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## *Articles*

# Public Knowledge About the Social Security Administration's Disability Programs: Findings from the Understanding America Study

by Matt Messel, Tokunbo B. Oluwole, and David Rogofsky*

*In this article, we examine public awareness of the disability benefit programs administered by the Social Security Administration (SSA). Using 2021 survey results from the nationally representative panel of Understanding America Study respondents, we explore public knowledge of various aspects of the Social Security Disability Insurance and Supplemental Security Income programs. We present descriptive statistics that highlight different levels of program knowledge from one program aspect to another as well as across respondent characteristics such as age, race/ethnicity, educational attainment, income, and presence of a long-term disabling condition. Program aspects covered in the survey questions include financial and medical eligibility for program benefits, application and disability determination procedures, and typical processing times and benefit amounts. Our findings may enable SSA and other stakeholders who work with people with disabilities to target informational outreach to groups with lower current levels of program knowledge.*

## Introduction

Statistically, about one in four Americans will become disabled before reaching retirement age (Social Security Administration [SSA], n.d. b). SSA's disability programs exist to protect people who are not able to work at a substantial level because of a severe and long-term health condition. The two disability programs administered by SSA are Social Security Disability Insurance (DI) and Supplemental Security Income (SSI). DI provides benefits to covered workers who become disabled and who have contributed payroll taxes into the Social Security system.[1] SSI provides payments to disabled children and adults whose families have very low income and resources. Individuals may be eligible to receive benefits from both programs simultaneously. Roughly 2 million people apply for benefits from these disability programs each year. It is important for the public not only to be aware that these programs exist, but also to understand basic program aspects such as eligibility rules, the application and disability determination processes, and typical monthly benefit amounts. In this article, we describe results of a survey on public knowledge about the SSA disability programs. Findings from this analysis may be useful to stakeholders who work with people with disabilities, perhaps enabling them to target informational outreach effectively.[2]

**Selected Abbreviations**

| | |
|---|---|
| DDS | Disability Determination Service |
| DI | Disability Insurance |
| SGA | substantial gainful activity |
| SSA | Social Security Administration |
| SSI | Supplemental Security Income |
| UAS | Understanding America Study |

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## Methods

In June 2021, the University of Southern California's Center for Social and Economic Research began fielding a nationally representative Internet survey of individuals aged 18 or older on knowledge of the SSA disability programs as part of its Understanding America Study (UAS). The SSA disability-program survey constitutes UAS Survey 322. The UAS panel comprises approximately 9,500 respondents who were selected using address-based sampling. Panel members who do not have Internet access are provided an electronic device and Internet service at their residence. Panelists may respond to a selection of surveys each month, for which they receive nominal compensation. The surveys cover a wide range of topics, including health and disability, social attitudes, financial well-being, and participation in social safety-net programs. More details regarding UAS methodology and survey topics may be found in Alattar, Messel, and Rogofsky (2018) and on the UAS website (https://uasdata.usc.edu).

We use descriptive statistics to show the relationships between 20 measures of program knowledge and respondent characteristics. We employ chi-square statistics to test for statistical significance in the observed relationships. We then create a composite measure of program knowledge and respondent characteristics to summarize the relationships, also using chi-square statistics. The composite measure represents an average of the 17 program-knowledge questions that were asked of all respondents.[3]

In this article, we use UAS Survey 322 results that appear in the UAS comprehensive file, covering June–September 2021 survey responses. At that time, 6,492 respondents had completed the survey (Table 1).[4] Of these, 23.9 percent reported having a long-term work-limiting disability.[5] Two-thirds of respondents identified as non-Hispanic White (66.4 percent), 13.4 percent identified as Hispanic, 11.3 percent identified as non-Hispanic Black, 5.6 percent identified as Asian/Pacific Islander, 0.8 percent identified as American Indian/Alaska Native, and 2.6 percent identified as multiracial. Most respondents had completed high school (91.9 percent), and 34.9 percent had attained at least a bachelor's degree.

This article presents survey results indicating those respondents' knowledge of various aspects of the disability programs administered by SSA. The findings address general program awareness and knowledge about the financial eligibility rules, the application and disability determination processes, typical benefit amounts, family benefit availability, health insurance eligibility, and continuation of benefit eligibility. Finally, we discuss the composite measure of program knowledge. Appendix A presents the full text of each of the 20 survey questions, the choices provided as possible answers, and the correct (or salient) responses.

In the Findings section, we present tables showing the survey results and demonstrating how public knowledge about the programs varies from one aspect to another and across demographic groups. The tables also highlight statistically significant differences between the groups.

## Findings

We present the survey results in nine subsections, consisting of one subsection for each of eight subject areas and a ninth subsection addressing the composite measure discussed above.

### General Awareness of SSA Disability Programs

About three-quarters (75.8 percent) of adults overall are aware that the DI program exists (Table 2, Question 1). Awareness is higher among people with a long-term work-limiting disability (84.8 percent) and increases with age (from 51.2 percent among people aged 18–29 to 89.4 percent among those aged 62–69). Awareness among respondents who are Asian/Pacific Islander (60.3 percent), non-Hispanic Black (70.5 percent), and Hispanic (72.2 percent) is lower than that of non-Hispanic White respondents (78.6 percent). People without a high school diploma are also less likely to know about the DI program than are people with higher levels of education.

Only half of the adult population (49.9 percent) is aware that SSI is a program for low-income people with disabilities (Question 2). As with the DI program, awareness is higher among people with a long-term work-limiting disability (59.7 percent) and it increases with age (from 35.7 percent among people aged 18–29 to 57.4 percent among those aged 62–69). By race/ethnicity, awareness is lowest among Asian/Pacific Islander respondents (42.6 percent), although the difference from other race and ethnicity groups is not significant. People with the highest household income ($100,000 or more) are also less likely to know about the SSI program.

**Table 1.**
**Sample size and demographics**

| Characteristic | Respondents | |
|---|---|---|
| | Number (unweighted) | Percent (weighted) |
| Total | 6,492 | 100.0 |
| Presence of long-term disability | | |
| No | 4,917 | 76.1 |
| Yes | 1,545 | 23.9 |
| Sex | | |
| Women | 3,860 | 51.4 |
| Men | 2,632 | 48.6 |
| Race/ethnicity | | |
| Non-Hispanic White | 4,323 | 66.4 |
| Non-Hispanic Black | 506 | 11.3 |
| Hispanic (any race) | 850 | 13.4 |
| Asian/Pacific Islander | 405 | 5.6 |
| American Indian/Alaska Native | 147 | 0.8 |
| More than one race | 252 | 2.6 |
| Age | | |
| 18–29 | 661 | 11.4 |
| 30–49 | 2,320 | 36.2 |
| 50–61 | 1,556 | 21.8 |
| 62–69 | 1,033 | 16.1 |
| 70 or older | 913 | 14.4 |
| Educational attainment | | |
| Less than high school diploma or equivalent | 318 | 8.1 |
| High school diploma or equivalent | 1,067 | 30.2 |
| Some college, no degree | 2,358 | 26.8 |
| Bachelor's degree | 1,610 | 19.8 |
| Master's degree or higher | 1,137 | 15.1 |
| Marital status | | |
| Married | 3,560 | 55.6 |
| Divorced | 1,113 | 16.2 |
| Widowed | 324 | 5.1 |
| Never married | 1,494 | 23.0 |
| Household income, last 12 months | | |
| Less than $50,000 | 2,242 | 40.5 |
| $50,000–74,999 | 946 | 15.7 |
| $75,000–99,999 | 804 | 13.1 |
| $100,000 or more | 2,329 | 30.7 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTE: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

**Table 2.**
**General awareness of SSA disability programs**

| Characteristic | Number (unweighted) | Q1: Aware of DI program? (% yes) | Q2: Aware of SSI program? (% yes) | Q3: Interest in learning more about disability programs? (% agree) | Q4: Know of the best sources of information on disability programs? (% agree) |
|---|---|---|---|---|---|
| Total | 6,492 | 75.8 | 49.9 | 37.0 | 36.5 |
| Presence of long-term disability | | | | | |
| No (reference category) | 4,917 | 72.8 | 46.6 | 36.0 | 33.8 |
| Yes | 1,545 | 84.8* | 59.7* | 39.9 | 44.4* |
| Sex | | | | | |
| Women | 3,860 | 74.2 | 50.5 | 37.5 | 37.8 |
| Men (reference category) | 2,632 | 77.5 | 49.1 | 36.5 | 35.1 |
| Race/ethnicity | | | | | |
| Non-Hispanic White (reference category) | 4,323 | 78.6 | 49.9 | 30.5 | 36.0 |
| Non-Hispanic Black | 506 | 70.5* | 54.8 | 52.7* | 42.6 |
| Hispanic (any race) | 850 | 72.2* | 46.6 | 49.6* | 33.9 |
| Asian/Pacific Islander | 405 | 60.3* | 42.6 | 51.3* | 33.4 |
| American Indian/Alaska Native | 147 | 79.6 | 54.1 | 43.8 | 40.7 |
| More than one race | 252 | 78.7 | 56.8 | 34.2 | 38.8 |
| Age | | | | | |
| 18–29 (reference category) | 661 | 51.2 | 35.7 | 38.5 | 26.2 |
| 30–49 | 2,320 | 69.9* | 47.4* | 42.4 | 34.6* |
| 50–61 | 1,556 | 79.9* | 50.7* | 43.7 | 36.8* |
| 62–69 | 1,033 | 89.4* | 57.4* | 27.3* | 45.0* |
| 70 or older | 913 | 88.7* | 57.6* | 22.7* | 39.3* |
| Educational attainment | | | | | |
| Less than high school diploma or equivalent | 318 | 68.5* | 52.0 | 37.2 | 32.4 |
| High school diploma or equivalent | 1,067 | 74.2 | 49.3 | 36.6 | 35.7 |
| Some college, no degree | 2,358 | 78.4 | 51.0 | 39.3 | 38.4 |
| Bachelor's degree | 1,610 | 76.8 | 51.0 | 34.6 | 35.5 |
| Master's degree or higher (reference category) | 1,137 | 76.9 | 46.0 | 36.3 | 37.8 |
| Marital status | | | | | |
| Married (reference category) | 3,560 | 77.5 | 49.7 | 35.0 | 35.8 |
| Divorced | 1,113 | 81.0 | 55.2 | 40.9 | 40.7 |
| Widowed | 324 | 86.2* | 55.6 | 22.7* | 43.5 |
| Never married | 1,494 | 65.7* | 45.3 | 42.3 | 33.4 |
| Household income, last 12 months | | | | | |
| Less than $50,000 | 2,242 | 75.3 | 52.9* | 38.0 | 38.1 |
| $50,000–74,999 | 946 | 77.7 | 50.1* | 37.8 | 37.0 |
| $75,000–99,999 | 804 | 75.1 | 51.5* | 37.3 | 35.1 |
| $100,000 or more (reference category) | 2,329 | 76.6 | 46.8 | 34.7 | 35.4 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

Nearly two in five people (37.0 percent) report that they are interested in learning more about SSA's disability programs (Question 3). People of color are substantially more likely than non-Hispanic White respondents to report interest in learning more. For instance, Asian/Pacific Islander respondents, who tend to have lower levels of program awareness, are 20.8 percentage points more likely than non-Hispanic White respondents to want to learn more (51.3 percent versus 30.5 percent). Respondents in the 30–49 and 50–61 age groups, who are most likely to experience work disabilities and potentially rely on DI and SSI, are also more likely than younger and older respondents to want to learn more.

Overall, relatively few respondents (36.5 percent) report that they know the best sources of information about SSA disability programs (Question 4). People with a long-term work-limiting disability are more likely to report that they know the best sources (44.4 percent), as are those aged 62–69 (45.0 percent).

Together, these findings suggest that some of the groups most likely to need disability benefits, such as people with a long-term work-limiting disability and those in the ages when disability onset is most common, are more likely to be aware of the DI and SSI programs. Still, only a minority of people report that they know the best place to seek information. The relatively low levels of program awareness and high levels of interest in acquiring more information among some race/ethnicity groups (Asian/Pacific Islander, non-Hispanic Black, and Hispanic) suggest that communication efforts targeting these groups may be useful.

### *Financial Eligibility for Disability Programs*

In addition to having a general awareness of SSA's disability programs, potential applicants should understand whether they are financially eligible for DI benefits, SSI payments, or both. Each program has distinct rules for financial eligibility. To qualify for DI benefits, an individual generally must have worked and paid Social Security payroll taxes for at least one-quarter of the period between reaching age 21 and disability onset, including at least half of the 10 years immediately preceding disability onset. Workers who meet the duration-of-work criterion are considered "fully insured" and those who meet the recency-of-work criterion are considered "disability insured" and thereby financially eligible to receive DI benefits.[6]

Findings from the UAS suggest that considerable portions of the population are unfamiliar with the financial eligibility rules for the DI program. Less than half of respondents (47.0 percent) knew that DI eligibility is not extended to everyone with a Social Security number (Table 3, Question 5), and when presented with a true/false question that overstated the work-duration criteria for fully insured status, only 42.1 percent correctly responded "false" (Question 6). On the other hand, 66.0 percent of respondents correctly identified work-recency requirements for disability-insured status (Question 7). However, note that Question 7 combined the financial eligibility query with a basic statement about DI medical eligibility ("an individual must have a medical condition that meets Social Security definition of disability"), about which public understanding may be more widespread. These relatively low levels of knowledge about financial eligibility suggest that some potentially qualifying individuals may not apply for benefits. Conversely, financially ineligible individuals, not knowing the requirements, may submit applications that will be denied.

