



Retirement and Disability Research Center

UNIVERSITY OF WISCONSIN-MADISON

Work Credit Accumulation & SSDI Eligibility Among Young Adults

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Abstract

Social Security Disability Insurance (SSDI) is an important social insurance that protects workers against the risk of income loss due to work-limiting disabilities. One of the SSDI eligibility criteria is a set of credits based on age and work history. However, the current work credit eligibility structure has been static and might not reflect changes in labor force engagement as a result of changing demographic trends. In particular, the extended age range of young adulthood and the multiple employment disruptions young adults experience while making major life transitions, such as completing secondary education, getting married, and becoming parents (becoming a parent is used as a proxy for onset family caregiving). Little is known about the relationships between SSDI credit eligibility under the current program structure, young adults' labor force engagement, and any potential disparity in SSDI credit eligibility across ages. Using the PSID (2005–2019), this study follows 2,345 young adults for at least ten years and estimates the proportion of those who met the SSDI credit eligibility criteria at each age between ages 18 and 34 years. The findings indicate that the share of SSDI-eligible young adults is highest at age 25 at 71 percent, while around 29 percent are deemed ineligible, even when needed. Then, using regression analyses, this study examines differences in the probability of being SSDI-eligible across adult milestones and the differences by sex and race/ethnicity within these milestones after accounting for a vector of controls. The results illustrate the potential limitations of the SSDI for young adults and how program rules related to the eligibility structure may better support the well-being of workers.

Keywords: Young Adults, SSDI, Earnings, Benefit Eligibility, Disparities

JEL codes: H55, I38, J11, J17

Introduction

Social Security Disability Insurance (SSDI) is a social insurance program administered by the Social Security Administration (SSA) to deliver benefits to covered employees with disabilities and their dependents. The SSDI offers the benefits that beneficiaries need to cover necessary and basic expenses, such as food and housing. Employees can earn coverage by working and paying the Federal Insurance Contributions Act (FICA) or Social Security taxes on their earnings. According to SSA's 2023 annual report, the SSDI provided benefits to approximately nine million Americans, including employees with disabilities, adult children with disabilities, widows and widowers with disabilities, and spouses and minor student children of workers with disabilities who are currently receiving SSDI benefits (SSA 2023a). For this reason, the SSDI is an important social insurance program that offers protection against the risk of income loss due to work-limiting disabilities to covered employees and their dependents.

Although the prevalence of disabilities increases with age, 26.4 percent of adults with disabilities were aged 18–39 years old (Varadaraj et al. 2021). In fact, more than one in four twenty-year-old young adults becomes disabled before reaching retirement age (SSA 2023e). Therefore, contrary to one may believe, the risk of disability is prevalent among younger individuals. Thus, meeting the eligibility criteria and having access to the SSDI are vital for every worker's economic security and well-being (Meyer and Mok 2019), including young adults, who may have different labor force engagements than older workers.

Consequently, the SSA has special rules for young workers to qualify for disability benefits that essentially allow them to qualify for SSDI benefits with a limited work and earnings history. These rules were created in the early 1900s (SSA 2020). Even though the income threshold needed to earn one work credit has been adjusted every year to accommodate the cost of living (i.e., cost-of-living adjustment, COLA) since 1978, the base formula used to calculate the number of credits needed at each age has never been updated. Understandably, this base formula may fail to reflect broader demographic shifts and the dynamic interactions of the working-age population with the labor market.

Accordingly, these unchanging eligibility rules may not be appropriate for the more recent conditions and behaviors of those participating in the labor force, thereby potentially affecting their SSDI credit eligibility. For example, an increasing number of young adults are now seeking college degrees (Hanson 2024), delaying getting married (US Census Bureau 2023), and delaying

transitioning into parenthood (Schweizer and Guzzo 2020). In fact, one study showed that approximately 10 percent of young adults experience adult caregiving that interrupts their employment, which impact their work hours (Chy 2023). These changes could have implications for young adults' engagement in the labor force. This, in turn, may play a crucial role in young adults' ability to meet the SSDI work credit criteria, which emphasize both earnings and recent work duration.

However, existing studies are yet to investigate the potential variations in SSDI credit eligibility by age and different adult milestones. Different eligibility criteria that reflect more recent labor market conditions and the behavior of the labor force could reduce disparities in SSDI use by sex, race/ethnicity, and other characteristics. This study estimates the scope of eligibility disparities and the potential for expanded eligibility criteria.

Using the Panel Study of Income Dynamics (PSID), the Transition to Adulthood Supplement (2005–2019) (Survey Research Center 2023), and SSA's yearly income threshold information (SSA 2024b), this study descriptively estimates the share of eligible young adults at each age between ages 18 and 34 years old and by adult milestones, such as education, marital status, and parenthood status. This study also explores the intersection of these milestones by sex and race/ethnicity. Then, employing linear probability with fixed-effects models, this study estimates the within-person changes in the probability of meeting the SSDI credit eligibility at each age after accounting for a vector of controls such as sex, race/ethnicity, educational attainment, marital status, parenthood status, and income. Specifically, this study asks: 1) What is the proportion of young adults who meet the SSDI credit eligibility criteria at each age between aged 18 and 34 years? and 2) Are there differences in the probability of being eligible for the SSDI in terms of educational attainment, marital status, and parenthood status at each age between 18 and 34? How do these probabilities differ according to sex and race/ethnicity?

The results show that the proportion of SSDI-eligible young adults aged between 18 and 34 years old peaks at close to 71 percent. In other words, between the ages 18 and 34 years old, around 29 percent of young adults would be deemed ineligible for SSDI benefits, even when needed. Moreover, the findings from the regression analyses reveal two significant factors: "*Benefit Eligibility premium – BE premium*" and "*Benefit Eligibility penalty – BE penalty*" in the probability of meeting SSDI eligibility. *BE premium* is defined as the positive association between a certain demographic characteristic and SSDI benefit eligibility, whereas *BE penalty* is defined

as the negative association between a characteristic and SSDI eligibility. These factors are associated with adult milestones such as college education, marital status, and parenthood status to varying degrees. It also illustrates disparities in SSDI access by sex, race/ethnicity, and sex-race/ethnicity interactions. For example, the study finds that high school graduates have a consistently lower probability of meeting SSDI credit eligibility than those with bachelor's degrees. Second, although not always significantly different, married young adults tend to have a higher probability of meeting SSDI credit eligibility than unmarried young adults. Finally, the probabilities of meeting the SSDI credit eligibility criteria for non-parents and parents do not differ from one another on average. However, further stratifications by sex and race/ethnicity reveal different stories, in which they illustrate the presence of BE premiums for fathers and BE penalties for mothers in terms of the predicted probability of meeting the SSDI credit eligibility, especially for Black mothers.

These findings suggest that the current work credit eligibility criteria for SSDI fail to reflect the changes in labor force engagement during young adulthood and that sex and racial disparities exist in SSDI eligibility, even when sex and race/ethnicity are not the basis of the eligibility rules. The discovery of BE premiums and penalties in meeting employment-tied benefits expands our understanding of the gender gap between men and women as it relates to parenting, employment, and income. In addition, this study also demonstrates through a series of simulations that a small change in the current program rule could increase the probability of meeting SSDI credit eligibility among young adults and potentially improve their protection against income loss due to work-limiting disabilities.

Social Security Disability Insurance (SSDI)

Individuals may interact with employment-tied social insurance to support themselves and their families. Under unforeseen circumstances, workers may interact with the SSDI, a public and cheaper alternative to private disability insurance (Shih 2022b). The SSDI is a social insurance program delivered by the SSA. Unlike private disability insurance, SSDI benefits are not as strictly tied to contributions as in private insurance.

Under Title II of the Social Security Act (SSA 2024a), there are three categories of individuals who can qualify for SSDI benefits: 1) a covered employee with disabilities whose age is less than full retirement age (FRA); 2) a person with disabilities since childhood (before age

22), who is dependent on a parent who is a beneficiary of SSDI or a retirement benefits program or is dependent on a deceased beneficiary; or 3) a widow or widower with disabilities, age 50–60, whose deceased spouse was a beneficiary.

This study focuses on individuals in Category 1, a covered employee who developed disabilities before the FRA. For these individuals to qualify for SSDI benefits, they must 1) have worked in jobs covered by Social Security and have accumulated an adequate number of quarters of coverage or work credits, and 2) have a medical condition that meets Social Security’s definition of disability. The number of work credits is determined by strict SSA rules and calculated based on work duration, recency of work, and earnings. The amount of earnings needed to earn one credit has changed since 1978 and varies from year to year. The 2024 threshold for earning one credit is \$1,730 (SSA 2024b). Each year (i.e., four calendar quarters), employees can earn up to four credits. Work credit is based on annual wages or self-employment income. This means that if you are working in a high-paying job, you may earn all four credits in one or two calendar quarters.

The SSDI credit eligibility is also a sliding scale based on the age at which disability begins, meaning that younger applicants can be eligible for fewer credits than older applicants. In general, applicants who developed a disability before the age of 24 years needed at least one and a half years of work or six work credits. Applicants between the ages of 24 and 30 could qualify if they had credit for working half the time between the age of 21 and the time their disability began. Applicants aged 31 years and older would need at least 20 credits in the 10 years immediately before their disability begins (SSA 2023d). Table 1 provides a chart of the work credit eligibility criteria by the age of young adults up to 34 years.

Table 1. Credit-Eligibility at Each Age (based on SSA rule)

Developed Disability at age	Years of work	Credits Needed
≤ 24 years old	1.5	6
25 years old	2	8
26 years old	2.5	10
27 years old	3	12
28 years old	3.5	14
29 years old	4	16
30 years old	4.5	18
31 years old	5	20
32 years old		20

33 years old	20
34 years old	20

Note. This table shows the author’s calculations of the number of work credits and years of work needed to meet the SSDI eligibility requirements at each age from ages 18–34 years old under the current SSA rules.

Disabilities and Young Adulthood

Disability Risk

Among adults with disabilities, 26.4 percent are aged 18–39 years old (Varadaraj et al. 2021). In addition, the SSA report shows that 7.4 percent of SSDI beneficiaries are young individuals aged 34 years and younger, while 12.4 percent of beneficiaries receive SSDI benefits as a Disabled Adult Child (SSA 2022). Thus, the risk of disability is prevalent, even in younger age groups.

Disability insurance is important for working-age adults because one cannot predict when one has a work-limiting injury. However, few have access to private disability insurance. A study by the Life Insurance Marketing and Research Association (LIMRA) showed that only 14 percent of consumers have their own disability insurance in 2022 (LIMRA 2022). Pricing data on private disability insurance reveal that the average annual costs are \$451 for people aged 18–24 and \$1,800 for those aged 45–54 years (Shih 2022a). With generally lower wages and salaries as well as a lack of awareness, many young workers might not have private disability insurance. Therefore, having a job covered by Social Security that allows them to automatically pay for SSDI and get coverage is an important alternative. Although the SSDI is relatively accessible, its strict eligibility rules (e.g., quarters of coverage or work credit rules) may present a challenge for young adults, especially among women.

The prevalence of disability increases with age; however, women still have a higher prevalence than men of all ages (Okoro et al. 2018). The Center of Disease Control and Prevention (CDC) report that in the US every year, there are more than 50,000 women affected with severe maternal morbidity (SMM), “a range of serious pregnancy complications that result in significant short-term or long-term consequences to a woman’s health” (CDC 2022). Therefore, if work interruption results in young adults leaving the workforce for extended periods (e.g. Childbirth), it may limit their ability to accrue the required work credits. This could result in them having little protection against the risk of income loss while facing a heightened risk of disability, temporary employment, or financial setbacks.

Young Adulthood

Young workers typically require fewer work credits than older workers do; nonetheless, the work credit structure may not be fully aligned with young adults' work experience in this period. Young adults, especially those in emerging adulthood (late teens to mid-twenties or early thirties), experience many transitions and changes (Arnett 2000; Chy 2023; Oliveira et al. 2020). In developmental psychology, the age range of 18–34 is considered a distinct life stage (Arnett 2000; Furstenberg and Kennedy 2016). According to Arnett (2000), emerging adulthood is a period in which young people begin to observe life possibilities open to them to explore, and gradually arrive at decisions in interpersonal relationships, work, and worldviews. Oliveira et al. (2020) found that an individual's transition into adulthood affects both the individual and their family, as young adults decide whether to be independent or continue with dependency on the family. There are five adult milestones, as described by Furstenberg and Kennedy (2016): completing education, having full-time work, independent living, marriage, and parenthood. A more recent study also added financial independence as a new indicator of adult transition (Cepa and Furstenberg 2021).

During emerging adulthood, young adults work toward achieving these milestones. Some focus on obtaining full-time employment and becoming financially independent, while others focus on other things such as leaving their parental home, getting married, and having children. However, the timing of reaching this and other milestones varies across young adults, which may be due to either personal choice or institutional barriers, such as race, gender, social class inequalities (Cepa and Furstenberg 2021), and/or family responsibilities. In fact, research examining young adults and family caregiving has also found evidence that caregiving may impede young adults' achievement of key adult milestones and may impact their employment, as well as mental and social well-being (Chy 2023; Flinn 2018; King McLaughlin et al. 2019; Koumoutzis et al. 2020; Levine et al. 2005). Conversely, from another perspective, young adults' multiple life events and responsibilities could potentially interrupt and disrupt their work history and earnings, which could directly impact their SSDI eligibility (Altonji, Hynsjo, and Vidangos 2021; Carnevale et al. 2015; Chy 2023; Musick, Bea, and Gonalons-Pons 2020). Therefore, this study addresses two research questions.

- 1) What is the proportion of young adults who meet the SSDI credit eligibility criteria at each age between ages 18 and 34?

- 2) Are there differences in the probability of being SSDI-eligible by milestone? Within milestones, how do these probabilities differ according to sex and race/ethnicity?

Hypothesis 1: Education. Between 70 and 80 percent of college students are active in the labor market while formally enrolled in some form of postsecondary education or training. Many also earn only 200 percent of the poverty threshold (\$23,540) or less (Carnevale et al. 2015). Therefore, compared to young adults with high school degrees, those who choose to pursue a college degree or higher may be more likely to delay working full-time. This means that they may be more likely to have zero or fewer earnings than high school graduates, who are more likely to participate in the labor force full-time. Consequently, we may expect that pursuing a college or higher degree may directly affect young adults' work credit accumulation to meet SSDI credit eligibility. In addition, students pursuing graduate degrees may be penalized under the current tax code. That is because the Internal Revenue Service (IRS) exempts students from paying FICA (Social Security and Medicare) taxes if they are employed by the same school, college, or university where they are pursuing a course of study (Internal Revenue Service 2005). Not paying FICA taxes means not earning or accumulating work credits for Social Security benefits; thus, young adults with higher education may be less likely to be eligible than those who do not.

Hypothesis 2: Marriage. The transition to marriage can also affect the SSDI credit eligibility in young adulthood. This is because the transition to marriage has been shown to be associated with earnings premiums for both men and women (Juhn and McCue 2017). Accordingly, we may expect married young adults to have a higher probability of being SSDI-eligible than unmarried young adults do.

Hypothesis 3: Parenthood. On the other hand, parenthood can lead to stepping back from the labor force to take on caregiving duties in ways that reduce parents' opportunities to maintain or accumulate necessary work credits. This effect may be especially significant for mothers who typically serve as primary caregivers (Bartel et al. 2018; Baum II and Ruhm 2016; Knop 2019; Rossin-Slater, Ruhm, and Waldfogel 2013). Indeed, immediately following the first transition into parenthood, women's earnings decline, whereas men's earnings increase (Musick, Bea, and Gonalons-Pons 2020). Therefore, we may expect to see differences in the impact of transition into parenthood on the probability of being SSDI-eligible between men and women because SSDI is an employment/income-tied benefit.

Although there is a complex relationship between females' educational attainment and income relative to their male counterparts (Bobbitt-Zeher 2007; Everett et al. 2011), the current literature examining gender income gaps by education, marital status, and parenthood status suggests that men are more likely to have higher earnings than women (Altonji, Hynsjo, and Vidangos 2021; Bobbitt-Zeher 2007; Juhn and McCue 2017; Kopczuk, Saez, and Song 2010; Machado and Jaspers 2023; Musick, Bea, and Gonalons-Pons 2020; Yu and Hara 2021). Accordingly, we may expect female young adults to have a lower probability of meeting the SSDI eligibility than young male adults. In addition, according to the literature on racial gaps in earnings, this study expects to see similar racial gaps in meeting SSDI eligibility between Black and White young adults across educational attainment, marital status, and parenthood status (Cheng 2016; Glauber 2007; 2008; Lu, Wang, and Han 2017; McDaniel et al. 2011; Willson 2003). In particular, this study expects Black young adults to have lower probabilities of being SSDI-eligible than White young adults.

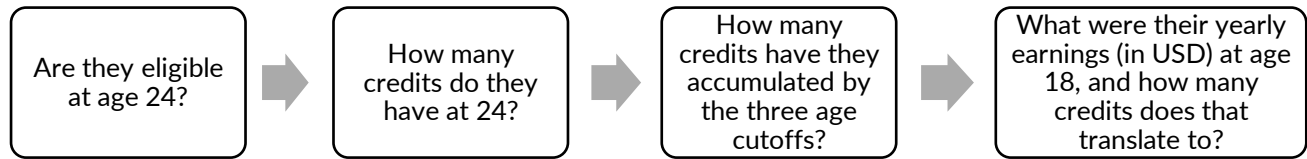
Methodology

Data

The basis of this study is the Panel Study of Income Dynamics (PSID) and the Transition into Adulthood Supplement (2005–2019) (Survey Research Center 2023). Using these data, this study estimates each person's work credits based on SSA's yearly income threshold information. The PSID is ideal for assessing SSDI eligibility across age groups because it provides comprehensive longitudinal information on employment, earnings, birth and marriage histories, and demographics.

Generating Key Measures

The key outcome measure needed for the current study is *SSDI Eligibility*, which should be a dummy variable, where 0 indicates an observation's ineligibility for SSDI at a given age and 1 indicates eligibility for SSDI. However, current publicly available datasets do not offer a direct path for measuring SSDI eligibility. Therefore, creating the *SSDI Eligibility* measure requires multiple steps of data wrangling and a comprehensive understanding of the SSA's rules for earning and accumulating work credits. Figure 1 presents the reverse workflow used to calculate the SSDI eligibility measures according to the age-specific SSA criteria (SSA 2023d).

Figure 1. Reversed Workflow of Work Credits – SSDI Eligibility Measure

Step 1: This study creates a *Work-Credit* measure by dividing individuals' annual earnings by the SSA yearly income thresholds that is then capped at four credits for a given year according to the SSA rule.

Step 2: With the *Work-Credit* measure, this study creates an *Accumulated Work Credits* variable, where the yearly work credits of an individual are added up by the three age cutoffs according to the SSA's rules. So, the *Accumulated Work Credits* are added up:

- 1) for those *aged 18–23*, from the age they were first observed until their current age.
- 2) for those *aged 24–30*, from age 21 up to their current age.
- 3) for those *aged 31–34*, from the last 10 years up to their current age.

For example, for an individual who was observed from age 18 to 24 years old and had four credits each year, their *Accumulated Work Credits* at age 24 would be 16 credits (calculated based on the second age cutoff).

Step 3: The number of accumulated work credits at a given age is compared to the number of work credits required at that age, as shown in Table 1.

Step 4: Using the information in Step 3, this study creates the measure of interest, *SSDI Eligibility*, by assigning each observation a 0 value if their accumulated work credits at a given age were less than the required number of credits for that age or 1 if the accumulated work credits were equal to or greater than the required number of credits.

Table 2 provides an example of the earnings history of a twenty-four-year-old who was observed from age 18 to 24 years and how each variable was generated and came together to create the *SSDI Eligibility* measure.

In the example below, Person A had annual earnings of \$20,000 in 2008 when they were aged 21. The earnings are then divided by SSA's 2008 earnings threshold, which is \$1,050 for one work credit or \$4,200 for the maximum of four credits allowed. Person A earned more than four work credits that year before it was capped at four credits. By the age of 24, Person A earned seven additional credits, making a total of 11 accumulated credits. The study then compared this twenty-four-year-old's accumulated credits to the number of credits required for a twenty-four-year-old adult, which is six (see Table 1). This young adult was then coded 1 as SSDI-eligible because they had accumulated more than six credits at age 24.

Table 2. Example of Earnings History and Variables Generating Process for SSDI Eligibility Measure

	Year	Age	Annual Income	Work Credits (max. 4)	Accumulated Credits at age 24	Credits Required at age 24	SSDI Eligibility at age 24
Person A	2005	18	0	0	0	6	0
Person A	2006	19	0	0	0	6	0
Person A	2007	20	0	0	0	6	0
Person A	2008	21	\$20,000	4	4	6	0
Person A	2009	22	\$25,000	4	8	6	1
Person A	2010	23	0	0	8	6	1
Person A	2011	24	\$3,600	3	11	6	1

Note. This table shows an example of an observation in the study with the years they were observed, their age, annual income, work credits, accumulated work credits at age 24, number of credits required at age 24, and SSDI eligibility status at a given age.

