COVID-19 and Employment Losses for Workers with Disabilities: An Intersectional Approach

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Abstract: This paper studies the disparate effects of COVID-19 on workers with physical and mental disabilities, paying particular attention to an intersectional analysis by disability, race/ethnicity, and gender. Results indicate that White and Black women with disabilities experienced relatively greater employment losses during the pandemic compared to White men without disabilities. Our decomposition procedures reveal that the disability employment gap increased during the pandemic, and a substantial portion of the increased gap is explained by differential effects of the pandemic across occupations. The unexplained component of the disability gap also rose, which could partly reflect growing discrimination against people with disabilities.

Keywords: COVID-19, Disability, Race, Gender, Unemployment, Jobs, Intersectional

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I. Introduction

The COVID-19 pandemic has caused immense social and economic harm around the globe. In the U.S., tens of millions of workers lost their jobs starting in March 2020, with a prolonged period of high unemployment and persistent hardships well into 2021. Hourly, contingent, and lower-wage employees were more likely to be fired, furloughed, and suffer pandemic-related unemployment and economic harm (Bartik et al., 2020). People with disabilities are almost twice as likely to fall into those employment categories (Schur, 2003). Women and people of color also faced relatively greater employment losses as they were disproportionately represented in sectors with the most business closures (Alon et al., 2020; Bahn et al., 2020). The effects are likely to be even greater for women and people of color who have disabilities as well as for other individuals with multiple minority identities (Blanck, 2020; Blanck et al., 2020).

Prior to the pandemic, fewer than one in three (30.9%) working-age people with disabilities were employed, as compared to three-fourths (74.6%) of their nondisabled peers (BLS, 2020). This chasm in employment exists even though people with disabilities have the same motivation for employment and markers of employability as similarly-situated people without disabilities (Ali et al., 2011). While the employment gap between people with and without disabilities generally increased up until 2015 (Kraus et al., 2017; Lauer and Houtenville, 2017), the gap narrowed in the tight labor markets from 2015 to 2019, with a gain of 4.0 points in the employment rate for people with disabilities compared to 2.4 points for people without disabilities (BLS, 2016, 2020).

The COVID-19 pandemic erased many of these gains and exacerbated the employment disparity between people with and without disabilities. To explore this assertion, our paper uses

Current Population Survey (CPS) data to examine the employment status of workers with and without disabilities following the onset of the COVID-19 pandemic relative to previous years. Based on earlier research finding greater job loss rates among workers with disabilities during economic recessions, we expect to find that COVID-19 played a larger role in employment losses for individuals with disabilities compared to individuals without disabilities.

II. Background: Employment by Disability, Gender, and Race

Why are people with disabilities less likely to be employed? While education gaps and disability income support from the government are important factors, employer attitudes and organizational culture also contribute to their low employment rates. Audit studies show that employers are less likely to express interest in job applicants with disabilities even when their resumes are identical to those of applicants without disabilities, and the disabilities are irrelevant to job performance (Ameri et al., 2018, Baert, 2018). Other studies have shown that, once hired, many workers with disabilities must contend with negative attitudes from supervisors and co-workers that limit career growth and the quality of their work life, as well as with structural barriers in workplace policies (Ren et al., 2008; Schur et al., 2013). They are more likely to work in low-wage, part time, and contingent jobs (Schur et al., 2013) where they receive lower pay and benefits compared to workers without disabilities in similar jobs (Schur, 2002, 2003). Disability accommodations are generally well-received by co-workers, but they sometimes generate resentment (Schur et al., 2014). Employees with disabilities also face a pay gap after accounting for productive characteristics such as education and job experience, and are more likely to be laid off by employers when times are bad (Kruse et al., 2018; Mitra and Kruse, 2016).

Workers with disabilities are underrepresented in white-collar jobs and overrepresented in service and blue-collar jobs (BLS, 2020; Schur et al., 2020). While these types of jobs are less amenable to work from home, pre-pandemic data show that people with disabilities were in fact about 20% more likely to work at home than otherwise-similar workers without disabilities. This differential points to the benefits that work-from-home accommodations can provide to persons with mobility impairments or other conditions that make it difficult or risky to work a regular schedule at the employer's location. During the pandemic, service and blue-collar jobs were especially hard-hit with closures – the sectors in which people with disabilities are disproportionately employed. The restructuring of many jobs during the pandemic may ultimately benefit many people with disabilities by making employers more willing to accommodate the need for home-based work (Schur et al., 2020).

The experience of disability is influenced by other salient characteristics such as gender and race. Women with disabilities, for example, may have different experiences than men with disabilities based on how they are socialized and the different gender roles they are expected to fulfill (Fine & Asch, 1988; Hanna & Rogovsky, 1991). Multiple marginalized identities may combine not simply in an additive way, but may interact to create unique forms of disadvantage (Hanna & Rogovsky, 1991). Women with disabilities, for example, can face extra challenges in becoming employed as a disability may reinforce negative stereotypes about the abilities and job performance of women. Men with disabilities, however, may face extra challenges both economically and psychologically if their disability limits their employment and ability to fulfill the traditional male "breadwinner" role. The effects of gender and disability combine to give women with disabilities especially low employment rates (16.5% compared to 19.7% for men with disabilities in 2019), although the disability employment gap is larger among men than

among women (Schur et al., 2013: 161-162; BLS, 2020). Disabled women's especially low employment rate contributes to their higher poverty rate compared to both men with disabilities and women without disabilities (Schur et al., 2013). In the context of the pandemic, women who bear primary childcare responsibility may face extra employment challenges if they must spend time at home supervising children kept from attending school in person. This additional care work can pose particular challenges for women who have to contend with the time and energy demands of a disability.