The SSI program does not require previous employment, but it sets limits on the amount of income and assets that a financially eligible applicant may have. In 2022, a qualifying applicant may have countable income of no more than $841 per month; if the applicant's spouse also applies for SSI, the couple's income limit is $1,261. Further, the resource limit for eligibility is $2,000 of countable assets for an individual and $3,000 for a couple. UAS Survey 322 does not include any questions specifically about SSI financial eligibility criteria. However, because awareness of the SSI program's existence is 49.9 percent, the share of respondents who know its eligibility criteria is presumably lower still.

### *Disability Benefit Application Process*

In addition to knowing whether they are financially eligible for benefits, it is important for potential beneficiaries to understand the disability application process. For instance, a general understanding of the forms and evidence that must be submitted to demonstrate medical eligibility might facilitate the application process. Likewise, knowledge of the likelihood that an application will be allowed, and how long the application process will take, may help an individual decide whether to apply and make financial plans for the application period.

**Table 3.**
**Knowledge of earnings-history eligibility requirements for DI benefits**

| Characteristic | Number (unweighted) | Q5: Basic DI eligibility (% correct) | Q6: What qualifies as "fully insured" for DI? (% correct) | Q7: What qualifies as "disability insured"? (% correct) |
|---|---|---|---|---|
| Total | 6,492 | 47.0 | 42.1 | 66.0 |
| Presence of long-term disability | | | | |
| No (reference category) | 4,917 | 45.7 | 42.6 | 64.9 |
| Yes | 1,545 | 50.9* | 40.5 | 69.6 |
| Sex | | | | |
| Women | 3,860 | 49.5* | 44.0 | 66.5 |
| Men (reference category) | 2,632 | 44.4 | 40.1 | 65.7 |
| Race/ethnicity | | | | |
| Non-Hispanic White (reference category) | 4,323 | 48.7 | 39.5 | 67.2 |
| Non-Hispanic Black | 506 | 52.5 | 47.1* | 63.2 |
| Hispanic (any race) | 850 | 38.4* | 48.6* | 62.4 |
| Asian/Pacific Islander | 405 | 40.5 | 45.2 | 67.7 |
| American Indian/Alaska Native | 147 | 34.1 | 62.6* | 65.7 |
| More than one race | 252 | 44.5 | 36.6 | 68.5 |
| Age | | | | |
| 18–29 (reference category) | 661 | 53.6 | 47.9 | 61.2 |
| 30–49 | 2,320 | 43.1* | 45.7 | 65.5 |
| 50–61 | 1,556 | 51.3 | 44.9 | 69.4 |
| 62–69 | 1,033 | 46.5 | 37.3* | 68.3 |
| 70 or older | 913 | 45.7 | 29.1* | 64.1 |
| Educational attainment | | | | |
| Less than high school diploma or equivalent | 318 | 51.9 | 47.2 | 65.3 |
| High school diploma or equivalent | 1,067 | 43.9 | 41.5 | 64.4 |
| Some college, no degree | 2,358 | 47.7 | 44.9 | 67.2 |
| Bachelor's degree | 1,610 | 48.6 | 39.0 | 66.3 |
| Master's degree or higher (reference category) | 1,137 | 47.5 | 39.5 | 68.3 |
| Marital status | | | | |
| Married (reference category) | 3,560 | 47.0 | 39.8 | 66.5 |
| Divorced | 1,113 | 46.6 | 44.0 | 68.3 |
| Widowed | 324 | 42.5 | 36.7 | 68.9 |
| Never married | 1,494 | 48.4 | 47.3* | 63.2 |
| Household income, last 12 months | | | | |
| Less than $50,000 | 2,242 | 48.8 | 43.9 | 65.0 |
| $50,000–74,999 | 946 | 46.7 | 45.4 | 66.6 |
| $75,000–99,999 | 804 | 44.4 | 37.2 | 64.4 |
| $100,000 or more (reference category) | 2,329 | 45.8 | 39.4 | 68.1 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

The first step toward receiving disability benefits is to apply. Nearly all respondents (92.9 percent) know that filing a claim is part of the process (Table 4, Question 8).[7] Once an individual applies, staff at a Social Security field office processes the application and determines whether the individual is financially eligible. If the applicant is not financially eligible, SSA issues a "technical denial." If the applicant is financially eligible, the application is sent to a Disability Determination Service (DDS) office, which adjudicates whether the applicant meets SSA's definition of disability. Individuals are considered disabled if they have a medical condition that prevents them from working at a substantial level for at least 12 months. After a DDS determines that an applicant is disabled, the claim is allowed. DI benefits begin 5 months after the onset of an individual's disability in most cases,[8] and SSI payments begin immediately after a DDS determination of eligibility. If the DDS determines that the applicant is not disabled—a "medical denial"—the individual may appeal the decision. In most cases, the appeal process begins with a reconsideration of the decision at the DDS office. As needed, applicants may take subsequent appeals to an administrative law judge at a Social Security hearing office, to SSA's Appeals Council, and then to a federal court.

In all, the disability determination process may take as little as a few months or as much as 2 years or longer, depending on whether an individual appeals an initial DDS denial. For all DI and SSI applications filed in 2013, the average processing time was 238 days, or about 8 months (Social Security Advisory Board 2017). Half of UAS respondents correctly estimated that the application process typically takes 6 months or more (Question 9). Workers with a long-term disability, older respondents, and those with lower levels of education and income were more likely to correctly estimate the length of application. Asian/Pacific Islander and Hispanic respondents were more likely to estimate that the application process is quicker than it is—with 76.1 and 63.3 percent, respectively, believing that the process takes fewer than 6 months on average.

About 50 percent of DI applicants receive an allowance either at the initial DDS level or upon appeal (SSA 2021, Table 60). When asked to estimate the ultimate allowance rate for DI applicants, 41.1 percent of respondents correctly estimated the rate to within about 10 percentage points (40–60 percent; Question 10). Equal proportions underestimated the allowance rate (29.5 percent) and overestimated it (29.4 percent). Non-Hispanic Black respondents, people with disabilities, and people with lower educational attainment and household income were more likely to underestimate allowance rates. It may be worth exploring whether perceptions about allowance rates affect the decision to apply, particularly among the populations that are more likely to underestimate the allowance rate.

### *Disability Determination Process*

At both the DDS and appeals levels, examiners follow a five-step process to determine whether the applicant's medical condition and diminished work capacity qualify for disability benefits (Wixon and Strand 2013). This process requires applicants to submit evidence of their medical condition, their past and current work, and their ability to engage in different physical and mental aspects of work.[9]

In step 1 of the disability determination process, examiners verify that the applicant is not engaging in "substantial" work, as defined by an earnings level. In 2022, the earnings thresholds that qualify as substantial gainful activity (SGA) are $1,350 per month for individuals who are not blind and $2,260 for blind individuals. If the applicant has earnings that meet or exceed the SGA threshold, the application is denied. If the examiners verify that the applicant is not working at the SGA level, they review the medical evidence provided by the applicant in step 2, in which they determine whether the applicant's medical condition is severe and long-term. A condition is considered severe if it significantly affects the applicant's ability to engage in the basic physical and mental tasks of work. The condition is considered long-term if it expected to last longer than 12 months or to result in death. If the condition is determined to be severe and long-term, the process continues to step 3; if not, the application is medically denied.

In step 3, examiners determine whether the applicant's condition "meets or equals" medical criteria contained in the agency's Listing of Impairments. If the applicant has a single condition that meets the listings' severity criteria or has multiple conditions that combine to equal the listings' criteria, the examiner grants a medical allowance for disability benefits. Applicants who are determined to have a severe, long-term impairment, but whose conditions do not meet or equal the listings' medical criteria, receive a work history evaluation in step 4 of the determination process.

**Table 4.**
**Knowledge of aspects of the DI application process**

| Characteristic | Number (unweighted) | Q8: Aware that individuals need to apply for benefits? (% yes) | Q9: Typical time to decision (% correct: 6 months or longer) | Q10: Ultimate allowance rate for DI applicants? | | |
|---|---|---|---|---|---|---|
| | | | | Underestimates (% estimating *less than 40 percent*) | Correct (% estimating *40–60 percent*) | Overestimates (% estimating *more than 60 percent*) |
| Total | 6,492 | 92.9 | 50.1 | 29.5 | 41.1 | 29.4 |
| Presence of long-term disability | | | | | | |
| No (reference category) | 4,917 | 92.5 | 44.5 | 27.9* | 41.1 | 31.0* |
| Yes | 1,545 | 94.1 | 66.7* | 34.5 | 41.2 | 24.3 |
| Sex | | | | | | |
| Women | 3,860 | 91.8 | 54.5* | 31.6* | 41.9 | 26.5* |
| Men (reference category) | 2,632 | 94.2 | 45.5 | 27.3 | 40.4 | 32.4 |
| Race/ethnicity | | | | | | |
| Non-Hispanic White (reference category) | 4,323 | 84.4 | 53.0 | 28.0 | 40.3 | 31.7 |
| Non-Hispanic Black | 506 | 87.3 | 62.5* | 37.3* | 45.2 | 17.5* |
| Hispanic (any race) | 850 | 90.7 | 36.7* | 28.5 | 44.3 | 27.2 |
| Asian/Pacific Islander | 405 | 91.4 | 23.9* | 32.0 | 37.9 | 30.1 |
| American Indian/Alaska Native | 147 | 79.1 | 53.2 | 35.3 | 39.1 | 25.6 |
| More than one race | 252 | 98.9* | 50.4 | 31.8 | 36.2 | 32.1 |
| Age | | | | | | |
| 18–29 (reference category) | 661 | 82.9 | 29.7 | 32.4 | 41.6 | 26.0 |
| 30–49 | 2,320 | 91.9* | 48.9* | 32.0 | 42.0 | 26.0 |
| 50–61 | 1,556 | 94.3* | 59.2* | 30.3 | 39.0 | 30.7 |
| 62–69 | 1,033 | 97.1* | 57.7* | 27.5 | 38.9 | 33.6 |
| 70 or older | 913 | 96.7* | 47.5* | 21.9* | 44.6 | 33.5* |
| Educational attainment | | | | | | |
| Less than high school diploma or equivalent | 318 | 84.3* | 62.6* | 38.8* | 39.7 | 21.5* |
| High school diploma or equivalent | 1,067 | 91.5* | 57.3* | 31.0* | 42.9 | 26.1* |
| Some college, no degree | 2,358 | 93.5* | 52.5* | 31.5* | 41.0 | 27.5* |
| Bachelor's degree | 1,610 | 94.8 | 37.3 | 23.5 | 41.3 | 35.1 |
| Master's degree or higher (reference category) | 1,137 | 96.9 | 41.7 | 25.6 | 38.7 | 35.8 |

(Continued)

**Table 4.**
**Knowledge of aspects of the DI application process—*Continued***

| Characteristic | Number (unweighted) | Q8: Aware that individuals need to apply for benefits? (% yes) | Q9: Typical time to decision (% correct: 6 months or longer) | Q10: Ultimate allowance rate for DI applicants? | | |
|---|---|---|---|---|---|---|
| | | | | Underestimates (% estimating *less than 40 percent*) | Correct (% estimating *40–60 percent*) | Overestimates (% estimating *more than 60 percent*) |
| Marital status | | | | | | |
| Married (reference category) | 3,560 | 95.0 | 47.7 | 26.9 | 39.6 | 33.5 |
| Divorced | 1,113 | 93.3 | 62.3* | 34.4* | 41.2 | 24.3* |
| Widowed | 324 | 94.4 | 62.0* | 28.4 | 42.5 | 29.2 |
| Never married | 1,494 | 87.4* | 44.8 | 32.5* | 44.5 | 23.0* |
| Household income, last 12 months | | | | | | |
| Less than $50,000 | 2,242 | 89.6* | 56.4* | 35.7* | 41.3 | 23.1* |
| $50,000–74,999 | 946 | 94.2 | 50.9* | 29.8 | 40.8 | 29.4 |
| $75,000–99,999 | 804 | 92.9 | 50.1* | 26.2 | 40.3 | 33.5 |
| $100,000 or more (reference category) | 2,329 | 96.1 | 42.5 | 24.0 | 41.7 | 34.3 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

At step 4, examiners evaluate whether the applicant has the physical and mental capacity to resume work in any recently held jobs. If so, the application is denied. For applicants who cannot perform their previous work, disability examiners consider, in step 5, whether they can perform any work in the national economy based on their physical and mental capacity, accounting also for other characteristics such as age, education, and skilled work experience. If the examiner finds that the applicant can engage in a significant number of jobs, the applicant is deemed ineligible for benefits. If the claimant is found to be unable to make the adjustment to any other work, considering his or her residual functional capacity, age, education, and work experience, then the applicant is eligible for benefits (SSA 2018).

The public's knowledge about these five steps varies. For step 1, 60.9 percent of a subpanel consisting of respondents who have ever applied for DI benefits or SSI payments are aware that individuals who work but have earnings beneath the SGA threshold may retain benefit eligibility (Table 5). Awareness of this rule is substantially lower among Asian/Pacific Islander and Hispanic program participants, however.

For step 2, about half of the population (51.0 percent) knows that people with short-term disabilities—that is, disabilities expected to last less than 12 months—do not qualify for DI benefits (Table 6, Question 12). Two-thirds of respondents (66.0 percent) know that the consideration of medical conditions is part of the determination process, which is relevant to step 3 (Question 13). We find little evidence that awareness of steps 2 and 3 vary by individual characteristics.

For step 4, 57.1 percent of the population correctly reported that benefits will be denied if the applicant is judged to be able to perform previous work (Question 14). Awareness of step 4 is higher among people with a long-term work-limiting disability (62.4 percent) and people who are widowed (66.3 percent) or divorced (63.1 percent) but is lower among respondents who are American Indian/Alaska Native (40.8 percent), Asian/Pacific Islander (50.7 percent), and non-Hispanic Black (51.6 percent) than those who are non-Hispanic White (59.5 percent).