However, not all observations in this study have a complete earnings history for the observed period. In fact, there is a substantial amount of missing earnings data. Consequently, the current approach to constructing the *SSDI Eligibility* measure was unable to correctly identify the true eligibility status of some observations. Missing annual earnings created biases in the data, where some individuals were incorrectly assigned ineligibility status. The missing data stems from the PSID survey design, which only collects the employment and earnings history of the Reference Person and their Spouse/Partner. This means that each year that an observation was not identified as either Reference Person or Spouse/Partner, earnings would be missing in that year. However,

they are still in the study sample because each year of available reported earnings could still be counted towards working history and work credit accumulation.

To resolve these incorrect assignments of ineligibility status, this study creates two measures representing the lower- and upper-bound shares of SSDI-eligible individuals. The *Lower-bound Share* measure is calculated by dividing the number of *truly* SSDI-eligible individuals by the sum of *truly* SSDI-eligible, *truly* SSDI-ineligible, and those with undetermined eligibility status. Conversely, the *Upper-bound Share* measure is derived by dividing the combined number of truly SSDI-eligible and undetermined status individuals by the same denominator used in the lower-bound measure. This method allows us to retain observations with partial earnings information, thereby improving statistical power.

Adult Milestones Variables

For the examination of the relationships between SSDI eligibility and labor force engagement in young adults, this study employs three adult milestone variables. The first is *Educational Attainment*, a time-invariant categorical variable. It indicates the highest level of education achieved by young adults at the oldest age they were observed. The categories are 1 “High School or Less,” 2 “Some College,” 3 “Bachelor’s Degree,” and 4 “Graduate Degree or Higher.”

The second variable is *Marital Status*, which is a time-varying categorical variable. It indicates the current marital status of young adults at each age between 18 and 34 years old. The categories are 1 “Unmarried,” 2 “Married,” and 3 “Separated/Widowed/Divorced.” The decision to employ time-varying marital status allows us to observe young adults as they are transitioning from unmarried to married or other status, and vice versa.

The third adult milestone variable is *Parenthood Status*, which is a time-varying binary variable. It indicates the current parenthood status of young adults at each age observed. The two categories are 0 “Non-Parent/No birth history” and 1 “Parent.” Similar to the *Marital Status* variable, a time-varying Parenthood Status variable allows us to observe young adults as they are making their first transition into parenthood.

Analytic Sample

First, the study requires that individuals be aged 18–34 years between 2005 and 2019. In other words, the criterion identifies individuals whose age falls within the range of 18 to 34 years during any of the years within the 2005 to 2019 period. This criterion produces a right-censored dataset

in which SSDI credit eligibility cannot be observed beyond the age of 34. The examination of SSDI eligibility for the population in the current age range provides a unique and interesting case study of the SSDI credit eligibility structure. This is because individuals between ages 24 and 31 encounter a dynamic SSDI work credit eligibility requirement per the SSA's special rules. This involves an incremental increase of two work credits per year as employees age, continuing until the rules stabilize the required credits for those aged 31 years and older (see Table 1). This allows us to examine young individuals as they build their employment history; this process may or may not affect their eligibility for SSDI as they age, given the incremental change in work credit requirements.

Second, the study then restricts the sample to young adults, who enter the study in 2005, to those that were observable for at least ten years through 2019. This is because one of the SSA's special rules for young workers indicates that applicants aged 31 years and older need at least 20 credits in the *10 years* before their disability begins. This restriction ensured that all young adults aged between 31 and 34 years in the study would have some work history observed for a minimum of 10 years.

However, this sample inclusion criteria creates a specific cohort of young adults who were aged 18–22 years in 2005 who were observed for at least 10 years through 2019. In other words, this means that individuals whose ages do not fall within this age range and do not remain in the sample for 10 years by the year 2019 would be dropped from the analytical sample. Consequently, many PSID observations (13,552 persons) were dropped because they failed to meet these strict sample criteria (see Table 3). Descriptive analysis shows that there are statistically significant differences in the socioeconomic and demographic characteristics between the analytic sample and the excluded sample. In brief, on average, the excluded sample had lower educational attainment and was less likely to be married but was slightly older, had higher annual hours worked, and had higher income than the analytic sample, despite showing up in fewer waves. Thus, the current analytical sample represents a distinctive group of young adults who consistently appeared in the PSID and PSID-TAS for 10 years or more between 2005 and 2019. In addition, given the employment characteristics of the excluded sample, we may speculate that analyses of the current analytic sample potentially underestimate the proportion of SSDI-eligible young adults. Therefore, it should be noted that this analytical sample does not constitute a nationally representative sample of young adults in the US.

Finally, the study requires the sample to have non-missing values on key covariates, such as sex, race/ethnicity, marital status, educational attainment, and parenthood status to ensure comparability among individuals in the sample.

These criteria yielded a final analytic sample of 2,345 persons and 30,458 person-years for the descriptive analysis and 2,295 persons and 26,016 person-years for the regression analyses, which included a set of individuals aged 18 to 34 years who had some work history, were observable for at least 10 years between 2005 and 2019 and had non-missing values on key covariates. There are fewer observations for the regression analyses because the models only include observations for which the study can ascertain their true eligibility.

To provide a comprehensive understanding of young adults' characteristics in the sample and their SSDI credit eligibility status, this study stratifies the sample by the SSDI credit eligibility status relative to the time observed during the survey window. Under the Eligibility Status column in Table 4, from left to right, there are 1) *Overall*, which shows an overview of the sample characteristics, 2) *Never Eligible*, indicating observations which never were SSDI-eligible between ages 18 and 34, 3) *Less than 50 percent of the Time* indicating observations which were SSDI-eligible for half or less than half of their time observed between ages 18 and 34, and 4) *More than 50 percent of the Time* indicating observations which were SSDI-eligible for more than half of their time observed between ages 18 and 34.

Table 3. Sample Inclusion Criteria

	Person-years	Persons
Observations were 18–34 years old between 2005	77,318	15,898
And were observed for 10 years through 2019	30,476	2,346
And have non-missing on covariates such as Sex, Race/Ethnicity, Highest Education, Marital Status, and Parenthood Status	30,458	2,345

Methods

After determining the *SSDI Eligibility* (see Figure 1) at each age from 18–34 years old, this study begins by plotting and descriptively describing the share of eligible young adults at each age by different characteristics, including sex, race/ethnicity, educational attainment, marital status, and parenthood status.

SSDI eligibility could be quite complex, especially for those whose disability begins before the age of 22, because of factors such as parents' retirement/disability status, own marital status, and earnings records (see the [Disabled Adult Child](#) for more information, SSA 2023b). The examination of SSDI eligibility rates by age will enable the consideration of age-specific factors that could shape overall eligibility.

Next, the paper conducts regression analyses using conditional linear probability with fixed effects models to observe the within-person differences in the probability of being SSDI-eligible in each year of young adulthood as a function of each adult milestone, and with further stratifications by 1) sex, 2) race/ethnicity, and 3) sex and race/ethnicity. The following specification provides an example of a model that examines differences by marital status:

$$\begin{aligned} \Pr(\text{SSDI_eligible}_{it}) &= \beta_0 + \sum_{t=18}^{34} \beta_1 \text{age}_{it} + \beta_2 \text{marital_stat}_i \\ &+ \beta_3 \left(\sum_{t=18}^{34} \text{age}_{it} \times \text{marital_stat}_i \right) + \beta_4 X_{it} + \alpha_i + \epsilon_{it} \end{aligned}$$

where $\Pr(\text{SSDI_eligible}_{i,t})$ is the probability of being eligible for SSDI for an individual i at age t ; age_{it} is a set of dummies at individuals' ages 18–34; marital_stat_i is the marital status of an individual i ; X_{it} is a vector of controls, such as sex, race/ethnicity, education, annual income, and parenthood status for an individual i at time t ; α_i is the individual-specific fixed effect; and ϵ_{it} are error terms for an individual i at time t . Coefficient β_3 with the interaction term ($\text{age}_{it} \times \text{marital_stat}_i$) captures the probability of SSDI eligibility for an individual i at time t when they were unmarried, married, and separated/divorced/widowed.

Findings

This study focuses on the work credit rule that partly determines SSDI eligibility and examines the extent to which adulthood milestones and individual characteristics may impact eligibility for part one of the two criteria, thus making them ineligible *in the event that they become disabled*.

Descriptive Characteristics of Young Adults by SSDI Eligibility Status

Table 4 shows the young adult characteristics stratified by the three categories of SSDI eligibility status. It also shows the simple t-test results describing statistical differences across the three

eligibility status groups. Starting with an overview of the sample, it appears that, on average, half of the sample were female and half were male. Sixty-five percent of the sample were White, 17 percent were Black or African American, and the other 18 percent were of other races/ethnicities. The education variable, which indicates the highest educational attainment at the oldest age observed, shows that, on average, 21 percent of the observations had a High School diploma or less, 34 percent had Some College, 13 percent had a Bachelor's Degree, and the remaining 32% had a Graduate Degree or higher education.

Marital Status and Parenthood Status are both time-varying variables. Many young adults were in Unmarried status, accounting for 79 percent of the observations. Another 17 percent were in Married status and around five percent were in Separated/Widowed/Divorced status. Many young adults between the ages of 18 and 34 were in Non-Parent (or not-yet-parent) status, with 73 percent of observations were Non-Parents compared to 27 percent of the observations who were Parents.

After stratification by the SSDI Eligibility Status relative to the time observed, there are some variations, especially among those who were *Never Eligible* and those who were SSDI-eligible for *More than 50 percent of the Time*. The differences between the two groups were statistically significant for all characteristics.

First, proportionately more female young adults belongs to the *Never Eligible* group than the *More than 50 percent of the Time* group, suggesting that there might be gender differences in the share of SSDI-eligible young adults. However, the magnitude was rather small (52 percent vs. 49 percent, respectively). In contrast, there are clear racial differences that are high in both statistical significance and magnitude between the two groups. For instance, while only 49 percent of the *Never Eligible* group were White young adults, they represented the largest proportion (72 percent) of those who are SSDI-eligible for *More than 50 percent of the Time*. On the other hand, only 28 percent of those who are SSDI-eligible for *More than 50 percent of the Time* were identified as Black and other races/ethnicities young adults, compared to 51 percent in the *Never Eligible* group. Moreover, there are differences by Educational Attainment between the *Never Eligible* and the *More than 50 percent of the Time* groups. Sixty-seven percent of the *Never Eligible* group have some college or lower educational attainment compared to 47 percent for the *More than 50 percent of the Time*.

At the same time, there were few differences between those who were *Never Eligible* and those who were SSDI-eligible for *Less than 50 percent of the Time* in the time they were observed. For example, Table 4 shows that on average, those who were *Never Eligible* were slightly more likely than those who were SSDI-eligible for *Less than 50 percent of the Time* to identify as parents.

In sum, those who were *Never Eligible* were more likely than those who were SSDI-eligible for *More than 50 percent of the Time* to be female, non-White, Unmarried or Separated/Widowed/Divorced, parents, and, on average, to have lower educational attainment.

These descriptive findings suggest disparities in meeting the SSDI credit eligibility criteria based on demographic characteristics such as sex, race/ethnicity, educational attainment, marital status, and parenthood status. Both race/ethnicity and educational attainment stood out as the most influential factors associated with SSDI eligibility among young adults, based on the statistical significance and magnitude of differences across the three eligibility groups. Subsequent analyses provide further insights into the scope and magnitude of these racial disparities, as well as disparities based on other characteristics.

Table 4. Weighted Descriptive Summary Statistics

Proportion of Person-Years	Eligibility Status					Difference	
	Overall	Never Eligible (1)	Less Than 50% of the Time (2)	More Than 50% of the Time (3)	(1)-(2)	(1)-(3)	
<i>Time-invariant covariates</i>							
Sex							
Male	0.50	0.48	0.48	0.51	ns	ns	
Female	0.50	0.52	0.52	0.49	ns	ns	
Race/Ethnicity							
White	0.65	0.49	0.62	0.72	***	***	
Black/African American	0.17	0.23	0.18	0.15	***	***	
Others	0.18	0.27	0.20	0.13	***	***	
Educational Attainment							
High School or less	0.21	0.27	0.27	0.15	ns	***	
Some College	0.34	0.39	0.34	0.32	***	***	
Bachelor's Degree	0.13	0.11	0.10	0.16	ns	***	
Graduate Degree or higher	0.32	0.23	0.29	0.36	***	***	
<i>Time-varying covariates</i>							
Marital Status							
Unmarried	0.79	0.79	0.82	0.77	***	***	
Married	0.17	0.13	0.14	0.19	***	***	
Separated/ Widowed/Divorced	0.05	0.08	0.04	0.04	*	***	
Parenthood Status							

Non-parent/No birth history	0.73	0.65	0.70	0.76	ns	***
Parent	0.27	0.35	0.30	0.24	ns	***
Person (unweighted)	2,345	540 (20.72%)	772 (23.24%)	1,033 (56.03)		
Person-year (unweighted)	30,458	6,738	9,848	13,872		

Note. The samples are weighted at individual level. *Never Eligible* category represents observations that never met the SSDI eligibility criteria between the age of 18 and 34. *Less Than 50 percent of the Time* category represents observations that were identified as having met the eligibility criteria for half or less of the time they were observed during the 2005–2018 survey window. *More Than 50 percent of the Time* category represented observations that were identified as having met the eligibility criteria for more than half of the time they were observed during the survey window. Difference columns show simple t-test statistics. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ns=not significant

Shares of SSDI Eligible Young Adults

Figure 2 presents the overall unconditional share of SSDI-eligible young adults at each age. Even though young adults were tracked from age 18 to 34 years, the following graphs show the observed shares of SSDI eligibility starting from age 20 onwards. This is due to the current data limitation, where young adults' earnings, and thereby their SSDI eligibility, were only observed starting at age 18 (i.e., there was no prior work history prior to age 18 because of the way the PSID collected the earnings data). Therefore, to present the tracking of how young adults build and accumulate work history to meet the SSDI eligibility criteria, this study shows the shares of SSDI eligibility starting at age 20.

Another important note is the vertical line at age 22 years in this study and the following graphs. This line represents the change in the structure of the SSDI work credit eligibility criteria. According to the SSA, young adults who developed disabilities between ages 18 and 22 may be eligible for SSDI on their parents' Social Security earnings record if their parents are deceased or start receiving retirement or disability benefits. However, young adults must still be unmarried. This also means that if young adults were to develop a disability after age 22, they would need their own Social Security earnings records to meet SSDI eligibility.

As a reminder, the SSA has dynamic SSDI credit eligibility rules that change as applicants age. The rules state that to qualify for SSDI benefits 1) applicants who develop a disability *before the age of 24 years* would need at least one and a half years of work or six work credits, 2) those *between the ages of 24 and 30* would need to have the number of credits for working half the time between the age of 21 and the time their disability began, and 3) those *aged 31 years and older*, need at least 20 credits in the 10 years immediately before their disability begins (SSA 2023d). It is worth noting that, according to the SSA's Program Operations Manual System (POMS), the

third rule above implies that for applicants with disability begun at age 31 (and older), the 20 credits needed to qualify for SSDI can only be counted from when they were aged 22 years old onward (SSA 2023c). This essentially means losing the credits they already accumulated before age 22. Similarly, the second rule implies that young adults with disability begun between ages 24 and 30 could only qualify with the credits they accumulated from age 21 years old, essentially losing all the credits they accumulated during their teenage years.

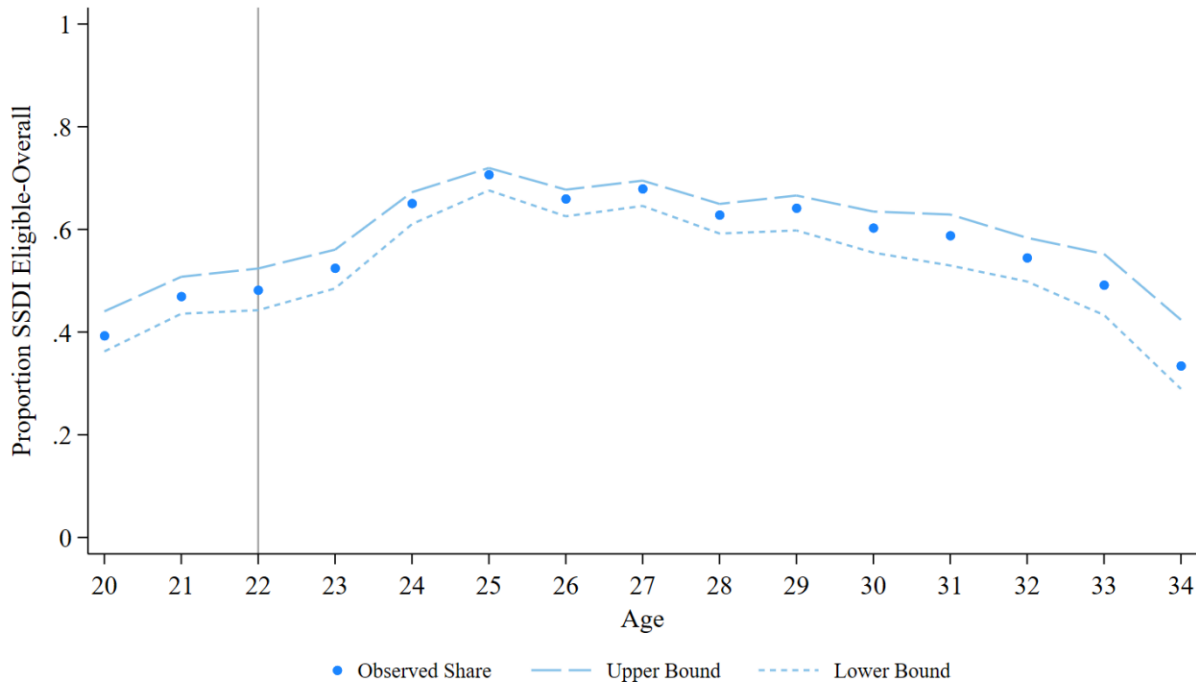


Figure 2: Proportion of Overall SSDI Eligible Young Adults between Ages 20 and 34 Years Old

Note. The markers in this graph show the unconditional share of SSDI eligible young adults aged 20 to 34 years using the actual SSDI eligibility, as observed in the data with a complete annual earnings history. The dashed lines depict the upper and lower bounds of the SSDI eligibility.

In summary, Figure 2 shows that between ages 20 and 34, the proportion of young adults who would be eligible for SSDI peaks close to 71 percent at age 25. However, by age 31, when the rule changes from counting the credits for working half the time to counting the credits from the last 10 years, young adults see a drop of 12 percentage points in the proportion of SSDI-eligible young (at 59 percent) which continue to trend down until the last observed age. This means that at each age between ages 20 and 34 around 29 to 41 percent of young adults would be ineligible based on their work-credit for SSDI even if they need it. If the analytic assumed to be nationally representative, this would implicate 29 to 41 percent of the 78.5 million young adults in 2018 (US

Census Bureau 2019), equivalent to 22.8 to 32.2 million. Given that many young adults do not meet the SSDI eligibility criteria, this is a policy concern. Especially after 22 years of age, young adults can no longer qualify for SSDI based on their parents' earnings. Based on the current program rules, there are two possible explanations for young adults' inability to meet SSDI credit eligibility: 1) insufficient earnings and 2) insufficient time spent attached to the labor force.

To pinpoint which of the two explanations is behind the ineligibility among young adults, Table 5 presents weighted descriptive employment characteristics by SSDI eligibility status and each wave of data. The characteristics (from the left to the right column) include the Average Annual Number of Credits (maximum four credits per the SSA's rule), Average Annual Income (calculation also includes those with zero earnings), Average Annual Total Hours Worked (this is an imputed measure that was calculated by multiplying the average hours worked per week by 50 weeks), and the Proportion of Unemployed young adults.

Based on the first five columns for the Average Number of Credits, the table shows, on average, in each wave, young adults across the SSDI eligibility status are unable to accumulate a maximum of four credits. The next four columns for Average Annual Income show that young adults across eligibility statuses have relatively lower earnings in each wave (i.e., annual earnings are lower than SSA's yearly earnings threshold to earn four credits). At the same time, on average, young adults' annual total hours worked are also relatively low (fewer than 35 hours/week), especially during the earlier waves when they were college-aged young adults. Finally, Table 5 shows that young adults who were *Never Eligible* had the highest proportion of unemployed young adults compared to those who were SSDI-eligible for *More than 50 percent of the Time* whose proportion of unemployed was the lowest.

These additional descriptive analyses of employment characteristics provide suggestive evidence that both explanations for ineligibility among young adults between the ages of 20 and 34 are plausible. Young adults during these ages might have insufficient earnings—to accumulate the maximum four credits per year—and/or have insufficient time spent attached to the labor force. These lead them to fail to meet the yearly earnings threshold and work duration test, which are both necessary for meeting the SSDI work credit requirements.

