

**UNDERSTANDING THE INCREASED FINANCIAL HARDSHIP EXPERIENCED BY
OLDER ADULTS WITH DISABILITIES DURING THE COVID-19 PANDEMIC**

Zachary A. Morris

BC21-S30722F2

Date submitted: July 2022

Center for Retirement Research at Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467
Tel: 617-552-1762 Fax: 617-552-0191
<https://crr.bc.edu>

The research reported herein was pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement and Disability Research Consortium. The opinions and conclusions expressed are solely those of the author and do not represent the opinions or policy of SSA, any agency of the federal government, Stony Brook University, or Boston College. Neither the United States Government nor any agency thereof, nor any of their employees, make any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply endorsement, recommendation or favoring by the United States Government or any agency thereof.

© 2022, Zachary A. Morris. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Project Number:

BC21-S3

Title:

Understanding the Increased Financial Hardship Experienced by Older Adults with Disabilities During the COVID-19 Pandemic

Authors:

Zachary A. Morris, Stony Brook University

Date:

July 2022

Key Findings and Policy Implications:

The objective of this paper is to analyze why older adults with disabilities experienced greater financial hardship during the COVID-19 pandemic. It is hypothesized that increased household spending during the pandemic due to increased disability-related costs, and not job loss, mediated the relationship between disability and financial insecurity. The paper analyzes data from the for adults ages 51 and older from the U.S. *Health and Retirement Study* (HRS) 2020 survey, which was carried out from March 2020 to May 2021 (N=13,083).

The paper found that:

- Adults with disabilities were significantly more likely to experience financial hardships compared to those without disabilities, net sociodemographic and health controls.
- The report of increased household spending during the pandemic significantly mediated the relationship between disability and financial hardship. Job-loss and income loss had no statistically significant indirect effect.

The policy implications of the findings are:

- More research is needed to understand changes to the costs of disability-related goods and services during the pandemic and their impact on people with disabilities.
- Such research can provide policy makers with key information on potential items to subsidize, compensate for, or provide in future disaster events in order to protect the financial security of people with disabilities.

Introduction

The coronavirus pandemic has caused major social and economic disruptions in addition to its acute health effects and people with disabilities have been identified as disproportionately impacted (Boyle et al., 2020; Kendall et al., 2020; Turk et al., 2020). A systematic review of the impact of COVID-19 on individuals with physical disabilities identified eleven studies documenting how the pandemic affected access to healthcare as well as changes in social habits, mood changes, and decreased levels of physical activity during the pandemic (Lebrasseur et al., 2020). None of these studies, however, examined the economic and financial impact of the pandemic on people with disabilities, including SSD beneficiaries. A recent study by Choi and colleagues (2021), however, draw's on the COVID-19 module of the Health and Retirement Study (HRS) and examines the extent to which older adults with disabilities reported greater material hardships (economic and food insecurity) during the early months of the pandemic. These authors found that those with three or more functional limitations experienced an elevated risk for economic and food insecurity during the pandemic. However, they find that this risk was not accounted for by employment related losses. The authors thus called for future research to “evaluate a full range of potential mediators linking disability to economic and food insecurity,” (Choi, Carr, & Namkung, 2021, 8).

Drawing on nationally representative data of the population ages 51 and older from the U.S. Health and Retirement Study (HRS), including data from the full 2020 wave, this paper aims to fill this gap in the literature as to why people with disabilities experienced acute financial hardships during the COVID-19 pandemic. Understanding the mechanisms increasing financial hardships is critical for informing policy responses that can support the economic security of this population and to prepare for future disasters.

Financial hardship among people with disabilities during the Covid 19 Pandemic

Even before the pandemic, people with disabilities experienced substantial barriers to financial stability (Goodman, O'Day, & Morris, 2017; McGarity & Caplan, 2019). A 2016 study found that adults with disabilities in the US were more than twice as likely than those without disabilities to find it “very difficult” to cover expenses and pay bills, to have past due medical bills, and to be unable to come up with \$2,000 if an unexpected need arose in the next month (Goodman et al., 2017). Sen (2004) puts forth two distinct disadvantages experienced by people with disabilities to explain this increased risk of financial hardship. The first concerns difficulties obtaining suitable earnings from work, which we will refer to as the “income disadvantage.” The second concerns challenges people with disabilities face converting income into desired utilities

as a result of the extra disability-related expenses that people with disabilities must incur. We will refer to this as the “conversion disadvantage.” In the section below, we consider each type of disadvantage as possible explanations for the increased economic hardship experienced by people with disabilities during the pandemic.

