

# From recession to pandemic: Displacement among workers with disabilities from 2007 through 2021

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## Abstract.

**BACKGROUND:** With at least one-quarter of the U.S. adult population reporting one or more disabilities in 2020, people with disabilities represent a large and diverse group of individuals who often face significant barriers in the labor market, especially job displacement - involuntary job loss due to external factors.

**OBJECTIVE:** We examine how rates of job displacement varied for people with different types of disabilities from 2007–2021, a period that includes the 2008 Great Recession and the COVID-19 pandemic.

**METHODS:** We use data from six waves of Current Population Study Displaced Worker Supplement (CPS DWS,  $N=344,729$ ) and a series of logistic regression models to examine differences in displacement by disability status and type.

**RESULTS:** People with disabilities were approximately twice as likely as those without disabilities to experience job displacement, but more during times of economic turmoil. Although displacement disparities by disability status were decreasing from a high of 6.5 percentage points during the Great Recession, the pandemic increased the gap to 5.8 percentage points.

**CONCLUSION:** Involuntary job loss among people with disabilities is exacerbated by exogenous shocks. We extend work on disability and displacement, incorporating the COVID-19 pandemic in our discussion of explanations of both labor market disadvantage and precarity.

Keywords: Disability studies, employment insecurity, COVID-19, economic recession, United States

## 1. Introduction

Finding and maintaining work pose some of the greatest challenges for people with disabilities. Disabled people<sup>1</sup> are less likely to be employed and

when they are employed, they are clustered in precarious, non-union jobs often in the food preparation and service sectors that pay little (Maroto & Pettinicchio, 2014; Pettinicchio & Maroto, 2021; U.S. Bureau of Labor Statistics (BLS), 2022a). This is

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<sup>1</sup>In our writing we refer to both “people with disabilities” and “disabled people” to follow how different people with disabilities

refer to themselves. Although person-first language has become more common within the social sciences and among researchers, many individuals within the disability community prefer to use identity-first language because it better demonstrates how disability is a political identity.

especially the case among individuals with cognitive, independent living, and multiple disabilities. Compounding limited access to the labor market, workers with disabilities are also more likely to experience involuntary job loss, particularly in periods of shock or major structural change (Mitra & Kruse, 2016). They are “first fired, last hired” (Kruse & Schur, 2003; Groce, 2004; Kaye, 2010) in times of crisis. This has important consequences for future labor market outcomes and for inequality more generally (Pettinicchio, Maroto, & Brooks, 2022).

Displacement is a distinct cause of unemployment because it involves involuntary job loss due to external factors like economic downturns, automation, and job outsourcing. Displacement typically involves employers shedding workers because they can no longer sustain them. It does not refer to job loss due to poor employee performance or to employees voluntarily seeking out better work opportunities. Displacement is important to study for numerous reasons. First, displacement is disproportionately experienced by workers in certain sectors (U.S. BLS, 2022b). Second, displacement disproportionately affects already marginalized workers, compounding wage inequality. Third, displaced workers often require re-training for new jobs, but may experience delays in receiving up-to-date, marketable skills, if at all (Quintini & Venn, 2013). Finally, for these reasons, displaced workers may be out of work for longer periods, potentially delaying re-employment and creating longer term scarring effects associated with economic precarity, health and mental health, and family dynamics (Gangl, 2004, 2006).

Despite growing research on the relationships between disability and employment, less is known about job displacement among people with different types of disabilities, particularly during the recent COVID-19 pandemic, a time of increased labor market precarity among workers with disabilities (Maroto, Pettinicchio, & Lukk, 2021; Umucu, 2021). We therefore address recent aspects of displacement with the following research question: How have rates of displacement varied for people with different types of disabilities from 2007–2021, a period that includes the 2008 Great Recession and the COVID-19 pandemic? To answer this question, we use data from the 2010, 2012, 2014, 2018, 2020, and 2022 waves of the Current Population Study (CPS) Displaced Worker Supplement (DWS,  $N=344,729$ ) and examine rates of displacement by disability status and type over time. Importantly, we extend work on disability and displacement, discussing explanations of both

labor market disadvantage and precarity in recent years.

### *1.1. Disability and labor market inequality*

People with disabilities have lower labor market participation compared to similarly situated people without disabilities and tend to experience greater disadvantages at work (Brown & Moloney, 2019). Throughout the 1990s and 2000s, before and after the Great Recession, labor market participation among disabled Americans declined yearly, despite protections put in place to improve job outcomes (Bruyère, 2016; Maroto & Pettinicchio 2022a; U.S. BLS, 2020). Consequently, about 80% of Americans with disabilities were not in the labor force in 2021. Many are considered discouraged workers – those who stopped looking for work and are not included in unemployment rates (U.S. BLS, 2022a).