Table 5. Employment Characteristics by Year and Eligibility Status

Year	Average Annual Number of Credits (max. 4)				Average Annual Income (include \$0 income)				Average Annual Total Hours Worked (include zero work hour)				Proportion of Unemployed			
	Overall	Never	Less Than 50%	More Than 50%	Overall	Never	Less Than 50%	More Than 50%	Overall	Never	Less Than 50%	More Than 50%	Overall	Never	Less Than 50%	More Than 50%
2005	2.10 (1.85)	0.51 (1.25)	1.75 (1.88)	2.47 (1.76)	5,439.00 (7,581.73)	2,446.56 (7,878.30)	3,142.59 (4,446.53)	6,703.09 (8,086.52)	826.97 (913.01)	552.06 (1,013.47)	581.36 (801.99)	948.62 (912.70)	0.38	0.82	0.49	0.27
2006	2.56 (1.77)	0.63 (1.38)	2.10 (1.82)	3.06 (1.53)	7,395.93 (8,779.37)	1,357.16 (3,862.08)	5,478.64 (7,157.83)	9,128.68 (9,330.27)	1,193.98 (1,181.64)	757.46 (1,462.94)	978.52 (1,163.57)	1,325.82 (1,129.00)	0.28	0.79	0.37	0.16
2007	1.80 (1.89)	0.14 (0.64)	1.52 (1.87)	2.35 (1.85)	5,674.11 (9,624.04)	152.13 (703.28)	4,077.42 (7,508.79)	7,798.17 (10,881.72)	373.53 (771.73)	72.54 (350.02)	313.22 (709.06)	465.72 (842.90)	0.47	0.93	0.54	0.32
2008	2.35 (1.85)	0.37 (1.03)	1.92 (1.86)	3.11 (1.52)	9,112.22 (12,637.48)	811.98 (3,351.19)	5,879.01 (8,917.26)	13,004.39 (14,152.27)	515.29 (975.44)	153.15 (523.45)	434.02 (999.82)	607.42 (1,005.13)	0.32	0.82	0.39	0.14
2009	1.66 (1.90)	0.19 (0.75)	1.09 (1.69)	2.44 (1.87)	7,206.83 (12,673.77)	535.03 (3,311.79)	4,273.84 (11,437.68)	10,950.90 (13,898.17)	422.74 (809.91)	106.26 (469.54)	287.71 (680.80)	579.43 (902.34)	0.52	0.91	0.64	0.33
2010	1.96 (1.89)	0.30 (0.96)	1.42 (1.77)	2.90 (1.66)	8,777.20 (13,554.78)	489.85 (1,867.18)	4,258.81 (8,300.30)	14,423.31 (15,698.84)	298.10 (759.71)	34.77 (263.46)	271.06 (704.18)	363.96 (836.42)	0.42	0.87	0.53	0.19
2011	1.83 (1.94)	0.27 (0.93)	1.15 (1.75)	2.82 (1.76)	10,491.91 (16,736.02)	682.60 (3,378.26)	5,184.09 (11,784.11)	17,247.39 (19,091.46)	721.65 (993.98)	175.41 (551.38)	493.99 (888.98)	1,018.55 (1,050.16)	0.49	0.89	0.64	0.26
2012	1.87 (1.93)	0.23 (0.84)	1.09 (1.68)	2.96 (1.69)	11,157.03 (17,448.98)	422.04 (2,131.42)	4,819.04 (11,327.89)	18,917.06 (19,821.47)	276.77 (795.55)	64.63 (312.40)	250.57 (818.91)	325.62 (837.13)	0.48	0.90	0.63	0.22
2013	2.13 (1.95)	0.44 (1.22)	1.60 (1.88)	3.07 (1.66)	15,851.14 (23,137.59)	2,570.27 (9,414.99)	9,112.51 (16,656.97)	24,755.68 (26,086.45)	1,142.22 (1,091.60)	306.43 (703.78)	998.18 (1,072.86)	1,490.28 (1,040.33)	0.60	0.86	0.64	0.46
2014	1.50 (1.91)	0.32 (0.99)	1.32 (1.83)	2.12 (1.99)	10,092.83 (17,598.79)	1,361.20 (6,129.24)	6,948.90 (13,849.64)	15,712.17 (20,651.81)	930.07 (1,208.33)	344.93 (869.50)	890.67 (1,213.77)	1,088.24 (1,231.20)	0.38	0.77	0.43	0.21
2015	2.34 (1.95)	0.74 (1.52)	2.10 (1.96)	3.07 (1.67)	22,939.21 (28,828.75)	4,891.07 (12,414.37)	15,918.00 (22,381.33)	33,685.69 (31,750.48)	1,693.19 (947.09)	1,007.74 (1,076.85)	1,589.68 (988.67)	1,996.11 (702.99)	0.63	0.77	0.58	0.59
2016	1.16 (1.79)	0.56 (1.36)	1.25 (1.82)	1.37 (1.87)	10,035.28 (20,391.32)	4,407.29 (12,884.86)	9,232.31 (18,269.97)	13,088.71 (23,623.67)	2,020.55 (845.88)	1,436.58 (1,098.67)	2,088.69 (773.48)	2,292.32 (518.81)	0.31	0.64	0.36	0.16
2017	2.68 (1.86)	1.35 (1.87)	2.46 (1.92)	3.33 (1.48)	31,496.89 (35,600.76)	11,686.26 (20,730.73)	24,152.90 (27,857.19)	43,523.50 (39,503.30)	1,738.50 (951.22)	1,117.23 (1,047.39)	1,699.73 (1,011.60)	1,991.27 (747.70)	0.79	0.81	0.76	0.79
2018	0.69 (1.49)	0.49 (1.30)	0.78 (1.56)	0.73 (1.53)	7,329.04 (20,555.73)	5,402.63 (19,135.09)	6,811.13 (17,524.05)	8,586.58 (22,832.36)	2,134.85 (894.22)	1,657.68 (1,121.69)	2,105.36 (924.07)	2,482.37 (418.51)	0.38	0.82	0.49	0.27

Note. The samples are weighted at individual level. *Never* category represents observations that did not meet the SSDI eligibility criteria between the ages of 18 and 34. *Less Than 50 percent* category represents observations that were identified as having met the eligibility criteria for half or less than the time they were observed during the 2005–2018 survey window. *More Than 50 percent* category represents observations who were identified as having met the eligibility criteria more than half of the time they were observed during the survey window.

The Probability of SSDI Eligibility by Adult Milestones

Between the late teens and early thirties, many young adults may have different labor force engagement behaviors than those of older ages, since many also work toward completing a college degree, getting married, or becoming a parent. The literature suggests that these behaviors have the potential to interrupt or disrupt young adults' work history (Altonji, Hynsjo, and Vidangos 2021; Carnevale et al. 2015; Chy 2023; Musick, Bea, and Gonalons-Pons 2020), which has consequences for their work history and earnings. In turn, this may directly affect their SSDI credit eligibility under SSA's current SSDI work credit eligibility requirements.

Figures 3–14 present the predicted probability of being SSDI-eligible at each age by the three adult milestones (i.e., education, marital status, and parenthood status), by each milestone and sex interaction, by each milestone and race/ethnicity interaction, and by each milestone and sex-race/ethnicity interaction. Appendix A presents a regression table showing the relationship between young adults' age and overall probability of meeting SSDI eligibility, interacting with sex and race/ethnicity.

Education

Figure 3 shows that the rates of meeting the SSDI eligibility criteria varied according to education level. First, most young adults see their peak SSDI eligibility probabilities between 24 and 25 years of age. At age 25, the highest to lowest probability are Bachelor's Degree at 69 percent, Graduate degree or higher at 67 percent, Some College at 56 percent, and High School or less at 55 percent.

Similar to what we see in Figure 2, by age 31, young adults across levels of educational attainment see a drop of around 19 to 28 percentage points in their SSDI eligibility probabilities, which continue, but with slighter declines, until the last observed age.

Second, there are *Benefit Eligibility premiums (BE premiums)* tied to educational attainment. These show up in the positive relationship between the predicted probability of meeting SSDI eligibility and educational attainment. Figure 3 shows young adults with a bachelor's degree or higher have consistently higher probabilities of meeting SSDI eligibility than those with lower educational attainment, which is contrary to the study's hypothesis. For example, while the predicted probability of being SSDI-eligible for young adults with a high school or less education peaks at age 24 at 55 percent, those at the same age with a bachelor's or *eventual* higher

degree have a predicted probability of 69 percent. This is a fascinating finding because one might think that those with high school educational attainment would have transitioned to full-time employment earlier than those with a bachelor's degree or higher, making them more likely to have higher earnings and thereby a higher probability of meeting the eligibility at least until their counterparts graduated from college. However, this was not what was observed. Even at 20 years of age, young adults with a college degree, who are presumably still pursuing their degree, have a higher probability of meeting SSDI eligibility than 20-year-old high school graduates, who might have already engaged full-time in the labor force for at least two years following their high school completion.

Lastly, the study hypothesized that those with a graduate degree or higher could potentially be penalized under the current FICA tax code that exempts students who were employed by the same university they enrolled in. Figure 3 reveals that this hypothesis barely holds, showing those with a graduate degree or higher have slightly lower probabilities but statistically non-significant differences than those with a bachelor's degree from early to mid-twenties. This suggests that young adults with a graduate degree or higher might have realized a return to education immediately following their graduation, but not before, as we have seen in the comparison between high school and college graduates.

Nonetheless, it seems that the return to higher education is realized even during college students' academic careers. The next three figures provide further insights into this relationship and its potential associations with sex and race/ethnicity.

Beginning with Figure 4 with the examination of the predicted probabilities of being SSDI-eligible by different levels of education and sex, there are few differences between male and female young adults across all four levels of educational attainment. The females' predicted probability of meeting SSDI eligibility among high school and college graduates shows divergence from their male counterparts beginning at around 28 years old and continuing to age 34 years old.

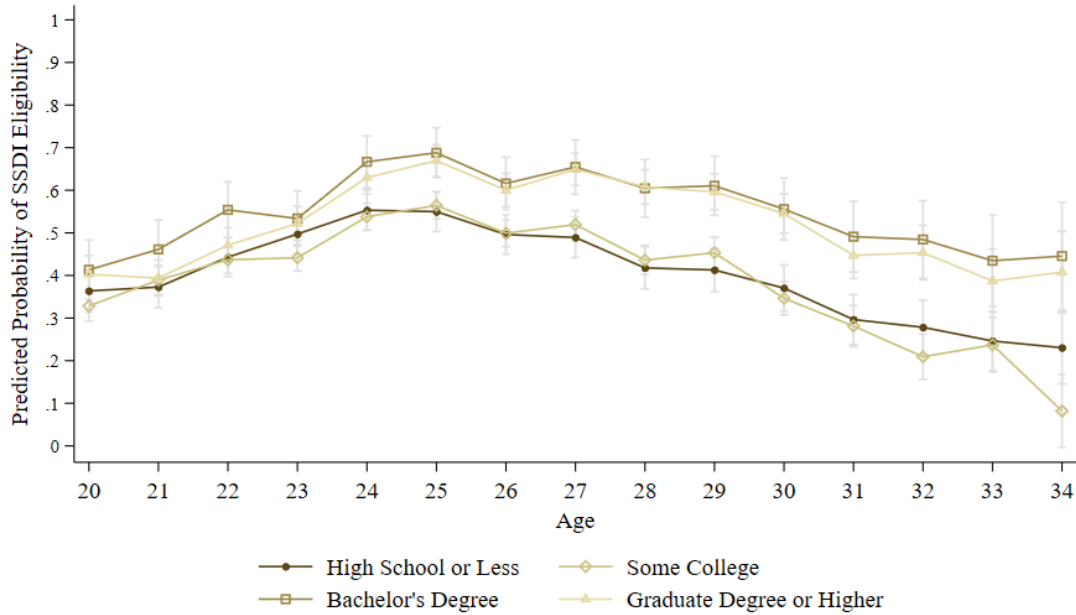


Figure 3: Predicted Probability of Being SSDI Eligible by Highest Education

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by education from ages 20 to 34 years. The results shown are a net of controls, such as sex, race/ethnicity, marital status, parenthood status, income, and other random effects. Error bars represent 95 percent confidence intervals.

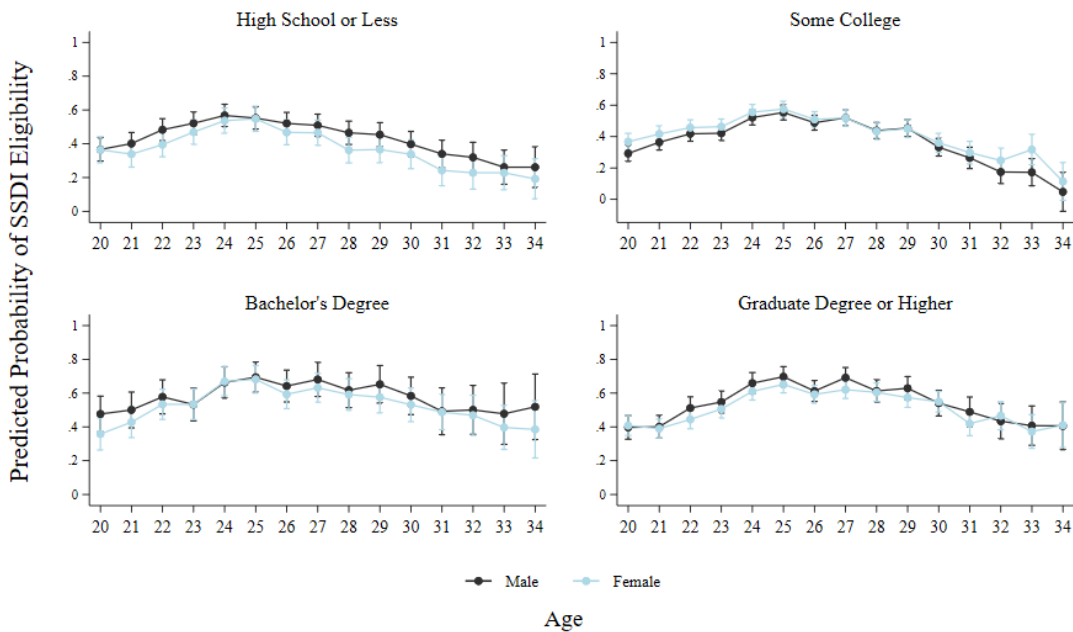


Figure 4: Predicted Probability of Being SSDI Eligible by Highest Education & Sex

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by education and sex from ages 20 to 34 years. Results shown are a net of controls such as sex, race/ethnicity, marital status, parenthood status, income, and other random effects. Error bars represent 95 percent confidence intervals.

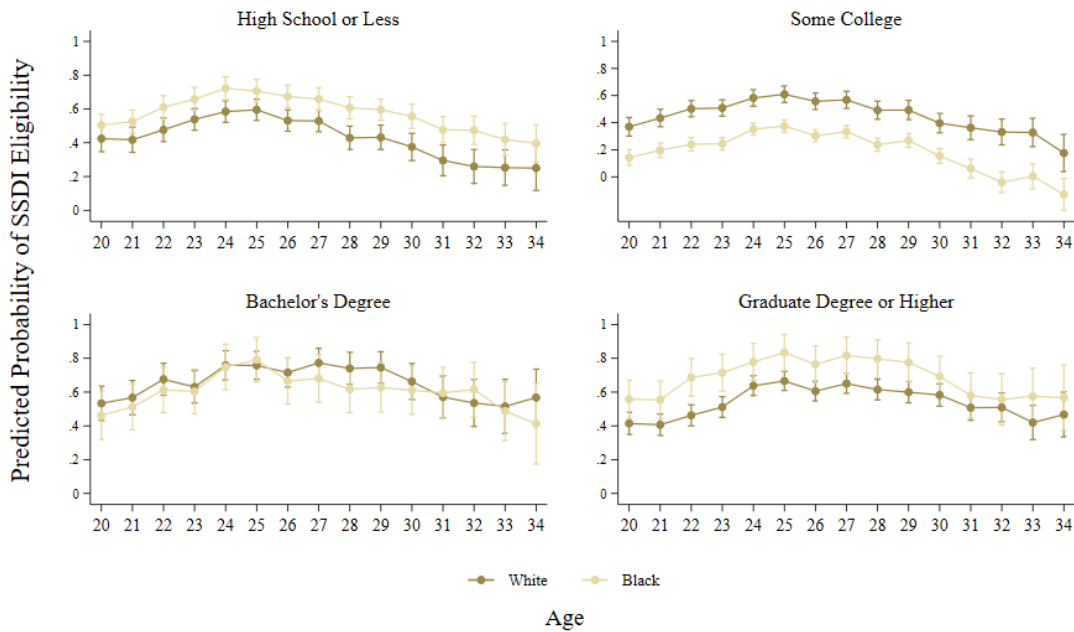


Figure 5: Predicted Probability of Being SSDI Eligible by Highest Education & Race

Note. This graph shows predicted probability of meeting the SSDI eligibility under the current eligibility structure for all young adults stratified by education and race from ages 20 to 34 years old. Results shown are a net of controls such as sex, race/ethnicity, marital status, parenthood status, income, and other random effects. The other-race category was excluded from the graph since, due to data limitation, it cannot be inferred exactly who was included in the category. Error bars represent 95 percent confidence intervals.

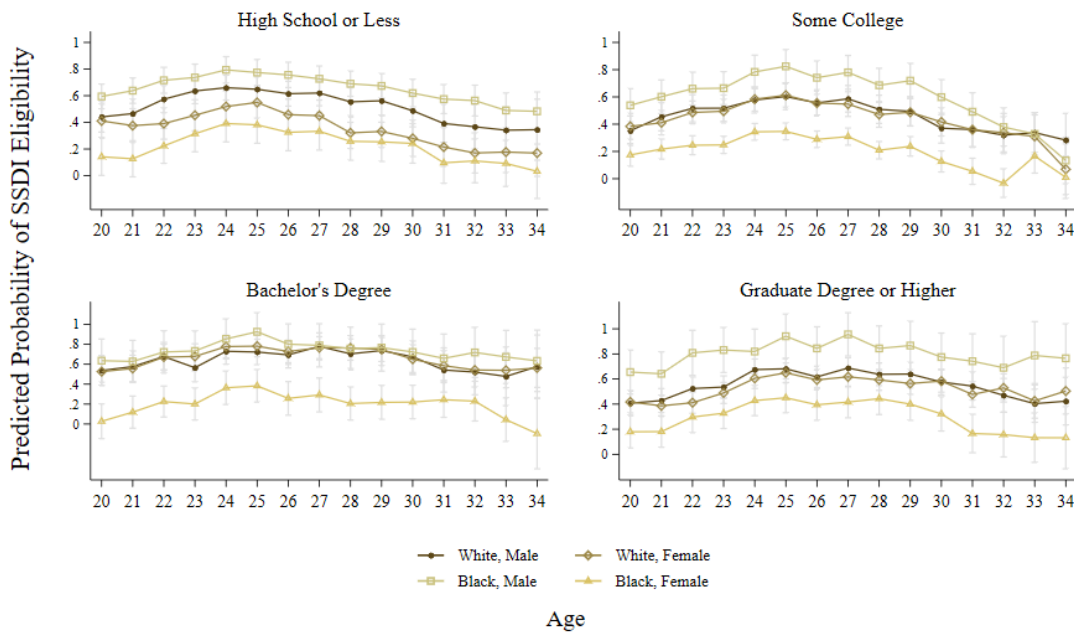


Figure 6: Predicted Probability of Being SSDI Eligible by Highest Education & Sex-Race

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by education and race from ages 20 to 34 years. The results shown are a net of controls such as sex, race/ethnicity, marital status, parenthood status, income, and other random effects. The other-

race category was excluded from the graph because, due to data limitations, I could not infer exactly who was included in the category. Error bars represent 95 percent confidence intervals.

One may speculate that these could be the result of the transition to parenthood penalty among females, but if that is true, the same divergence could possibly show up for females with a graduate degree or higher. Instead, at the highest education level, females' predicted probability of being SSDI-eligible consistently overlapped with that of men. Future studies should investigate whether having a graduate degree or higher offers protection for female employment and earnings, thus helping reduce the gender gap in earnings. Future studies should also investigate whether females with graduate degree or higher start their transition to parenthood at a much later age than those with lower educational attainment.

Next, Figure 5 shows the relationship between each educational attainment level and the predicted probability of meeting SSDI eligibility by race/ethnicity. While the models include all three categories of race/ethnicity (i.e., White, Black, and Other Race), the current paper opted to show only the comparison between White and Black individuals. This is because the current data lack details about *how* and *who* were categorized as *Other Race*; thus, the paper cannot accurately infer who they were, but the information for the Other race category is available in the corresponding Appendix B.

Despite the limitation, the results shown in Figure 5 are compelling. First, there are clear White and Black racial disparities across different levels of educational attainment, except for bachelor's degree. Of note is the persistence of lower probabilities of meeting the eligibility criteria among 20-to-34-year-old Black adults with some college education. In this category, Black/White gaps in the predicted probability of meeting SSDI eligibility are around 30 percentage points. This means that at each age between 20 and 34 years, Black young adults with some college degrees are 30 percentage points less likely than their White counterparts to be eligible for SSDI, *even if they needed it*.

Third, interestingly, Black young adults with a high school diploma or less and those with a graduate degree or higher seem to fare better than their White counterparts in terms of predicted probability of meeting SSDI eligibility. Anecdotally, one may suspect that Black young adults, who often have lower socio-economic statuses (SES) than White young adults, would have to work more hours than their peers. However, this works in their favor because, as Black young adults put more hours in the labor force, the taxes on their earnings translate to more Social

Security work credits, thus making them likelier than their White counterparts to be eligible for SSDI.