Awareness is higher for step 5 (80.9 percent, Question 15) than for any other. Older respondents are especially likely to know that disability benefits will be denied if the applicant can perform other work in the national economy. Awareness is lower among respondents who are non-Hispanic Black (72.3 percent), Hispanic (74.3 percent), and Asian/Pacific Islander (76.2 percent) than those who are non-Hispanic White (84.1 percent).

### *Typical Benefit Amounts*

To enable financial planning, potential disability-program beneficiaries are well-served to be aware of the amount of monthly income they may receive. Most DI beneficiaries rely on these benefits for more than half of their monthly family income (Messel and Trenkamp 2022). Although DI benefit amounts vary depending on an individual's circumstances, the average disabled-worker benefit in December 2021 (shortly after the survey) was $1,358.30 and nearly two-thirds (65.8 percent) of disabled-worker beneficiaries received between $800 and $1,800 a month (SSA 2022a, Table 5.D2).

When asked to estimate the average DI benefit, most respondents (57.9 percent) correctly reported a figure in the $800 to $1,800 range (Table 7). Another 33.9 percent estimated a figure lower than $800 per month, and only 8.1 percent estimated more than $1,800 per month. People with disabilities are more likely to correctly estimate the average DI benefit (63.8 percent), yet they too are far more likely to underestimate the monthly benefit (31.1 percent) than to overestimate it (5.1 percent). Women, younger adults, individuals without a high school diploma, and American Indian/Alaska Native, non-Hispanic Black, and Hispanic respondents are relatively more likely to underestimate DI benefits than are other groups. Overall, this evidence suggests that the public does not tend to overestimate the amount of monthly DI benefits.

SSI disability payments are typically lower than DI benefits, with a maximum federal benefit in 2022 of $841 per month for an individual and $1,261 for a married couple who are both eligible for SSI.[10] UAS Survey 322 does not ask respondents to estimate the average SSI monthly payment.

### *Family Benefits*

In addition to disabled-worker benefits, DI may pay auxiliary benefits to the disabled worker's spouse and children. Each spouse or child may receive up to 50 percent of the amount that the disabled worker receives, although the total amount of benefits that the disabled worker's family may receive cannot exceed 188 percent of the worker's benefit (Romig and Shoffner 2015). SSI does not offer auxiliary payments.

**Table 5.**
**Knowledge of step 1 of the 5-step disability determination process among DI and SSI applicants**

| Characteristic | Number (unweighted) | Q11: Step 1 knowledge (% aware of SGA criterion) |
|---|---|---|
| Total | 1,056 | 60.9 |
| Presence of long-term disability | | |
| No (reference category) | 0 | . . . |
| Yes | 1,056 | 60.9 |
| Sex | | |
| Women | 407 | 61.2 |
| Men (reference category) | 649 | 59.7 |
| Race/ethnicity | | |
| Non-Hispanic White (reference category) | 628 | 63.7 |
| Non-Hispanic Black | 165 | 59.7 |
| Hispanic (any race) | 133 | 48.1* |
| Asian/Pacific Islander | 40 | 35.0* |
| American Indian/Alaska Native | 33 | 56.8 |
| More than one race | 54 | 72.5 |
| Age | | |
| 18–29 (reference category) | 58 | 57.2 |
| 30–49 | 306 | 62.0 |
| 50–61 | 334 | 61.7 |
| 62–69 | 241 | 61.0 |
| 70 or older | 115 | 57.0 |
| Educational attainment | | |
| Less than high school diploma or equivalent | 123 | 62.6 |
| High school diploma or equivalent | 251 | 59.6 |
| Some college, no degree | 472 | 59.0 |
| Bachelor's degree | 142 | 66.4 |
| Master's degree or higher (reference category) | 67 | 67.3 |
| Marital status | | |
| Married (reference category) | 430 | 57.8 |
| Divorced | 293 | 63.5 |
| Widowed | 81 | 62.0 |
| Never married | 252 | 62.6 |
| Household income, last 12 months | | |
| Less than $50,000 | 623 | 59.4 |
| $50,000–74,999 | 128 | 55.6 |
| $75,000–99,999 | 99 | 60.9 |
| $100,000 or more (reference category) | 179 | 72.1 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

. . . = not applicable; * = difference from reference category is statistically significant at the 0.05 level.

**Table 6.**
**Knowledge of steps 2–5 of the 5-step DI disability determination process**

| Characteristic | Number (unweighted) | Q12: Step 2 knowledge (% aware that short-term disability does not qualify for benefits) | Q13: Step 3 knowledge (% aware of work history and SSA disability definition criteria) | Q14: Step 4 knowledge (% aware of resumption of past work criteria) | Q15: Step 5 knowledge (% aware of criteria involving capacity to do any work) |
|---|---|---|---|---|---|
| Total | 6,492 | 51.0 | 66.0 | 57.1 | 80.9 |
| Presence of long-term disability | | | | | |
| No (reference category) | 4,917 | 51.1 | 64.9 | 55.3 | 80.1 |
| Yes | 1,545 | 50.4 | 69.6 | 62.4* | 82.9 |
| Sex | | | | | |
| Women | 3,860 | 50.6 | 66.5 | 59.9 | 80.7 |
| Men (reference category) | 2,632 | 51.4 | 65.7 | 54.2 | 81.1 |
| Race/ethnicity | | | | | |
| Non-Hispanic White (reference category) | 4,323 | 52.5 | 67.2 | 59.5 | 84.1 |
| Non-Hispanic Black | 506 | 50.0 | 63.2 | 51.6* | 72.3* |
| Hispanic (any race) | 850 | 47.4 | 62.4 | 55.7 | 74.3* |
| Asian/Pacific Islander | 405 | 45.5 | 67.7 | 50.7* | 76.2* |
| American Indian/Alaska Native | 147 | 50.9 | 65.7 | 40.8* | 74.1 |
| More than one race | 252 | 48.4 | 68.5 | 46.4* | 84.9 |
| Age | | | | | |
| 18–29 (reference category) | 661 | 48.0 | 61.2 | 55.4 | 72.0 |
| 30–49 | 2,320 | 53.0 | 65.5 | 53.8 | 79.3* |
| 50–61 | 1,556 | 53.7 | 69.4 | 59.1 | 81.3* |
| 62–69 | 1,033 | 49.4 | 68.3 | 58.1 | 85.4* |
| 70 or older | 913 | 45.8 | 64.1 | 62.7 | 86.5* |
| Educational attainment | | | | | |
| Less than high school diploma or equivalent | 318 | 52.1 | 65.3 | 59.9 | 77.2* |
| High school diploma or equivalent | 1,067 | 48.6 | 64.4 | 61.2* | 78.5* |
| Some college, no degree | 2,358 | 51.3 | 67.2 | 56.6 | 81.7 |
| Bachelor's degree | 1,610 | 50.3 | 66.3 | 52.8 | 81.5 |
| Master's degree or higher (reference category) | 1,137 | 55.8 | 68.3 | 54.1 | 85.3 |
| Marital status | | | | | |
| Married (reference category) | 3,560 | 52.3 | 66.5 | 55.5 | 82.1 |
| Divorced | 1,113 | 50.1 | 68.3 | 63.1* | 80.8 |
| Widowed | 324 | 48.3 | 68.9 | 66.3* | 87.2 |
| Never married | 1,494 | 49.1 | 63.2 | 54.9 | 76.7 |
| Household income, last 12 months | | | | | |
| Less than $50,000 | 2,242 | 49.3 | 65.0 | 58.4 | 78.8 |
| $50,000–74,999 | 946 | 49.8 | 66.6 | 55.3 | 84.0 |
| $75,000–99,999 | 804 | 49.9 | 64.4 | 60.3 | 77.4 |
| $100,000 or more (reference category) | 2,329 | 53.7 | 68.1 | 54.6 | 82.6 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

**Table 7.**
**Knowledge of typical monthly DI benefit amounts**

| Characteristic | Number (unweighted) | Q16: Average monthly DI benefit? Underestimates (% estimating *less than $800*) | Correct (% estimating *$800 to $1,800*) | Overestimates (% estimating *more than $1,800*) |
|---|---|---|---|---|
| Total | 6,492 | 33.9 | 57.9 | 8.1 |
| Presence of long-term disability | | | | |
| No (reference category) | 4,917 | 34.8 | 55.9 | 9.3 |
| Yes | 1,545 | 31.1 | 63.8* | 5.1* |
| Sex | | | | |
| Women | 3,860 | 39.0 | 54.8* | 6.2 |
| Men (reference category) | 2,632 | 28.6 | 61.2 | 10.2 |
| Race/ethnicity | | | | |
| Non-Hispanic White (reference category) | 4,323 | 31.0 | 60.4 | 8.7 |
| Non-Hispanic Black | 506 | 44.5* | 51.3* | 4.3* |
| Hispanic (any race) | 850 | 38.0* | 54.4 | 7.6 |
| Asian/Pacific Islander | 405 | 36.7 | 52.1 | 11.2 |
| American Indian/Alaska Native | 147 | 53.9 | 43.1* | 3.0* |
| More than one race | 252 | 28.3* | 62.0 | 9.7 |
| Age | | | | |
| 18–29 (reference category) | 661 | 43.8 | 48.5 | 7.7 |
| 30–49 | 2,320 | 40.7 | 52.9 | 6.4 |
| 50–61 | 1,556 | 29.3* | 61.4* | 9.4 |
| 62–69 | 1,033 | 24.6* | 67.1* | 8.3 |
| 70 or older | 913 | 26.5* | 62.7* | 10.7 |
| Educational attainment | | | | |
| Less than high school diploma or equivalent | 318 | 45.8* | 50.8 | 3.5 |
| High school diploma or equivalent | 1,067 | 35.8 | 58.3 | 5.9 |
| Some college, no degree | 2,358 | 32.7 | 59.8 | 7.5 |
| Bachelor's degree | 1,610 | 30.1 | 58.6 | 11.3 |
| Master's degree or higher (reference category) | 1,137 | 31.0 | 57.1 | 11.9 |
| Marital status | | | | |
| Married (reference category) | 3,560 | 32.0 | 58.4 | 9.6 |
| Divorced | 1,113 | 31.4 | 61.9 | 6.7 |
| Widowed | 324 | 26.7 | 69.4* | 3.9* |
| Never married | 1,494 | 42.0* | 51.4 | 6.6 |
| Household income, last 12 months | | | | |
| Less than $50,000 | 2,242 | 40.7* | 54.3* | 5.0* |
| $50,000–74,999 | 946 | 33.3 | 57.8 | 8.9 |
| $75,000–99,999 | 804 | 28.7 | 61.6 | 9.7 |
| $100,000 or more (reference category) | 2,329 | 28.5 | 60.6 | 10.9 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

Nearly three in four respondents (72.4 percent) know that the DI program features auxiliary benefits (Table 8, Question 17). Younger adults, respondents without a high school diploma, and those who are Hispanic or Asian/Pacific Islander are less likely to be aware that DI provides auxiliary benefits.

### Health Insurance

In addition to monthly payments, DI beneficiaries and SSI recipients receive access to health insurance through the Medicare and Medicaid programs, respectively. DI beneficiaries are generally eligible for the Medicare coverage 29 months after they become entitled for DI benefits.[11,12] SSI recipients in most states are eligible for Medicaid coverage beginning 1 month after they qualify for SSI payments.

When asked whether DI beneficiaries receive Medicare coverage immediately after monthly benefits start, only 44.1 percent of respondents correctly answered "false" (Table 8, Question 18), indicating low awareness of the 2-year waiting period. Knowledge of the waiting period did not vary by disability status or other individual characteristics. However, 87.1 percent of respondents correctly answered "true" that SSI recipients are also eligible for Medicaid (Question 19).[13] People with a long-term work-limiting disability and older adults were more likely to be aware of Medicaid eligibility for SSI recipients.

### Continuing Eligibility

DI and SSI eligibility may discontinue for various reasons. If evidence of work above the SGA level for a sustained period emerges, then a beneficiary or recipient of either program is determined to be no longer disabled. SSI eligibility also may cease if a recipient's assets surpass program thresholds. In addition to these financial factors, DI beneficiaries and SSI recipients must maintain medical eligibility by undergoing periodic continuing disability reviews (CDRs). CDRs generally occur every 3, 5, or 7 years, depending on the extent to which the individual's medical condition is expected to improve (SSA, n.d. a). If a CDR examiner determines that an individual has experienced medical improvement and can currently engage in SGA, the individual's benefits will cease.[14]

Most respondents (86.2 percent) understand that individuals will no longer receive DI benefits if their medical condition improves (Table 9). Awareness is highest for older respondents and those with higher levels of education. It is substantially lower among American Indian/Alaska Native respondents (56.2 percent).

### Composite Program Knowledge

We find three significant differences across demographic groups in the composite program-knowledge measure (Table 10). First, people with disabilities tend to exhibit high levels of program knowledge (68.1 percent, versus 63.9 percent for the entire population). This makes sense, because people with disabilities are more likely to have applied for and participated in one or both of the programs. Second, composite program knowledge appears to increase with age: Respondents aged 50–61 scored 66.6 percent on the composite measure, compared with 56.6 percent for those aged 18–29. This result also makes sense, because the incidence of work-limiting disabilities and the filing of SSA disability program applications both increase for individuals approaching retirement age (SSA 2021). Finally, composite program knowledge varies by race and ethnicity. Respondents who are Asian/Pacific Islander (58.1 percent), American Indian/Alaska Native (58.5 percent), and Hispanic (60.4 percent) have lower scores on the composite measure than those who are non-Hispanic White (65.5 percent). Knowledge differences are statistically significant, even when accounting for age-distribution differences between these populations.

## Conclusions

SSA disability programs protect people who are not able to work at SGA level because of a severe and long-term health condition. It is important for the public not only to be aware that these programs exist, but also to understand basic program aspects such as eligibility rules, the application and determination processes, and the monthly income that these programs provide. This knowledge is helpful for financial planning and, more specifically, when preparing to apply for benefits.