Struggles are also evident among those who remain in the labor market. Workers with disabilities tend to earn less than those without disabilities, which is linked to household poverty and income inequality (Jajthner et al., 2020; Maroto, Pettinicchio, & Patterson, 2019). In addition, people with disabilities experience greater earnings volatility, they are more likely to be in precarious and contract-based jobs, and they often are subject to occupational segregation (Jolly & Wagner, 2023; Maroto & Pettinicchio, 2014; Schur & Kruse, 2022). They are also more likely to be paid low-to-subminimum wages (Maroto & Pettinicchio, 2022b).

Given these labor market conditions, people with disabilities earn on average 26% less than similar workers, but this can range from 10 to 37% less based on the type of disability (Maroto and Pettinicchio 2014, 2015). Individuals reporting multiple disabilities, cognitive disabilities, and disabilities related to independent living are also more likely to report lower earnings (Brucker, Houtenville, & Lauer 2016; Jones 2011). Lower earnings, limited benefits, and poorer working conditions place people with disabilities in more precarious labor market situations that further contribute to higher rates of poverty among this group and leave them at risk for job displacement.

### *1.2. Disparities in job displacement*

Drawing from broader frameworks of labor market inequality, scholars point to several interrelated factors that explain job displacement, and, especially, how job displacement disproportionately affects

some groups more than others. These range from changing economic contexts and shifts in occupations and industry sectors to changing job demands and demographics to discrimination. For example, Spalter-Roth and Deitch (1999) analyzed the unequal effects of job displacement among different categories of people resulting from major labor market restructuring in the 1990s, focusing on workers in manufacturing and in service sector industries. Even though most displaced workers were able to find subsequent work, many ended up in lower paying jobs, and this was especially true among women and people of color. Their research also pointed to the intersectional aspects of negative post-displacement effects and occupational segmentation based on gender and race. Additionally, immigrant workers are more likely to experience job displacement than native-born workers, with more severe repercussions for labor market and earnings outcomes down the road (Bratsberg, Raaum, & Røed, 2018).

These patterns were found repeatedly in subsequent work on displacement. Wilson's (2009) analysis of the erosion of wages for less-skilled workers points to how African American workers clustered in low-skilled jobs have been disproportionately affected by displacement. Examining lower-income workers during mass layoffs, Andersson and colleagues (2018) found that the duration of joblessness was especially lengthy for displaced Black, female, and older workers. But, it may not only be lower income workers who feel the effects of displacement. According to Roscigno et al. (2012) and Wilson and Roscigno (2018), some of the highest rates of displacement were among professional and managerial jobs, which also disproportionately affected African Americans, especially older workers.

As a commonly experienced life-course event that triggers potential long-term labor market costs (DiPrete, 2002; DiPrete & McManus, 2000; Gangl, 2004, 2006), job displacement results in a variety of negative consequences for workers. This is especially the case when there are lengthy periods between being displaced and becoming reemployed. Displacement can increase the chances of subsequent job losses (Stevens, 1991). Unemployment spells may have long-lasting, scarring effects on workers' future wages – effects that are often felt many years after initial unemployment (Shuey & Wilson 2017). Displacement is also often characterized by downward employer mobility (Mouw and Kalleberg 2010). This occurs when a person returns to work with a new employer and lower quality job with lower wages,

which further contributes to wage inequality (see also Ruhm, 1991 and Brand, 2006). Finally, displacement also has important health impacts (Black, Devereaux, & Salvanes, 2015), which the pandemic made even more acute, highlighting the importance of considering context when assessing disparities in displacement rates.

### *1.3. Job displacement and context*

Job loss is linked to larger economic and policy contexts, which results in shifting rates and changing disparities in displacement over time. Linked to the mortgage crisis and subprime lending, the Great Recession spurred massive layoffs from the end of 2007 through the beginning of 2009 (Farber, 2017; Kalleberg & von Wachter, 2017). Mitra and Kruse's (2016) key study of job displacement found that between 2007 and 2013 men and women with disabilities were almost twice as likely to experience job displacement as men and women without disabilities for almost any reason, but especially for their position or shift being abolished. And so, prior to the pandemic, and despite already having lower than average employment levels, disabled people saw greater negative effects on displacement from the Great Recession (Fogg, Harrington, & McMahon, 2010; Livermore & Honeycutt, 2015).

The COVID-19 pandemic further highlighted problematic relationships between the labor market and disability (Maroto, Pettinicchio, & Lukk, 2021; Umucu, 2021). The employment rate for people with disabilities in the United States declined from 19.3% in 2019 to 17.9% in 2020 and increased slightly to 19.1% in 2021. While unemployment rates declined among both disabled and non-disabled workers between 2020 and 2021, unemployment rates were still about twice as high for people with disabilities.