Similarly, disability may interact with race in affecting employment and human capital outcomes. Bailey and Mobley note that "Much of the Black experience is shaped by an understanding of Black bodies as a productive labor force, leaving little room for an identity-based approach to disability," and that "Ableism and notions of disability are a major component of anti-Black racism" (2019: 25). Native Americans and Blacks have the highest prevalence of disability in the U.S., reflecting lack of access to health care and other social disparities (Schur et al., 2013). The disability employment gap is larger among Blacks than among White non-Latinx, resulting in an especially low employment rate among Blacks with disabilities (15.6% in 2019) compared both to Blacks without disabilities (64.9%) and White non-Latinx with disabilities (19.7%)(BLS, 2020). This disparity may partly stem from the extra difficulties faced by both Blacks and Latinx with disabilities in school-to-work transitions (Hasnain & Balcazar, 2009). As among women with disabilities, low employment rates contribute to especially high poverty rates among Blacks and Latinx with disabilities (Schur et al., 2013: 184). The interaction of disability with race and ethnicity also shows up in political and social measures, particularly in insufficient access to services and equipment, reduced social support, and inadequate policies for equitable treatment and accommodations (Gary et al., 2011; Schur et al., 2013).

Disability may combine with both race and gender in ways that create particular disadvantages. Degener (2011:31) writes of the need for greater awareness of multidimensional discrimination: "Discrimination at the intersection of race, gender and disability will rarely be composed of discrete jigsaw pieces corresponding exactly to the three separate grounds. More commonly, it will be based on a mélange of overlapping and undefined prejudices and stigmas." Bailey & Mobley (2019) argue that both Disability Studies and Black Studies should have a comprehensively intersectional approach that takes account of the particular experiences of Black women, who spend relatively more time in caring for disabled family members and keeping them connected with members of the community. Having a disability may especially challenge the social role of Black women who are expected to be strong leaders in their families and communities (Hanna & Rogovsky 1991). While some research has examined the intersection of disability with gender and race separately, very little research has explored the intersections of all three dimensions.

III. Data and Methodology

In this study, employment measures are constructed using data from the CPS, a monthly survey collected by the Bureau of Labor Statistics (BLS), which has a sample of about 1,800,000 individuals per year. It provides data on various demographic characteristics as well as measures of disability based on a six-question set (asked since 2008). The six disability questions identify hearing, vision, cognitive, and mobility impairments, and difficulty with self-care or going outside alone.[1] Because the BLS does not do a seasonal adjustment on the numbers for employment and unemployment by disability status, we do our own seasonal adjustment and reweight the data accordingly so that the changes we observe in 2020 do not reflect seasonal patterns. We kept all individuals ages 18-64 without missing observations for the key variables

in our analysis, leaving a total sample size of 745,036 individuals (comprised of 686,367 people without disabilities and 58,669 people with disabilities).

These data are first used to construct descriptive statistics on employment rates and number of jobs by disability status. These statistics are then broken down by type of disability, gender, race, ethnicity, education, and age, taking an intersectional approach to explore how disability interacts with these characteristics in affecting employment. We also examine employment patterns by disability status in occupations and industries, focusing on the occupations and industries hardest hit by the pandemic. After a brief review of annual trends, we analyze monthly patterns in 2020 during the COVID-19 pandemic. We focus in particular on changes from January to April when there was a large pandemic-related employment drop, and from January to December (accounting for the combined effect of the April drop and the partial recovery since April).

After examining these basic patterns, we run logit regressions to predict the percent change in the likelihood of disability employment, controlling for demographic characteristics, occupation, and industry. The final part of the analysis uses a decomposition approach to examine the extent to which the differences in employment rates between those with and without a disability are explained by differences in observed characteristics, or remains unexplained. The decomposition, which is based on logit regressions for employment status, follows the precedent set by Fairlie (1999, 2003) and is a variation of the common Oaxaca-Blinder decomposition first developed to explain wage gaps (Oaxaca 1973; Blinder 1973). The explained gap is the portion of the gap attributed to disability differences in demographic, occupation, and industry variables; the residual gap is the portion attributed to disability differences in market returns to those characteristics. To best approximate the baseline structure of employment determinants that

would exist in the absence of discrimination or other differential treatment based on disability, we use the coefficients from pooled regressions as suggested by Neumark (1988) and Oaxaca & Ransom (1994). The residual (unexplained) employment gap is simply the difference between actual employment rates and predicted employment rates. Note that the CPS contains questions about previous occupation and industry of employment in the past 12 months, so information on occupation and industry is available for individuals who are not currently employed but were employed in the past 12 months. Given the importance of industry and occupation in our analysis, we present models with industry and occupation controls, meaning that our regression and decomposition analyses focus on a sub-sample of individuals with strong connections to the job market who are currently employed or have been employed in the past 12 months. This sub-sample has 568,089 observations (547,319 people without disabilities and 20,770 people with disabilities).

The determinants of whether or not individual *i* is employed in year *t* are expressed as follows:

$$Y_{it} = \alpha + \beta_1 X_{it} + e_{it} \quad (1)$$

The variables in the *X* matrix include individual characteristics that influence people's employment status: gender, race/ethnicity, educational attainment, marital status, and age. The term e_{it} an individual-specific idiosyncratic error term. All regressions are weighted using sample weights provided in the CPS, modified to reflect a seasonal adjustment by disability status.

Sample statistics are found in online data appendices.[2] These appendices show large declines in the absolute number of employed individuals between January and April 2020 for all demographic groups among individuals with and without a disability (broken down by gender, race/ethnicity, education, and age). All groups except Latinx workers with disabilities showed at

least a partial rebound by December 2020. Those who were doing even better in December 2020 relative to the beginning of the year in terms of employment gains include disabled workers with a Bachelor's degree, and all workers with a graduate degree. The appendices also point to sizeable declines in the absolute number of people employed in most, but not all, occupations and industries between January and April 2020 for both disabled and non-disabled people, with partial recoveries in most categories (and even full recoveries in a few) by December 2020. Occupations with the largest job losses in absolute terms include food preparation, sales, production, and transportation. Finally, sample means in the appendices for all variables used in the regression analysis indicate that the non-disabled and disabled sub-samples are comparable except in the case of employment status, education, and marital status. Individuals with disabilities are less likely to be employed or to have a Bachelor's or graduate degree, and they are more likely to be separated/divorced or widowed. Consistent with their lower average levels of education, people with disabilities tend to be overrepresented in blue-collar and service occupations, and underrepresented in white-collar occupations −the biggest difference is for managerial jobs, held by 11.9% of non-disabled workers and 9.2% of disabled workers.