Descriptive findings from the UAS suggest that about three in four adults know that the DI program exists, but only half know that the SSI program exists. Knowledge about specific program aspects varies. For instance, majorities of respondents know that an individual must apply for disability benefits, that an applicant must meet the medical criteria for benefits, and that beneficiaries can become ineligible for benefits if their medical condition improves. However, knowledge about other program aspects is lower. For instance, there seems to be confusion about financial eligibility for DI benefits. Furthermore, about half of UAS respondents believe that the determination process is quicker than it is. By identifying the program aspects about which the public is less

**Table 8.**
**Knowledge of family (auxiliary) benefits and health insurance coverage**

| Characteristic | Number (unweighted) | Q17: Aware of auxiliary benefits? (% yes) | Q18: Aware of lag between DI eligibility and Medicare coverage? (% yes) | Q19: Aware of Medicaid coverage for SSI recipients? (% yes) |
|---|---|---|---|---|
| Total | 6,492 | 72.4 | 44.1 | 87.1 |
| Presence of long-term disability | | | | |
| No (reference category) | 4,917 | 72.3 | 43.7 | 85.9 |
| Yes | 1,545 | 72.4 | 45.3 | 90.4* |
| Sex | | | | |
| Women | 3,860 | 70.6 | 46.1 | 87.0 |
| Men (reference category) | 2,632 | 74.4 | 42.0 | 87.1 |
| Race/ethnicity | | | | |
| Non-Hispanic White (reference category) | 4,323 | 74.9 | 44.5 | 88.2 |
| Non-Hispanic Black | 506 | 71.4 | 44.3 | 83.7 |
| Hispanic (any race) | 850 | 65.2* | 44.6 | 86.2 |
| Asian/Pacific Islander | 405 | 63.3* | 41.0 | 83.3 |
| American Indian/Alaska Native | 147 | 69.3 | 38.7 | 84.6 |
| More than one race | 252 | 70.7 | 39.5 | 85.6 |
| Age | | | | |
| 18–29 (reference category) | 661 | 62.3 | 44.6 | 77.5 |
| 30–49 | 2,320 | 70.1* | 43.4 | 86.2* |
| 50–61 | 1,556 | 73.4* | 46.5 | 87.3* |
| 62–69 | 1,033 | 78.4* | 43.1 | 91.8* |
| 70 or older | 913 | 78.0* | 43.1 | 91.3* |
| Educational attainment | | | | |
| Less than high school diploma or equivalent | 318 | 63.6* | 41.3 | 85.0 |
| High school diploma or equivalent | 1,067 | 71.0* | 44.3 | 85.1 |
| Some college, no degree | 2,358 | 71.6* | 42.2 | 87.6 |
| Bachelor's degree | 1,610 | 75.1 | 45.8 | 89.1 |
| Master's degree or higher (reference category) | 1,137 | 78.0 | 46.5 | 88.4 |
| Marital status | | | | |
| Married (reference category) | 3,560 | 75.7 | 43.9 | 88.1 |
| Divorced | 1,113 | 71.8 | 46.0 | 88.4 |
| Widowed | 324 | 72.5 | 44.4 | 91.7 |
| Never married | 1,494 | 65.0* | 43.1 | 82.7* |
| Household income, last 12 months | | | | |
| Less than $50,000 | 2,242 | 67.7* | 41.4 | 86.3 |
| $50,000–74,999 | 946 | 73.8 | 46.4 | 86.1 |
| $75,000–99,999 | 804 | 74.9 | 47.8 | 88.3 |
| $100,000 or more (reference category) | 2,329 | 76.8 | 44.8 | 88.1 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

**Table 9.**
**Knowledge that eligibility for disability benefits may discontinue**

| Characteristic | Number (unweighted) | Q20: Eligibility may discontinue if condition improves (% correct) |
|---|---|---|
| Total | 6,492 | 86.2 |
| Presence of long-term disability | | |
| No (reference category) | 4,917 | 85.3 |
| Yes | 1,545 | 88.5 |
| Sex | | |
| Women | 3,860 | 86.0 |
| Men (reference category) | 2,632 | 86.3 |
| Race/ethnicity | | |
| Non-Hispanic White (reference category) | 4,323 | 88.6 |
| Non-Hispanic Black | 506 | 80.1* |
| Hispanic (any race) | 850 | 83.1* |
| Asian/Pacific Islander | 405 | 81.2* |
| American Indian/Alaska Native | 147 | 56.2* |
| More than one race | 252 | 84.5 |
| Age | | |
| 18–29 (reference category) | 661 | 79.0 |
| 30–49 | 2,320 | 85.0 |
| 50–61 | 1,556 | 87.2* |
| 62–69 | 1,033 | 88.2* |
| 70 or older | 913 | 90.9* |
| Educational attainment | | |
| Less than high school diploma or equivalent | 318 | 81.9* |
| High school diploma or equivalent | 1,067 | 83.4* |
| Some college, no degree | 2,358 | 83.9* |
| Bachelor's degree | 1,610 | 90.6 |
| Master's degree or higher (reference category) | 1,137 | 92.2 |
| Marital status | | |
| Married (reference category) | 3,560 | 87.3 |
| Divorced | 1,113 | 86.5 |
| Widowed | 324 | 91.4 |
| Never married | 1,494 | 81.8* |
| Household income, last 12 months | | |
| Less than $50,000 | 2,242 | 81.8* |
| $50,000–74,999 | 946 | 86.8 |
| $75,000–99,999 | 804 | 87.8 |
| $100,000 or more (reference category) | 2,329 | 89.9 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

**Table 10.**
**Composite measure of knowledge about disability programs**

| Characteristic | Number (unweighted) | Composite knowledge (% questions answered correctly) |
|---|---|---|
| Total | 6,492 | 63.9 |
| Presence of long-term disability | | |
| No (reference category) | 4,917 | 62.5* |
| Yes | 1,545 | 68.1 |
| Sex | | |
| Women | 3,860 | 64.2 |
| Men (reference category) | 2,632 | 63.7 |
| Race/ethnicity | | |
| Non-Hispanic White (reference category) | 4,323 | 65.5 |
| Non-Hispanic Black | 506 | 62.4* |
| Hispanic (any race) | 850 | 60.4* |
| Asian/Pacific Islander | 405 | 58.1* |
| American Indian/Alaska Native | 147 | 58.5* |
| More than one race | 252 | 63.9 |
| Age | | |
| 18–29 (reference category) | 661 | 56.6 |
| 30–49 | 2,320 | 62.2* |
| 50–61 | 1,556 | 66.6* |
| 62–69 | 1,033 | 67.6* |
| 70 or older | 913 | 65.7* |
| Educational attainment | | |
| Less than high school diploma or equivalent | 318 | 63.1 |
| High school diploma or equivalent | 1,067 | 63.4 |
| Some college, no degree | 2,358 | 64.6 |
| Bachelor's degree | 1,610 | 63.7 |
| Master's degree or higher (reference category) | 1,137 | 64.7 |
| Marital status | | |
| Married (reference category) | 3,560 | 64.3 |
| Divorced | 1,113 | 66.5 |
| Widowed | 324 | 68.2 |
| Never married | 1,494 | 60.3* |
| Household income, last 12 months | | |
| Less than $50,000 | 2,242 | 63.1 |
| $50,000–74,999 | 946 | 64.5 |
| $75,000–99,999 | 804 | 64.2 |
| $100,000 or more (reference category) | 2,329 | 64.5 |

SOURCE: UAS Survey 322, results as of September 2021.

NOTES: Because some respondents did not answer all demographic questions, the sums of the characteristic groupings do not necessarily equal the sample size.

Appendix A presents the full text of the survey questions.

* = difference from reference category is statistically significant at the 0.05 level.

knowledgeable, SSA and other interested parties can better tailor communication and services for people with disabilities. In turn, potential applicants may be better prepared to decide whether to apply and know what to expect from the application process.

We also find that the composite measure of disability program knowledge is lower among people of color, even when controlling for age. People of color are also more likely to report that they are interested in learning about disability programs. Together, these findings suggest the promise of targeting these populations for informational outreach. Research also indicates that people of color are more likely to experience structural barriers in acquiring information about retirement planning, particularly from channels outside their social networks and employers (Chang 2005; Chard, Messel, and Rogofsky forthcoming). Future research can seek ways to identify and remove the structural barriers that account for the disparities in program knowledge.

Our analysis faces several limitations, some of which may also be addressed in future research. First, our descriptive analysis demonstrates only that public knowledge differs by program aspect and population subgroup; it cannot explain why these differences exist. Future surveys or other quantitative analyses could address, at least partially, the reasons for these differences. SSA might learn more about the barriers faced by populations with lower program knowledge by using in-person interviews with open-ended questions. Research could also include additional demographic characteristics, such as urban/rural residence, that would be useful for identifying other potential outreach target groups. Future versions of the disability program knowledge survey could also include additional questions about the SSI program, which are relatively lacking in UAS Survey 322. Moreover, future research could explore whether studies using address-based samples, such as the UAS, are able to reach a sample representative of the full population of people with disabilities. For instance, people with disabilities who do not have a stable address may not be included in the sampling frame. This may lead to underrepresentation of unhoused people with disabilities who may qualify for SSI payments based on their income and resource levels.

Furthermore, our findings do not control for demographic and socioeconomic factors affecting disability program knowledge in the general population. Future studies controlling for these factors (and accounting for interactions between the various factors) may shed more light on these relationships. As the sample size of disability program knowledge respondents grows, these types of analysis should become more feasible.

## *Appendix A: UAS 322 Survey Questionnaire*

Listed below are the full-text versions of the UAS 322 survey questions, the responses to which are summarized in Tables 2–9. In some instances, the wording of the questions has been slightly modified for contextual clarity. Correct answers, or those indicating the respondent's knowledge or interest as highlighted in the tables, are noted.

### *General Awareness of SSA Disability Programs*

| | | |
|---|---|---|
| Question 1 | **DI awareness** | *Were you aware that the DI program exists?*<br>☑ Yes ☐ No |
| Question 2 | **SSI awareness** | *Were you aware that the SSI program exists for disabled people with low income?*<br>☑ Yes ☐ No |
| Question 3 | **Interest in learning more about disability programs** | *I am interested in learning more about Social Security disability benefits.*<br>☑ Agree strongly<br>☑ Agree somewhat<br>☐ Neither agree nor disagree<br>☐ Disagree somewhat<br>☐ Disagree strongly |
| Question 4 | **Sources of information about DI** | *I know what the best sources of information are for learning about Social Security disability benefits.*<br>☑ Agree strongly<br>☑ Agree somewhat<br>☐ Neither agree nor disagree<br>☐ Disagree somewhat<br>☐ Disagree strongly |

### *Financial Eligibility for Disability Programs*

| | | |
|---|---|---|
| Question 5 | **Basic eligibility** | *Anyone with a Social Security number is eligible for DI benefits.*<br>☐ True ☑ False |
| Question 6 | **"Fully insured" status** | *People need to have been employed and paid Social Security taxes for at least 60 quarters (15 years) to be eligible for DI benefits.*<br>☐ True ☑ False |
| Question 7 | **"Disability insured" status** | *To qualify for DI benefits, an individual must have worked in jobs covered by Social Security in the last 10 years and have a medical condition that meets Social Security definition of disability.*<br>☑ True ☐ False |

### *Disability Benefit Application Process*

| | | |
|---|---|---|
| Question 8 | **Submitting application** | *People must submit a claim for review by Social Security before they can receive DI benefits.*<br>☑ True ☐ False |
| Question 9 | **Typical time needed to reach a decision** | *On average, how long do you think it takes from the time an individual applies for disability benefits until they start receiving benefits?*<br>☐ Less than 1 week<br>☐ A few weeks<br>☐ A couple of months<br>☐ Several months<br>☑ Between 6 months and 1 year<br>☑ More than 1 year |
| Question 10 | **Ultimate allowance rate** | *What percentage of applicants do you believe are ultimately approved for disability benefits?*<br>[Answers within the range of 40 percent to 60 percent are considered correct.] |

### *Disability Determination Process*

Question 11 **Step 1—SGA**

*Were you aware of the Social Security rule that states that an individual who files for disability benefits may be working if their income is below the SGA amount?*

☑ Yes ☐ No

[This question is asked only of individuals who have ever applied for DI benefits or SSI payments. All other questions are asked of all respondents.]

Question 12 **Step 2—"Severe" and "long-term" disability**

*People with short-term disability (one that is expected to last less than 12 months) are not eligible for DI.*

☑ True ☐ False

Question 13 **Step 3—Medical criteria (Listing of Impairments)**

*To qualify for DI benefits, an individual must have worked in jobs covered by Social Security in the last 10 years and have a medical condition that meets Social Security definition of disability.*

☑ True ☐ False

Question 14 **Step 4—Ability to perform past work**

*An individual who can perform work that he or she has done in the past may still be able to receive DI benefits.*

☐ True ☑ False

Question 15 **Step 5—Ability to perform other work**

*If the DDS office decides—based on the claimant's age, education, experience, and skills—that he or she can do other work, the claim will be denied.*

☑ True ☐ False

### *Typical Benefit Amounts*

Question 16 **Average benefit**

*On average, how much do you think DI beneficiaries receive in disability benefits?*

[Answers within the range of $800 to $1,800 per month are considered correct.]