Job losses, however, followed a different pattern during the COVID-19 pandemic than during the 2008 recession. After spiking in the summer of 2020, unemployment rates quickly declined over the following year (Cortes & Forsythe, 2023). Still, disparities in unemployment and displacement by education, race, and gender remained apparent (Montenovo et al., 2022; U.S. BLS, 2022b). Women experienced greater job loss and displacement during the pandemic than men (Mooi-Reci & Risman, 2021; Montenovo et al., 2022), as did people who identify as Indigenous in Canada (St-Denis, 2020). Non-white American workers were more likely to experience

job loss because of their over-representation in low-income jobs, which saw a great deal of displacement (Cortes & Forsythe, 2023). They were also less likely to recover from displacement between 2020 and 2021.

In addition to financial insecurity and distress (Maroto et al., 2023; Pettinicchio et al., 2021), those who experienced involuntary job displacement during the pandemic were more likely to experience declining mental health (Grace 2022). They also are more likely to experience additional health issues associated with corresponding losses in health-care benefits and insurance, as well as increased food insecurity (Bundorf, Gupta, and Kim 2021; Milovanska-Farrington 2023). Job displacement during the pandemic also revealed its gendered nature as women potentially delayed job searches due to expectations about caregiving responsibilities (Collins, et al., 2021). This means that involuntary job loss during the pandemic extends beyond its impacts on re-employment and financial security to include a host of related effects tied to health and family. Consequently, longer term scarring effects can be quite robust disproportionately affecting marginalized communities.

In light of previous work on displacement across groups, including people with disabilities, and the varying employment consequences of the pandemic, we expect that people with disabilities will have higher rates of displacement for survey waves covering the pandemic and these will further vary by disability type. The pandemic acted as an exogenous force on work, fundamentally changing its very nature in both the short and long-term. Concerned about the intersection of their health and disability status, workers faced a great deal of uncertainty about whether they would still have jobs throughout and post-pandemic, drawing parallels with involuntary job loss experiences during the Great Recession (Reeves, et al., 2014). Some, especially those in better paying jobs within management, professional, and administrative fields, were able to continue work remotely, benefitting from more flexible work arrangements (Baker, 2020). This had some positive effects on well-being but not necessarily for women who also had to manage caregiving responsibilities (Fan and Moen 2023). For other groups, including people with disabilities, working from home was not feasible in large part because of the jobs they occupy (Dey et al., 2020; Maroto, Pettinicchio, and Lukk 2021). Job losses exacerbated the already precarious labor market positions for members of these groups.

## 2. Method

### 2.1. Data

We study displacement among people with different disabilities using data from the 2010, 2012, 2014, 2018, 2020, and 2022 waves of Current Population Study Displaced Worker Supplement (Flood et al., 2022). The CPS is a monthly labor force survey conducted by the U.S. Census Bureau. The DWS comprises a sample of workers age 20 years or older who involuntarily lost or left their jobs due to a plant or company closing, insufficient work, or the completion of a seasonal job in the three calendar years prior to the survey wave. This means that data from the 2010 wave incorporate displaced workers from 2007–2009 and data from the 2022 wave incorporate displaced workers from 2019–2021 with pooled data providing the ability to analyze experiences of displacement from 2007 through 2021.

We begin our analysis with the 2010 DWS wave after which CPS revised their set of disability-related questions to provide better information regarding different types of potential limitations.<sup>2</sup> To study disparities in displacement rates, we restrict our sample to workers who completed the CPS DWS and who were at risk of job loss during each sample period. Following Farber (2004, 2011) and Mitra and Kruse (2016), this incorporates employed workers and those who reported job loss during the sample period. It does not include workers who were not in the labor force for reasons such as those related to retirement, education, or caregiving. We also restrict analyses to non-military workers with occupational data. Our final sample size is 344,729 individuals for the sample of workers who were displaced or at risk for job displacement at the time of the survey. Finally, we weight all descriptive statistics and model estimates using survey-provided weights that adjust for non-interview status within households and for population characteristics based on age, race, sex, and state of residence (CPS, 2022).

### 2.2. Measures and analytic models

Our primary outcome variable of *job displacement* measures whether the respondent experienced job displacement within the three years prior to the survey wave. It is based on responses to the survey question:

<sup>2</sup>The CPS included questions related to only work-limiting disabilities prior to 2009 (McMenamin and Hipple 2014).

“During the last 3 calendar years, that is, January [YEAR] through December [YEAR], did you lose a job, or leave one because: your plant or company closed or moved, your position or shift was abolished, insufficient work or another similar reason?” Respondents who answered “Yes” to this question were considered to have been displaced from their jobs and then asked a series of follow-up questions regarding job displacement.