To further our understanding of the relationship between educational attainment and SSDI work credit eligibility, Figure 6 shows the relationship as it intersects with both sex and race/ethnicity. These interactions allow us to observe the potential impact of identity intersection on the relationship between education and SSDI credit eligibility for young adults. First, the figure shows both sex and race/ethnicity play important roles in moderating the relationship between education and SSDI work credit eligibility, especially among young Black adults.

For instance, across all levels of educational attainment, Black Male young adults exhibit the highest predicted probability of meeting SSDI eligibility (i.e., close to 100 percent at their highest peak), while Black Female young adults exhibit the lowest predicted probability (i.e., around 45 percent at their highest peak). At the same time, their White counterparts nested between the two extremes and showed no clear significant difference, except for those with High school or less. These results provide suggestive evidence that when young adults are identified as Black, their sex moderates the relationship between education and SSDI work credit eligibility. However, sex does not seem to moderate the relationship when young adults are identified as White. One may question if these results speak to the compounding disadvantage of being female and of being Black or African American identities in both education and professional careers. Appendix E provides additional descriptive insights into employment characteristics of these young adults by educational attainment and sex-race/ethnicity.

Finally, it is worth noting that the drops in predicted probabilities at age 31 years old that we see in the overall model also show up in these three stratified models. However, there are some groups that experience a sharper decline at age 31 than other stratified groups. For example, Black females with a high school diploma or less show a sharper decline than their male counterparts. Similarly, Black young adults with some college have a sharper decline than their White counterparts.

Marital Status

Getting married is another big and important milestone in young adults' lives that could potentially impact their labor force engagement and earnings, which are directly tied to SSDI work credit eligibility. Therefore, this section focuses on the understanding of the relationship between marital

status and SSDI credit eligibility. First, it is important to note that *Marital Status* in the current study is allowed to be dynamic in nature, and thus it was coded as a time-varying variable. This means that each marker in the graph indicates a time/age where young adults are transitioning from unmarried to married, and vice versa. Therefore, this study is always observing the relationships between being married versus unmarried and the SSDI credit eligibility. Second, this study opted to show only these two group comparisons, even though the third category of Separated/Widowed/Divorced was also included in the models. This is because there are few young adults who were identified as Separated/Widowed/Divorced (i.e., 5 percent of the overall sample or 117 young adults), which might present inaccurate estimates for this group.

Figure 7 shows the overall impact of being Unmarried and Married on the predicted probability of meeting the SSDI credit eligibility. The figure reveals that married young adults, especially those in their mid-twenties, have slightly higher and statistically significant differences than unmarried young adults (66 percent versus 60 percent at their peaks). This is consistent with the hypothesis that married young adults are more likely than unmarried young adults to be eligible for SSDI. This reflects the earnings premium following marriage or “*marriage premium*” as often found in the literature related to lifetime earnings (Juhn and McCue 2017). Thus, according to this new insight, this study reveals there is also an increased predicted probability for benefits eligibility, particularly for SSDI, associated with marriage, or “*Benefit Eligibility premiums – BE premiums*.” Next, the study examines whether *BE premiums* also hold for young adults of different sexes, race/ethnicity, and the intersection of the two identities.

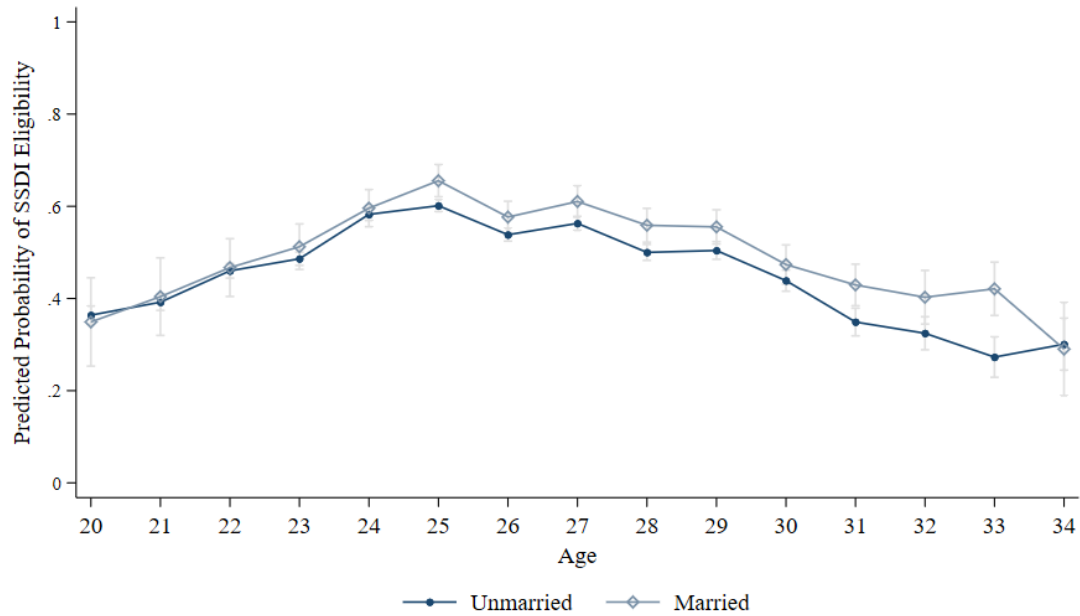


Figure 7: Predicted Probability of Being SSDI Eligible by Marital Status

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by marital status from ages 20 to 34 years. The results show a net of controls, such as sex, education, marital status, parenthood status, income, and other fixed effects. The Separated/Widowed/Divorced category was excluded from the graph because few observations belong to this category, leading to extremely volatile or unreliable estimates. Error bars represent 95 percent confidence intervals.

Figure 8 shows the predicted probability of being SSDI-eligible by marital status and sex. Indeed, there are *BE premiums* for both male and female young adults. However, it is more salient among married male young adults, where there is up to a 20 percent increase, particularly from mid-twenties, and these differences are almost always statistically significant. Simultaneously, married female young adults experience a relatively smaller *BE premium* associated with being married. Both unmarried and married female young adults have an almost parallel trend in their predicted probabilities with married female young adults showing a slightly higher predicted probability than unmarried female young adults (66 percent versus 60 percent at their peaks).

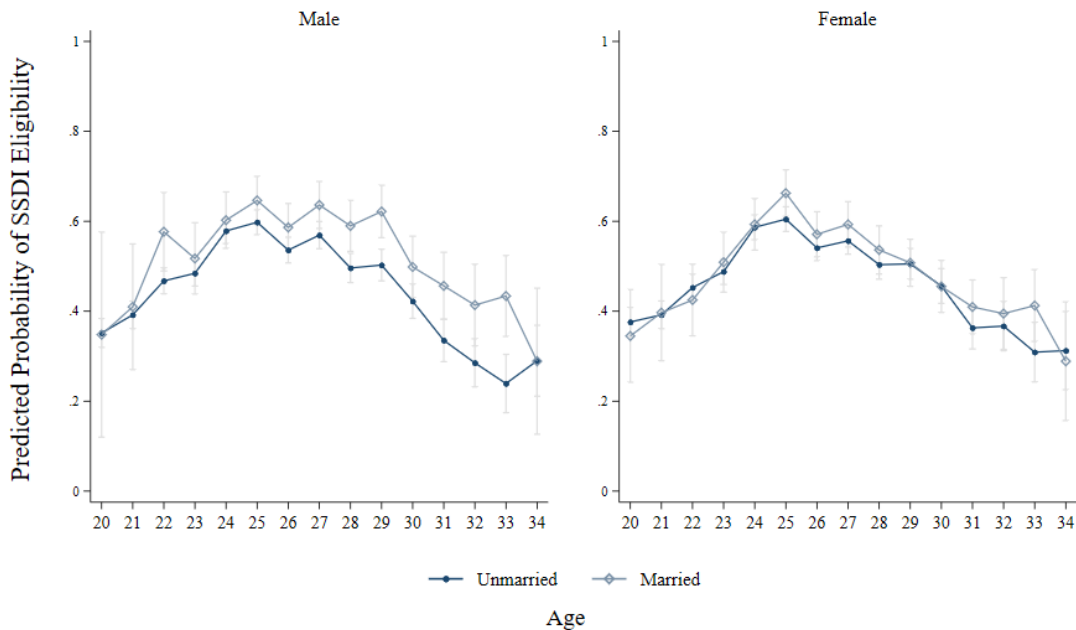


Figure 8: Predicted Probability of Being SSDI Eligible by Marital Status & Sex

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by marital status and sex from ages 20 to 34 years. Results shown are a net of controls such as sex, education, marital status, parenthood status, income, and other fixed effects. The Separated/Widowed/Divorced category was excluded from the graph since few observations belong to the category, leading to an extremely volatile line. Error bars represent 95 percent confidence intervals.

Figure 9 shows the predicted probability of meeting SSDI eligibility by the two marital status categories interacting with race/ethnicity (more information for the Other race and Separated/Divorced/Widowed is shown in and corresponding Appendix C). Similar to Figure 8, the *BE premium* holds true for White young adults, but not for Black young adults. In fact, the relationship between marital status and the predicted probability of meeting SSDI eligibility is less clear among Black young adults. For example, for a group of Black young adults in their early twenties, marriage seems to be associated with a lower predicted probability compared to unmarried Black young adults, suggesting *BE penalties* associated with marriage. However, this took a turn when Black young adults were married in their mid-twenties to early thirties, when there was *BE premiums* associated with marriage. This suggests that Black young adults might be penalized for early transition into marriage and may be better off by delaying the transition until their mid-twenties or later.

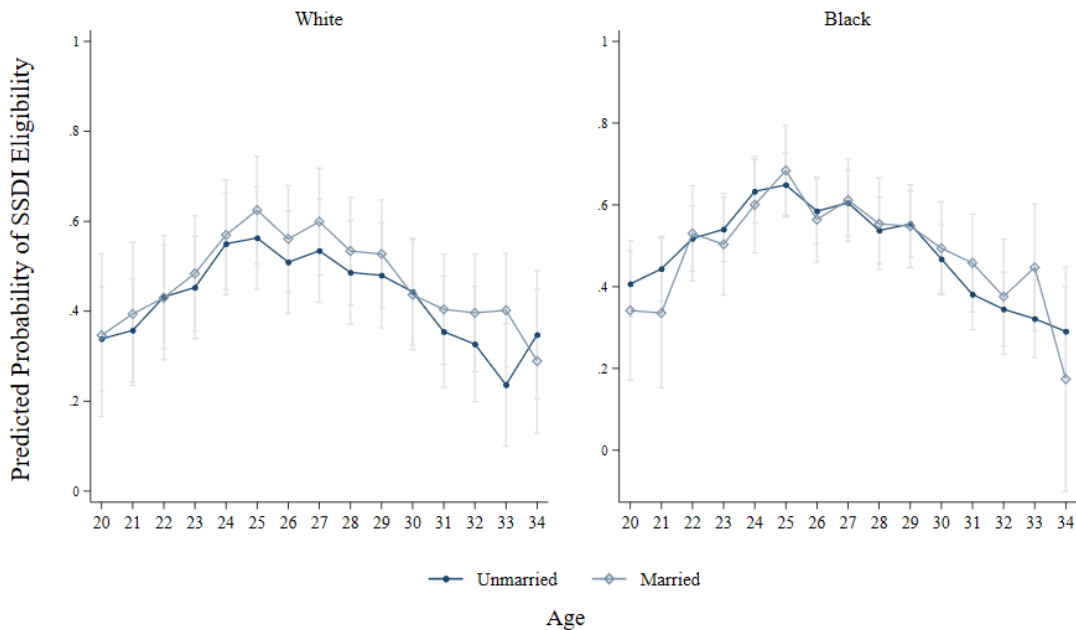


Figure 9: Predicted Probability of Being SSDI Eligible by Marital Status & Race

Note. This graph shows predicted probability of meeting the SSDI eligibility under the current eligibility structure for all young adults stratified by marital status and race from ages 20 to 34 years old. Results shown are a net of controls such as sex, education, marital status, parenthood status, income, and other fixed effects. The other-race category was excluded from the graph since, due to data limitation, I cannot infer exactly who was included in the category. The Separated/Widowed/Divorced category was also excluded from the graph since few observations belong to the category, leading to an extremely volatile line. Error bars represent 95 percent confidence intervals.

For the final examination of the relationship between marital status and SSDI work credit eligibility, Figure 10 plots three-way interacting graphs to examine the potential role of intersecting sex-race/ethnicity identities in moderating the relationship. Figure 10 shows that across the different intersecting identities, there are *BE premiums* associated with marriage, especially among young White Male adults. At the same time, the penalty for early transition to marriage, as shown in Figure 9, seems to be driven more by Black Male young adults than by Black Female young adults. A future qualitative study is needed to explain why Black Male young adults are being penalized for getting married early compared to their female and White counterparts. Appendix F provides additional descriptive insights into employment characteristics of these young adults by marital status and sex-race/ethnicity.

Again, similar to what shown in the models for educational attainment, there are drops in the predicted probabilities at age 31 across marital status and its sex and race/ethnicity stratified groups. However, it is important to note that these drops are more pronounced in among these models by Marital Status than by Educational Attainment. In addition, interestingly, there are

patterns of unmarried groups' predicted probabilities bouncing back following the decline, unlike their married counterparts where the declines in the predicted probabilities persisted until their last age observed. Future studies are needed to understand this interesting phenomenon.

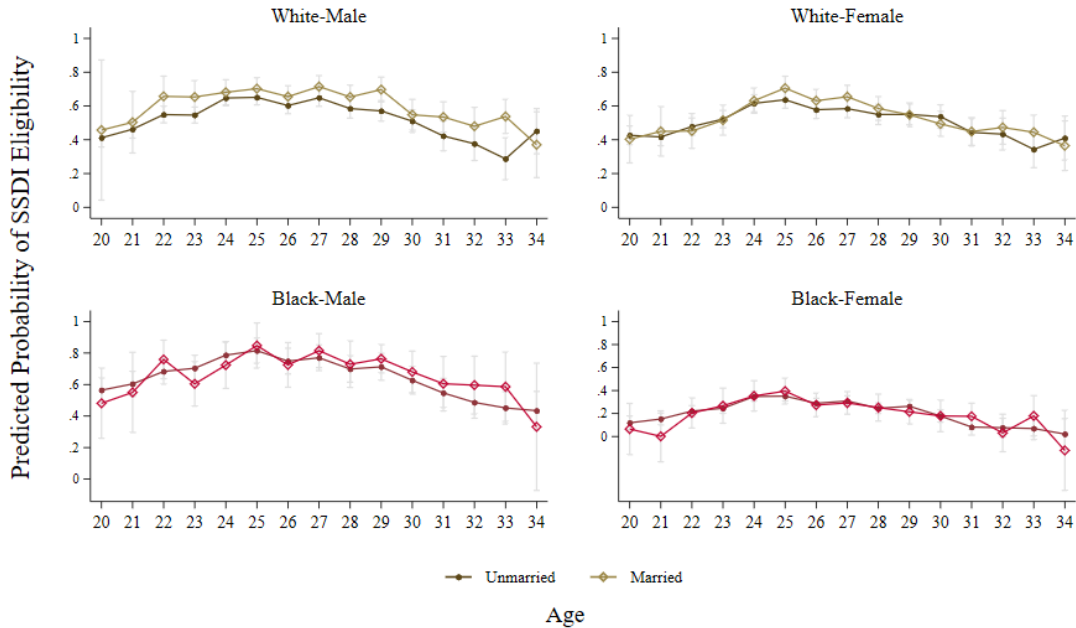


Figure 10: Predicted Probability of Being SSDI Eligible by Marital Status & Sex-Race

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by marital status and race from ages 20 to 34 years. The results show a net of controls, such as sex, education, marital status, parenthood status, income, and other fixed effects. The other-race category was excluded from the graph because, due to data limitations, I could not infer exactly who was included in the category. The Separated/Widowed/Divorced category was also excluded from the graph because few observations belong to this category, leading to an extremely volatile line. Error bars represent 95 percent confidence intervals.

Parenthood Status

During young adulthood, many young adults transition into parenthood. Becoming a parent is a major milestone in people's lives and is often found to have negative associations with individuals' employment and earnings (Musick, Bea, and Gonalons-Pons 2020). The four following graphs show the relationship between parenthood status and the predicted probability of meeting SSDI eligibility, and then interact this relationship by sex, race/ethnicity, and with both sex and race/ethnicity simultaneously. However, first, note that *Parenthood Status* is also a time-varying variable, similar to *Marital Status*. This means that each marker for the *Parent* line represents the first time a young adult transitions into parenthood. Naturally, once a young adult became a parent, they would remain there until their last observation period.

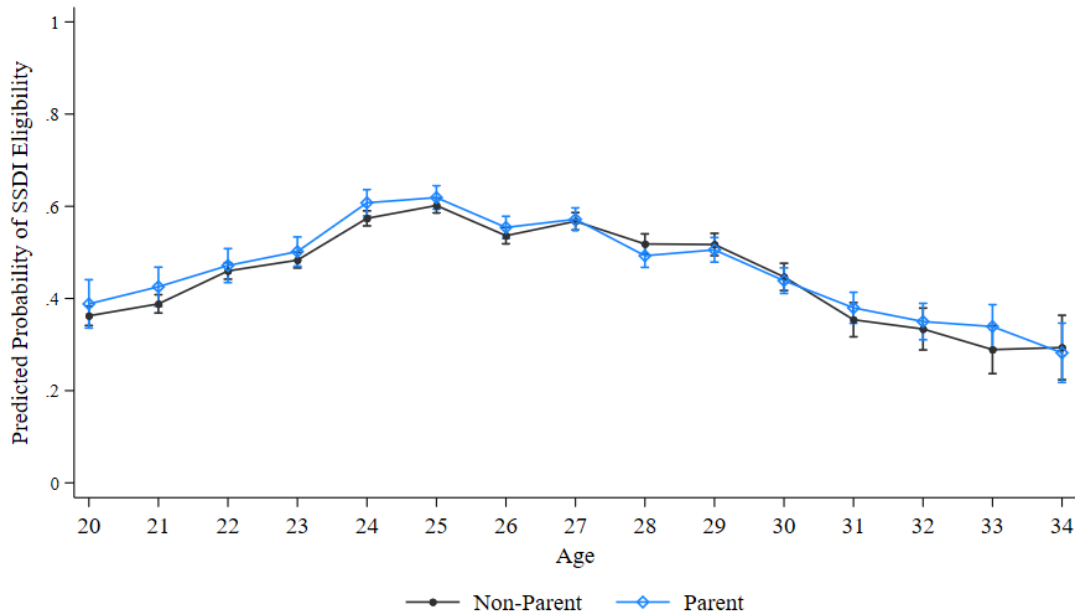


Figure 11: Predicted Probability of Being SSDI Eligible by Parenthood Status

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by parenthood status from ages 20 to 34 years. The results show a net of controls, such as sex, education, marital status, parenthood status, income, and other fixed effects. Error bars represent 95 percent confidence intervals.

Figure 11 shows the predicted probability of meeting eligibility based on parenthood status for all young adults. Unlike marital status, there seems to be a small *BE premium* associated with becoming a parent. Between the ages 20 and 34 years old, parent young adults show a slightly higher predicted probability for some of the ages than non-parent young adults. Prior literature shows there is a positive association between transition into parenthood and labor force engagement for fathers and a negative association for mothers (Glauber 2008; Musick, Bea, and Gonalons-Pons 2020; Yu and Hara 2021). These associations often referred to as “*fatherhood premium*” and “*motherhood penalty*.” Thus, one may expect to see that some parents may have a higher predicted probability than non-parents or *BE premiums*, while some parents may have a lower predicted probabilities than non-parents or *BE penalties*, possibly due to having to take time off from the labor force for childbirth and/or childcare.

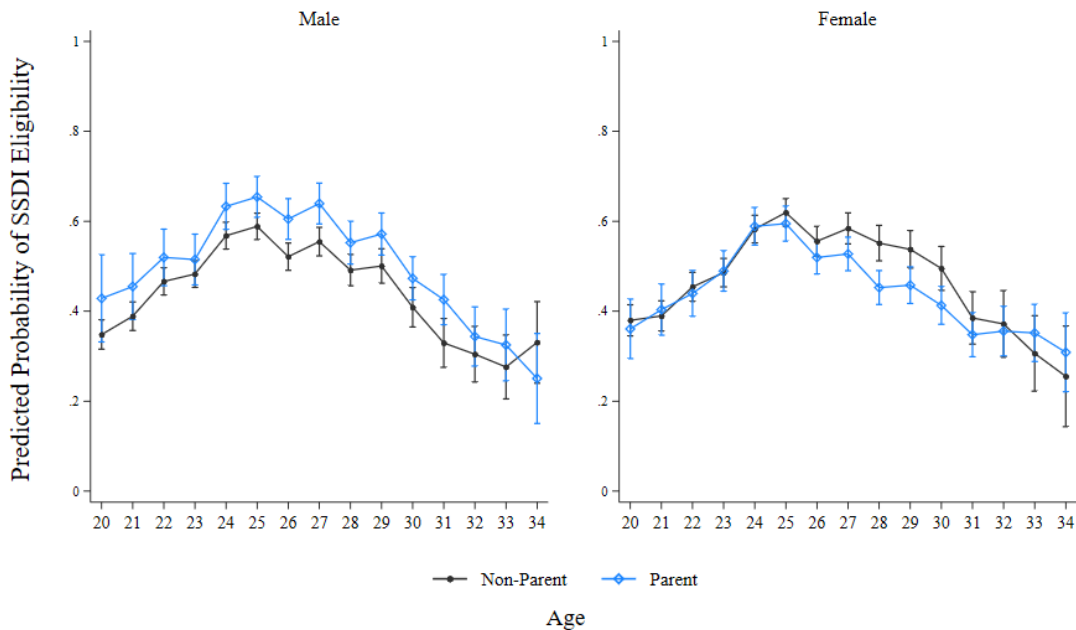


Figure 12: Predicted Probability of Being SSDI Eligible by Parenthood Status & Sex

Note. This graph shows predicted probability of meeting the SSDI eligibility under the current eligibility structure for all young adults stratified by parenthood status and sex from ages 20 to 34 years old. Results shown are a net of controls such as sex, race/ethnicity, education, parenthood status, income, and other fixed effects. Error bars represent 95 percent confidence intervals.