IV. Trends in Employment: Descriptive Analysis

In looking at longer-term trends, we see that working-age individuals with disabilities had a declining employment rate following the 2008-09 financial crisis through 2014. This decline was considerably sharper and lasted longer than it did for individuals without a disability, as the disabled population experienced a longer lag time in finding new jobs (Figure 1). The relative employment of the disabled population improved strongly, however, from 2015 to 2019. Using 2008 as a base year, Figure 1 shows that the relative employment rate in 2019 was similar

for people with and without disabilities, and there was a sharp decrease for both groups in the 2020 pandemic.

Monthly data for 2020 point to a stronger pandemic-related drop in the number of jobs for workers with disabilities. As shown in Figure 2, individuals with disabilities reported a markedly larger decline in the number of jobs in April compared to January (Panel A). Lockdowns, workplace closures, and layoffs, which started in late March 2020 and intensified in April, resulted in enormous job losses across the country. The number of jobs was also slower to bounce back for individuals with disabilities in the summer and fall of 2020. Notably, job losses in 2020 were stratified by disability status, as shown in the figure (Panel B). The most severe employment declines were experienced by people who identified as having trouble with self-care and having trouble with going outside alone. These disability categories are generally considered as indicators of severity, which implies that people with more severe disabilities had the largest employment declines and the most trouble in finding work again as the pandemic wore on. The markedly different employment patterns for people with different types of disabilities supports the point made in Baldwin & Choe (2014) that it is important to examine heterogeneity within the disabled population when examining labor market outcomes.

These patterns are shown in Table 1. Overall the employment rate for people with disabilities dropped by 18.9% from January to April in 2020, compared to 15.5% for people without disabilities. Although each drop is statistically significant, the difference between them is not significant (Columns 7 and 8). Table 1 further shows that individuals with disabilities have considerably lower overall employment rates compared to the non-disabled population, so a drop of about 5 percentage points in the employment rate between January and April (from 31.8% to 26.7%) amounts to a substantial decline given the relatively low starting point. The table also

shows that the large employment drops from January to April occurred across types of disabilities, with declines ranging from 15.6% for people with a hearing impediment to 31.1% for people with difficulty going outside. These declines from January to April are both large in magnitude and statistically significant (except for people with self-care limitations, most likely due to a smaller sample size for this type of disability). In contrast, the employment declines for January to December across disability types are smaller in magnitude and mostly not significant.

The employment declines were stratified not only by disability, but also by gender, race/ethnicity, and age, as well as the intersections of these categories. Figure 3 shows that the largest employment declines were experienced by female, Black, and middle-aged workers with disabilities. Women and middle-aged workers with disabilities also experienced the slowest recoveries, while Black workers with disabilities showed a surge in employment growth in the fall of 2020 followed by a sharp drop-off at the end of the year. The underlying data are reported in Table 2, which shows that the estimated January-April drop was larger among workers with disabilities across almost all demographic categories compared to workers without disabilities in the same categories. For example, among Black workers, total employment dropped 16.4% for people without disabilities and 31.8% for people with disabilities, accounting for a 15.4% disability gap. Only for three out of the fourteen demographic groups reported were the employment drops in January to April smaller for people with disabilities: Latinx individuals, people with some college, and those ages 50-64. Note that most of the disability gaps are not statistically significant, largely due to small sample sizes of people with disabilities within the demographic categories (column 3). Also in Table 2, the drop for the entire year (January to December) was relatively larger for workers with disabilities compared to workers without disabilities in the majority of demographic categories, but the magnitudes of the drops are not as

large as they were in the first quarter. Again the differences between people with and without disabilities are mostly not statistically significant, largely due to the small sample sizes within some of the demographic categories for people with disabilities (e.g., the 11.3% gap among those age 35-49 is significant while the larger 15.4% gap among Black non-Latinx is not significant because the latter sample size is smaller and therefore has a wider margin of error)(column 6).

Workers with disabilities are more prevalent in the occupations that had larger employment declines, as shown in Table 3. Among the top four occupations ranked by prevalence of disability (column 1), the January-April employment drop was clearly larger than average in three of them (building and grounds cleaning, food preparation and serving, and transportation and material moving). As shown in column 4, across the 22 occupations, the employment drop in the first four months of 2020 was larger for workers with disabilities compared to workers without disabilities in 15 occupations. We also analyzed industry and reached a similar conclusion: that is, individuals with disabilities tend to work in the industries that had larger employment declines in the height of the pandemic (results not shown but available). With some variations across particular occupation and industry categories, these overall conclusions also apply to the January-December 2020 data.

V. Logit results

We next analyze the employment changes with logit estimations of Equation (1) using the sample of individuals employed currently or in the preceding 12 months based on the monthly CPS for January-December 2020. The logit predicts employment using a post-March dummy variable and a post-March trend term. To allow for differential patterns in employment by demographic and job characteristics, both the post-March dummy and the trend terms are interacted with all the independent variables, including three-way interactions among disability,

gender, and race/ethnicity. Column 1 reports employment estimations for January-April 2020, and Column 2 reports estimations for January-December 2020. In both columns, each row presents the predicted percent change in the likelihood of employment relative to the January-March 2020 period.

In Table 4, the first row shows the base change for people without disabilities, which is negative and statistically significant in both periods, and the second row shows the additional effect for people who have disabilities. These estimates indicate that the disability gaps in the employment changes for January-April and January-December are significantly different from zero in both periods.

Does disability intersect with gender and race in affecting employment drops? Results in Table 4 for the three-way interactions of disability with gender and race/ethnicity categories. Here we examine the potential additive effect of all three dimensions (disability, gender, and race/ethnicity) by comparing each group to the base group of White men without disabilities. As can be seen in the "without disability" rows in both columns, almost every gender and racial/ethnic category had a significantly larger employment drop than did White men without disabilities, and all of these negative marginal effects are statistically significant. Only White non-Latinx women without disabilities have no additional employment drops during the January-December period relative to White men without disabilities. Similarly, almost all of the results in the "with disability" rows indicate larger employment drops for workers with disabilities across the gender and racial/ethnic categories. However, only half of these are significantly different from zero in the January-April period, and three out of eight are significantly different from zero in the January-December period. This latter set of results for the entire year indicate a larger and persistent employment drop for Latinx men with disabilities and for White and Black women

with disabilities. Given the challenge of obtaining precise estimates in the face of small sample sizes when adding a 3-way interaction term, these results provide compelling evidence that Latinx men and White and Black women with disabilities bore a relatively heavy burden of employment losses during the pandemic.

