19)		(.18)	
2004	-.5401**	0.583	.5587***	1.748
	(.18)		(.18)	
2008	-.6581***	0.518	.8822***	2.416
	(.19)		(.18)	
Female	-.1899	0.827	.125	1.133
	(.18)		(.17)	
Race/ Ethnicity				
White and other (reference)				
Black	.0858	1.090	-.0069	0.993
	(.11)		(.11)	
Hispanic	.4374*	1.549	-.3216	0.725
	(.22)		(.20)	
Asian	.8449	2.328	-.9494*	0.387
	(.54)		(.48)	
Education				
Less than high school (reference)				
High School Graduate	.2486	1.282	-.3834*	0.682
	(.14)		(.15)	
Some College	.7594***	2.137	-.8501***	0.427
	(.14)		(.15)	
College Graduate	1.3761***	3.959	-1.6497***	0.192
	(.16)		(.17)	
Marital Status				
Currently Married (reference)				
Never Married	-.7118***	0.491	.7464***	2.109
	(.14)		(.14)	
Divorced or Separated	-.1679	0.845	.4576***	1.580
	(.10)		(.10)	
Widowed	-.5245*	0.592	.8056*	2.238

			(.24)				(.27)	
Intercept	2.6975***	14.843	3.4962***	32.990	-2.129***	0.119	-2.9566***	0.052
	(.24)		(.36)		(.19)		(.31)	

[1] Reference category = DI only
[2] Reference category = VA only

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