Figure 12 shows the relationship between parenthood status and the predicted probability of meeting the SSDI eligibility stratified by sex. The graph reveals that, indeed, there are *BE premiums* associated with the transition into parenthood, particularly for fathers. Meanwhile, those who became mothers during their early twenties had a similar predicted probability to non-mothers. Those who become mothers during their mid-twenties to early thirties see a lower predicted probability than for those who are non-mothers. This suggests that there may be a penalty associated with becoming a mother in the form of a lower predicted probability for meeting SSDI work credit eligibility or *BE penalties*. These findings are consistent and can be tied to broader literature on gender disparities in lifetime earnings.

Figure 13 shows the same relationship stratified by race/ethnicity (more information for the Other race category is shown in the corresponding Appendix D). First, there is no clear pattern for the *BE premiums* and *BE penalties* associated with the transition into parenthood among White young adults. For example, the predicted probabilities of White parents are sometimes slightly higher while sometimes slightly lower than White non-parents between ages 20 to 27 years, but then it becomes lower than White non-parents until age 31 before becoming higher again at age

33. This may reflect the behavior of White parents following their first childbirth, where they exhibit temporary disengagement from the labor force to care for their newborns or young children. On the other hand, Black parents consistently experience *BE premiums* where their predicted probability is always higher than that of Black non-parents, even though the difference is not always statistically significant. One may think that, unlike White parents, Black parents cannot afford to take time off from work to care for their newborns or young children.

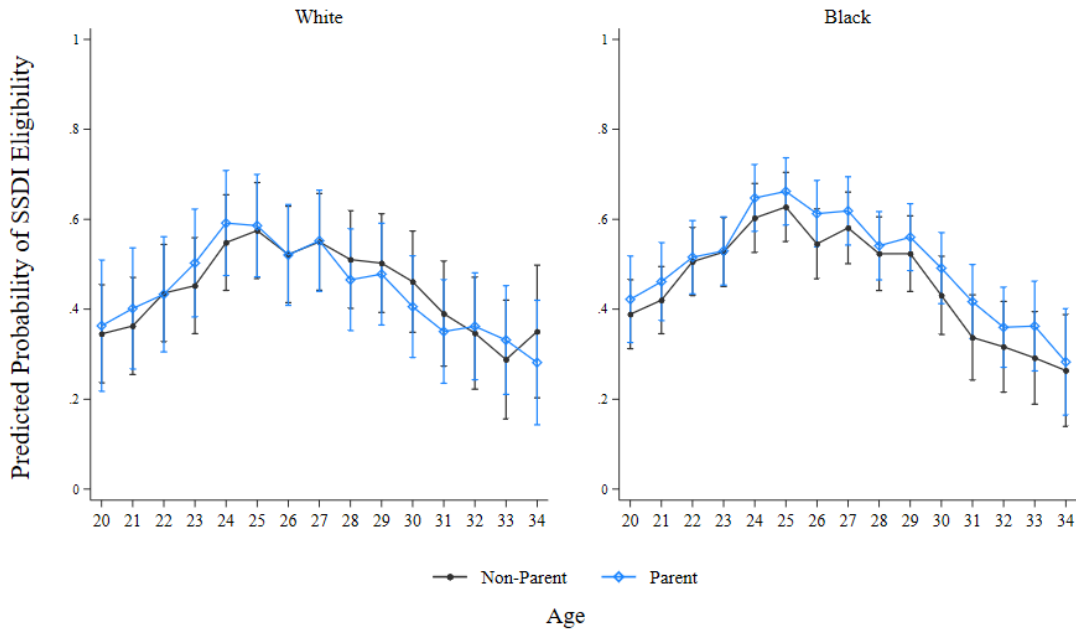


Figure 13: Predicted Probability of Being SSDI Eligible by Parenthood & Race

Note. This graph shows predicted probability of meeting the SSDI eligibility under the current eligibility structure for all young adults stratified by parenthood status and race from ages 20 to 34 years old. Results shown are a net of controls such as sex, race/ethnicity, education, parenthood status, income, and other random effects. The other-race category was excluded from the graph since, due to data limitation, I cannot infer exactly who was included in the category. Error bars represent 95 percent confidence intervals.

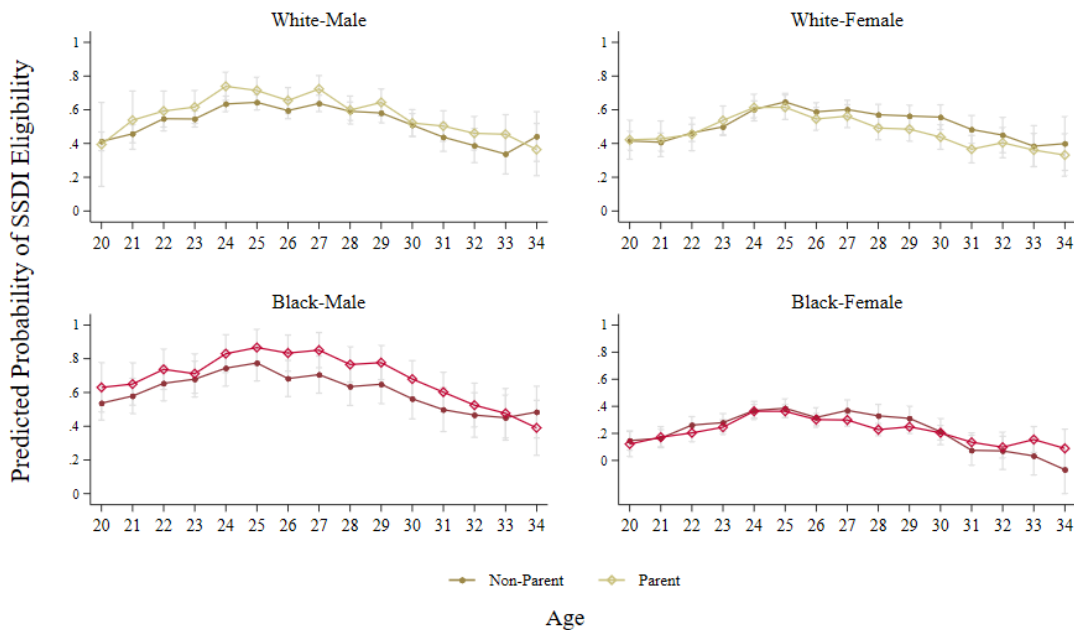


Figure 14: Predicted Probability of Being SSDI Eligible by Parenthood & Sex-Race

Note. This graph shows the predicted probability of meeting the SSDI eligibility criteria under the current eligibility structure for all young adults stratified by parenthood status and race from ages 20 to 34 years. The results shown are a net of controls, such as sex, race/ethnicity, education, parenthood status, income, and other random effects. The other-race category was excluded from the graph because, due to data limitations, I could not infer exactly who was included in the category. Error bars represent 95 percent confidence intervals.

Lastly, Figure 14 shows how the relationship between parenthood status and the predicted probability of meeting SSDI eligibility interacts with both sex and race/ethnicity. Figure 14 reveals that *BE premiums*, as seen in Figure 12, are mainly driven by Black fathers, while the *BE penalties* are driven by both White and Black mothers. Prior literature suggests that married Black fathers saw an increase in earnings following the birth of a child (Glauber 2008). Potentially, this may be due to Black fathers having to work more to meet additional expenses brought about by the birth of a new child. Existing literature supports the current findings of *BE penalties* associated with motherhood since SSDI credit eligibility is closely tied to mothers' earnings (Glauber 2007; Musick, Bea, and Gonalons-Pons 2020; Yu and Hara 2021). Prior studies examining mothers' employment following birth suggest that both White and Black mothers must have stepped back from the labor market for childbirth and/or to care for a newborn (Lu, Wang, and Han 2017; Taniguchi and Rosenfeld 2002), thus affecting their SSDI work credit eligibility. Appendix F provides additional descriptive insights into employment characteristics of these young adults by parenthood status and sex-race/ethnicity.

In this series of models for Parenthood Status, there are also drops in the predicted probability at around age 31 years old. Fascinatingly, the patterns of predicted probability bouncing back following the initial declines do not seem to exist for any stratified group, unlike what we have seen in the series of models for Marital Status.

The findings shown in these graphs provide important insights into SSDI credit eligibility for young adults. These series of analyses show that major adult milestones, such as education, marital status, and parenthood status, interrupt and/or disrupt young adults' labor force engagement and sometimes negatively associated with young adults' probabilities of meeting SSDI eligibility. In addition, the results show that both sex and race/ethnicity are important indicators contributing to disparities in the probability of meeting the SSDI eligibility criteria, as well as the compounding disadvantages of intersecting identities, as in the case of Black Female young adults. Finally, these findings show that the current program's eligibility rules disproportionately impact SSDI credit eligibility for an older age group of young adults.

Discussion

Social Security Disability Insurance (SSDI) is an important social insurance program for many American employees and currently serves around nine million beneficiaries, but few studies have examined the design of its eligibility structure in the recent context of workers' labor force engagement. Using the Panel Study of Income Dynamics (PSID), PSID's Transition to Adulthood Supplement (2005–2019), and the SSA annual income threshold for earnings quarters of coverage or work credits, this study creates a novel measure of *SSDI [work credit] Eligibility* based on the SSA rules of the Social Security Act.

With this new measure, the study follows 2,345 young adults between ages 18 and 34 years old for at least 10 years as they worked to accumulate work credits. Considering the dynamic nature of the number of work credits required to meet SSDI eligibility during these ages, the current study first explores the characteristics of young adults stratified by three eligibility statuses: *Never Eligible*, eligible for *Less than 50 percent of the Time*, and *More than 50 percent of the Time* observed. The results show that young adults in the *Never Eligible* group were more likely to be female, of racial minority group, and have some college or lower educational attainment than young adults in the *More than 50 percent of the Time* group. These characteristics of the *Never Eligible* group present a policy concern because female, non-White, and low educational

attainment individuals are already among those with a higher risk of disability (CBPP 2024; Jacob et al. 2018; Leveille, Resnick, and Balfour 2000; Tsai 2017). This means that despite already facing a higher risk of disability, young adults in this group might also be unable to access SSDI benefits because they failed to meet SSDI credit eligibility.

Second, the current study descriptively estimates the proportion of those who meet the SSDI work credit requirements at each age between ages 18 and 34. The results show that between the ages of 20 and 34 years old, the share of SSDI-eligible young adults peaks at around 71 percent, indicating that the remaining 29 percent of young adults would not be eligible for SSDI benefits even when needed. If the study assumed a national representation for the current analytic sample, this would be equivalent to 22.8 million young adults in 2018.

Finally, this study also exploits the panel nature of the data and conducts regression analyses with fixed effects to examine the within-person changes conditioned on each major life milestone (i.e., education, marriage, and parenthood), as well as their interactions with sex, race/ethnicity, and sex-race/ethnicity together, after accounting for a vector of controls. The analyses reveal that: 1) major life milestones have strong associations with individuals' labor force engagement and have underlying roles in either helping or hindering their efforts to accumulate work credit to meet SSDI benefit eligibility; 2) sex and race/ethnicity are catalytic agents in the relationships between major life milestones and predicted probability of meeting SSDI credit eligibility, and 3) individuals with intersecting vulnerable identities such as Black women are faced with compounding disadvantages as the interruption/disruption in their labor force engagement resulted in lower predicted probability of meeting benefit eligibility, *in the event that they needed it*.

Disparities in SSDI Access During Young Adulthood

The current study finds suggestive evidence of disparities in accessing SSDI benefits among a group of young adults under the current SSDI credit eligibility structure.

First, this study finds that higher education is associated with SSDI eligibility premiums, *Benefit Eligibility premiums – BE premiums*. As shown in Figure 3, young adults with a Bachelor's Degree or higher have up to around 20 percentage points higher predicted probability of meeting SSDI eligibility than those with High School or less. Since annual earnings are key components of the SSDI work credit eligibility formula, these findings are consistent with prior studies which

show that there is a positive relationship between education and earnings. In essence, this study shows that the return on education extends beyond its return on earnings. Moreover, somewhat contrary to the hypothesis on the penalty of pursuing a graduate degree, the results show that young adults with a Graduate degree or higher are just as likely as those with a Bachelor's Degree to meet SSDI credit eligibility. This demonstrates that even under the current FICA tax code, which exempts students from owing FICA taxes and in effect limits young adults from accumulating their Social Security work credits, young adults with higher education remain advantageous over those with lower education.

Second, as hypothesized, the study finds SSDI *BE premiums* associated with marriage. In general, the results show that married young adults are better off than other marital statuses in terms of meeting SSDI credit eligibility. This marriage *BE premiums* ranges from 20 percentage points for males to around six percentage points for females. This finding is consistent with broader literature on earnings premiums following the transition to marriage.

Lastly, the study finds both *BE premiums* and *BE penalties* associated with transition to parenthood, reflected in the probability of being SSDI-eligible for young adults ages between 20 and 34 years old. However, on average, the magnitudes of these average *BE premiums* and *BE penalties* are relatively smaller than those associated with marital status, with the *BE premiums* ranging from one to four percentage points while *BE penalties* range from one to two percentage points

Sex and Race/Ethnicity as Potential Compounding Disadvantages for SSDI Access

Under the current SSA's SSDI *credit* eligibility requirements, applicants' work history, earnings, and medical conditions are the three main components for consideration, while both sex/gender and race/ethnicity are not explicitly considered parts of the requirements. However, this study finds that both gender and race/ethnicity play crucial roles in young workers' SSDI credit eligibility based on the current work credit eligibility rules. Across the three young adult milestones, disparities in SSDI benefits access by gender and race are evident.

By Educational Attainment, the findings from models interacting education by sex show education as a potential gender-equalizing factor, whereby males and females with the same level of education have the same or similar probabilities of being SSDI-eligible. This suggests the potential benefit of education in reducing gender inequality in terms of benefit eligibility. In

addition, the results from models interacting with race/ethnicity show that postsecondary education is associated with higher SSDI *BE premiums* among Black young adults compared to their White counterparts. As shown in Figure 5, Black and White young adults with Bachelor's Degree have similar predicted probability of meeting SSDI eligibility, but when both have a Graduate Degree or higher, Black young adults show around 10 percentage points higher probability than White young adults.

By Marital Status, while models evaluating the differences by gender or race/ethnicity alone did provide much evidence of gender and race/ethnicity disparities, models with three-way interactions reveal clear evidence of these disparities. As previously seen in Figure 11, the *BE premiums* associated with being married seem to be driven by White male and female young adults. Interestingly, among these White young adults, there is no clear evidence of gender disparities. This is contrary to what is shown among Black young adults. The gender disparities in marital status seem to be driven primarily by the differences in the predicted probabilities between Black male and female young adults.

Finally, by Parenthood Status, the findings reveal that among males, fathers tend to have a higher probability of being SSDI-eligible than non-fathers. The opposite is true among females, where the mothers' probability of being SSDI-eligible started to decline at age 25 and persisted until age 30 before climbing back up. This provides us with a first look at the compounding disadvantage for women associated with the transition into parenthood. Not only does the transition into parenthood lead to a loss of earnings for mothers, but it also leads to a lower probability of being SSDI-eligible. Additionally, three-way interactions models show that *BE premiums* associated with fatherhood are mainly driven by Black fathers, while *BE penalty* associated with motherhood is driven by mothers of both race/ethnicities. First, one may guess the reasons to be that a Black father with a newborn child has to increase his working hours to meet the increasing expenses of raising a newborn. Increasing working hours means increasing earnings and higher taxes paid into the payroll taxes which is then converted to the number of work credits. In turn, one may speculate that both White and Black mothers with the presence of their newborns have had to step back from the labor force and in effect unable to accumulate work credits or insufficiently accumulate the number of credits needed.

These findings expand our understanding of the consequences of transition into adulthood, earnings, and gender and racial gaps with implications for economic security of young adults.

Additionally, this study offers novel insights related to SSDI work credit accumulation to meet SSDI credit eligibility requirements among young adults. It also highlights the limitations of current program structures for workers with multiple work interruptions or disruptions. These insights carry significant implications for policies related to young adults and current SSDI credit eligibility structures and their economic security.

Potential Reform to SSDI Work Credits Eligibility Structure

Given the new insights from this study, the Social Security Administration (SSA) could be flexible and take into accounts the new extended age range of young adulthood and the delayed transitions of young adults' significant life milestones (i.e., completing college, getting married, and becoming a parent) when designing the structure of work-credit eligibility for SSDI benefits. Recall that there are two possible mechanisms by which young adults could fail to meet the current eligibility: insufficient earnings to accumulate the maximum four credits per year and/or insufficient time spent attached to the labor force. So, one potential reform that the SSA could undertake is to allow for some flexibility where applicants, between the ages of 24 and 34, with multiple work interruptions qualifying for SSDI and fewer work credits and less time spent attached to the labor market.

To explore how this potential reform impacts young adults' SSDI credit eligibility, this study conducts a series of simulation analyses to descriptively estimate the proportions of SSDI-eligible young adults by sex, race/ethnicity, and educational attainment. In the simulation study, SSDI applicants were allowed to qualify for SSDI benefits for working *a quarter of the time*, instead of *half the time*, between the age of 21 and the time disability began. The choice between a quarter versus a third of the time was simply a matter of avoiding complex decimal points.

In effect, the only change that needs to be made under the new proposed work credit eligibility is changing the denominator of the current formula from two to four. Under this new formula, the number of required credits would only increase by one-credit increments as applicants age. This smaller increase also implies that applicants would have the ability to meet this new criterion even when they spend less time attached to the labor market. Additionally, since fewer credits are required to meet eligibility as applicants age, the SSA does not need to fix the number of required credits to 20 credits for 31 and older applicants. Instead, the SSA could allow the number of credits to continue to be dynamic (i.e., one-credit incremental increase) for applicants

until age 34 years old. Table 6 presents a parallel table to Table 1 and shows the number of years and work credits needed for each age of young adults. In this new table, if you developed a disability at age 27, under the new structure, you would need 6 credits for 18 months or 1.5 years of working, instead of 12 credits for three years of working out of the past six years.

Table 6. Comparison Between the Current and the Proposed Credit-Eligibility at Each Age

Developed disability at age	Current SSA Rules		Proposed New SSA Rules	
	Years of work	Credits Needed	Years of Work	Credit Needed
≤ 24	1.5	6	0.75 years (~ 9 months)	3
25	2	8	1	4
26	2.5	10	1.25	5
27	3	12	1.5	6
28	3.5	14	1.75	7
29	4	16	2	8
30	4.5	18	2.25	9
31		20	2.5	10
32	5	20	2.75	11
33		20	3	12
34		20	3.25	13

Note. This table shows the author's calculations of the number of work credits and years of work needed to meet SSDI eligibility requirements at each age from ages 18–34 years old. Years of Work and Credits Needed under the current SSA Rules were calculated based on the current SSA rules, while the same variables under the Proposed New SSA rules were calculated using the current SSA formula, with its denominator changed from two to four (i.e., quarter of the time vs. half of the time worked and the age disability began).

Figures 15–18 provide the simulation results comparing the proportion of SSDI-eligible young adults estimated based on the new eligibility rules and the proportions estimated based on existing rules. First, Figure 15 shows that under this new structure, the share of SSDI-eligible young adults between ages 24 and 34 increases by around 10 percent, making more than 80 percent of young adults eligible for SSDI if needed. This is in comparison to 71 percent of SSDI-eligible young adults under the existing rules. In addition, the simulation results for the potential reform for work credit eligibility structure show 1) narrower gaps between male and female, and between White and Black young adults; 2) narrower gaps in proportion of SSDI-eligible young adults across all levels of educational attainment; and 3) smaller declines by the three age cutoffs.

These findings demonstrate that the new approach could better align the eligibility criteria with the realities of young adults' lives and improve the effectiveness of the SSDI program by

providing support to those who need it. They also reveal that different eligibility criteria for workers with multiple life transitions and work disruptions could potentially reduce disparities in SSDI use based on sex, race/ethnicity, and other characteristics.