VI. Decomposition Results

The results so far indicate that employment appeared to drop more in the pandemic among workers with disabilities compared to workers without disabilities, and the regression results lend confidence to the assertion that the employment drops were relatively more severe for workers with disabilities, especially Latinx men and White and Black women. Tables 5 and 6 present the decomposition results using two different comparisons to sort out the role of occupation and industry in explaining the relative effect of the pandemic on employment outcomes of workers with disabilities. Table 5 compares the decomposition results between the "pre-lockdown" January-March 2020 period and the "post-lockdown" April-December 2020 period, while Table 6 uses a matched sample of individuals from March and April to examine employment transitions in 2020 compared to March-April transitions in earlier years. Note that both analyses are restricted to the sub-sample of workers with strong connections to the job market.

Table 5 shows that the disability gap in proportion employed increased from 0.059 in January-March to 0.076 in April-December, and this increase of 0.017 was statistically significant (column 3). Within both periods very little of the disability employment gap is explained by occupation, industry, education, and demographic variables (8.3% in January-March and 15.6% in April-December), indicating that disability is a dominant factor at each point in time. Moving between the periods, however, about 41% of the increase in the disability

employment gap is explained by these factors, indicating that they play a substantial role in explaining disability employment dynamics over the pandemic. Among the predictors, the occupational distribution accounts for the largest portion of the increase, followed by education.

Taking a different approach that focuses on the large pandemic-related employment drop in April 2020, Table 6 analyzes the April employment status of those who were employed in March, and decomposes the disability gap in their April employment. The disability gap in proportion employed in April was 0.031 (representing 3.1 percentage points) in the 2014-2019 period, rising to 0.054 in 2020, reflecting an increase of 0.022 (column 3). While this increase is greater than the Table 5 increase in the disability gap, the Table 6 increase is not significantly different from zero owing in part to the much smaller sample size. The explained portion of the gap was 3.8% before 2020 and 36.3% in 2020, and the demographic, occupation, and industry factors explained 82.0% of the increase in the disability gap. The occupation and education factors shared a nearly equal amount of the increase in the explained gap.

VII. Conclusion

This paper has explored the intersection of race, gender, and disability status in the impact of the COVID-19 pandemic on employment losses. Findings from the logit regressions testing for intersectional differences indicate that White and Black women with disabilities experienced relatively greater employment losses during the pandemic compared to White men without disabilities. Moreover, the decomposition results tell us that: a) in each period, there remains a substantial disability gap in employment after controlling for demographic, occupation, and industry factors; b) these disability gaps appeared to increase during the pandemic; c) a good portion of the increased disability gap is accounted for by how the pandemic differentially affected occupations and industries; and d) there was still an increase in the

unexplained component of the disability employment gap during the pandemic. These results are consistent with pre-pandemic research indicating higher layoff rates among workers with disabilities that are not fully explained by observed characteristics (Kaye et al., 2011; Mitra & Kruse, 2016). Although the unexplained gap is usually attributed to insufficient data on all characteristics that affect employment and earnings, our result could reflect growing discrimination by employers against people with disabilities during the pandemic.

An important question for future research is the extent to which individuals with disabilities have more trouble finding and maintaining new jobs following the relaxation of stay-at-home orders relative to workers without disabilities. These differences could be even larger for women and people of color with disabilities compared to their counterparts without disabilities. Another relevant question is the extent to which the disability earnings gap has changed due to the pandemic and how changes in occupation and industry distributions help to explain the change in the gap. It would also be interesting to see how childcare responsibilities affect employment when parents—primarily mothers—stay home as their children are taught virtually in the pandemic; this additional responsibility may place particular burdens on mothers who have to contend with the time and energy demands of a disability. Finally, it will be interesting to see how the labor shortages and tight labor market coming out of the pandemic may have both a short-term and long-term effect on the employment of people with disabilities.

The results help to inform the direction of employment policies during and after COVID-19 by showing how employment outcomes have changed for people across the spectrum of disabilities and for individuals from underserved/minority backgrounds in the context of the pandemic. Our results also have important implications for employer policies to provide telecommuting accommodations rather than trying to pigeonhole individuals with disabilities

into a traditional workspace. Part of the difficulties faced by many people with disabilities in the pandemic is that they are more likely to be in the kinds of jobs that need to be done on-site and cannot be done at home (e.g., buildings and grounds maintenance, food service)(Schur et al., 2020). To the extent that their work can be moved home, however, home-based work may have particular value for people with disabilities in ensuring that their pay levels and raises are determined more by actual job performance and qualifications, rather than by stereotypes and workplace cultural dynamics that have been shown to disadvantage workers with disabilities (Schur et al., 2013). The unprecedented increase in working from home for many professional workers during the pandemic may have lasting effects on employers' acceptance of such arrangements, for instance, as workplace accommodations for persons with disabilities and others. These circumstances may create and reinforce a new norm of workplace accommodation with positive outcomes, as working from home has advantages for many people with disabilities on dimensions of productivity, health, and quality of life. In short, while the pandemic disproportionately hurt the employment of people with disabilities, especially among women and people of color, the overall effects of job restructuring may ultimately benefit many people with disabilities.