The income disadvantage for people with disabilities and the COVID 19 pandemic

People with disabilities experience inequities in the labor market, including lower rates of employment and reduced earnings relative to those without disabilities (Rafal & Houtenville, 2020). The reasons for these labor market inequalities are varied but include difficulty obtaining suitable education for skill development (Government Accountability Office, 2020), disability-based employment discrimination (Friedman, 2020), and the lack of workplace accommodations that makes it difficult for people with disabilities to stay in work (Maestas, Mullen, and Rennane, 2019). People with disabilities may also be precariously employed which makes them particularly vulnerable during periods of economic downturn. Men and women with disabilities have been found to be, respectively, 75 and 89% more likely to experience an involuntary job loss compared to men and women without disabilities (Mitra and Kruse, 2016). And, after the Great Recession of 2008, older adults with disabilities were 30% more likely to experience job loss compared to the general older adult population (Atlandag, Schmidt, and Sevak, 2012). In addition to these labor market disadvantages, people with disabilities who are unable to work and who rely on disability benefits may also struggle to maintain their standard of living (Morris, 2021).

Given these labor market disadvantages experienced by people with disabilities, one could assume that the downturn of the labor market during the pandemic could easily account for any increased risk for financial hardship experienced by people with disabilities during this period. From February to April 2020, when the pandemic was rapidly spreading, the unemployment rate for persons with a disability more than doubled from 7.8% to 18.9%. Yet, that rate of job loss was comparable to those without disabilities which increased from 3.6% to 14.3% (Office of Disability Employment Policy, 2022). Moreover, by the end of 2021 the US Office of Disability Employment Policy reported a stronger recovery for persons with a disability relative to those without disabilities (Office of Disability Employment Policy, 2022).

Thus, while the pandemic negatively impacted the employment of people with disabilities, the degree of impact does not appear to have been worse than for those without disabilities. Moreover, half of all persons with a disability are age 65 and over, which is nearly three times larger than the share for those with no disability (Bureau of Labor and Statistics, 2022). Thus, many people with disabilities are no longer in the labor market and their financial well-being would not likely be impacted by the pandemic’s labor market turmoil. Even among those below the retirement age, a considerable number of those with disabilities, approximately 12 million people, receive Social Security Disability benefits (SSA, 2020). Though those who

receive these benefits may also engage in work, the receipt of these benefits, which remain unchanged during periods of market turmoil, likely protected them from financial hardship during the labor market downturn. Indeed, Choi and colleagues (2021, 3) find that older adults with disabilities, defined as those with three or more functional limitations, were the least likely to report a job loss in the pandemic and the most likely to report not working prior to the pandemic yet were significantly more likely to experience financial insecurity. Given this prior research, we thus hypothesize that people with disabilities will be more likely to report financial insecurities during the pandemic period (Hypothesis 1) but that the report of both declining income and of job loss will not mediate the relationship between disability and financial security (Hypothesis 2).

The conversion disadvantage for people with disabilities and the COVID 19 pandemic

People with disabilities incur numerous expenses that those without disabilities need not incur. These expenses may include assistive technologies (i.e. screen readers, electric wheel chairs, prosthetics, special-purpose computers, communication devices), personal care assistants to help with daily living, and out-of-pocket medical expenses (Mitra, Findley, & Sambamoorthi, 2009); Denny-Brown, O’Day, and McLeod, 2015). Some people with disabilities also spend more on regular goods and services, including for heating and food, as a result of disability-specific needs (Mont & Cote, 2020).

Noting the relevance of these costs on household budgets including persons with disabilities, Sen (2004) argues that to understand the full picture of economic disadvantage experienced by people with disabilities one needs to move beyond the earnings disadvantage to also consider the role of disability-related expenses. Specifically, he notes the ways in which these expenses restrict the ability of people with disabilities to convert income into a desired utility as the person must first cover any disability-related expenses. This results in less disposable income relative to a person without a disability with the same amount of earnings. A recent study estimated, for example, that, as a result of these expenses, adults with work-disabilities in the US, on average, require 29% more income (or an additional \$18,322 a year for a household at the median income level) to obtain the same standard of living as a comparable household without a member with a disability (Morris et al., 2021).