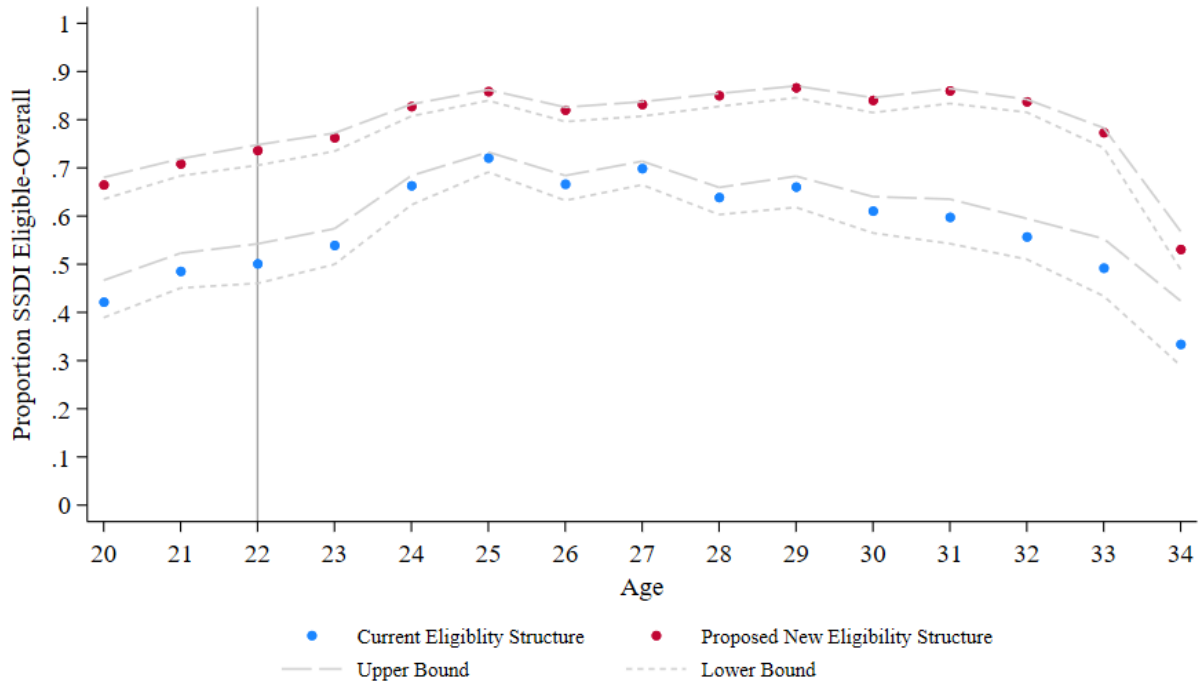


Figure 15: Proportion of Overall SSDI Eligible Young Adults between Ages 20 and 34 Years Old under the Current-vs. the Proposed New Eligibility Structures

Note. The markers in this graph show the unconditional share of SSDI eligible young adults ages 20 to 34 years using the actual SSDI eligibility, as observed in the data with a complete annual earnings history. The dashed lines depict the upper and lower bounds of the SSDI eligibility. The blue markers indicate the share of SSDI eligible young adults under the current SSDI eligibility. The red markers indicate the share of SSDI eligible young adults under the proposed new SSDI eligibility structure.

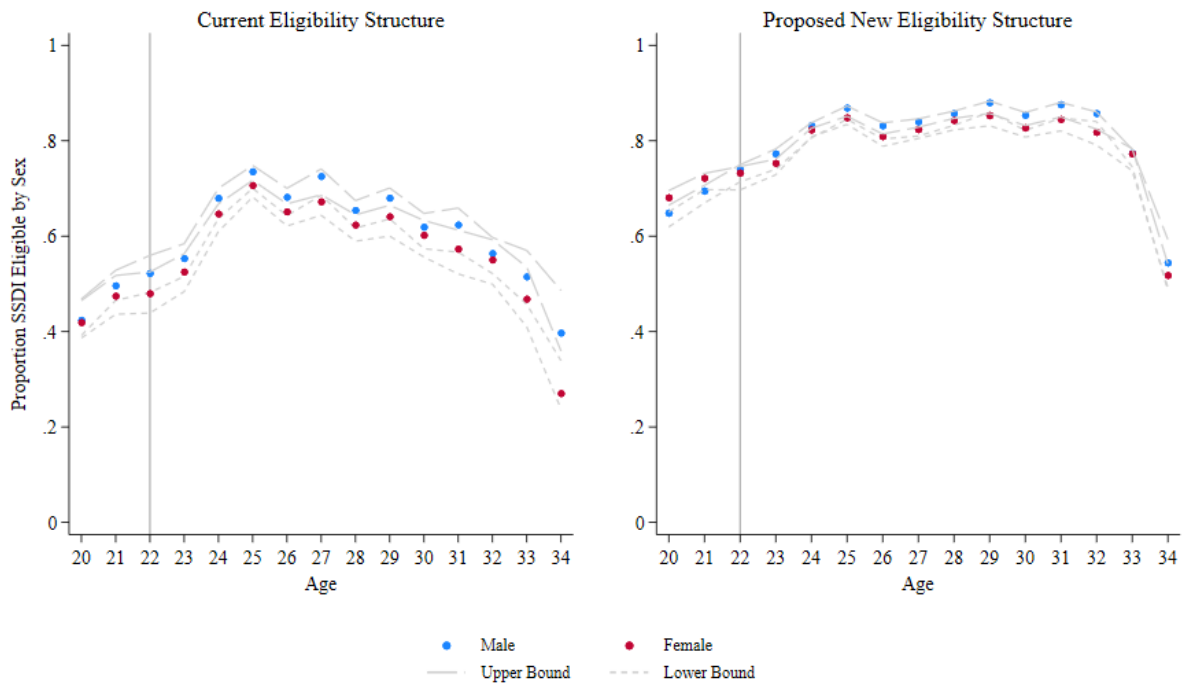


Figure 16: Proportion of SSDI Eligible Young Adults between Ages 20 and 34 Years Old by Sex under the Current- vs. the Proposed New Eligibility Structures

Note. The markers in this graph show the unconditional share of SSDI eligible young adults ages 20 to 34 years by sex using the actual SSDI eligibility, as observed in the data with a complete annual earnings history. The dashed lines depict the upper and lower bounds of the SSDI eligibility. The blue markers indicate the share of SSDI eligible young adults who were males. The red markers indicate the share of SSDI eligible young adults who were females.

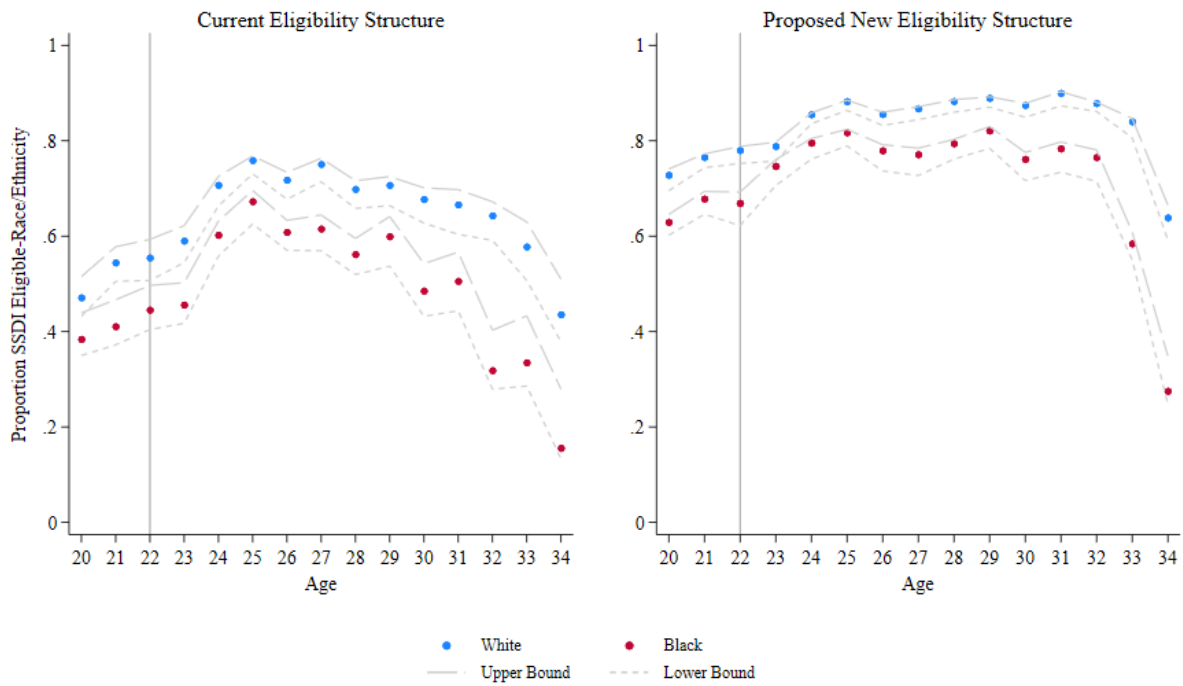


Figure 17: Proportion of SSDI Eligible Young Adults between Ages 20 and 34 Years Old by White and Black Racial Groups under the Current vs. the Proposed New Eligibility Structures

Note. The markers in this graph show the unconditional share of SSDI eligible young adults ages 20 to 34 years by sex using the actual SSDI eligibility, as observed in the data with a complete annual earnings history. The dashed lines depict the upper and lower bounds of the SSDI eligibility. The blue markers indicate the share of SSDI eligible young adults who were White. The red markers indicate the share of SSDI eligible young adults who were Black.

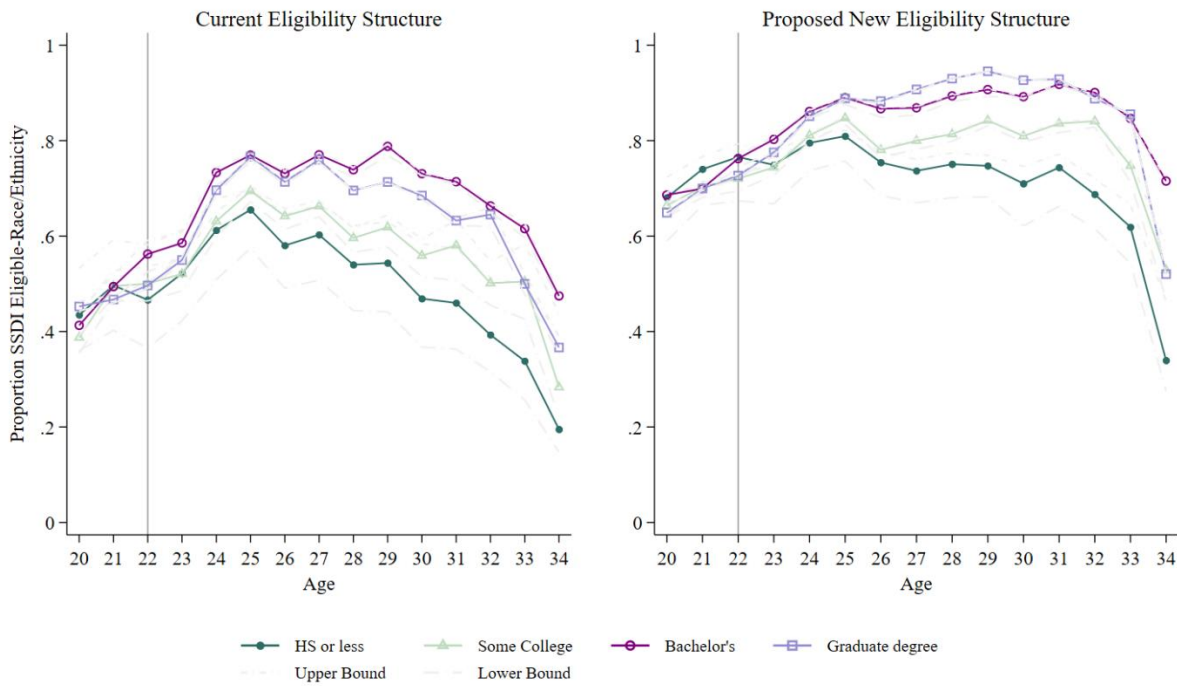


Figure 18: Proportion of SSDI Eligible Young Adults between Ages 20 and 34 Years Old by Educational Attainment under the Current- vs. the Proposed New Eligibility Structures

Note. The markers in this graph show the unconditional share of SSDI eligible young adults ages 20 to 34 years by sex using the actual SSDI eligibility, as observed in the data with a complete annual earnings history. The dashed lines depict the upper and lower bounds of the SSDI eligibility. The red connected line indicates the share of SSDI eligible young adults with high school diploma or less. The brown connected line indicates the share of SSDI eligible young adults with some college education. The copper-color connected line indicates the share of SSDI eligible young adults with bachelor's degrees. The blue connected line indicates the share of SSDI eligible young adults with graduate degree or higher.

Limitations

This descriptive study has several limitations. First, the current study only captures one part of the SSDI eligibility rule that is based on own earnings and work history and does not consider part two of the eligibility criteria that rely on meeting SSA's strict definition of disability. Future study may consider examining both the work credit and medical conditional requirement together to explore an encompassing eligibility status of working age Americans. Second, because the PSID collects information biennially and follows families instead of individuals over time, there are some years of missing annual earnings during non-interviewed years and/or when an observation was not identified as a reference person or spouse/partner. Future study may consider employing alternative sources of data with a complete record of earnings history to deal with biases estimate and also to increase precision of the estimated eligibility. Third, the current study only examines

employees up to age 34. Understanding eligibility status during later life stages is also important in helping us to address potential disparity in accessing important benefits such as the SSDI. Therefore, future study may consider expanding beyond the current age and examine individuals SSDI eligibility into mid-adulthood and older life stages. Lastly, the study's unexpected findings of BE premiums associated with Bachelor's degree and higher educational attainment during late teens and early twenties are a limitation and may be of interest for future research.

Policy Implications

Despite the lack of national non-representativeness of the analytic sample and other limitations, this study provides important insights into a complex issue of disadvantaged identities and disparities in paid employment and in access to employment-tied social benefits. The results from the first descriptive analysis show that a group of young adults who face a higher risk of disability (CBPP 2024; Jacob et al. 2018; Leveille, Resnick, and Balfour 2000; Tsai 2017) are also most likely to be ineligible for SSDI benefits. This group is proportionally more female and non-White and has low educational attainment. Having disability without protection could put young adults at risk of poverty and other negative health and well-being outcomes, which presents a serious policy concern. Therefore, the SSA and other government agencies could do more to reduce employment or income disparities and improve access to employment-tied benefits like the SSDI. For example, SSA could consider the lower lifetime earnings of female, non-White, and low educational attainment individuals and provide them with an alternative credit eligibility structure that would allow more of them to meet the SSDI credit eligibility.

Moreover, this study also reveals the significant impact of key milestones in young adulthood, such as completing education, entering marriage, and transitioning to parenthood, as well as their characteristics such as sex and race/ethnicity, on a group of young adults' labor engagement, earnings, and thereby their eligibility for SSDI benefits. The findings emphasize persistent racial disparities in the United States, even within a policy framework that does not explicitly consider sex or race/ethnicity as a basis for eligibility criteria. Accordingly, the SSA could expand its research objective to include more studies that aim at understanding unintended consequences of eligibility structures for Social Security programs.

Additionally, the study underscores the significance of life choices in determining the probability of meeting SSDI eligibility criteria. For instance, young adults who marry in the life

stage tend to fare better in terms of eligibility than those who remain unmarried. Conversely, young adults who opt not to pursue higher education may face greater challenges in meeting eligibility criteria than their educated peers. Therefore, this study points to the need for better support for young adults during this important life stage, so they are better informed about the choices they would have to make for their future without having negative implications on their economic security.

References

- Altonji, Joseph G., Disa M. Hynsjo, and Ivan Vidangos. 2021. "Marriage Dynamics, Earnings Dynamics, and Lifetime Family Income." Working Paper. Working Paper Series. National Bureau of Economic Research. <https://doi.org/10.3386/w28400>.
- Arnett, Jeffrey Jensen. 2000. "Emerging Adulthood: A Theory of Development from the Late Teens through the Twenties." *American Psychologist* 55 (5): 469.
- Bartel, Ann P., Maya Rossin-Slater, Christopher J. Ruhm, Jenna Stearns, and Jane Waldfogel. 2018. "Paid Family Leave, Fathers' Leave-Taking, and Leave-Sharing in Dual-Earner Households." *Journal of Policy Analysis and Management* 37 (1): 10–37. <https://doi.org/10.1002/pam.22030>.
- Baum II, Charles L., and Christopher J. Ruhm. 2016. "The Effects of Paid Family Leave in California on Labor Market Outcomes." *Journal of Policy Analysis and Management* 35 (2): 333–56. <https://doi.org/10.1002/pam.21894>.
- Bobbitt-Zeher, Donna. 2007. "The Gender Income Gap and the Role of Education." *Sociology of Education* 80 (1): 1–22. <https://doi.org/10.1177/003804070708000101>.
- Carnevale, Anthony P., Nicole Smith, Michelle Melton, and Eric Price. 2015. "Learning While Earning: The New Normal." *Georgetown University Center on Education and the Workforce*. Georgetown University Center on Education and the Workforce. <https://eric.ed.gov/?id=ED574376>.
- CBPP. 2024. "Policy Basics: Top Ten Facts about Social Security." 2024. <https://www.cbpp.org/research/social-security/top-ten-facts-about-social-security>.
- CDC. 2022. "Pregnancy Complications." April 4, 2022. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications.html>.
- Cepa, Kennan, and Frank F. Furstenberg. 2021. "Reaching Adulthood: Persistent Beliefs about the Importance and Timing of Adult Milestones." *Journal of Family Issues* 42 (1): 27–57. <https://doi.org/10.1177/0192513X20918612>.
- Cheng, Siwei. 2016. "The Accumulation of (Dis)Advantage: The Intersection of Gender and Race in the Long-Term Wage Effect of Marriage." *American Sociological Review* 81 (1): 29–56. <https://doi.org/10.1177/0003122415621263>.
- Chy, Somalis. 2023. "Emerging Adulthood: Impacts of Adult Care on Education, Work, and Well-Being." *Emerging Adulthood*, April. <https://doi.org/10.1177/21676968231166987>.
- Everett, Bethany G., Richard G. Rogers, Robert A. Hummer, and Patrick M. Krueger. 2011. "Trends in Educational Attainment by Race/Ethnicity, Nativity, and Sex in the United States, 1989–2005." *Ethnic and Racial Studies* 34 (9): 1543–66. <https://doi.org/10.1080/01419870.2010.543139>.
- Flinn, B. 2018. "MILLENNIALS: THE EMERGING GENERATION OF FAMILY CAREGIVERS." *Innovation in Aging* 2 (suppl_1): 240–240. <https://doi.org/10.1093/geroni/igy023.896>.
- Furstenberg, Frank F, and Sheela Kennedy. 2016. "Growing up Is Harder to Do 2: After the Great Recession." *Contexts*, November 4.
- Glauber, Rebecca. 2007. "Marriage and the Motherhood Wage Penalty Among African Americans, Hispanics, and Whites." *Journal of Marriage and Family* 69 (4): 951–61. <https://doi.org/10.1111/j.1741-3737.2007.00423.x>.
- . 2008. "Race and Gender in Families and at Work: The Fatherhood Wage Premium." *Gender & Society* 22 (1): 8–30. <https://doi.org/10.1177/0891243207311593>.

- Hanson, Melanie. 2024. "College Enrollment & Student Demographic Statistics." Education Data Initiative. 2024. <https://educationdata.org/college-enrollment-statistics>.
- Internal Revenue Service. 2005. "Student Exception to FICA Tax." 2005. <https://www.irs.gov/charities-non-profits/student-exception-to-fica-tax>.
- Jacob, Mini E, Megan M Marron, Robert M Boudreau, Michelle C Odden, Alice M Arnold, and Anne B Newman. 2018. "Age, Race, and Gender Factors in Incident Disability." *The Journals of Gerontology: Series A* 73 (2): 194–97. <https://doi.org/10.1093/gerona/glx194>.
- Juhn, Chinhui, and Kristin McCue. 2017. "Specialization Then and Now: Marriage, Children, and the Gender Earnings Gap across Cohorts." *Journal of Economic Perspectives* 31 (1): 183–204. <https://doi.org/10.1257/jep.31.1.183>.
- King McLaughlin, Jessica, Jennifer C Greenfield, Leslie Hasche, and Carson De Fries. 2019. "Young Adult Caregiver Strain and Benefits." *Social Work Research* 43 (4): 269–78.
- Knop, Brian. 2019. "Among Recent Moms, More Educated Most Likely to Work." US Census Bureau. Census.Gov. 2019. <https://www.census.gov/library/stories/2019/08/are-women-really-opting-out-of-work-after-they-have-babies.html>.
- Kopczuk, Wojciech, Emmanuel Saez, and Jae Song. 2010. "Earnings Inequality and Mobility in the United States: Evidence from Social Security Data Since 1937*." *The Quarterly Journal of Economics* 125 (1): 91–128. <https://doi.org/10.1162/qjec.2010.125.1.91>.
- Koumoutzis, Athena, Kelly E Cichy, Mary Dellmann-Jenkins, and Maureen Blankemeyer. 2020. "Age Differences and Similarities in Associated Stressors and Outcomes Among Young, Midlife, and Older Adult Family Caregivers." *The International Journal of Aging and Human Development*, 0091415020905265.
- Leveille, S. G., H. E. Resnick, and J. Balfour. 2000. "Gender Differences in Disability: Evidence and Underlying Reasons." *Aging Clinical and Experimental Research* 12 (2): 106–12. <https://doi.org/10.1007/BF03339897>.
- Levine, Carol, Gail Gibson Hunt, Deborah Halper, Andrea Y Hart, Jessica Lautz, and David A Gould. 2005. "Young Adult Caregivers: A First Look at an Unstudied Population." *American Journal of Public Health* 95 (11): 2071–75.
- LIMRA. 2022. "Disability Insurance and a Secure Retirement Go Hand-in-Hand." Life Insurance Marketing and Research Association. 2022. <https://www.limra.com/en/newsroom/industry-trends/2022/disability-insurance-and-a-secure-retirement-go-hand-in-hand/>.
- Lu, Yao, Julia Shu-Huah Wang, and Wen-Jui Han. 2017. "Women's Short-Term Employment Trajectories Following Birth: Patterns, Determinants, and Variations by Race/Ethnicity and Nativity." *Demography* 54 (1): 93–118. <https://doi.org/10.1007/s13524-016-0541-3>.
- Machado, Weverthon, and Eva Jaspers. 2023. "Money, Birth, Gender: Explaining Unequal Earnings Trajectories Following Parenthood." *Sociological Science* 10 (May):429–53. <https://doi.org/10.15195/v10.a14>.
- McDaniel, Anne, Thomas A. DiPrete, Claudia Buchmann, and Uri Shwed. 2011. "The Black Gender Gap in Educational Attainment: Historical Trends and Racial Comparisons." *Demography* 48 (3): 889–914. <https://doi.org/10.1007/s13524-011-0037-0>.
- Meyer, Bruce D., and Wallace K. C. Mok. 2019. "Disability, Earnings, Income and Consumption." *Journal of Public Economics*, Trans-Atlantic Public Economics Seminar 2016, 171 (March):51–69. <https://doi.org/10.1016/j.jpubeco.2018.06.011>.