### *Family Benefits*

Question 17 **Auxiliary benefits**

*Spouses and children of a person with disabilities may also receive DI benefits based on the person's earnings record.*

☑ True ☐ False

### *Health Insurance*

Question 18 **Medicare coverage for DI beneficiaries**

*DI beneficiaries are insured by Medicare immediately after the start date for their benefit.*

☐ True ☑ False

Question 19 **Medicaid coverage for SSI recipients**

*SSI beneficiaries are eligible for Medicaid coverage.*

☑ True ☐ False

### *Continuing Eligibility*

Question 20 **Eligibility duration**

*A person receiving DI benefits will continue to receive benefits forever, even if the condition improves until the beneficiary is no longer considered disabled.*

☐ True ☑ False

## Notes

*Acknowledgments:* The authors thank Richard Chard, John Murphy, Johanna P. Maleh, Tony Notaro, and Mark Sarney for their helpful comments and suggestions.

[1] Members of an insured disabled worker's family may also be eligible for DI benefits.

[2] Stakeholders include nonprofit advocacy groups and policymakers in SSA and other federal or state and local agencies.

[3] One question was administered only to individuals who had ever applied for DI benefits or SSI payments, and two other questions addressed respondent attitudes toward learning about the programs rather than assessing program knowledge.

[4] Because Survey 322 is still in the field, the sample size has since increased.

[5] Consistent with the UAS definition, we define individuals as having a long-term disability if they answer *yes* to the question "Do you have any impairment or health problem that limits the kind or amount of paid work you can do?" and *no* to the question "Is this a temporary condition that will last for less than 3 months?"

[6] These criteria are adjusted for workers younger than 31 (SSA 2022c) and individuals who are blind (SSA 2012).

[7] This result is for all survey respondents. Conditional on DI awareness, the figure is 95.8 percent (versus 84.1 percent among those who are not aware of the DI program). Conditional on SSI awareness, the figure is 94.9 percent (versus 91.0 percent of those who aren't aware of SSI).

[8] Because disability onset may be deemed to have occurred prior to application, initial DI benefits are sometimes retroactive.

[9] The applicant's responsibility for evidence is detailed in the Code of Federal Regulations (see https://www.ssa.gov/OP_Home/cfr20/416/416-0912.htm).

[10] These amounts, known as the federal benefit rates, are generally equal to the maximum countable income level for an SSI recipient.

[11] The 5-month waiting period between entitlement and first receipt of DI benefits is followed by an additional 24-month waiting period before Medicare coverage begins. Entitlement for DI benefits refers to the month when an individual met both the financial *and* medical eligibility for the DI program. When an individual is determined to have been entitled to DI benefits for 29 or more months prior to the allowance decision, Medicare coverage begins immediately.

[12] Medicare coverage does not apply to auxiliary beneficiaries unless they are also insured for DI.

[13] We considered "true" to be the correct answer. However, because state Medicaid coverage provisions for SSI recipients are not uniform, UAS respondents residing in some states may have correctly answered "false."

[14] A CDR involves an 8-step sequential evaluation process that considers an individual's current impairments and medical evidence, as outlined in SSA (2022b). In the Code of Federal Regulations, SSA states that "in most instances, we must show that you are able to engage in [SGA] before your benefits are stopped. When doing this, we will consider all your current impairments not just that impairment(s) present at the time of the most recent favorable determination. If we cannot determine that you are still disabled based on medical considerations alone…, we will use the new symptoms, signs, and laboratory findings to make an objective assessment of your functional capacity to do basic work activities or residual functional capacity and we will consider your [age, education, and skilled work experience]" (see https://www.ssa.gov/OP_Home/cfr20/404/404-1594.htm).

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# Employment Transitions Among Older Americans During the Initial Lockdown and Early Reopening Months of the COVID-19 Recession

by Christopher R. Tamborini and ChangHwan Kim*

*This study examines the employment status of older Americans in the months immediately before and after the peak COVID-19 lockdown in April 2020. We construct longitudinal employment data from 2019–2020 Current Population Surveys. To account for seasonal fluctuations in employment and retirement patterns that are not unique to the COVID-19 recession, we implement a difference-in-differences analysis using multinomial logistic regressions. We find that the onset of the pandemic immediately and adversely affected all workers, but the extent of the employment disruptions varied by age group, sex, and whether the worker has a college degree. Reemployment patterns after the peak lockdown month also varied but did not simply reverse the earlier patterns. Our findings imply that the employment effects of the COVID-19 recession are substantially different from those of previous recessions.*

## Introduction

Employment disruptions during economic downturns can have lasting consequences, particularly for older adults. In the early stages of the COVID-19 pandemic, U.S. unemployment rose sharply and work hours decreased. The effects, however, were not uniform across worker subgroups. For example, employment loss was higher among workers with less education (Bartik and others 2020) and minorities (Andrea and others 2022; Fairlie, Couch, and Xu 2020; Kim and others 2021; Moen, Pedtke, and Flood 2020).

In this article, we investigate how the onset of the COVID-19 pandemic and the resulting recession affected the employment dynamics of older Americans. Although there has been a surge of interest in studying the pandemic's employment effects, few studies have focused on older adults and even fewer have assessed their employment patterns by following individual subjects over time. Moreover, heterogeneity in pandemic employment patterns among older adults is not well established, despite studies (such as Kim and others 2021) showing disparate effects among other subgroups in the working-age population.

The employment dynamics of older Americans during the COVID-19 recession are important to document and understand given the rising median age of the population and the significance of employment for older adults' income and preparation for retirement (Goda and others 2022; Munnell and Rutledge 2013). In addition, the COVID-19 recession could affect older Americans in unexpected ways (Resnick, Zimmerman, and the Gerontological Society of America COVID-19 Task Force 2021). State government–mandated business closures; social distancing policies; and occupational differences between essential and nonessential workers and the ability to work from home, among other factors, may affect groups differently. Further, because the risk of serious health

**Selected Abbreviations**

| | |
|---|---|
| CPS | Current Population Survey |
| DID | difference-in-differences |
| IPUMS | Integrated Public Use Microdata Series |
| MORG | Merged Outgoing Rotation Group |

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complications from the virus increases sharply with age (Polyakova and others 2020; Verdery and others 2021), the COVID-19 recession may affect older adults differently than prior downturns. We explore the employment dynamics of older adults during the early months of the COVID-19 recession using monthly data from the Current Population Survey—Merged Outgoing Rotation Group (CPS-MORG), available from the Integrated Public Use Microdata Series (IPUMS) database (Flood and others 2020). We construct two longitudinal data sets that track individuals' monthly employment status before and after the peak lockdown in April 2020. We track whether workers had continuous work, transitioned from employment to non-employment, or resumed work, and compare the experiences of older and younger workers.
A unique challenge in studying changes in older adults' employment over time is controlling for events unrelated to COVID-19, especially involving retirement. To circumvent this issue, we use difference-in-differences (DID) regressions, which adjust for observed differences in employment across age groups over the same months in 2019.

Our results shed new light on the labor market experiences of older adults during the COVID-19 recession. We find that the onset of the pandemic had a large and immediate adverse effect on employment for older Americans, yet older men and women were less likely to transition from employment to nonemployment than younger workers were. However, there was considerable heterogeneity across education levels. During the early reopening months of the summer of 2020, older Americans were less likely to resume employment than younger adults were because they were also less likely, on average, to have experienced employment disruptions during the lockdown, which mitigates their seeming disadvantage in reemployment.

## *Background: Older Adults' Employment During Hard Economic Times*

We situate our study within the rapidly growing literature on the employment effects of the economic downturn caused by the COVID-19 pandemic. Studies find evidence of a range of adverse employment outcomes related to state-mandated lockdowns, business closures, and social distancing policies. The outcomes include surging unemployment, unprecedented temporary layoff rates, a spike in labor force nonparticipation, and declining work hours (Bartik and others 2020).

Yet the employment effects have not been felt uniformly across groups. For example, work-hour reductions related to increased caregiving requirements affected mothers far more than fathers (Collins and others 2020). Additionally, unemployment at the onset of the recession was concentrated among the less-educated (Bartik and others 2020; Moen, Pedtke, and Flood 2020), although workers without a high school diploma appear to be less negatively affected because they tend to be employed in "essential" occupations (Montenovo and others 2020). Minorities also were hard hit by the economic fallout of COVID-19 (Andrea and others 2022; Fairlie, Couch, and Xu 2020; Kim and others 2021).

Comparatively little attention has focused on older Americans' employment over the pandemic. A body of literature indicates that older and younger adults often fare differently in terms of employment disruptions during recessions (Redbird and Grusky 2016). Regarding job loss, studies have consistently found that older adults are less negatively affected, in large part because of their seniority and job experience (Couch and others 2018). If this pattern continued during the pandemic, we would find evidence that older adults' employment was more stable than that of their younger counterparts during the COVID-19 recession. On the other hand, older workers who are displaced during recessions tend to experience greater wage losses and reductions in income (Couch and others 2018; Couch, Jolly, and Placzek 2009). They also tend to experience longer unemployment spells between jobs (Johnson and Butrica 2012; Neumark and Button 2013; Wanberg and others 2016).

A complication in studying the employment effects of economic downturns on older adults is accounting for retirement transitions. A strand of research shows that economic downturns, such as the Great Recession, are associated with increased probabilities of retirement and early Social Security benefit claiming (Coile and Levine 2011; Fichtner, Phillips, and Smith 2012). Research also finds evidence that some older adults postpone retirement or take "bridge jobs" (for example, positions taken to maintain income or health insurance coverage while searching for permanent work or until becoming eligible to claim retirement benefits) during economic contractions (Munnell and Rutledge 2013). Job loss during recessions may also increase the long-run probability of Social Security disability benefit uptake (Couch and others 2013).

Research on past recessions provides insights, but the COVID-19 recession has notable distinctions.

Many state governments responded to the public health and safety emergency by abruptly mandating business closures, issuing stay-at-home orders, and instituting social distancing policies, which resulted in more rapid employment loss than occurred in past recessions. Job losses also were concentrated in industry sectors differing from those in past recessions, such as retail sales and hospitality rather than construction and manufacturing (Cajner and others 2020; Montenovo and others 2020). Yet many job losses related to COVID-19 might be temporary, as evidenced by a rebound in employment in May and June of 2020 that was fueled in large part by workers returning to their same jobs (Cheng and others 2020; Sanzenbacher 2021).

There are various reasons why the COVID-19 economic downturn could affect employment differently for older and younger adults. As noted earlier, older adults tend to have longer job tenure and work experience, which increase employment stability. Yet older workers also face greater risk of severe complications from the virus than their younger counterparts do. Consequently, older workers who fear the virus or who face greater exposure may be more likely to leave the labor force or retire earlier than expected to minimize the risk of infection. This may be particularly evident among persons who cannot work remotely or are aged 62—Social Security's early eligibility age for retirement benefits—or older. Vulnerability to the virus may also reduce older workers' propensity to take bridge jobs, as such jobs often entail more face-to-face contact (Bui, Button, and Picciotti 2020).

There are also demand-side reasons why the employment dynamics of older adults may have differed from those of younger persons during the pandemic. One aspect is age discrimination. Employers may hold negative stereotypes about older workers, which can reduce their employment stability or reemployment opportunities during an economic downturn (Neumark, Burn, and Button 2019). Further, to the extent that employers view older workers as more expensive or vulnerable than younger workers during the COVID-19 recession (Ayalon and others 2020), older workers could be more susceptible to layoffs or displacement.

Disparate employment outcomes can also result from the types of occupations and industries that employ older adults (Carr 2021). Some industries were more negatively affected by the COVID-19 outbreak than others (Adams-Prassl and others 2020; Angelucci and others 2020; Fairlie, Couch, and Xu 2020). Older workers are less likely than younger workers to be employed in industries such as eating and drinking establishments, where job losses related to COVID-19 were higher.

To date, the few studies that focused on older workers have shown mixed evidence. Bui, Button, and Picciotti (2020) document larger relative increases in unemployment at the onset of the COVID-19 recession among adults aged 65 or older, particularly among women. Moen, Pedtke, and Flood (2020) report marked increases in unemployment among men and women in their 50s without a college degree. Another study shows increased probabilities of early work-to-retirement transitions in April 2020 (Coibion, Gorodnichenko, and Weber 2020). Heterogeneity by sex also may emerge (Couch, Fairlie, and Xu 2022). Bui, Button, and Picciotti (2020) find greater relative drops in employment for female workers aged 65 or older than for similarly aged men. Goda and others (2022) show that older workers' employment dropped sharply, and their unemployment rate increased, in the early months of the COVID-19 pandemic. Like Sanzenbacher (2021), we build on these works by tracking changes in employment status for individuals longitudinally while controlling for general economic trends over time.

The employment effects induced by the COVID-19 pandemic also differ across time. April 2020 is commonly described as the most stringent lockdown month as indicated by job losses, business closures, reduced operations, and stay-at-home policies (Bureau of Labor Statistics 2021; Fairlie, Couch, and Xu 2020). The sharp drop in economic activity in April led to large increases in unemployment and dramatic employment loss. Reopenings in the late spring and summer of 2020 led to modest rebounds in employment levels in many states, largely involving individuals who resumed working at their previous job (Cheng and others 2020; Kim and others 2021). To our knowledge, no prior studies have examined how older adults' employment dynamics differed from those of the prime working-age population between these two phases.

## *Research Design*

We use data from the January–July 2019 and 2020 surveys of the CPS-MORG, a nationally representative monthly employment survey. The CPS-MORG uses a unique 4-8-4 outgoing-rotation design, which means that households are interviewed for 4 consecutive months, then unobserved for 8 months, then reinterviewed for 4 additional months. Using an identification key to link responses for individual respondents,

we can construct two longitudinal data sets that contain monthly information for those individuals over multiple months. The first data set allows us to track changes in individuals' employment status from the prelockdown phase (January–March 2020) to the peak lockdown month (April 2020). The second data set enables us to track employment status from April to the early "reopening" months (May–July). Each data set includes some individuals who are not included in the other, but the demographic characteristics of both panels are very similar.