Increased disability-related expenses during the pandemic is another potential explanation for the heightened risk of financial insecurity experienced by people with disabilities during the pandemic. Though the disability-specific basket of goods and services that people with disabilities require likely varies depending on impairment, support needs, and geographical context, there is some evidence that the price of some common disability-related items increased during the pandemic. A recent national survey of home health care providers identified a 12.5% annual increase in the cost of home health aides in 2020 (Genworth, 2022). The survey identified the drivers of this increase as a combination of growing demand along with increased costs of delivering care in the pandemic, including personal protective equipment, safety training, and the management of regulatory compliance (Genworth, 2022).

Stocking up on additional supplies and personal protective equipment may have created an additional cost burden on people with disabilities leading to financial insecurity. During the pandemic, for example, there was a high demand for ventilator parts (Ranney et al., 2020), which led many chronic ventilator users to preemptively purchase needed equipment at elevated costs (Iyengar et al., 2020). People with disabilities likely expended greater than average personal resources on personal protective equipment, also medical supplies, or pharmaceutical drugs to protect themselves during the stay at home orders. Though a full accounting of the added cost burden experienced by people with disabilities has yet to be documented, there is evidence of increased disability-related costs and thus the exacerbation of the conversion disadvantage during the pandemic. Consistent with this evidence, we hypothesize that the report of increased expenses during the pandemic will significantly mediate the relationship between disability and financial insecurity (Hypothesis 3). Consistent with this hypothesis, we further suspect that compared to those with disabilities surveyed in 2018, those with disabilities in 2020 will report greater out-of-pocket medical, long-term care, drug, and hospital costs (Hypothesis 4)

Methods

Data

We draw on the Health and Retirement Study (HRS), which provides a nationally representative sample of adults ages 51 and older in the US. The HRS, which was first introduced in 1998, is sponsored by the National Institute on Aging (NIA U01AG009740), and includes a wealth of information on the health and well-being of older adults in the US. We specifically analyze nationally representative data collected from the HRS 2020 Core (Early, Version 1.0) survey data which was collected from March 2020 to May 2021. For our primary results, we limit the final analytic sample to respondents with no missing observations on any of the variables included in the analysis (N=13,083).

Measures

Financial insecurity

The 2020 COVID Module of the HRS introduced a number of questions relating to the impact of the pandemic on the financial security of households. Specifically respondents were asked to report yes (1) or no (0) on a number of financial hardships, including whether they missing any regular payments on rent or mortgage, missed any regular payments on credit cards or other debt, missed any other regular payments such as utilities, could not pay medical bills, didn't have enough money to buy food, or had trouble buying food even though they had money. All but the last of the hardship questions concerned financial insecurity, while the latter question related to food access. We thus use the first five questions to develop a household financial insecurity

index in which we summed the report of each measure and which ranged from 0, indicating the report of no financial insecurity hardships, to 5, the report of all hardship measures.

Disability

An index of function limitations was developed in accordance with prior research (Choi et al., 2022; Covinsky, et al., 2009; Duchowny & Noppert, 2021; Tucker-Seelye et al., 2009). A series of functional related health questions were asked and responded to with a yes (coded as 1) or no (coded as 0). Specifically, the respondents were asked if they had any difficulty walking several blocks; walking across a room; climbing several stairs; stopping; pushing and pulling large objects; getting up from a chair; picking up a dime; dressing; eating; bathing; and getting in and out of bed. Responses to these functional questions were summed with a range from 0-11. As Choi and colleagues (2021) identified adults with three or more functional limitations as experiencing the highest risk of financial insecurity during the pandemic, we focus the analysis below on this population.

Mediating variables

We analyze the following as potential mediators for the relationship between disability and financial insecurity in accordance with our hypotheses above. As per the analysis of changes to the earnings of people with disabilities, we use a question asking respondents “since the start of the coronavirus pandemic, has your income gone up or down or stayed about the same because of the pandemic?” Those who reported less income were coded as “Reporting lower income.” Respondents were also asked whether their work was affected by the pandemic and, if so, whether they lost their job or were laid off permanently or whether they were furloughed or laid off temporarily. For any respondent reporting that they were laid off permanently or temporarily we generate a variable indicating “Lost job during pandemic.” As per the analysis of changes to spending during the pandemic, we use a question asking respondents, in the context of changes to their financial situation during the pandemic: “Has your household spending gone up or down or stayed about the same?” To indicate those respondents reporting higher household spending, we generate a variable labeled as “Reporting increased spending” which serves as the mediator variable to be used to examine hypothesis 3.

Covariates

In addition to these primary variables of interest, we introduce a variety of sociodemographic and health controls. Specifically, we control for age, years of education, gender of respondent, race/ethnicity, and marital status. In addition, we control for the self-reported health of the respondent from 1 (excellent) to 5 (poor), their number of reported chronic health conditions (including arthritis, cancer, diabetes, heart disease, hypertension, lung disease, psychiatric problems, and stroke (range: 0-8)), the presence of depressive symptoms (CSED score 0-8), and whether they report having had Covid-19.