- Musick, Kelly, Megan Doherty Bea, and Pilar Gonalons-Pons. 2020. "His and Her Earnings Following Parenthood in the United States, Germany, and the United Kingdom." *American Sociological Review* 85 (4): 639–74. <https://doi.org/10.1177/0003122420934430>.
- Okoro, Catherine A., NaTasha D. Hollis, Alissa C. Cyrus, and Shannon Griffin-Blake. 2018. "Prevalence of Disabilities and Health Care Access by Disability Status and Type Among Adults — United States, 2016." *MMWR. Morbidity and Mortality Weekly Report* 67 (32): 882–87. <https://doi.org/10.15585/mmwr.mm6732a3>.
- Oliveira, Carolina, Gabriela Fonseca, Luciana Sotero, Carla Crespo, and Ana Paula Relvas. 2020. "Family Dynamics During Emerging Adulthood: Reviewing, Integrating, and Challenging the Field." *Journal of Family Theory & Review* 12 (3): 350–67. <https://doi.org/10.1111/jftr.12386>.
- Rossin-Slater, Maya, Christopher J. Ruhm, and Jane Waldfogel. 2013. "The Effects of California's Paid Family Leave Program on Mothers' Leave-Taking and Subsequent Labor Market Outcomes." *Journal of Policy Analysis and Management* 32 (2): 224–45. <https://doi.org/10.1002/pam.21676>.
- Schweizer, Valerie, and Karen Benjamin Guzzo. 2020. "Distributions of Age at First Birth, 1960-2018." Bowling Green State University. 2020. <https://www.bgsu.edu/ncfmr/resources/data/family-profiles/schweizer-guzzo-distribution-age-first-birth-fp-20-11.html>.
- Shih, Amanda. 2022a. "How Much Does Long-Term Disability Insurance Cost?" Policygenius. 2022. <https://www.policygenius.com/disability-insurance/learn/how-much-does-long-term-disability-insurance-cost/>.
- . 2022b. "Long-Term Disability Insurance vs. Social Security Disability Insurance." Policygenius. 2022. <https://www.policygenius.com/disability-insurance/long-term-disability-insurance-vs-social-security-disability-insurance/>.
- SSA. 2020. "Annual Statistical Supplement, 2020 - History of OASDI Coverage, Financing, and Insured Status (2.A1-2.A7)." Social Security Administration Research, Statistics, and Policy Analysis. 2020. <https://www.ssa.gov/policy/docs/statcomps/supplement/2020/2a1-2a7.html#table2.a7>.
- . 2022. "Annual Statistical Report on the Social Security Disability Insurance Program, 2022."
- . 2023a. "Annual Statistical Supplement, 2023." <https://www.ssa.gov/policy/docs/statcomps/supplement/2023/supplement23.pdf>.
- . 2023b. "Disability Benefits." 2023. <https://www.ssa.gov/benefits/disability/qualify.html>.
- . 2023c. "Program Operations Manual System (POMS)." 2023. <https://secure.ssa.gov/poms.nsf/lnx/0900711125>.
- . 2023d. "Social Security Credits and Benefit Eligibility." 2023. <https://www.ssa.gov/benefits/retirement/planner/credits.html>.
- . 2023e. "The Faces and Facts of Disability." 2023. <https://www.ssa.gov/disabilityfacts/facts.html>.
- . 2024a. "Compilation of Social Security Laws." 2024. https://www.ssa.gov/OP_Home/ssact/ssact-toc.htm.
- . 2024b. "Quarter of Coverage." 2024. <https://www.ssa.gov/oact/cola/QC.html>.
- Survey Research Center. 2023. "Panel Study of Income Dynamics, Public Use Dataset." *Institute for Social Research, University of Michigan, Ann Arbor, MI*.

- Taniguchi, Hiromi, and Rachel A. Rosenfeld. 2002. "Women's Employment Exit and Reentry: Differences among Whites, Blacks, and Hispanics." *Social Science Research* 31 (3): 432–71. [https://doi.org/10.1016/S0049-089X\(02\)00009-1](https://doi.org/10.1016/S0049-089X(02)00009-1).
- Tsai, Yuping. 2017. "Education and Disability Trends of Older Americans, 2000–2014." *Journal of Public Health* 39 (3): 447–54. <https://doi.org/10.1093/pubmed/fdw082>.
- US Census Bureau. 2019. "Age and Sex Composition in the United States: 2018." Census.Gov. 2019. <https://www.census.gov/data/tables/2018/demo/age-and-sex/2018-age-sex-composition.html>.
- . 2023. "Historical Marital Status Tables." Census.Gov. 2023. <https://www.census.gov/data/tables/time-series/demo/families/marital.html>.
- Varadaraj, Varshini, Jennifer A. Deal, Jessica Campanile, Nicholas S. Reed, and Bonnielin K. Swenor. 2021. "National Prevalence of Disability and Disability Types Among Adults in the US, 2019." *JAMA Network Open* 4 (10): e2130358. <https://doi.org/10.1001/jamanetworkopen.2021.30358>.
- Willson, Andrea E. 2003. "Race and Women's Income Trajectories: Employment, Marriage, and Income Security over the Life Course." *Social Problems* 50 (1): 87–110. <https://doi.org/10.1525/sp.2003.50.1.87>.
- Yu, Wei-hsin, and Yuko Hara. 2021. "Motherhood Penalties and Fatherhood Premiums: Effects of Parenthood on Earnings Growth Within and Across Firms." *Demography* 58 (1): 247–72. <https://doi.org/10.1215/00703370-8917608>.
- Altonji, Joseph G., Disa M. Hynsjo, and Ivan Vidangos. 2021. "Marriage Dynamics, Earnings Dynamics, and Lifetime Family Income." Working Paper. Working Paper Series. National Bureau of Economic Research. <https://doi.org/10.3386/w28400>.
- Arnett, Jeffrey Jensen. 2000. "Emerging Adulthood: A Theory of Development from the Late Teens through the Twenties." *American Psychologist* 55 (5): 469.
- Carnevale, Anthony P., Nicole Smith, Michelle Melton, and Eric Price. 2015. "Learning While Earning: The New Normal." *Georgetown University Center on Education and the Workforce*. Georgetown University Center on Education and the Workforce. <https://eric.ed.gov/?id=ED574376>.
- CDC. 2022. "Pregnancy Complications." April 4, 2022. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications.html>.
- Cepa, Kennan, and Frank F. Furstenberg. 2021. "Reaching Adulthood: Persistent Beliefs about the Importance and Timing of Adult Milestones." *Journal of Family Issues* 42 (1): 27–57. <https://doi.org/10.1177/0192513X20918612>.
- Chy, Somalis. 2023. "Emerging Adulthood: Impacts of Adult Care on Education, Work, and Well-Being." *Emerging Adulthood*, April. <https://doi.org/10.1177/21676968231166987>.
- Flinn, B. 2018. "MILLENNIALS: THE EMERGING GENERATION OF FAMILY CAREGIVERS." *Innovation in Aging* 2 (suppl_1): 240–240. <https://doi.org/10.1093/geroni/igy023.896>.
- Furstenberg, Frank F, and Sheela Kennedy. 2016. "Growing up Is Harder to Do 2: After the Great Recession." *Contexts*, November 4.
- Hanson, Melanie. 2024. "College Enrollment & Student Demographic Statistics." Education Data Initiative. 2024. <https://educationdata.org/college-enrollment-statistics>.

- Internal Revenue Service. 2005. "Student Exception to FICA Tax." 2005. <https://www.irs.gov/charities-non-profits/student-exception-to-fica-tax>.
- Juhn, Chinhui, and Kristin McCue. 2017. "Specialization Then and Now: Marriage, Children, and the Gender Earnings Gap across Cohorts." *Journal of Economic Perspectives* 31 (1): 183–204. <https://doi.org/10.1257/jep.31.1.183>.
- King McLaughlin, Jessica, Jennifer C Greenfield, Leslie Hasche, and Carson De Fries. 2019. "Young Adult Caregiver Strain and Benefits." *Social Work Research* 43 (4): 269–78.
- Koumoutzis, Athena, Kelly E Cichy, Mary Dellmann-Jenkins, and Maureen Blankemeyer. 2020. "Age Differences and Similarities in Associated Stressors and Outcomes Among Young, Midlife, and Older Adult Family Caregivers." *The International Journal of Aging and Human Development*, 0091415020905265.
- Levine, Carol, Gail Gibson Hunt, Deborah Halper, Andrea Y Hart, Jessica Lautz, and David A Gould. 2005. "Young Adult Caregivers: A First Look at an Unstudied Population." *American Journal of Public Health* 95 (11): 2071–75.
- LIMRA. 2022. "Disability Insurance and a Secure Retirement Go Hand-in-Hand." Life Insurance Marketing and Research Association. 2022. <https://www.limra.com/en/newsroom/industry-trends/2022/disability-insurance-and-a-secure-retirement-go-hand-in-hand/>.
- Meyer, Bruce D., and Wallace K. C. Mok. 2019. "Disability, Earnings, Income and Consumption." *Journal of Public Economics*, Trans-Atlantic Public Economics Seminar 2016, 171 (March): 51–69. <https://doi.org/10.1016/j.jpube.2018.06.011>.
- Musick, Kelly, Megan Doherty Bea, and Pilar Gonalons-Pons. 2020. "His and Her Earnings Following Parenthood in the United States, Germany, and the United Kingdom." *American Sociological Review* 85 (4): 639–74. <https://doi.org/10.1177/0003122420934430>.
- Okoro, Catherine A., NaTasha D. Hollis, Alissa C. Cyrus, and Shannon Griffin-Blake. 2018. "Prevalence of Disabilities and Health Care Access by Disability Status and Type Among Adults — United States, 2016." *MMWR. Morbidity and Mortality Weekly Report* 67 (32): 882–87. <https://doi.org/10.15585/mmwr.mm6732a3>.
- Oliveira, Carolina, Gabriela Fonseca, Luciana Sotero, Carla Crespo, and Ana Paula Relvas. 2020. "Family Dynamics During Emerging Adulthood: Reviewing, Integrating, and Challenging the Field." *Journal of Family Theory & Review* 12 (3): 350–67. <https://doi.org/10.1111/jftr.12386>.
- Schweizer, Valerie, and Karen Benjamin Guzzo. 2020. "Distributions of Age at First Birth, 1960–2018." Bowling Green State University. 2020. <https://www.bgsu.edu/ncfmr/resources/data/family-profiles/schweizer-guzzo-distribution-age-first-birth-fp-20-11.html>.
- Shih, Amanda. 2022a. "How Much Does Long-Term Disability Insurance Cost?" Policygenius. 2022. <https://www.policygenius.com/disability-insurance/learn/how-much-does-long-term-disability-insurance-cost/>.
- . 2022b. "Long-Term Disability Insurance vs. Social Security Disability Insurance." Policygenius. 2022. <https://www.policygenius.com/disability-insurance/long-term-disability-insurance-vs-social-security-disability-insurance/>.
- SSA. 2020. "Annual Statistical Supplement, 2020 - History of OASDI Coverage, Financing, and Insured Status (2.A1-2.A7)." Social Security Administration Research, Statistics, and Policy Analysis. 2020. <https://www.ssa.gov/policy/docs/statcomps/supplement/2020/2a1-2a7.html#table2.a7>.

-
- . 2022. “Annual Statistical Report on the Social Security Disability Insurance Program, 2022.”
- . 2023a. “Annual Statistical Supplement, 2023.” <https://www.ssa.gov/policy/docs/statcomps/supplement/2023/supplement23.pdf>.
- . 2023b. “Disability Benefits.” 2023. <https://www.ssa.gov/benefits/disability/qualify.html>.
- . 2023c. “How You Earn Credits 2023.” <https://www.ssa.gov/pubs/EN-05-10072.pdf>.
- . 2023d. “Social Security Credits and Benefit Eligibility.” 2023. <https://www.ssa.gov/benefits/retirement/planner/credits.html>.
- . 2024a. “Compilation of Social Security Laws.” 2024. https://www.ssa.gov/OP_Home/ssact/ssact-toc.htm.
- . 2024b. “Quarter of Coverage.” 2024. <https://www.ssa.gov/oact/cola/QC.html>.
- Survey Research Center. 2023. “Panel Study of Income Dynamics, Public Use Dataset.” *Institute for Social Research, University of Michigan, Ann Arbor, MI*.
- US Census Bureau. 2019. “Age and Sex Composition in the United States: 2018.” Census.Gov. 2019. <https://www.census.gov/data/tables/2018/demo/age-and-sex/2018-age-sex-composition.html>.
- . 2023. “Historical Marital Status Tables.” Census.Gov. 2023. <https://www.census.gov/data/tables/time-series/demo/families/marital.html>.
- Varadaraj, Varshini, Jennifer A. Deal, Jessica Campanile, Nicholas S. Reed, and Bonnielin K. Swenor. 2021. “National Prevalence of Disability and Disability Types Among Adults in the US, 2019.” *JAMA Network Open* 4 (10): e2130358. <https://doi.org/10.1001/jamanetworkopen.2021.30358>.

Appendix

Appendix A. Estimated Probability of Meeting SSDI Eligibility Between Ages 20 and 34 years old by Sex & Race/Ethnicity

	White-Male	White-Female	Black-Male	Black-Female	Other Race-Male	Other Race-Female
20 years old	0.26*** (0.02)	0.24*** (0.02)	0.36*** (0.02)	0.37*** (0.02)	0.34*** (0.02)	0.31*** (0.02)
21 years old	0.30*** (0.02)	0.27*** (0.02)	0.37*** (0.02)	0.41*** (0.02)	0.35*** (0.02)	0.35*** (0.02)
22 years old	0.36*** (0.02)	0.34*** (0.02)	0.41*** (0.02)	0.48*** (0.02)	0.41*** (0.02)	0.44*** (0.02)
23 years old	0.39*** (0.02)	0.36*** (0.02)	0.46*** (0.02)	0.50*** (0.02)	0.45*** (0.02)	0.44*** (0.02)
24 years old	0.49*** (0.02)	0.46*** (0.02)	0.55*** (0.02)	0.60*** (0.02)	0.55*** (0.02)	0.53*** (0.02)
25 years old	0.51*** (0.02)	0.49*** (0.02)	0.59*** (0.02)	0.61*** (0.02)	0.57*** (0.02)	0.55*** (0.02)
26 years old	0.43*** (0.02)	0.42*** (0.02)	0.52*** (0.02)	0.55*** (0.02)	0.50*** (0.02)	0.50*** (0.02)
27 years old	0.45*** (0.02)	0.45*** (0.02)	0.53*** (0.02)	0.60*** (0.02)	0.52*** (0.02)	0.53*** (0.02)
28 years old	0.39*** (0.02)	0.37*** (0.02)	0.48*** (0.02)	0.53*** (0.02)	0.46*** (0.02)	0.46*** (0.02)
29 years old	0.39*** (0.03)	0.39*** (0.03)	0.47*** (0.02)	0.55*** (0.03)	0.46*** (0.02)	0.48*** (0.02)
30 years old	0.33*** (0.03)	0.30*** (0.03)	0.43*** (0.03)	0.45*** (0.03)	0.41*** (0.02)	0.39*** (0.02)
31 years old	0.23*** (0.03)	0.23*** (0.03)	0.35*** (0.03)	0.40*** (0.03)	0.33*** (0.02)	0.32*** (0.03)
32 years old	0.22*** (0.03)	0.17*** (0.03)	0.36*** (0.03)	0.35*** (0.04)	0.32*** (0.03)	0.27*** (0.03)
33 years old	0.22*** (0.04)	0.15*** (0.04)	0.30*** (0.04)	0.34*** (0.04)	0.30*** (0.03)	0.24*** (0.03)
34 years old	0.13* (0.05)	0.11* (0.05)	0.28*** (0.05)	0.34*** (0.05)	0.26*** (0.04)	0.23*** (0.04)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.01 (0.01)	-0.01 (0.01)	-0.07*** (0.01)	-0.07*** (0.01)	0.01 (0.01)	0.01 (0.01)
Observations	26,016	26,016	26,016	26,016	26,016	26,016
R-squared	0.22	0.22	0.22	0.22	0.22	0.22
Number of persons	2,295	2,295	2,295	2,295	2,295	2,295

Note. This table reports regressions results of probability of meeting SSDI eligibility between ages 20 and 34 by sex & race net of controls such as education, marital status, parenthood status, income, and individual fixed effects. Standard errors in parentheses. (***) $p < 0.001$, (**) $p < 0.01$, (*) $p < 0.05$.