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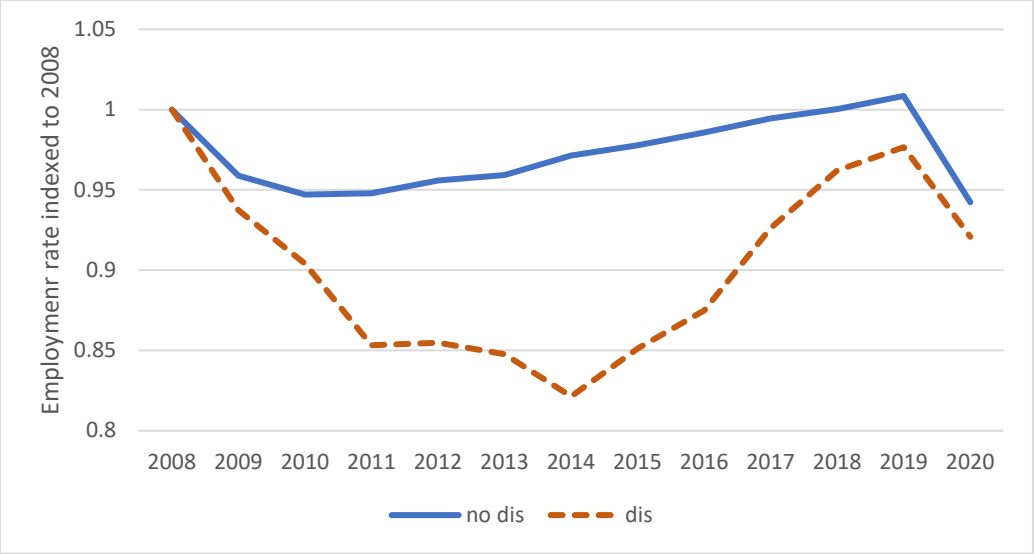
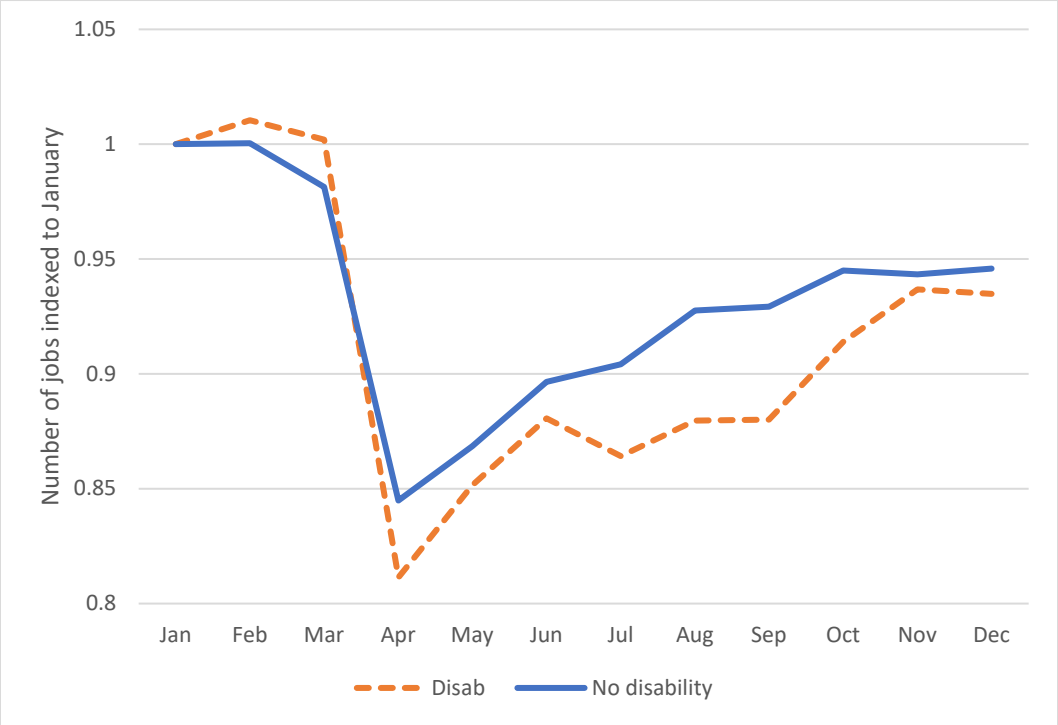