For each data set, we select two observations per respondent to detect any changes in their employment status. For the first data set, which we call the "lockdown panel," we link the April observation to that for the latest prelockdown month (that is, March, if available; if the March interview is absent, then February; if not February, then January). For the second data set, the "reopening panel," we link the April observation to the latest postlockdown month in our observation period (that is, July, if available; if the July interview is absent, then June; if not, then May). We use the CPS-MORG data covering the same months in 2019 for comparison.

Our analytic sample consists of men and women aged 18–69 who are not enrolled in school or institutionalized. To examine employment transitions, we use a DID design with multiple time periods using multinomial logistic (logit) regression models. DID is a quasiexperimental approach that allows us to better isolate a specific effect from general trends over time (Gangl 2010), making it suitable for analyzing the COVID-19 downturn.

Of particular interest are differences by age; specifically, comparisons of older workers' employment-status changes with those of individuals of the prime working ages of 30–49 over the same period. However, comparing employment changes among older and prime-age workers poses the unique challenge of distinguishing between the types of employment transitions more typical of one age group or the other. For example, older adults who stop working are likely to include some who retire voluntarily. To disentangle the increases in nonemployment that are due to COVID-19 from retirement transitions in a "normal" year, we introduce a second difference—that is, the difference between 2019 and 2020. Applying the DID approach thus allows us to account for employment trends across age groups that occurred prior to the COVID-19 recession as we estimate the differentials that occurred during the pandemic.

In nonlinear DID models such as binary or multinomial logits, one cannot assume that the time effect is constant across groups and the group effects are constant across time (Puhani 2012). Thus, we cannot assume common trends for the expected potential outcomes. However, we can assume common trends for a nonlinear transformation of the expected outcomes (Lechner 2011). That is, we estimate the treatment effect (COVID-19) on older workers by comparing the difference across age groups of the conditional expectation of the observed outcomes (or the observed change in work status) to the difference across age groups in the conditional expectation of the counterfactual outcomes (or the counterfactual change in work status without interaction effects between time and groups). Throughout the article, we interpret the estimated DID effects for older workers relative to the prime working-age population.

The main dependent variable is employment status. The variable consists of four mutually exclusive employment-status categories that may occur over two points in time: (1) continuously employed; (2) employed to not employed; (3) not employed to employed; and (4) continuously not employed. For example, in the lockdown panel, respondents who were employed in March and not employed in April are classified as "employed to nonemployed." This dependent variable offers a reliable estimate about employment status during the COVID-19 recession. "Nonemployed workers" include those who had a job but were not at work, as well as those who were unemployed or not in the labor force. Workers who are temporarily laid off are ordinarily classified as unemployed. However, during the COVID-19 lockdown, a substantial portion of such individuals were miscategorized as "employed but not at work" because of the abruptness of the layoffs (Bureau of Labor Statistics 2021). As a result, unemployment rates among labor force participants in that period may be biased. We focus on an individual's probability of being at work because that metric is not affected by the COVID-19–related misclassification and thus is the most stable measure of employment.

The analysis and the dependent variable for both the lockdown and reopening data panels are consistent. Note that we elected not to restrict the analysis sample for our logit models to those who were employed in January–March for the lockdown panel, and to those who were not at work in April for the reopening panel. This is because restricting the analysis sample to individuals who were not at work in April for the reopening panel could lead to a serious selection bias.

Put briefly, those who were not at work in April 2020, following the onset of the pandemic, would not be comparable to those who were not at work in April in 2019. That is, we cannot assume the common trends if we limit the analysis sample in such a way. Our strategy can avoid this problem. Using this dependent variable, we calculate a series of sex-specific multinomial logit regression estimates as follows:

$$\ln\left(\frac{P(Y_k)}{P(Y_c)}\right) = \sum \beta_{jk} G_j + \gamma_k T + \sum \delta_{jk} (G_j \times T) + \sum \theta_{lk} X_l + \alpha_s + M_\mu ,$$

where $P(Y_c)$ is the probability of the employment status of the reference group (continuous work) and $P(Y_k)$ is the probability of the employment status of the comparison group. $G_j$ is a set of dummy variables indicating age group $j$. Workers of prime working ages (30–49) are the reference group. Older adults are broken out into narrower age ranges (50–54; 55–59; 60–64; 65–69). $\beta_{jk}$ measures the relative odds of outcome $k$ for age group $j$ compared with the reference group at time $T$ (a dummy variable for year 2020). Thus, $\gamma_k$ quantifies the change in the logarithm of the odds ratio (log odds) of outcome $k$ in 2020 compared to 2019 for the prime working-age group. Our main interest is the coefficient of $(G_j \times T)$, $\delta_{jk}$, which measures the change in the relative odds of the outcome $k$ for the age group $j$ in 2020 over the same months in 2019 relative to the change for the reference group (prime-age workers).

Control variables, $X_l$, include race/ethnicity (non-Hispanic White, non-Hispanic Black, Asian, Hispanic, other), race/ethnicity interacted with year, education (less than high school diploma, high school graduate, some college, bachelor's degree, and graduate degree), education interacted with year, marital status, nativity, citizenship status, family size, and number of children. Fixed effects, $\alpha_s$, control for state-level variation in lockdown severity and other unobserved state-level heterogeneity. CPS panel months, $M_\mu$, are also controlled. To assess the role of job characteristics in driving differences in employment transitions by age group, some sets of models include labor-market covariates. All models generate estimates separately for men and women with survey weights. We report robust standard errors.

Although the National Bureau of Economic Research (2022) defines the COVID-19 recession as occurring from February to April 2020, we use "COVID-19 recession" to refer to the April 2020 peak lockdown month and the May–July 2020 observation period. We use "reopening" to refer to our May–July 2020 observation period.

## Results

We find sharp drops in employment in all age groups at the onset of the pandemic (that is, in April 2020 relative to April 2019), but the reduction was proportionally larger for younger workers, particularly for those aged 18–29 (Table 1). For example, the share of employed (and currently working) adults aged 18–29 dropped by 20.4 percentage points from April 2019 to April 2020 (from 77.5 percent to 57.1 percent). In comparison, the drop was 13.8 percentage points among workers aged 30–49 and 9.9 percentage points among workers aged 60–64.

Chart 1 presents the monthly employment rates for men and women from January to July in both 2019 and 2020, by age group. In 2020 (panels C and D), employment rates declined substantially and immediately at the start of the pandemic, particularly from March to April, the month of the most stringent lockdowns. For example, among persons aged 60–64, the employment rate declined from 58 percent to 52 percent for men and from 49 percent to 40 percent for women. The employment rate rebounded modestly after April but remained lower than in the prepandemic months.

Chart 1 also shows variations by age in how steeply employment declined in the early months of the pandemic. Overall, the extent of employment loss was deeper among younger age groups. For example, panel C shows that the share of currently working men aged 18–29 dropped by 17.1 percentage points from March to April 2020 (from 77.4 percent to 60.3 percent). In comparison, the drop was 11.6 percentage points among men aged 30–49 and 6.5 percentage points among men aged 60–64. Panel D shows similar trends for women: The employment rate of those aged 18–29 decreased 18.0 percentage points from March to April 2020, while the decline was 8.7 percentage points for women aged 60–64.

Table 2 presents the regression-adjusted DID results for the lockdown panel, which show the change in the probability of each of the four employment statuses (two continuations and two transitions) between the prepandemic months (January–March 2020) and the peak lockdown month (April 2020) relative to the same period in 2019, by age and sex. For ease of interpretation, we report the predicted values based on the estimated log odds. Separate panels present results for men and women. Both panels also present DID estimates for each age group relative to the reference group (the prime working ages of 30–49). The DID estimates therefore quantify the extent to which

**Table 1.**
**Employment status before and during the COVID-19 pandemic and other descriptive statistics for adults aged 18–69, by age group (in percent)**

| Characteristic | 18–29 | 30–49 | 50–54 | 55–59 | 60–64 | 65–69 |
|---|---|---|---|---|---|---|
| Employment status, April 2019 | | | | | | |
| Employed, currently— | | | | | | |
| Working | 77.5 | 79.6 | 75.8 | 68.5 | 55.5 | 32.1 |
| Not working | 1.6 | 1.9 | 2.2 | 2.1 | 1.9 | 1.3 |
| Unemployed | 4.8 | 2.2 | 2.1 | 1.6 | 1.4 | 0.9 |
| Not in labor force | 15.6 | 15.4 | 16.4 | 18.7 | 16.4 | 8.9 |
| Retired | 0.6 | 0.9 | 3.5 | 9.1 | 24.8 | 56.7 |
| Employment status, April 2020 | | | | | | |
| Employed, currently— | | | | | | |
| Working | 57.1 | 65.8 | 63.2 | 57.3 | 45.6 | 24.8 |
| Not working | 5.3 | 5.6 | 4.9 | 5.4 | 4.7 | 3.7 |
| Unemployed | 15.7 | 9.7 | 9.8 | 8.9 | 7.0 | 4.8 |
| Not in labor force | 21.2 | 18.1 | 18.8 | 20.2 | 18.0 | 9.4 |
| Retired | 0.6 | 0.9 | 3.3 | 8.2 | 24.7 | 57.2 |
| Educational attainment | | | | | | |
| Less than high school diploma or equivalent | 8.5 | 8.8 | 9.7 | 9.9 | 9.5 | 9.1 |
| High school diploma or equivalent | 35.3 | 25.2 | 27.9 | 30.3 | 31.2 | 28.5 |
| Some college, no bachelor's degree | 27.4 | 24.8 | 25.3 | 26.6 | 27.0 | 27.9 |
| Bachelor's degree | 23.0 | 25.5 | 23.0 | 21.1 | 19.9 | 20.4 |
| Postgraduate degree | 5.7 | 15.8 | 14.1 | 12.1 | 12.3 | 14.2 |
| Sex | | | | | | |
| Men | 51.3 | 49.6 | 49.1 | 48.6 | 47.6 | 46.8 |
| Women | 48.7 | 50.4 | 50.9 | 51.4 | 52.4 | 53.2 |
| Race/ethnicity | | | | | | |
| Non-Hispanic White | 53.8 | 57.1 | 63.5 | 68.1 | 70.6 | 73.4 |
| Non-Hispanic Black | 14.3 | 12.3 | 12.0 | 11.5 | 11.6 | 10.3 |
| Asian American | 5.5 | 7.5 | 6.0 | 5.1 | 5.1 | 4.9 |
| Hispanic | 22.7 | 20.5 | 16.4 | 13.3 | 10.9 | 9.8 |
| Other | 3.8 | 2.7 | 2.0 | 2.0 | 1.8 | 1.6 |
| Nativity | | | | | | |
| Foreign-born | 13.3 | 23.7 | 22.5 | 19.2 | 16.2 | 14.9 |
| U.S.-born | 86.7 | 76.3 | 77.5 | 80.8 | 83.8 | 85.1 |
| Marital status | | | | | | |
| Married | 21.8 | 62.3 | 66.1 | 65.4 | 64.9 | 64.4 |
| Separated, divorced, or widowed | 3.1 | 12.8 | 20.8 | 22.8 | 24.9 | 27.6 |
| Never married | 75.1 | 24.9 | 13.1 | 11.8 | 10.2 | 8.0 |
| Average number of children in home | 0.344 | 1.294 | 0.916 | 0.561 | 0.339 | 0.229 |
| Sample size [a] | 152,178 | 376,523 | 97,493 | 109,480 | 109,998 | 96,657 |
| Unique respondents [a] | 60,875 | 126,214 | 33,523 | 36,787 | 36,459 | 31,696 |

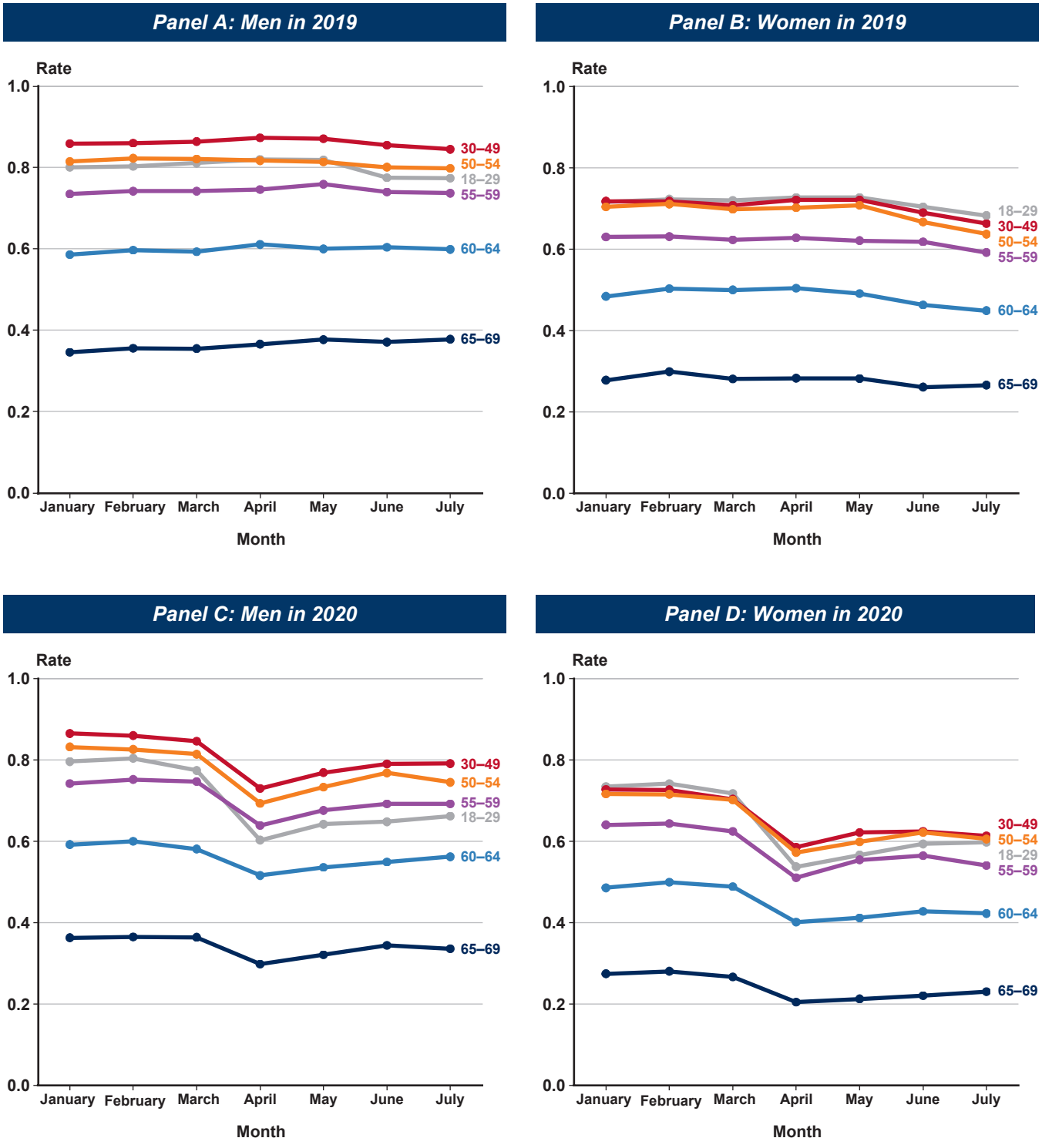
SOURCE: Authors' calculations using CPS-MORG data available from the IPUMS database.