Our primary predictor variable, *disability status* includes limitations based on six questions used by the CPS to identify the population with disabilities (Livermore et al. 2011). In addition to disability status, we also include five variables to measure the type of disability. These variables indicate whether the respondent reported a *cognitive, physical (ambulatory), hearing, vision, or independent living or self-care (IDL) disability*.<sup>3</sup> Cognitive difficulties include those related to learning, remembering, concentrating, or making decisions. Physical or ambulatory difficulties include anything that limits a respondent in one or more basic physical activities. Vision difficulties indicate whether the respondent was blind or had serious difficulty seeing even with corrective lenses. Hearing difficulties indicate whether the respondent was deaf or had serious difficulty hearing. Independent living difficulties indicate the presence of any condition that makes it difficult or impossible to perform basic activities outside the home alone, and self-care difficulties include personal needs, such as bathing and dressing. As many individuals experience multiple disabilities, these categories are not mutually exclusive.

We also include a series of demographic, education, and work-related control variables across models. *Gender* is a categorical variable of male (the referent) or female. We indicate *race/ethnicity* with a categorical variable measured as non-Hispanic white (the referent), non-Hispanic Black, Hispanic, or non-Hispanic other, and we control for *citizenship status*.<sup>4</sup> We measure *age* in years and include a quadratic *age-squared term* to account for any non-linear relationships. *Marital status* is a categorical variable that indicates whether the respondent was currently married (the referent), never married, or

separated, divorced, or widowed, and *any children* indicates whether any children under age 18 were present in the respondent’s household. We measure *educational attainment* with a categorical variable that indicates whether the respondent obtained a high school diploma or equivalent degree or less than that (the referent); attended some college without obtaining a degree; obtained an Associate’s (two-year) degree; completed college with a Bachelor’s (four-year) degree; or obtained a Master’s, professional, or Doctorate degree.

In addition to these covariates, we also control for the respondent’s major industry and occupation of employment, as involuntary job losses are often relegated to certain parts of the labor market. *Major occupation* includes the following seven categories: management, business, and financial occupations (referent); professional and related; service; sales and related; office and administrative support; natural resource, construction, and maintenance; and production, transportation, and material moving. *Major industry* includes the following 10 categories: agriculture and natural resources; construction; manufacturing; wholesale and retail trade; transportation and utilities; information and financial activities; professional and business services; educational and health services (referent); leisure and hospitality; other services; and public administration. For displaced workers, we use the occupations and industries of the jobs they were displaced from, and for continually employed workers, we use their current reported industry and occupation. Finally, to better account for changing economic and political environments, we also include indicator variables for the respondent’s *state of residence* and for the *survey year*.

Table 1 presents descriptive statistics for displaced workers and continually employed workers in the pooled dataset. Between 2007–2021, approximately 6.6% of workers were displaced. Displaced workers were more likely to have all types of disabilities; 7.0% of displaced workers reported having at least one disability compared to 3.6% of continually employed workers. Displaced workers were also younger and more likely to be male, belong to a racial minority group, and not married. They also tended to have lower levels of education.

We use a series of logistic regression models to examine the relationship between disability, disability type, and displacement. To show how this relationship varies over time, we incorporate interaction terms between disability and survey wave year

<sup>3</sup>Due to the small percentage of individuals reporting an IDL or self-care disability and the overlap in reporting of these disabilities, we combine independent living and self-care into a single measure.

<sup>4</sup>Due to the small sample sizes of other racial and ethnic categories, we combined these groups into a non-Hispanic other category. This category also includes individuals who identified with multiple racial groups.