Figure 1. Changes in Annual Employment Rates by Disability Status, 2008-2020

Panel A: Overall



Panel B: By Type of Disability

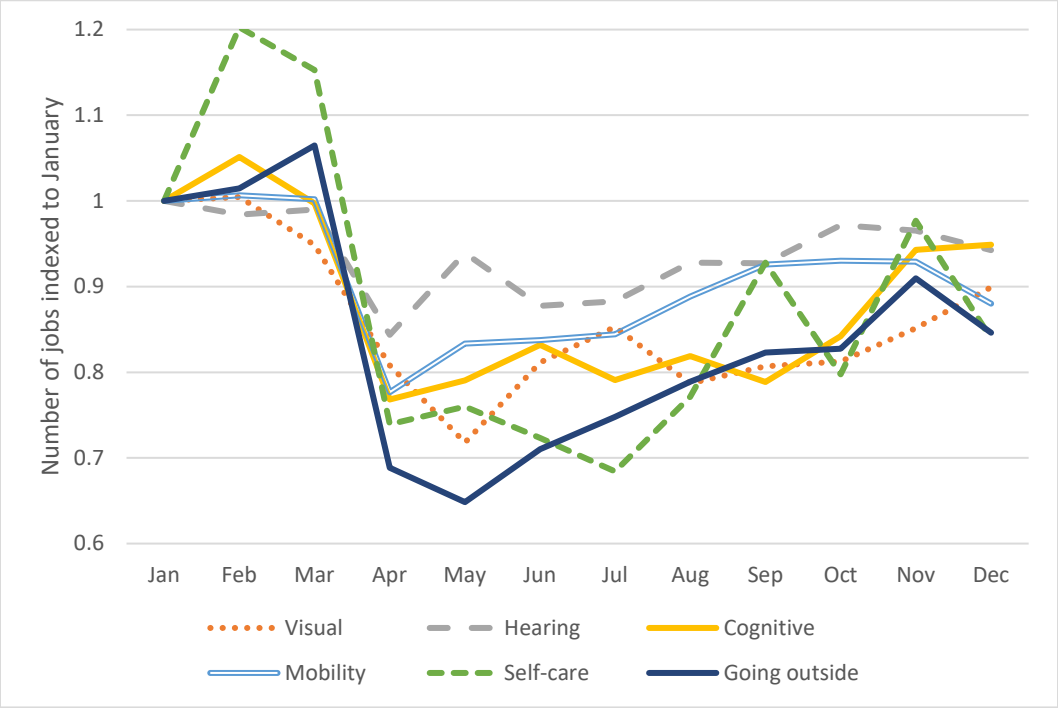
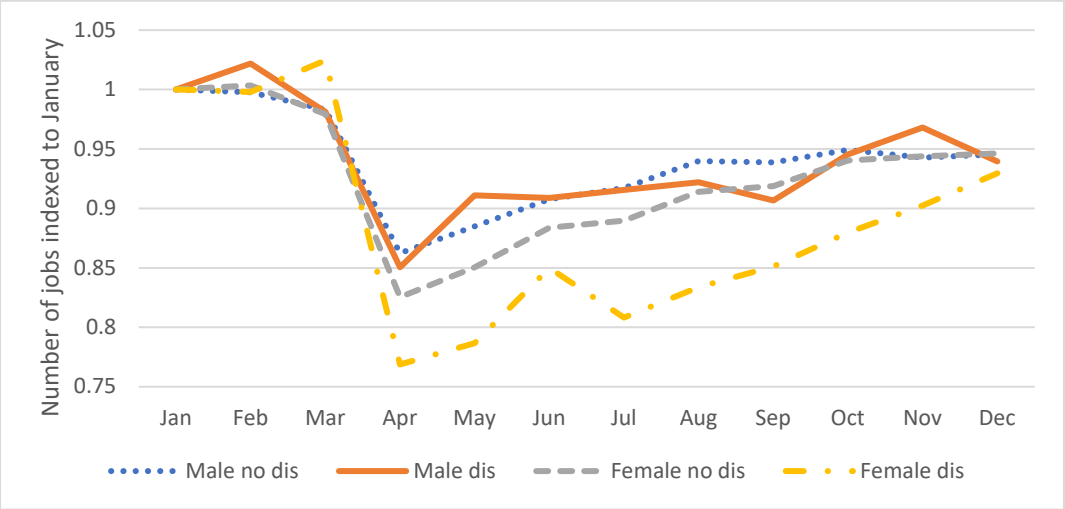
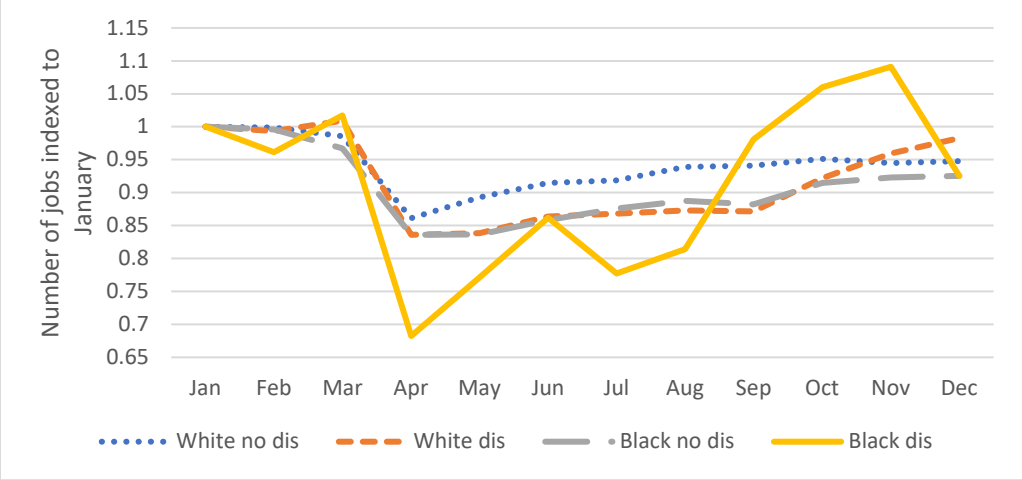


Figure 2. Changes in Monthly Employment (Number of Jobs) by Disability Status, 2020

Panel A: By Disability and Gender



Panel B: By Disability and Race



Panel C: By Disability and Age

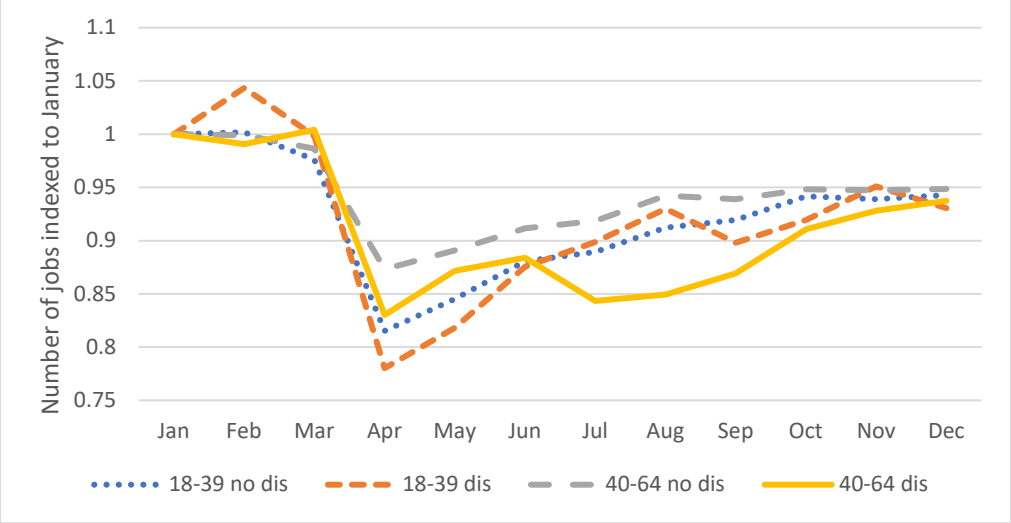


Figure 3. Changes in Monthly Employment by Disability and Gender, Race, and Age, 2020

Table 1. Employment by Disability in 2020

	Total employed (000's)			Employment rate			Percent change in total employed			
	January (1)	April (2)	December (3)	January (4)	April (5)	December (6)	January-April (7)		January-December (8)	
No disability	141,586	119,622	133,919	77.6%	65.4%	73.3%	-15.5%	**	-5.4%	**
Any disability	4,678	3,796	4,373	31.8%	26.7%	29.9%	-18.9%	**	-6.5%	*
Percent with disability	3.2%	3.1%	3.2%							
Disabilty type										
Hearing impairment	1,437	1,212	1,354	50.8%	44.7%	47.7%	-15.6%	**	-5.8%	
Vision impairment	795	643	715	37.1%	33.7%	37.2%	-19.2%	**	-10.1%	
Cognitive impairment	1,589	1,220	1,507	26.4%	22.2%	25.0%	-23.2%	**	-5.1%	
Mobility impairment	1,469	1,141	1,293	19.7%	16.4%	17.6%	-22.3%	**	-12.0%	*
Self-care limitation	248	183	208	10.5%	8.0%	9.5%	-26.1%		-16.1%	
Difficulty going outside alone	694	478	588	13.8%	10.1%	12.2%	-31.1%	**	-15.4%	