Appendix B. Estimated Probability of Meeting SSDI Eligibility Between Ages 20 and 34 years old by Race/Ethnicity & Educational Attainment

	High School or Less	Some College	Bachelor's Degree	Graduate Degree or Higher
20 y.o-White	0.39*** (0.02)	0.42*** (0.02)	0.38*** (0.02)	0.40*** (0.02)
20 y.o-Black	0.42*** (0.02)	0.42*** (0.02)	0.40*** (0.02)	0.43*** (0.02)
20 y.o-Other Race	0.49*** (0.02)	0.48*** (0.02)	0.46*** (0.02)	0.51*** (0.02)
21 y.o White	0.51*** (0.02)	0.52*** (0.02)	0.49*** (0.02)	0.52*** (0.02)
21 y.o-Black	0.61*** (0.02)	0.62*** (0.02)	0.58*** (0.02)	0.60*** (0.02)
21 y.o-Other Race	0.64*** (0.02)	0.64*** (0.02)	0.61*** (0.02)	0.61*** (0.02)
22 y.o White	0.58*** (0.02)	0.58*** (0.02)	0.55*** (0.02)	0.56*** (0.02)
22 y.o-Black	0.62*** (0.02)	0.62*** (0.02)	0.57*** (0.02)	0.58*** (0.02)
22 y.o-Other Race	0.57*** (0.02)	0.57*** (0.02)	0.52*** (0.02)	0.50*** (0.03)
23 y.o White	0.56*** (0.02)	0.56*** (0.02)	0.51*** (0.02)	0.51*** (0.03)
23 y.o-Black	0.51*** (0.02)	0.52*** (0.03)	0.46*** (0.02)	0.43*** (0.03)
23 y.o-Other Race	0.44*** (0.03)	0.44*** (0.03)	0.40*** (0.03)	0.37*** (0.03)
24 y.o White	0.43*** (0.03)	0.43*** (0.03)	0.38*** (0.03)	0.33*** (0.04)
24 y.o-Black	0.38*** (0.03)	0.37*** (0.04)	0.33*** (0.03)	0.32*** (0.04)
24 y.o-Other Race	0.38*** (0.04)	0.41*** (0.04)	0.32*** (0.04)	0.29*** (0.05)
25 y.o White	-0.15*** (0.02)	0.27*** (0.05)	0.19* (0.09)	0.21* (0.09)
25 y.o-Black	-0.40*** (0.03)	0.29*** (0.04)	0.11 (0.15)	0.11 (0.14)
25 y.o-Other Race	0.39*** (0.02)	0.42*** (0.02)	0.38*** (0.02)	0.40*** (0.02)
26 y.o White	0.42*** (0.02)	0.42*** (0.02)	0.40*** (0.02)	0.43*** (0.02)
26 y.o-Black	0.49*** (0.02)	0.48*** (0.02)	0.46*** (0.02)	0.51*** (0.02)
26 y.o-Other Race	0.51*** (0.02)	0.52*** (0.02)	0.49*** (0.02)	0.52*** (0.02)
27 y.o White	0.61*** (0.02)	0.62*** (0.02)	0.58*** (0.02)	0.60*** (0.02)
27 y.o-Black	0.64*** (0.02)	0.64*** (0.02)	0.61*** (0.02)	0.61*** (0.02)
27 y.o-Other Race	0.58*** (0.02)	0.58*** (0.02)	0.55*** (0.02)	0.56*** (0.02)
28 y.o White	0.62*** (0.02)	0.62*** (0.02)	0.57*** (0.02)	0.58*** (0.02)

28 y.o-Black	0.57*** (0.02)	0.57*** (0.02)	0.52*** (0.02)	0.50*** (0.03)
28 y.o-Other Race	0.56*** (0.02)	0.56*** (0.02)	0.51*** (0.02)	0.51*** (0.03)
29 y.o White	0.51*** (0.02)	0.52*** (0.03)	0.46*** (0.02)	0.43*** (0.03)
29 y.o-Black	0.44*** (0.03)	0.44*** (0.03)	0.40*** (0.03)	0.37*** (0.03)
29 y.o-Other Race	0.43*** (0.03)	0.43*** (0.03)	0.38*** (0.03)	0.33*** (0.04)
30 y.o White	0.38*** (0.03)	0.37*** (0.04)	0.33*** (0.03)	0.32*** (0.04)
30 y.o-Black	0.38*** (0.04)	0.41*** (0.04)	0.32*** (0.04)	0.29*** (0.05)
30 y.o-Other Race	-0.15*** (0.02)	0.27*** (0.05)	0.19* (0.09)	0.21* (0.09)
31 y.o White	-0.40*** (0.03)	0.29*** (0.04)	0.11 (0.15)	0.11 (0.14)
31 y.o-Black	0.39*** (0.02)	0.42*** (0.02)	0.38*** (0.02)	0.40*** (0.02)
31 y.o-Other Race	0.42*** (0.02)	0.42*** (0.02)	0.40*** (0.02)	0.43*** (0.02)
32 y.o White	0.49*** (0.02)	0.48*** (0.02)	0.46*** (0.02)	0.51*** (0.02)
32 y.o-Black	0.51*** (0.02)	0.52*** (0.02)	0.49*** (0.02)	0.52*** (0.02)
32 y.o-Other Race	0.61*** (0.02)	0.62*** (0.02)	0.58*** (0.02)	0.60*** (0.02)
33 y.o White	0.64*** (0.02)	0.64*** (0.02)	0.61*** (0.02)	0.61*** (0.02)
33 y.o-Black	0.58*** (0.02)	0.58*** (0.02)	0.55*** (0.02)	0.56*** (0.02)
33 y.o-Other Race	0.62*** (0.02)	0.62*** (0.02)	0.57*** (0.02)	0.58*** (0.02)
34 y.o White	0.57*** (0.02)	0.57*** (0.02)	0.52*** (0.02)	0.50*** (0.03)
34 y.o-Black	0.56*** (0.02)	0.56*** (0.02)	0.51*** (0.02)	0.51*** (0.03)
34 y.o-Other Race	0.51*** (0.02)	0.52*** (0.03)	0.46*** (0.02)	0.43*** (0.03)
Controls	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes
Constant	0.06*** (0.01)	-0.04* (0.02)	-0.09 (0.05)	-0.10 (0.05)
Observations	26,016	26,016	26,016	26,016
R-squared	0.22	0.22	0.22	0.23
Number of persons	2,295	2,295	2,295	2,295

Note. This table reports regressions results of probability of meeting SSDI eligibility between ages 20 and 34 interacting with race by educational attainment net of controls such as sex, marital status, parenthood status, income, and individual fixed effects. Standard errors in parentheses. (***) $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Appendix C. Estimated Probability of Meeting SSDI Eligibility Between Ages 20 and 34 years old by Race/Ethnicity & Marital Status

	Unmarried	Married	Separated/Widowed/Divorced
20 y.o-White	0.37*** (0.07)	0.39*** (0.02)	0.39*** (0.02)
20 y.o-Black	0.42*** (0.06)	0.41*** (0.02)	0.41*** (0.02)
20 y.o-Other Race	0.43*** (0.05)	0.48*** (0.02)	0.49*** (0.02)
21 y.o-White	0.49*** (0.05)	0.51*** (0.02)	0.51*** (0.02)
21 y.o-Black	0.58*** (0.04)	0.60*** (0.02)	0.61*** (0.02)
21 y.o-Other Race	0.63*** (0.04)	0.62*** (0.02)	0.63*** (0.02)
22 y.o-White	0.56*** (0.04)	0.56*** (0.02)	0.57*** (0.02)
22 y.o-Black	0.60*** (0.04)	0.58*** (0.02)	0.61*** (0.02)
22 y.o-Other Race	0.53*** (0.04)	0.53*** (0.02)	0.55*** (0.02)
23 y.o-White	0.53*** (0.04)	0.53*** (0.02)	0.55*** (0.02)
23 y.o-Black	0.45*** (0.04)	0.49*** (0.02)	0.49*** (0.02)
23 y.o-Other Race	0.41*** (0.04)	0.41*** (0.03)	0.43*** (0.03)
24 y.o-White	0.40*** (0.05)	0.38*** (0.03)	0.41*** (0.03)
24 y.o-Black	0.41*** (0.05)	0.30*** (0.04)	0.36*** (0.03)
24 y.o-Other Race	0.28*** (0.06)	0.37*** (0.05)	0.38*** (0.04)
25 y.o-White	0.16 (0.12)	0.21* (0.10)	0.21* (0.09)
25 y.o-Black	0.01 (0.18)	0.13 (0.15)	0.12 (0.15)
25 y.o-Other Race	0.37*** (0.07)	0.39*** (0.02)	0.39*** (0.02)
26 y.o-White	0.42*** (0.06)	0.41*** (0.02)	0.41*** (0.02)
26 y.o-Black	0.43*** (0.05)	0.48*** (0.02)	0.49*** (0.02)
26 y.o-Other Race	0.49*** (0.05)	0.51*** (0.02)	0.51*** (0.02)
27 y.o-White	0.58*** (0.04)	0.60*** (0.02)	0.61*** (0.02)
27 y.o-Black	0.63*** (0.04)	0.62*** (0.02)	0.63*** (0.02)
27 y.o-Other Race	0.56*** (0.04)	0.56*** (0.02)	0.57*** (0.02)
28 y.o-White	0.60*** (0.04)	0.58*** (0.02)	0.61*** (0.02)
28 y.o-Black	0.53***	0.53***	0.55***

	(0.04)	(0.02)	(0.02)
28 y.o-Other Race	0.53***	0.53***	0.55***
	(0.04)	(0.02)	(0.02)
29 y.o-White	0.45***	0.49***	0.49***
	(0.04)	(0.02)	(0.02)
29 y.o-Black	0.41***	0.41***	0.43***
	(0.04)	(0.03)	(0.03)
29 y.o-Other Race	0.40***	0.38***	0.41***
	(0.05)	(0.03)	(0.03)
30 y.o-White	0.41***	0.30***	0.36***
	(0.05)	(0.04)	(0.03)
30 y.o-Black	0.28***	0.37***	0.38***
	(0.06)	(0.05)	(0.04)
30 y.o-Other Race	0.16	0.21*	0.21*
	(0.12)	(0.10)	(0.09)
31 y.o-White	0.01	0.13	0.12
	(0.18)	(0.15)	(0.15)
31 y.o-Black	0.37***	0.39***	0.39***
	(0.07)	(0.02)	(0.02)
31 y.o-Other Race	0.42***	0.41***	0.41***
	(0.06)	(0.02)	(0.02)
32 y.o-White	0.43***	0.48***	0.49***
	(0.05)	(0.02)	(0.02)
32 y.o-Black	0.49***	0.51***	0.51***
	(0.05)	(0.02)	(0.02)
32 y.o-Other Race	0.58***	0.60***	0.61***
	(0.04)	(0.02)	(0.02)
33 y.o-White	0.63***	0.62***	0.63***
	(0.04)	(0.02)	(0.02)
33 y.o-Black	0.56***	0.56***	0.57***
	(0.04)	(0.02)	(0.02)
33 y.o-Other Race	0.60***	0.58***	0.61***
	(0.04)	(0.02)	(0.02)
34 y.o-White	0.53***	0.53***	0.55***
	(0.04)	(0.02)	(0.02)
34 y.o-Black	0.53***	0.53***	0.55***
	(0.04)	(0.02)	(0.02)
34 y.o-Other Race	0.45***	0.49***	0.49***
	(0.04)	(0.02)	(0.02)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Constant	-0.06	-0.10	-0.10
	(0.07)	(0.06)	(0.06)
Observations	26,016	26,016	26,016
R-squared	0.22	0.22	0.22
Number of persons	2,295	2,295	2,295

Note. This table reports regressions results of probability of meeting SSDI eligibility between ages 20 and 34 interacting with race by marital status net of controls such as sex, educational attainment, parenthood status, income, and individual fixed effects. Standard errors in parentheses. (***) $p < 0.001$, (**) $p < 0.01$, (*) $p < 0.05$.

Appendix D. Estimated Probability of Meeting SSDI Eligibility Between Ages 20 and 34 years old by Race/Ethnicity & Parenthood Status

	Non-Parent	Parent
20 y.o-White	0.27** (0.09)	0.40*** (0.02)
20 y.o-Black	0.31*** (0.09)	0.42*** (0.02)
20 y.o-Other Race	0.34*** (0.09)	0.49*** (0.02)
21 y.o-White	0.41*** (0.09)	0.50*** (0.02)
21 y.o-Black	0.50*** (0.09)	0.60*** (0.02)
21 y.o-Other Race	0.50*** (0.09)	0.63*** (0.02)
22 y.o-White	0.43*** (0.09)	0.57*** (0.02)
22 y.o-Black	0.46*** (0.09)	0.60*** (0.02)
22 y.o-Other Race	0.38*** (0.09)	0.56*** (0.02)
23 y.o-White	0.39*** (0.09)	0.56*** (0.02)
23 y.o-Black	0.32*** (0.09)	0.51*** (0.03)
23 y.o-Other Race	0.26** (0.09)	0.44*** (0.03)
24 y.o-White	0.27** (0.09)	0.40*** (0.04)
24 y.o-Black	0.24** (0.09)	0.34*** (0.04)
24 y.o-Other Race	0.19 (0.10)	0.40*** (0.06)
25 y.o-White	0.08 (0.13)	0.19* (0.09)
25 y.o-Black	0.04 (0.19)	0.13 (0.14)
25 y.o-Other Race	0.27** (0.09)	0.40*** (0.02)
26 y.o-White	0.31*** (0.09)	0.42*** (0.02)
26 y.o-Black	0.34*** (0.09)	0.49*** (0.02)
26 y.o-Other Race	0.41*** (0.09)	0.50*** (0.02)
27 y.o-White	0.50*** (0.09)	0.60*** (0.02)
27 y.o-Black	0.50*** (0.09)	0.63*** (0.02)
27 y.o-Other Race	0.43*** (0.09)	0.57*** (0.02)
28 y.o-White	0.46*** (0.09)	0.60*** (0.02)
28 y.o-Black	0.38***	0.56***

	(0.09)	(0.02)
28 y.o-Other Race	0.39***	0.56***
	(0.09)	(0.02)
29 y.o-White	0.32***	0.51***
	(0.09)	(0.03)
29 y.o-Black	0.26**	0.44***
	(0.09)	(0.03)
29 y.o-Other Race	0.27**	0.40***
	(0.09)	(0.04)
30 y.o-White	0.24**	0.34***
	(0.09)	(0.04)
30 y.o-Black	0.19	0.40***
	(0.10)	(0.06)
30 y.o-Other Race	0.08	0.19*
	(0.13)	(0.09)
31 y.o-White	0.04	0.13
	(0.19)	(0.14)
31 y.o-Black	0.27**	0.40***
	(0.09)	(0.02)
31 y.o-Other Race	0.31***	0.42***
	(0.09)	(0.02)
32 y.o-White	0.34***	0.49***
	(0.09)	(0.02)
32 y.o-Black	0.41***	0.50***
	(0.09)	(0.02)
32 y.o-Other Race	0.50***	0.60***
	(0.09)	(0.02)
33 y.o-White	0.50***	0.63***
	(0.09)	(0.02)
33 y.o-Black	0.43***	0.57***
	(0.09)	(0.02)
33 y.o-Other Race	0.46***	0.60***
	(0.09)	(0.02)
34 y.o-White	0.38***	0.56***
	(0.09)	(0.02)
34 y.o-Black	0.39***	0.56***
	(0.09)	(0.02)
34 y.o-Other Race	0.32***	0.51***
	(0.09)	(0.03)
Controls	Yes	Yes
Fixed Effects	Yes	Yes
Constant	0.05	-0.10
	(0.10)	(0.05)
Observations	26,016	26,016
R-squared	0.22	0.22
Number of persons	2,295	2,295

Note. This table reports regressions results of probability of meeting SSDI eligibility between ages 20 and 34 interacting with race by parenthood status net of controls such as sex, educational attainment, marital status, income, and individual fixed effects. Standard errors in parentheses. (***) $p < 0.001$, (**) $p < 0.01$, (*) $p < 0.05$.

Appendix E. Employment Characteristics by Educational Attainment & Sex-Race/ethnicity

<i>Panel 1: High School or less</i>	Male			Female		
	White	Black	Other	White	Black	Other
Annual Number of Credits (max. 4)	2.27 (1.94)	1.36 (1.82)	2.00 (1.99)	1.59 (1.91)	1.50 (1.87)	0.97 (1.68)
Annual Income (include 0 income)	15,054.82 (22,416.06)	6,013.09 (11,617.45)	12,015.56 (15,888.47)	7,045.35 (12,263.80)	5,337.15 (9,821.75)	3,472.96 (7,799.65)
Annual Total Hours Worked (include 0 hour)	1,128.15 (1,177.18)	621.70 (1,003.30)	1,316.81 (1,173.21)	792.41 (1,053.00)	748.75 (992.12)	518.92 (919.17)
Proportion of Unemployed	0.41	0.59	0.48	0.56	0.55	0.69
<i>Panel 2: Some College</i>						
Annual Number of Credits (max. 4)	2.16 (1.96)	1.57 (1.90)	1.33 (1.86)	1.93 (1.95)	1.76 (1.93)	1.69 (1.94)
Annual Income (include 0 income)	14,115.49 (19,451.40)	6,655.27 (11,704.53)	7,744.71 (17,454.36)	10,010.62 (15,551.57)	6,900.72 (11,133.30)	7,211.58 (11,095.09)
Annual Total Hours Worked (include 0 hour)	1,120.90 (1,217.52)	867.78 (1,133.26)	689.14 (1,082.44)	903.49 (1,083.92)	914.03 (1,038.82)	877.54 (1,116.10)
Proportion of Unemployed	0.45	0.58	0.66	0.49	0.51	0.57
<i>Panel 3: Bachelor's Degree</i>						
Annual Number of Credits (max. 4)	2.21 (1.94)	2.08 (1.86)	1.89 (1.99)	2.31 (1.91)	2.12 (1.91)	1.09 (1.71)
Annual Income (include 0 income)	21,308.43 (36,506.92)	14,255.58 (24,122.27)	14,891.72 (23,769.20)	15,322.02 (22,254.67)	13,066.44 (18,621.94)	5,033.83 (12,941.91)
Annual Total Hours Worked (include 0 hour)	1,183.04 (1,150.65)	914.16 (1,089.11)	1,007.10 (1,120.32)	1,034.87 (1,094.66)	1,069.15 (1,153.32)	723.37 (1,038.12)
Proportion of Unemployed	0.44	0.42	0.54	0.40	0.44	0.64
<i>Panel 3: Graduate Degree or higher</i>						
Annual Number of Credits (max. 4)	2.12 (1.91)	1.60 (1.88)	1.48 (1.85)	1.99 (1.92)	2.01 (1.92)	1.51 (1.87)
Annual Income (include 0 income)	16,094.72 (28,156.88)	12,588.62 (25,336.91)	10,806.03 (24,980.39)	13,965.88 (23,480.87)	11,202.96 (16,940.09)	8,844.04 (18,247.26)

Annual Worked (include 0 hour)	Total Hours	1,032.65 (1,094.89)	942.25 (1,137.64)	821.34 (1,065.12)	1,036.20 (1,104.28)	900.48 (1,091.13)	738.08 (1,026.99)
Proportion Unemployed	of	0.45	0.58	0.60	0.48	0.49	0.60

Note. This table shows weighted descriptive summary statistics of employment characteristics such as annual number of credits, annual income, and annual total hours worked, and proportion of observations who were unemployed by educational attainment, sex, and race/ethnicity.

Appendix F. Employment Characteristics by Marital Status & Sex-Race/ethnicity

	Male			Female		
	White	Black	Other	White	Black	Other
<i>Panel 1: Unmarried</i>						
Annual Number of Credits (max. 4)	2.12 (1.93)	1.49 (1.86)	1.55 (1.91)	1.97 (1.92)	1.78 (1.91)	1.42 (1.85)
Annual Income (include 0 income)	13,882.04 (22,739.23)	6,482.81 (12,367.67)	9,248.64 (17,891.58)	11,212.50 (19,138.15)	8,182.44 (13,676.04)	6,705.09 (13,876.55)
Annual Total Hours Worked (include 0 hour)	981.03 (1,133.94)	747.16 (1,084.40)	802.17 (1,096.44)	906.59 (1,091.91)	868.67 (1,056.63)	706.36 (1,032.41)
Proportion of Unemployed	0.44	0.59	0.59	0.47	0.51	0.60
<i>Panel 2: Married</i>						
Annual Number of Credits (max. 4)	2.62 (1.88)	2.34 (1.96)	1.68 (1.98)	2.01 (1.96)	2.33 (1.95)	1.35 (1.88)
Annual Income (include 0 income)	26,492.54 (37,176.26)	21,852.96 (29,481.97)	18,414.47 (35,184.86)	15,226.44 (23,338.17)	11,444.01 (16,557.40)	7,672.99 (16,107.57)
Annual Total Hours Worked (include 0 hour)	1,713.40 (1,087.27)	1,500.68 (1,005.49)	1,666.31 (1,045.24)	1,144.25 (1,085.30)	1,103.63 (1,063.72)	854.73 (1,073.21)
Proportion of Unemployed	0.41	0.36	0.65	0.53	0.47	0.66
<i>Panel 3: Separated/Divorced/Widowed</i>						
Annual Number of Credits (max. 4)	1.34 (1.88)	1.38 (1.90)	1.54 (1.98)	1.52 (1.92)	1.68 (1.95)	1.06 (1.73)
Annual Income (include 0 income)	10,007.89 (18,266.94)	7,473.18 (13,968.36)	12,971.96 (18,930.54)	7,872.37 (13,692.63)	7,137.28 (11,540.69)	5,740.59 (13,823.15)
Annual Total Hours Worked (include 0 hour)	1,062.96 (1,135.32)	1,222.14 (1,150.83)	424.21 (887.59)	901.55 (1,032.68)	1,053.21 (993.84)	993.09 (1,126.63)
Proportion of Unemployed	0.67	0.68	0.61	0.61	0.59	0.69

Note. This table shows weighted descriptive summary statistics of employment characteristics such as annual number of credits, annual income, and annual total hours worked, and proportion of observations who were unemployment by marital status, sex, and race/ethnicity.

Appendix G. Employment Characteristics by Parenthood Status & Sex-Race/ethnicity

<i>Panel 1: Non-Parent</i>	Male			Female		
	White	Black	Other	White	Black	Other
Annual Number of Credits (max. 4)	2.15 (1.93)	1.47 (1.85)	1.61 (1.92)	2.14 (1.92)	1.85 (1.90)	1.46 (1.86)
Annual Income (include 0 income)	15,139.08 (25,052.66)	6,439.46 (13,364.94)	10,638.82 (20,366.08)	13,324.84 (21,071.71)	8,495.73 (13,892.62)	7,343.06 (15,409.70)
Annual Total Hours Worked (include 0 hour)	1,014.49 (1,136.49)	646.95 (1,046.02)	803.57 (1,095.39)	988.70 (1,106.43)	872.16 (1,073.78)	761.78 (1,057.88)
Proportion of Unemployed	0.44	0.58	0.58	0.43	0.49	0.59
<i>Panel 2: Parent</i>						
Annual Number of Credits (max. 4)	2.31 (1.96)	1.68 (1.93)	1.40 (1.90)	1.44 (1.88)	1.78 (1.94)	1.26 (1.83)
Annual Income (include 0 income)	20,801.87 (31,769.80)	9,032.38 (15,496.46)	10,291.07 (23,360.74)	8,231.23 (16,172.88)	8,277.11 (13,852.43)	5,765.42 (11,372.99)
Annual Total Hours Worked (include 0 hour)	1,684.71 (1,134.14)	1,132.56 (1,132.23)	1,095.63 (1,157.50)	847.73 (1,039.70)	909.43 (1,038.67)	673.11 (1,004.40)
Proportion of Unemployed	0.48	0.56	0.67	0.63	0.52	0.67

Note. This table shows weighted descriptive summary statistics of employment characteristics such as annual number of credits, annual income, and annual total hours worked, and proportion of observations who were unemployment by parenthood status, sex, and race/ethnicity.