NOTES: Rounded components of percentage distributions do not necessarily sum to 100.0.

Demographic characteristics are as of April 2020.

a. Because the CPS uses a rotating sampling scheme, a single respondent can be interviewed multiple times.

**Chart 1.**
**Monthly employment rates by age group and sex: January–July 2019 and 2020**




SOURCE: Authors' calculations using CPS-MORG data available from the IPUMS database.

**Table 2.**
**Lockdown panel: Predicted probability of each employment status between January–March and April, 2019 and 2020, by age group; and DID estimates between age groups; all by sex**

| Variable and age group | Working in January–March and— | | Not working in January–March and— | |
|---|---|---|---|---|
| | Working in April (continuously employed) | Not working in April (employed to nonemployed) | Working in April (nonemployed to employed) | Not working in April (continuously nonemployed) |
| | | ***Men*** | | |
| Probability in 2019 | | | | |
| 18–29 | 0.866 | 0.028 | 0.041 | 0.064 |
| 30–49 | 0.849 | 0.023 | 0.035 | 0.092 |
| 50–54 | 0.804 | 0.028 | 0.029 | 0.138 |
| 55–59 | 0.732 | 0.031 | 0.029 | 0.208 |
| 60–64 | 0.580 | 0.031 | 0.034 | 0.355 |
| 65–69 | 0.296 | 0.033 | 0.023 | 0.648 |
| Probability in 2020 | | | | |
| 18–29 | 0.714 | 0.155 | 0.036 | 0.096 |
| 30–49 | 0.712 | 0.139 | 0.028 | 0.121 |
| 50–54 | 0.678 | 0.139 | 0.026 | 0.158 |
| 55–59 | 0.615 | 0.144 | 0.023 | 0.217 |
| 60–64 | 0.471 | 0.120 | 0.023 | 0.385 |
| 65–69 | 0.228 | 0.108 | 0.018 | 0.646 |
| Difference from 2019 to 2020 | | | | |
| 18–29 | -0.152*** | 0.126*** | -0.005 | 0.032*** |
| 30–49 | -0.137*** | 0.116*** | -0.007* | 0.028*** |
| 50–54 | -0.127*** | 0.110*** | -0.003 | 0.020 |
| 55–59 | -0.117*** | 0.114*** | -0.006 | 0.009 |
| 60–64 | -0.109*** | 0.090*** | -0.011* | 0.030 |
| 65–69 | -0.068*** | 0.075*** | -0.006 | -0.001 |
| DID between age groups | | | | |
| 18–29 | -0.015 | 0.011 | 0.001 | 0.003 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.010 | -0.005 | 0.004 | -0.009 |
| 55–59 | 0.021 | -0.002 | 0.001 | -0.020 |
| 60–64 | 0.029 | -0.026*† | -0.004 | 0.002 |
| 65–69 | 0.070*** | -0.041***‡ | 0.001 | -0.030 |
| Number | | 45,722 | | |
| Pseudo $R^2$ | | 0.1518 | | |

(Continued)

**Table 2.**
**Lockdown panel: Predicted probability of each employment status between January–March and April, 2019 and 2020, by age group; and DID estimates between age groups; all by sex—*Continued***

| Variable and age group | Working in January–March and— | | Not working in January–March and— | |
|---|---|---|---|---|
| | Working in April (continuously employed) | Not working in April (employed to nonemployed) | Working in April (nonemployed to employed) | Not working in April (continuously nonemployed) |
| | | ***Women*** | | |
| Probability in 2019 | | | | |
| 18–29 | 0.690 | 0.036 | 0.040 | 0.234 |
| 30–49 | 0.698 | 0.034 | 0.037 | 0.232 |
| 50–54 | 0.696 | 0.035 | 0.034 | 0.235 |
| 55–59 | 0.606 | 0.031 | 0.028 | 0.336 |
| 60–64 | 0.473 | 0.036 | 0.031 | 0.459 |
| 65–69 | 0.239 | 0.028 | 0.024 | 0.709 |
| Probability in 2020 | | | | |
| 18–29 | 0.535 | 0.187 | 0.027 | 0.250 |
| 30–49 | 0.568 | 0.155 | 0.027 | 0.250 |
| 50–54 | 0.566 | 0.153 | 0.027 | 0.254 |
| 55–59 | 0.499 | 0.149 | 0.019 | 0.333 |
| 60–64 | 0.369 | 0.121 | 0.022 | 0.488 |
| 65–69 | 0.165 | 0.079 | 0.015 | 0.740 |
| Difference from 2019 to 2020 | | | | |
| 18–29 | -0.155*** | 0.151*** | -0.013* | 0.016 |
| 30–49 | -0.130*** | 0.122*** | -0.010*** | 0.018** |
| 50–54 | -0.129*** | 0.118*** | -0.007 | 0.019 |
| 55–59 | -0.107*** | 0.118*** | -0.009* | -0.003 |
| 60–64 | -0.104*** | 0.085*** | -0.009* | 0.029 |
| 65–69 | -0.074*** | 0.051*** | -0.008 | 0.031* |
| DID between age groups | | | | |
| 18–29 | -0.025 | 0.030** | -0.002 | -0.002 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.000 | -0.004 | 0.003 | 0.000 |
| 55–59 | 0.023 | -0.004 | 0.001 | -0.021 |
| 60–64 | 0.026 | -0.037***† | 0.001 | 0.010 |
| 65–69 | 0.056*** | -0.070*** | 0.002 | 0.012 |
| Number | | 48,565 | | |
| Pseudo $R^2$ | | 0.1106 | | |

SOURCE: Authors' calculations using CPS-MORG data available from the IPUMS database and DID regression analysis.

NOTES: Control variables are fixed at the means.

Control variables are race/ethnicity, race/ethnicity interacted with year, education, education interacted with year, marital status, nativity, citizenship status, family size, number of children, state of residence, and CPS panel month.

. . . = not applicable.

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$ (marginal effects, two-tailed test).

† = $p < 0.05$; ‡ = $p < 0.01$ (logit DID estimates for which the sample is limited to those who worked in January–March, two-tailed test).

employment transitions experienced by older workers during the lockdown differed from those of the prime-age population, adjusting for general economic trends and the control variables in the models. Of key interest for this lockdown panel is the employed-to-nonemployed category from 2019 to 2020 by age.

Not surprisingly, the onset of the pandemic was significantly associated with higher employed-to-nonemployed transition rates for men than occurred in 2019 for all age groups (indicated by positive figures for differences between 2019 and 2020). However, the magnitude of the increases varied substantially by age. Younger workers were more likely to transition from employment to nonemployment during the pandemic: That likelihood increased by 11.6 percentage points for men aged 30–49, but by only 9.0 percentage points for men aged 60–64 and 7.5 percentage points for men aged 65–69. Interestingly, the increase from 2019 to 2020 in the likelihood of moving from employed to not employed for men in their late 50s was nearly the same as that for prime-age men.

Among women, workers in their 60s were significantly less likely than their younger counterparts to transition from employed to not employed at the onset of the COVID-19 recession. Those aged 18–29 experienced the highest increase from 2019 to 2020 in the likelihood of such a transition (15.1 percentage points), while women aged 65–69 experienced the lowest percentage-point increase (5.1).

Some observers might wonder whether workers in their 60s had lower increases in employed-to-nonemployed transitions because their baseline at-work rates (that is, before April) were lower than those of younger age groups. One way to address this concern is use logit models that limit the sample to those who were employed before the pandemic. This is possible because we can assume the common trend between 2019 and 2020 even with the restricted sample. In Table 2, statistically significant estimates from these limited-sample logit models are indicated by a dagger (or double dagger) symbol. The DID logit estimates generate significant negative coefficients for employed-to-nonemployed transitions for men and women in their 60s, which implies that their employed-to-nonemployed transition rates relative to those of prime-age workers were not simply a reflection of the lower baseline at-work rate before April. (With a *p*-value of 0.052, the estimate for women aged 65–69 is not marked with a dagger.)

Table 3 presents results for models like those used in Table 2 but also stratified by education. For brevity, we present only the final DID estimates, with prime-age workers as the reference group. Interestingly, the relative advantage for older workers over prime-age workers during the early months of the COVID-19 recession was experienced largely by those without a college degree. We know this because the probability of shifting from employment to nonemployment for men without a college degree was lower among the three oldest age groups (55–59, 60–64, and 65–69) than for prime-age men (ages 30–49). By contrast, the differences between workers in prime working ages and the other age groups in the odds of shifting to nonemployment is more compressed in the model comprising men with at least a bachelor's degree.

For older women, we also see significant differences by education. Among women without a college degree, those aged 55–69 had lower likelihoods of shifting from employment to nonemployment between January–March and April 2020 than did the prime-age group. By contrast, among those with a college degree, the likelihood of employment disruption—relative to prime-aged women—was slightly higher for those aged 55–59, was not significantly different for those aged 60–64, and was lower only for those aged 65–69.

Note that the lower likelihood of transitioning from employment to nonemployment for older nondegree-holding workers than for prime-age nondegree-holding workers does not also mean that those older nondegree-holding workers fared better than older workers with a college degree. Pandemic-related employment disruptions affected nondegree-holding workers more negatively than degree-holders regardless of age.

We designed additional models that included labor market covariates (industry, occupation, public/private sector) along with the control variables listed in Table 3 (results available upon request). Interestingly, when those models were stratified by education, we found that the lower likelihood of employed-to-nonemployed transition for older nondegree-holding workers than for prime-age nondegree-holders largely dissipated once we adjusted for labor market covariates, for both men and women. This implies that older nondegree-holding workers were less likely to experience employment disruptions than prime-age nondegree-holding workers during the lockdown phase because of the kinds of jobs they had. By contrast, among the models including only persons with a college degree, we found evidence that older workers were at least as likely as prime-age workers to experience disruption. These results cast doubt on the idea that older adults' labor market transitions during the COVID-19 lockdown were uniform.

**Table 3.**
**Lockdown panel DID estimates of employment-status predicted probabilities between January–March and April, 2019 and 2020, by sex, age group, and education, with demographic and education control variables**

| Education and age group | Working in January–March and— | | Not working in January–March and— | |
|---|---|---|---|---|
| | Working in April (continuously employed) | Not working in April (employed to nonemployed) | Working in April (nonemployed to employed) | Not working in April (continuously nonemployed) |
| | | ***Men*** | | |
| Less than bachelor's degree | | | | |
| 18–29 | -0.012 | 0.008 | 0.002 | 0.001 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.027 | -0.014 | 0.006 | -0.019 |
| 55–59 | 0.051* | -0.032*† | 0.004 | -0.023 |
| 60–64 | 0.055* | -0.064***† | 0.002 | 0.006 |
| 65–69 | 0.132*** | -0.085***‡ | 0.006 | -0.053* |
| Number | | 30,201 | | |
| Pseudo $R^2$ | | 0.1417 | | |
| Bachelor's degree or higher | | | | |
| 18–29 | -0.023 | 0.015 | -0.001 | 0.009 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | -0.009 | 0.001 | 0.001 | 0.006 |
| 55–59 | -0.016 | 0.038* | -0.003 | -0.019 |
| 60–64 | 0.005 | 0.028 | -0.014 | -0.019 |
| 65–69 | -0.010 | 0.019 | -0.004 | -0.005 |
| Number | | 15,521 | | |
| Pseudo $R^2$ | | 0.1534 | | |
| | | ***Women*** | | |
| Less than bachelor's degree | | | | |
| 18–29 | -0.037 | 0.034* | -0.002 | 0.005 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | -0.009 | -0.014 | 0.006 | 0.017 |
| 55–59 | 0.051* | -0.027* | 0.000 | -0.024 |
| 60–64 | 0.037 | -0.055*** | 0.010 | 0.008 |
| 65–69 | 0.094*** | -0.101***† | 0.007 | -0.001 |
| Number | | 30,103 | | |
| Pseudo $R^2$ | | 0.0948 | | |
| Bachelor's degree or higher | | | | |
| 18–29 | -0.011 | 0.025 | -0.003 | -0.011 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.015 | 0.004 | 0.001 | -0.020 |
| 55–59 | -0.025 | 0.033* | 0.006 | -0.013 |
| 60–64 | 0.022 | -0.018 | -0.015 | 0.012 |
| 65–69 | 0.003 | -0.031* | -0.004 | 0.032 |
| Number | | 18,462 | | |
| Pseudo $R^2$ | | 0.1134 | | |

SOURCE: Authors' calculations using CPS-MORG data available from the IPUMS database and DID regression analysis.