Note: * Significantly different from zero at p<.05, ** p<.01

Table 2. Employment Changes by Disability and Demographics in 2020

	January-April percent change in total employed						January-December percent change in total employed					
	No disability (1)		Disability (2)		Disability gap (3)		No disability (4)		Disability (5)		Disability gap (6)	
Overall	-15.5%	**	-18.9%	**	-3.3%		-5.4%	**	-6.5%	**	-1.1%	
Gender												
Male	-13.8%	**	-15.0%	**	-1.2%		-5.5%	**	-6.0%		-0.6%	
Female	-17.5%	**	-23.1%	**	-5.7%		-5.4%	**	-7.0%		-1.7%	
Race and ethnicity												
White non-Latinx	-13.9%	**	-16.4%	**	-2.5%		-5.2%	**	-1.7%		3.5%	
Black non-Latinx	-16.4%	**	-31.8%	**	-15.4%		-7.5%	**	-7.5%		0.0%	
Latinx	-20.1%	**	-17.1%	*	3.0%		-6.5%	**	-20.8%	*	-14.3%	
Other race/ethnicity	-15.8%	**	-25.8%	*	-10.1%		-1.9%		-22.0%	*	-20.1%	
Education												
No HS degree	-24.2%	**	-27.3%	*	-3.1%		-8.9%	**	-21.7%		-12.8%	
HS degree	-22.4%	**	-24.3%	**	-1.9%		-4.9%	**	-20.0%	**	-15.1%	**
Some college/AA	-19.2%	**	-13.6%	**	5.6%		-9.0%	**	0.0%		9.0%	
Bachelor's degree	-9.2%	**	-16.2%	**	-7.0%		-4.2%	**	7.0%		11.3%	
Grad degree	-3.2%	**	-17.1%	*	-13.8%		0.2%		3.4%		3.1%	
Age												
18-34	-20.5%	**	-22.6%	**	-2.1%		-5.9%	**	-5.8%		0.1%	
35-49	-12.0%	**	-23.3%	**	-11.3%	*	-4.7%	**	-16.0%	**	-11.3%	*
50-64	-13.4%	**	-13.1%	**	0.3%		-5.6%	**	0.0%		5.6%	

Note: Figures represent percent change in total employed among working-age people (18-64). The notation * is significantly different from zero at p<.05, ** p<.01. See Table A-1 for employment levels by month and disability status.

Table 3. Employment Changes by Occupation in 2020

		January-April percent change						January-December percent change					
	% with disability in Jan.	No disability		Disability		Disability gap		No disability		Disability		Disability gap	
	(1)	(2)		(3)		(4)		(5)		(6)		(7)	
Overall	3.2%	-15.5%	**	-18.9%	**	-3.3%		-5.4%	**	-6.5%	**	-1.1%	
Occupation (ranked by pct. w/disability)													
Building and grounds cleaning and maintenance	5.5%	-18.2%	**	-30.8%	*	-12.6%		-1.0%		-23.0%		-22.0%	
Community and social service	4.3%	-9.0%		-2.1%		6.9%		-1.3%		-29.2%		-28.0%	
Food preparation and serving related	4.1%	-48.5%	**	-53.8%	**	-5.4%		-25.2%	**	-27.5%	*	-2.4%	
Transportation and material moving	3.9%	-20.9%	**	-21.3%		-0.4%		-7.6%	**	-3.6%		4.0%	
Installation, maintenance, and repair	3.9%	-14.3%	**	-3.4%		10.9%		-7.0%		-16.0%		-9.0%	
Production occupations	3.8%	-24.7%	**	-28.2%	*	-3.5%		-3.5%		-19.4%		-15.9%	
Healthcare support occupations	3.7%	-16.2%	**	-15.6%		0.6%		-3.2%		0.7%		3.9%	
Farming, fishing, and forestry	3.7%	-0.3%		-25.1%		-24.7%		-6.7%		-37.7%		-31.0%	
Sales and related occupations	3.6%	-19.9%	**	-35.7%	**	-15.8%		-4.0%		-21.2%	*	-17.2%	
Protective service occupations	3.4%	-10.3%	*	-15.3%		-5.0%		-8.2%		-13.1%		-4.9%	
Personal care and service occupations	3.2%	-44.5%	**	-41.3%	*	3.3%		-21.6%	**	-39.6%	*	-18.0%	
Computer and mathematical science	3.1%	1.1%		-6.5%		-7.6%		-0.4%		-22.3%		-21.9%	
Office and administrative support	3.0%	-11.9%	**	18.3%		30.3%		-1.8%		13.6%		15.4%	
Business and financial operations	2.9%	-6.0%	*	-20.3%		-14.3%		-5.2%		-17.1%		-11.8%	
Arts, design, entertainment, sports	2.8%	-21.9%	**	1.5%		23.4%		-15.6%	**	66.5%		82.1%	
Legal	2.7%	-9.9%		-57.8%	**	-47.9%	*	-3.0%		-78.5%	**	-75.5%	**
Life, physical, and social science	2.7%	0.0%		-36.5%		-36.6%		2.1%		-17.9%		-20.0%	
Construction and extraction	2.7%	-19.5%	**	-20.1%		-0.6%		-6.5%	*	0.8%		7.3%	
Education, training, and library	2.7%	-13.3%	**	-30.1%	*	-16.8%		-3.5%		16.5%		20.0%	
Management occupations	2.3%	-5.2%	**	-3.7%		1.5%		-2.7%		21.4%		24.2%	
Healthcare practitioner and technical	2.2%	-8.2%	**	-10.8%		-2.7%		-1.4%		18.6%		20.0%	
Architecture and engineering	1.8%	-5.8%		-6.2%		-0.4%		-1.6%		-11.4%		-9.8%	

Note: The notation * is significantly different from zero at p<.05, ** p<.01.