Table 1  
Descriptive statistics by displacement, CPS DWS, 2010–2022 waves

	Workers at-risk of displacement		Displaced workers		Continually employed workers	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Outcome</b>						
Displaced	0.066	0.000				
<b>Disability</b>						
Any disability or limitation	0.039	0.000	0.070	0.002	0.036	0.000
Cognitive disability	0.010	0.000	0.025	0.001	0.009	0.000
Physical disability	0.015	0.000	0.030	0.001	0.014	0.000
Hearing disability	0.013	0.000	0.018	0.001	0.013	0.000
Vision disability	0.006	0.000	0.011	0.001	0.006	0.000
Self-care or IDL disability	0.006	0.000	0.015	0.001	0.005	0.000
<b>Covariates</b>						
Age (mean years)	43.135	0.027	42.007	0.103	43.216	0.028
Female	0.471	0.001	0.421	0.004	0.474	0.001
Race/ethnicity						
Non-Hispanic white	0.652	0.001	0.619	0.004	0.655	0.001
Non-Hispanic Black	0.111	0.001	0.130	0.003	0.110	0.001
Hispanic	0.158	0.001	0.178	0.003	0.157	0.001
Non-Hispanic other	0.079	0.001	0.072	0.002	0.079	0.001
Non-citizen	0.085	0.001	0.090	0.002	0.085	0.001
Marital status						
Currently married	0.575	0.001	0.497	0.004	0.580	0.001
Never married	0.279	0.001	0.324	0.004	0.275	0.001
Formerly married	0.147	0.001	0.179	0.003	0.144	0.001
Any children present	0.457	0.001	0.441	0.004	0.458	0.001
Education						
HS degree or less	0.330	0.001	0.390	0.004	0.326	0.001
Some college, no degree	0.179	0.001	0.207	0.003	0.177	0.001
Associate's degree	0.108	0.001	0.108	0.002	0.108	0.001
Bachelor's degree	0.244	0.001	0.209	0.003	0.247	0.001
Graduate or professional degree	0.139	0.001	0.085	0.002	0.143	0.001
Major occupation						
Management, business, and financial	0.174	0.001	0.153	0.003	0.176	0.001
Professional and related	0.241	0.001	0.153	0.003	0.248	0.001
Service	0.156	0.001	0.148	0.003	0.156	0.001
Sales and related	0.099	0.001	0.111	0.002	0.098	0.001
Office and administrative support	0.119	0.001	0.137	0.003	0.118	0.001
Natural resource, construction, and maintenance	0.091	0.001	0.134	0.003	0.088	0.001
Production, transportation, and material moving	0.120	0.001	0.165	0.003	0.117	0.001
Major industry						
Agriculture and natural resources	0.020	0.000	0.020	0.001	0.020	0.000
Construction	0.069	0.001	0.110	0.002	0.066	0.001
Manufacturing	0.107	0.001	0.154	0.003	0.104	0.001
Wholesale and retail trade	0.130	0.001	0.150	0.003	0.129	0.001
Transportation and utilities	0.054	0.001	0.046	0.002	0.055	0.001
Information and financial activities	0.092	0.001	0.097	0.002	0.091	0.001
Professional and business services	0.121	0.001	0.144	0.003	0.120	0.001
Educational and health services	0.234	0.001	0.123	0.003	0.242	0.001
Leisure and hospitality	0.076	0.001	0.103	0.002	0.075	0.001
Other services	0.047	0.000	0.039	0.002	0.048	0.000
Public administration	0.049	0.000	0.014	0.001	0.052	0.000

SOURCE: CPS DWS 2010–2022, N=353,646. NOTES: Estimates and standard errors provided for samples of workers at risk of displacement ( $N=353,646$ ), displaced ( $N=22,632$ ), and continually employed ( $N=331,014$ ). Estimates provided as proportions, unless otherwise stated. All estimates are weighted using CPS-provided survey weights.

and estimate models separately by survey wave year. Although we include control variables within our models, our results are primarily descriptive with the goal of documenting relationships over time. We

present and discuss most of our results as either average marginal effects or predicted probabilities with results averaged across the population for ease of interpretation.