NOTES: Control variables are fixed at the means.

Control variables are race/ethnicity, race/ethnicity interacted with year, education, education interacted with year, marital status, nativity, citizenship status, family size, number of children, state of residence, and CPS panel month.

. . . = not applicable.

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$ (marginal effects, two-tailed test).

† = $p < 0.05$; ‡ = $p < 0.01$ (logit DID estimates for which the sample is limited to those who worked in January–March, two-tailed test).

Table 4 presents the results for employment patterns between April and the reopening months (May–July) for 2019 and 2020. The DID results show that men and women in their 60s were less likely to transition from nonemployed to employed during May–July 2020 than prime-age workers were, adjusting for general trends over time. Although this result suggests that older men were less likely than younger men to become reemployed in absolute terms, the pattern is mainly driven by the smaller baseline of older workers with employment disruptions in April, as implied by our results in Table 2. Table 4's DID results show that the proportion of adults continuously working from April through May–July 2020 is significantly higher for men aged 60–69 than for prime-aged men. The same is true for women.

We also investigated employment status during the reopening months by education (Table 5). When the models were limited to workers without a college degree, men and women aged 60–69 were less likely than prime-aged workers to transition from nonemployed to employed in May–July 2020. However, relative to 2019, the likelihood of working continuously in 2020 for older men and women was higher than that of their prime working-age counterparts, and their relative likelihood of transitioning from employed to not employed was lower.

The experience of older degree-holders differed slightly. Like older nondegree-holders, their employment rate relative to prime-age workers was higher in 2020 than in 2019 (not shown). However, this occurred not because older degree-holders transitioned from not employed to employed more than their prime-aged counterparts (indicated by the absence of statistically significant coefficients), but because their likelihood of employment disruption was lower than that of prime-age degree-holders (illustrated by generally negative coefficients). This may indicate that degree-holding older workers who had a job were less likely to retire in 2020 than in 2019, perhaps in wariness of the unstable economic environment.

## *Discussion and Conclusions*

We seek a better understanding of the labor market effects of the COVID-19 recession on older adults. Using longitudinally linked monthly CPS data, we present regression-adjusted DID estimates of older workers' employment dynamics during two early phases of the COVID-19 pandemic. Several findings are noteworthy.

First, the DID estimates confirm that the onset of the pandemic caused large and immediate employment disruptions for many workers aged 55–69. Employment instability in later life can negatively affect income and retirement savings. Yet relative to workers aged 30–49, older workers—particularly those in their 60s—were less likely to experience employment disruptions.

Our results also point to heterogeneity among older workers, with educational level being an important dimension. Among workers in their 60s, those without a college degree experienced more adverse employment effects from the COVID-19 recession than did degree-holders. However, among nondegree-holders, workers aged 60–69 experienced less employment disruption during the lockdown phase, and were more likely to remain continuously employed, than their peers aged 30–49. By contrast, among college graduates, employment patterns of older and prime-age workers were more similar. We found that in the summer of 2020, after the peak lockdown, older adults experienced less employment disruption than younger workers did. Older workers without a college degree generally fared better than their prime-age counterparts, whereas differences by age were smaller for degree-holders.

The consequences of the COVID-19 pandemic could affect older Americans in unexpected ways. Our findings suggest that the employment effects may differ from those of previous recessions, especially for older workers with a college degree. For example, older degree-holders may have more resources, which enabled some of them to withdraw funds or pause their labor force participation during the initial onset and lockdown and thereby mitigate exposure risks. This may in turn have led to greater employment-status changes relative to prime-age college graduates than were seen in previous economic downturns. Another possibility is that employers took the recession as an opportunity to lay off certain types of older workers.

Our study also adds to the literature by providing a framework for exploring the early effects of COVID-19 on the employment dynamics of older workers using a DID approach. Yet the medium- and long-term effects of the pandemic, and the implications of its employment disruptions on long-term outcomes, remain uncertain. For example, an important question for future research is how the pandemic affected retirement resource accumulation and financial planning among older adults (Li and Mutchler 2020).

**Table 4.**
**Reopening panel: Predicted probability of each employment status between April and May–July, 2019 and 2020, by age group; and DID estimates between age groups; all by sex**

| Variable and age group | Working in April and— | | Not working in April and— | |
|---|---|---|---|---|
| | Working in May–July (continuously employed) | Not working in May–July (employed to nonemployed) | Working in May–July (nonemployed to employed) | Not working in May–July (continuously nonemployed) |
| | | ***Men*** | | |
| Probability in 2019 | | | | |
| 18–29 | 0.859 | 0.043 | 0.036 | 0.062 |
| 30–49 | 0.843 | 0.040 | 0.028 | 0.089 |
| 50–54 | 0.779 | 0.038 | 0.034 | 0.149 |
| 55–59 | 0.708 | 0.049 | 0.031 | 0.212 |
| 60–64 | 0.565 | 0.059 | 0.034 | 0.342 |
| 65–69 | 0.301 | 0.043 | 0.028 | 0.627 |
| Probability in 2020 | | | | |
| 18–29 | 0.691 | 0.057 | 0.098 | 0.155 |
| 30–49 | 0.695 | 0.046 | 0.087 | 0.172 |
| 50–54 | 0.638 | 0.043 | 0.093 | 0.226 |
| 55–59 | 0.594 | 0.044 | 0.091 | 0.272 |
| 60–64 | 0.460 | 0.044 | 0.067 | 0.429 |
| 65–69 | 0.236 | 0.031 | 0.061 | 0.673 |
| Difference from 2019 to 2020 | | | | |
| 18–29 | -0.169*** | 0.014* | 0.062*** | 0.093*** |
| 30–49 | -0.147*** | 0.006 | 0.059*** | 0.083*** |
| 50–54 | -0.141*** | 0.005 | 0.059*** | 0.077*** |
| 55–59 | -0.114*** | -0.005 | 0.059*** | 0.060*** |
| 60–64 | -0.105*** | -0.015* | 0.033*** | 0.087*** |
| 65–69 | -0.066*** | -0.012 | 0.033*** | 0.045** |
| DID between age groups | | | | |
| 18–29 | -0.021 | 0.009 | 0.003 | 0.010 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.006 | -0.001 | 0.001 | -0.006 |
| 55–59 | 0.034 | -0.011 | 0.001 | -0.023 |
| 60–64 | 0.042* | -0.021* | -0.025** | 0.004 |
| 65–69 | 0.082*** | -0.018* | -0.026** | -0.037 |
| Number | | 44,242 | | |
| Pseudo $R^2$ | | 0.1304 | | |

(Continued)

**Table 4.**
**Reopening panel: Predicted probability of each employment status between April and May–July, 2019 and 2020, by age group; and DID estimates between age groups; all by sex—*Continued***

| Variable and age group | Working in April and— | | Not working in April and— | |
|---|---|---|---|---|
| | Working in May–July (continuously employed) | Not working in May–July (employed to nonemployed) | Working in May–July (nonemployed to employed) | Not working in May–July (continuously nonemployed) |
| | | ***Women*** | | |
| Probability in 2019 | | | | |
| 18–29 | 0.688 | 0.063 | 0.044 | 0.204 |
| 30–49 | 0.688 | 0.058 | 0.034 | 0.220 |
| 50–54 | 0.663 | 0.056 | 0.032 | 0.248 |
| 55–59 | 0.575 | 0.059 | 0.030 | 0.336 |
| 60–64 | 0.442 | 0.058 | 0.025 | 0.475 |
| 65–69 | 0.227 | 0.042 | 0.026 | 0.706 |
| Probability in 2020 | | | | |
| 18–29 | 0.484 | 0.058 | 0.116 | 0.342 |
| 30–49 | 0.543 | 0.051 | 0.088 | 0.318 |
| 50–54 | 0.526 | 0.050 | 0.065 | 0.359 |
| 55–59 | 0.465 | 0.046 | 0.077 | 0.412 |
| 60–64 | 0.334 | 0.043 | 0.069 | 0.553 |
| 65–69 | 0.154 | 0.024 | 0.038 | 0.783 |
| Difference from 2019 to 2020 | | | | |
| 18–29 | -0.204*** | -0.005 | 0.072*** | 0.138*** |
| 30–49 | -0.144*** | -0.007 | 0.054*** | 0.097*** |
| 50–54 | -0.138*** | -0.007 | 0.033*** | 0.111*** |
| 55–59 | -0.110*** | -0.013 | 0.047*** | 0.076*** |
| 60–64 | -0.107*** | -0.015* | 0.045*** | 0.078*** |
| 65–69 | -0.072*** | -0.017** | 0.013* | 0.077*** |
| DID between age groups | | | | |
| 18–29 | -0.060*** | 0.002 | 0.018* | 0.040** |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.007 | 0.000 | -0.020* | 0.014 |
| 55–59 | 0.035 | -0.006 | -0.007 | -0.022† |
| 60–64 | 0.037* | -0.009 | -0.009 | -0.019† |
| 65–69 | 0.072*** | -0.011 | -0.041*** | -0.020 |
| Number | | 46,978 | | |
| Pseudo $R^2$ | | 0.1002 | | |

SOURCE: Authors' calculations using CPS-MORG data available from the IPUMS database and DID regression analysis.

NOTES: Control variables are fixed at the means.

Control variables are race/ethnicity, race/ethnicity interacted with year, education, education interacted with year, marital status, nativity, citizenship status, family size, number of children, state of residence, and CPS panel month.

. . . = not applicable.

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$ (marginal effects, two-tailed test).

† = $p < 0.05$; ‡ = $p < 0.01$ (logit DID estimates for which the sample is limited to those who worked in January–March, two-tailed test).

**Table 5.**
**Reopening panel DID estimates of employment-status predicted probabilities between April and May–July, 2019 and 2020, by sex, age group, and education, with demographic and education control variables**

| Education and age group | Working in April and— | | Not working in April and— | |
|---|---|---|---|---|
| | Working in May–July (continuously employed) | Not working in May–July (employed to nonemployed) | Working in May–July (nonemployed to employed) | Not working in May–July (continuously nonemployed) |
| | | ***Men*** | | |
| Less than bachelor's degree | | | | |
| 18–29 | -0.033 | 0.013 | 0.011† | 0.009 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.027 | 0.002 | -0.011 | -0.018 |
| 55–59 | 0.050* | -0.007 | -0.007 | -0.036 |
| 60–64 | 0.058* | -0.019* | -0.040*** | 0.000 |
| 65–69 | 0.121*** | -0.011 | -0.042*** | -0.069** |
| Number | | 29,273 | | |
| Pseudo $R^2$ | | 0.1230 | | |
| Bachelor's degree or higher | | | | |
| 18–29 | -0.002 | -0.004 | -0.006 | 0.012 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | -0.026 | -0.005 | 0.021 | 0.010 |
| 55–59 | 0.019 | -0.018 | 0.013 | -0.014 |
| 60–64 | 0.036 | -0.024 | -0.004 | -0.008 |
| 65–69 | 0.033 | -0.030* | -0.005 | 0.001 |
| Number | | 14,969 | | |
| Pseudo $R^2$ | | 0.1253 | | |
| | | ***Women*** | | |
| Less than bachelor's degree | | | | |
| 18–29 | -0.062** | -0.008 | 0.019 | 0.051* |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.013 | 0.003 | -0.037** | 0.021 |
| 55–59 | 0.058** | -0.009 | -0.011 | -0.037 |
| 60–64 | 0.073*** | -0.002 | -0.024* | -0.047* |
| 65–69 | 0.120*** | -0.007 | -0.061*** | -0.052** |
| Number | | 28,941 | | |
| Pseudo $R^2$ | | 0.0856 | | |
| Bachelor's degree or higher | | | | |
| 18–29 | -0.065** | 0.021 | 0.018 | 0.026 |
| 30–49 (reference group) | . . . | . . . | . . . | . . . |
| 50–54 | 0.001 | -0.002 | 0.001 | 0.001 |
| 55–59 | 0.003 | 0.000 | -0.004 | 0.001 |
| 60–64 | -0.009 | -0.021 | 0.012 | 0.017 |
| 65–69 | 0.009 | -0.016 | -0.013 | 0.020 |
| Number | | 18,037 | | |
| Pseudo $R^2$ | | 0.1039 | | |

SOURCE: Authors' calculations using CPS-MORG data available from the IPUMS database and DID regression analysis.

NOTES: Control variables are fixed at the means.

Control variables are race/ethnicity, race/ethnicity interacted with year, education, education interacted with year, marital status, nativity, citizenship status, family size, number of children, state of residence, and CPS panel month.

. . . = not applicable.

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$ (marginal effects, two-tailed test).

† = $p < 0.05$; ‡ = $p < 0.01$ (logit DID estimates for which the sample is limited to those who worked in January–March, two-tailed test).

In closing, we note that we have conducted some preliminary follow-up work to the analysis reported here. To gain some initial insights into the longer-run employment effects of COVID-19, we used recently released CPS data for an outgoing rotation group, which contains employment information for some of the April 2020 respondents as of 1 year later. Focusing on workers who experienced employment disruptions during the lockdown in April 2020, we find that 73 percent of those in the prime-age group (ages 30–49) had resumed employment in April 2021, while only 53 percent of workers aged 60–69 were employed. Whether the pandemic recession accelerated shifts to retirement or disability benefit uptake among older workers requires future study. The effect of the widespread introduction of COVID vaccines around April 2021 on labor market outcomes also warrants future research. Another fruitful avenue of future research would be to address the long-term financial implications of the employment disruptions caused in the early months of the pandemic, including the potential impacts of unemployment insurance and stimulus payments.

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