Table 4. Employment Changes by Disability Intersected with Gender and Race, 2020

	Employment drop in April			Employment drop plus recovery through December		
Base change for people without disabilities	-8.9%	(0.001)	**	-2.2%	(0.001)	**
Marginal effect of disability	-2.3%	(0.009)	*	-1.6%	(0.007)	*
Base change for white men without disabilities	-6.0%	(0.002)	**	-1.7%	(0.001)	**
Marginal effects relative to white men without disabilities						
Without disability						
Males						
Black non-Latinx	-4.2%	(0.007)	**	-3.1%	(0.006)	**
Latinx	-5.0%	(0.005)	**	-1.6%	(0.004)	**
Other race/ethnicity	-4.3%	(0.007)	**	-0.8%	(0.004)	*
Females						
White non-Latinx	-3.2%	(0.003)	**	0.0%	(0.002)	
Black non-Latinx	-5.3%	(0.007)	**	-2.2%	(0.005)	**
Latinx	-8.7%	(0.006)	**	-1.5%	(0.004)	**
Other race/ethnicity	-5.8%	(0.007)	**	-1.0%	(0.005)	*
With disability						
Males						
White non-Latinx	-1.7%	(0.013)		0.3%	(0.011)	
Black non-Latinx	-7.2%	(0.067)		7.4%	(0.050)	
Latinx	-10.3%	(0.035)	**	-10.5%	(0.035)	**
Other race/ethnicity	-1.6%	(0.056)		-2.8%	(0.053)	
Females						
White non-Latinx	-6.2%	(0.015)	**	-3.4%	(0.011)	**
Black non-Latinx	-11.4%	(0.043)	**	-8.3%	(0.038)	*
Latinx	-10.3%	(0.045)	*	-1.5%	(0.035)	
Other race/ethnicity	-5.4%	(0.050)		-8.3%	(0.048)	
Sample size	568,013					

Note: Figures represent predicted percent change in likelihood of employment relative to the pre-April period, based on logit regression using data for all 12 months of 2020. The notation * is significantly different from zero at p<.05, ** p<.01 (standard errors in parentheses). Both columns are based on coefficients from one logit regression predicting employment using a post-March dummy and post-March linear term. To allow differential drops and recoveries by demographic and job characteristics, both terms were interacted with education (5 categories), age (three categories), marital status (4 categories), occupation (22 categories), industry (13 categories), and full interactions of disability, gender, and race/ethnicity. Sample is limited to those with job currently or in past 12 months, since occupation and industry codes are available only for those workers.

Table 5. Decomposition of Employment Levels, 2020

	Jan-March, 2020 (1)			April-Dec.., 2020 (2)			Change (3)		
Employment levels									
No disability	0.960	(0.001)	**	0.899	(0.001)	**	-0.061	(0.001)	**
Disability	0.901	(0.005)	**	0.823	(0.005)	**	-0.078	(0.007)	**
Difference	0.059	(0.005)	**	0.076	(0.005)	**	0.017	(0.007)	*
Explained									
Total	0.005	(0.001)	**	0.012	(0.001)	**	0.007	(0.001)	**
Occupation	0.001	(0.000)	**	0.005	(0.001)	**	0.003	(0.001)	**
Industry	0.000	(0.000)		0.001	(0.000)	**	0.001	(0.001)	
Education	0.002	(0.000)	**	0.003	(0.000)	**	0.002	(0.000)	**
Other demographics	0.001	(0.000)	**	0.002	(0.001)	**	0.001	(0.001)	
Unexplained	0.054	(0.005)	**	0.064	(0.005)	**	0.010	(0.007)	
Percent of difference explained	8.3%			15.6%			40.8%		
Sample size	154,523			413,490					

Note: Figures represent Oaxaca decomposition of likelihood of employment for those of working age (18-64) who have a job currently or in the past 12 months. Occupation and industry are coded only for those with job currently or in past 12 months. The notation * is significantly different from zero at p<.05, ** p<.01 (standard errors in parentheses). Based on Oaxaca decompositions accounting for gender, race/ethnicity (4 categories), education (5 categories), age (three categories), marital status (4 categories), occupation (22 categories)m and industry (13 categories).

Table 6. Decomposition of Employment Changes for March-April Matched Samples

	2014-2019 combined (1)			2020 (2)			Change (3)		
Employment in April									
No disability	0.967	(0.000)	**	0.840	(0.003)	**	-0.127	(0.003)	**
Disability	0.936	(0.002)	**	0.787	(0.014)	**	-0.149	(0.015)	**
Difference	0.031	(0.002)	**	0.054	(0.015)	**	0.022	(0.015)	
Explained									
Total	0.001	(0.000)	**	0.019	(0.004)	**	0.018	(0.004)	**
Occupation	0.001	(0.000)	**	0.008	(0.002)	**	0.008	(0.002)	**
Industry	0.000	(0.000)		0.002	(0.002)		0.002	(0.002)	
Education	0.001	(0.000)	**	0.007	(0.001)	**	0.007	(0.001)	**
Other demographics	0.000	(0.000)	**	0.002	(0.002)		0.002	(0.002)	
Unexplained	0.030	(0.002)	**	0.034	(0.014)	*	0.004	(0.014)	
Percent of difference explained	3.8%			36.3%			82.0%		
Sample size	229,934			29,949					

Note: Figures represent probability of employment in April among those employed in March. The notation * is significantly different from zero at p<.05, ** p<.01 (standard errors in parentheses). Based on logit Oaxaca decompositions accounting for gender, race/ethnicity (4 categories), education (5 categories), age (three categories), marital status (4 categories), occupation (22 categories), and industry (13 categories).

ENDNOTES

[1] These six categories are based on the following six questions: 1) “Is this person deaf or does he/she have serious difficulty hearing?”; 2) “Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?”; 3) “Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?”; 4) “Does this person have serious difficulty walking or climbing stairs?”; 5) “Does this person have difficulty dressing or bathing?”; 6) “Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor’s office or shopping?”. Respondents may choose more than one category, so the categories are not mutually exclusive.

[2] Appendix tables are available by request from the lead author.