Table 2  
Results from logistic regression models predicting displacement

	Model 1			Model 2		
	AME	b	SE	AME	b	SE
Intercept		-3.123***	(0.081)		-3.117***	(0.081)
Any disability or limitation	0.054	0.692***	(0.033)			
Cognitive disability				0.056	0.704***	(0.065)
Physical disability				0.041	0.547***	(0.056)
Hearing disability				0.010	0.160*	(0.063)
Vision disability				0.016	0.240**	(0.091)
Self-care or IDL disability				0.025	0.361***	(0.087)
Age	0.000	-0.003***	(0.001)	0.000	-0.003***	(0.001)
Age squared	0.000	0.000***	(0.000)	0.000	0.000***	(0.000)
Female	-0.001	-0.018	(0.019)	-0.001	-0.021	(0.019)
Race/ethnicity (Ref: Non-Hispanic white)						
Non-Hispanic Black	0.018	0.277***	(0.029)	0.018	0.273***	(0.029)
Hispanic	0.003	0.056*	(0.027)	0.003	0.056*	(0.027)
Non-Hispanic other	0.002	0.036	(0.034)	0.002	0.034	(0.034)
Non-citizen	-0.008	-0.135***	(0.033)	-0.008	-0.135***	(0.033)
Marital status (Ref: Currently married)						
Never married	0.014	0.235***	(0.024)	0.014	0.229***	(0.025)
Formerly married	0.021	0.332***	(0.022)	0.020	0.326***	(0.022)
Any children present	0.001	0.016	(0.019)	0.001	0.017	(0.019)
Education (Ref: Less than a HS degree or less)						
Some college, no degree	0.004	0.071**	(0.023)	0.005	0.073**	(0.023)
Associate's degree	0.005	0.075**	(0.028)	0.005	0.077**	(0.028)
Bachelor's degree	-0.001	-0.012	(0.025)	-0.001	-0.012	(0.025)
Graduate or professional degree	-0.007	-0.121***	(0.035)	-0.007	-0.119***	(0.035)
Major occupation (Ref: Management)						
Professional and related	-0.003	-0.058	(0.031)	-0.003	-0.058	(0.031)
Service	0.005	0.091**	(0.034)	0.005	0.091**	(0.034)
Sales and related	0.008	0.145***	(0.036)	0.008	0.147***	(0.036)
Office and administrative support	0.018	0.294***	(0.032)	0.018	0.293***	(0.032)
Natural resource, construction, and maintenance	0.021	0.334***	(0.034)	0.021	0.334***	(0.034)
Production, transportation, and material moving	0.022	0.355***	(0.033)	0.022	0.353***	(0.033)
Major industry (Ref: Education and health)						
Agriculture and natural resources	0.057	0.972***	(0.042)	0.057	0.973***	(0.042)
Construction	0.049	0.878***	(0.036)	0.049	0.881***	(0.036)
Manufacturing	0.031	0.624***	(0.037)	0.031	0.622***	(0.037)
Wholesale and retail trade	0.009	0.219***	(0.048)	0.009	0.221***	(0.048)
Transportation and utilities	0.033	0.645***	(0.037)	0.032	0.643***	(0.037)
Information and financial activities	0.045	0.826***	(0.032)	0.045	0.826***	(0.032)
Professional and business services	0.030	0.606***	(0.062)	0.030	0.610***	(0.062)
Leisure and hospitality	0.048	0.862***	(0.038)	0.048	0.860***	(0.038)
Other services	0.015	0.332***	(0.048)	0.014	0.332***	(0.048)
Public administration	-0.020	-0.759***	(0.069)	-0.020	-0.758***	(0.069)
Pseudo R Squared	0.054			0.054		

NOTES: Results from logit models predicting the probability of displacement in the three years prior to the survey wave. Continuous variables are mean centered. Models include fixed effects for state of residence and survey year. "AME" refers to average marginal effects, which can be interpreted as a percentage point difference in being displaced. These are calculated by averaging the predicted probabilities of displacement across the population. SOURCE: CPS DWS 2010–2022, adults at-risk of displacement,  $N = 344,729$ . \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ .

### 3. Results

Table 2 presents the results from two logistic regression models predicting displacement with survey waves pooled over time. Model 1 includes results for people with any type of disability. Model 2 breaks

disability down into five different types. Models include all listed covariates, as well as the survey year and respondent's state of residence.

Both models highlight the struggles that people with disabilities experience within the labor market. As shown in Model 1, people with disabilities were

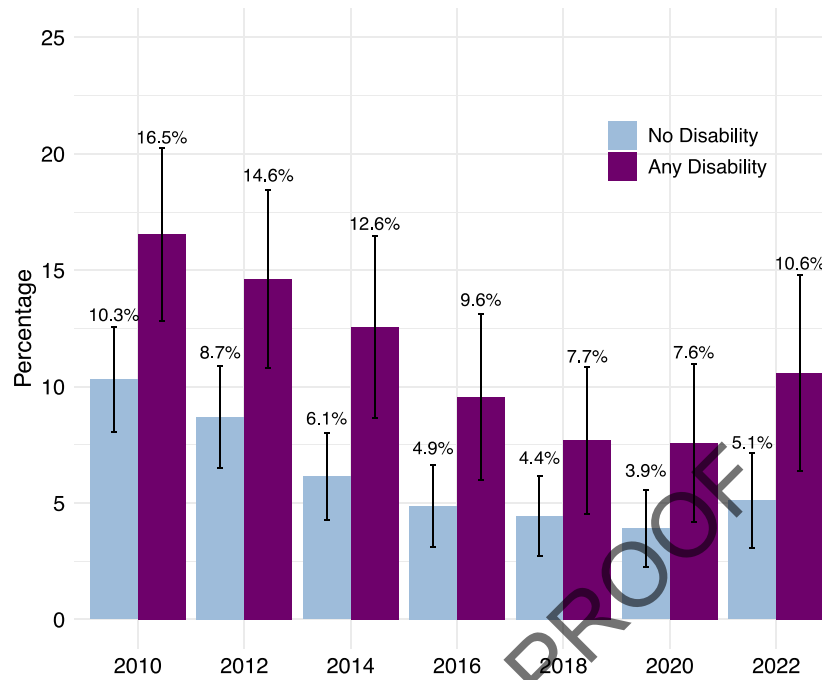


Fig. 1. Predicted probability of displacement by survey wave year and disability status. SOURCE: CPS DWS, 2010–2022 waves,  $N = 344,729$ . NOTES: Predicted probability of displacement for people with and without disabilities. Estimates and 95% confidence intervals averaged over the population and obtained from yearly models that include all covariates. See Table A2 for results.

approximately twice as likely to experience displacement than people without disabilities, controlling for demographics, education, occupation, and industry. With results averaged across the population, this resulted in an average disparity of 5.4 percentage points. Experiences of displacement also varied with disability type, as indicated in Model 2. People with cognitive disabilities were the most likely to be displaced, exceeding rates of displacement among people without disabilities by 5.6 percentage points. They were followed by people with physical disabilities, IDL disabilities, vision, and hearing disabilities.

Across all survey wave years, people with disabilities were more likely than those without disabilities to have experienced job displacement in the three years prior to the survey wave. These results from pooled 2010–2022 CPS survey waves confirm and extend Mitra and Kruse's (2016) findings by another decade. Disparities in displacement rates continue on through 2021. It is clear that people with disabilities are disadvantaged when it comes to job displacement, but how do these relationships vary across time periods? Have they been exacerbated by the COVID-19 pandemic?

Expanding on these results, Figures 1 and 2 and Appendix Tables A1-A3 show that the relationship between disability and job displacement has varied over time. Starting with the results for disability status, Figure 1, which plots the predicted probability of displacement over survey wave years by disability status and controlling for all covariates, shows decreasing rates of displacement over the past decade, as the country recovered from the 2008 recession. Rates of displacement decreased from highs in the 2010 wave of 10.3% for people without disabilities and 16.5% for people with disabilities to lows of 3.9% and 7.6% in 2020. Rates increased for both groups during the pandemic, but more so for people with disabilities. The result is that after gaps in displacement rates declined from an average of 6.2 percentage points in the 2010 wave to 3.7 percentage points in the 2020 wave, the gap increased to 5.5 percentage points during the 2022 wave representing the COVID-19 pandemic.

Experiences of displacement over time also varied across different disability types, as shown in Figure 2 and Appendix Table A2. Across the survey waves, the pattern for displacement for people with different types of disabilities was similar – rates of displace-



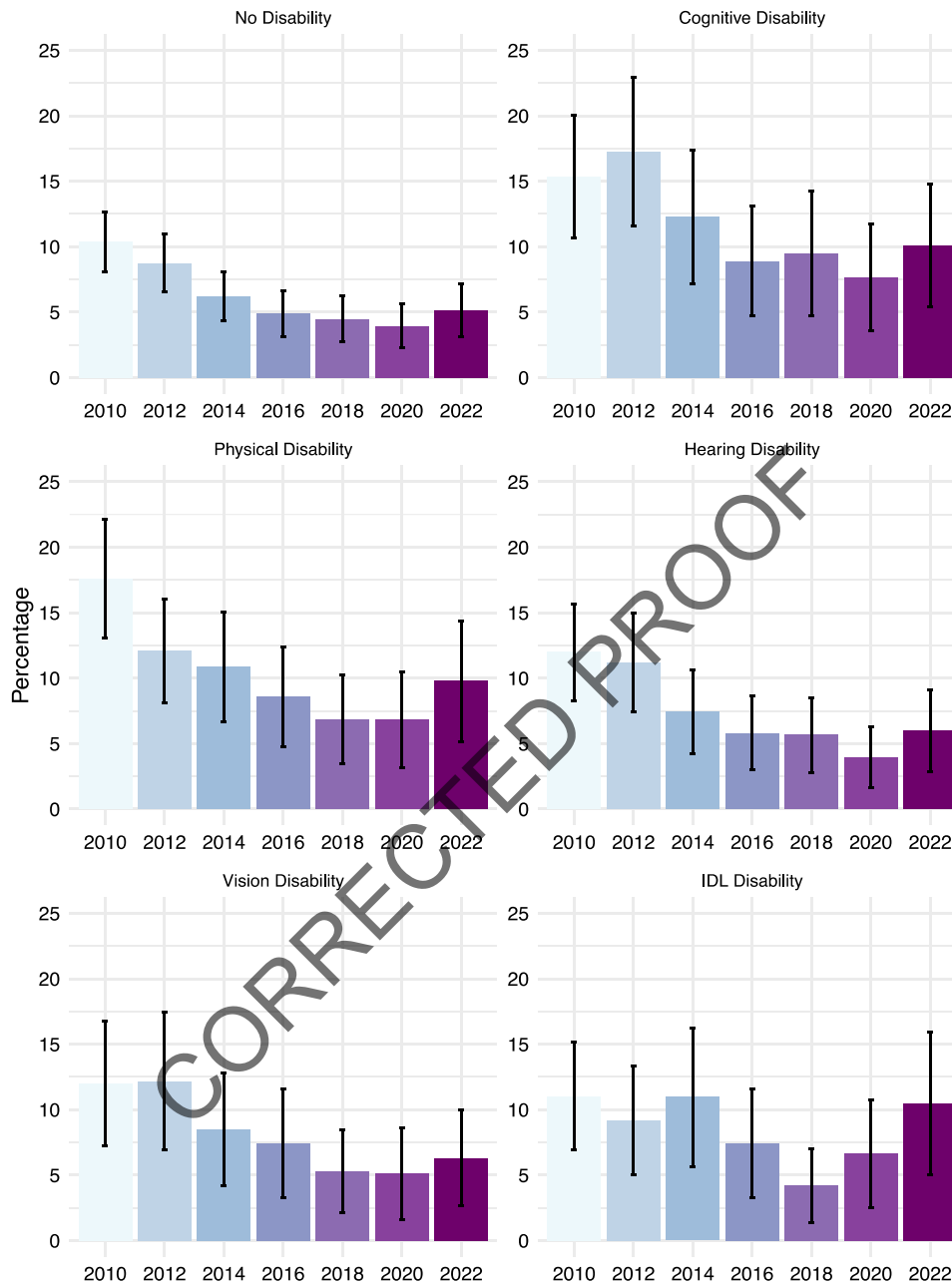


Fig. 2. Predicted probability of displacement by survey wave and disability type. SOURCE: CPS DWS, 2010–2022 waves,  $N=344,729$ . NOTES: Predicted probability of displacement for people with and without disabilities. Estimates and 95% confidence intervals obtained from yearly models that include all covariates. See Table A3 for results.

ment were highest in the 2010 and 2012 waves after the Great Recession, declined afterwards, and then rose again in 2022 with pandemic-related job losses. They also regularly exceeded those of people without disabilities.

In the 2022 survey wave, covering the COVID-19 pandemic (2019–2021), displacement was highest among individuals with cognitive, physical, or IDL disabilities. Approximately 10–11% of workers with these disabilities experienced displacement during

the pandemic. People with hearing and vision disabilities were less likely to experience displacement with about 6% of these workers losing jobs during the pandemic.

#### 4. Discussion

Most adults with disabilities are not in the labor force, a factor that is associated with increased poverty among this group. For people with disabilities in the labor force, the labor market is still a precarious place that does not always lead to economic security, as our findings show. Job loss is a traumatic event that comes with a variety of scarring effects. Yet, experiences of displacement are not evenly distributed; people with disabilities have traditionally experienced greater rates of displacement despite having less access to the labor market overall. Our project expanded this research to track displacement through the COVID-19 pandemic and examine experiences of displacement by disability type, net of key characteristics.

Similar to earlier years, people with disabilities, especially those with cognitive, IDL, and physical disabilities, were more likely than people without disabilities to experience job displacement over the 14-year period between 2007 and 2021, net of education level and occupation. Differences in displacement rates varied, though, with the greatest disparities appearing during times of economic and social turmoil – the Great Recession and the COVID-19 pandemic. Although displacement disparities by disability status had been decreasing since the Great Recession, the pandemic appeared to reverse this trend.

#### 5. Conclusion

Our findings, while descriptive, contribute to research on labor market inequality, disability, and job insecurity. They provide a starting point for future research that further investigates potential explanations for disability-related disparities in displacement. They also point toward the need for more research that not only examines experiences of displacement but also focuses on reemployment outcomes, including earnings.

This finding highlights the scarring effects of exogenous shocks on future labor market outcomes among those entering the labor market or looking

for working during recessions and pandemics. These effects, even though they may fade 10–15 years down the line, may contribute to a host of negative outcomes including permanently exiting the labor force, relying on social assistance on a more permanent basis, and reduced wages upon reemployment (von Wachter 2020). Importantly, involuntary (and often unexpected) job loss can affect all aspects of people’s lives. The earnings shock that come from displacement can negatively affect a couple’s expected marriage gains leading to divorce (Charles and Stephens 2004). Individuals experiencing job loss may also experience reduced life expectancy because of associated earnings losses (Sullivan and von Wachter 2009).

Because job displacement can usually involve both short or long-term involuntary job loss brought on by external forces, policies require multipronged efforts to limit its occurrence and its scarring effects. Work training programs focusing on high-demand skills in growing sectors with less precarious occupations, as well as opportunities for more continuous learning (e.g., “upskilling”) in both education and workplace settings should be widely accessible. Social supports like unemployment and other benefits can go a long way in keeping displaced workers afloat as they seek re-employment.

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