Self-reported out-of-pocket expenses

To examine hypothesis 4, we look at available information on out-of-pocket expenses in the HRS in two cross-sections of the survey from the 2018 and 2020 waves covering medical and caregiving expenses and food expenses for the household. Specifically, we examine out-of-pocket costs for in-home healthcare, medical expenses, prescription drug costs, hospital costs, other health care costs, and the report of not being able to afford medical care. In addition, we consider whether costs for food delivery, eating out in a typical week, and budget for at home eating changed significantly for households including an adult with a disability from 2018 to 2020.

Statistical Analysis

In the tables below, we conduct the following statistical analyses. We first examine bivariate relationships using t-tests for significance of difference between means. We then use Ordinary Least Squared (OLS) regression for the financial insecurity measure and linear probability models for binary variables of specific financial security measures to examine our first hypothesis that, in accordance with prior research, people with disabilities will be more likely to report financial insecurities during the pandemic period. For the investigation of hypotheses 2 and 3, we apply a formal mediation analysis in accordance with the Barron and Kenny's (1986) approach through use of the *medeff* command in Stata MP (Hicks and Tingley, 2011). The *medeff* command begins with two regressions, both of which are adjusted for covariates. In the first regression, the mediator (i.e. income down, lost job, or increased spending) is the dependent variable and the exposure variable (i.e. those with 3 or more functional limitations) is the independent variable of interest. In the second regression, the outcome variable (i.e. the financial insecurity index) becomes the dependent variable which is regressed on both the exposure and mediator variable. The coefficients from these models are then used within a Monte-Carlo simulation framework to calculate estimates of the indirect effect, the direct effect, the total effect, and the percent of the total effect mediated (see, Hicks and Tingley, 2011). In addition, to examine hypothesis 4, we conduct statistical tests to identify whether the average out-of-pocket expenses reported by those with disabilities changed significantly from 2018 to 2020

Results

We begin with an examination of the bivariate relationships between disability (the report of three or more functional limitations) and those without disabilities. We see in Table 1 that those with disabilities were significantly more likely to report one or more kinds of financial deprivation, were more likely to report increased spending during the pandemic, and less likely to report decreased income and that their work was affected by the pandemic. People with disabilities were also in worse overall health, of older age, less likely to be married, and more likely to be Black, un-married, female, and with less education compared to adults without disabilities.

	No limitations	3+ limitation	
	Mean	Mean	Significance
Missed rent/mortgage payments	3%	5%	***
Missed credit card payments	3%	6%	***
Missed utility payments	3%	7%	***
Missed medical payments	3%	6%	***
Couldn't afford food	4%	9%	***
Reports increased spending during pandemic	11%	18%	***
Reports lower income during pandemic	12%	10%	***
Reports work affected by pandemic	23%	12%	***
Self-reported health	2.57	3.51	***
# of chronic conditions	1.94	3.18	***
Depression (CESD)	1.05	2.46	***
Reported having COVID	2%	3%	NS
Age < 65	44%	35%	***
Age 65 - 74	32%	29%	***
Age > 65	25%	37%	***
Married	60%	44%	***
Hispanic	16%	17%	NS
Black	20%	26%	***
Female	55%	68%	***
Years of education	13.41	12.38	***
Observations	8574	4509	

Note: Unweighted results. Significance determined by t-test for standard of living index and age, and by chi-squared test statistic of no group differences for remaining categorical variables. NS = not significant, + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2 explores the relationship between disability and financial insecurity in a multiple regression framework and identifies that households containing adults with 3 or more disabilities were significantly more likely to experience financial insecurity [$\beta = 0.07$, 95%, CI: .350, .102] compared to those without disabilities, net a wide array of health and sociodemographic controls. Adults with disabilities were significantly more likely to report missed credit card payments [$\beta = .01$, 95%, CI: .001, .021], utility payments [$\beta = 0.02$, 95%, CI: .007, .027], medical payments [$\beta = 0.01$, 95%, CI: .004, .024], and the inability to afford food during the pandemic [$\beta = 0.02$, 95%, CI: .009, .031]. However people with disabilities were not more likely to report missed rent or mortgage payments [$\beta = .01$ 95%, CI: -.002, .015]. These results are consistent with the prior analysis conducted by Choi and colleagues (2021) and support our first hypothesis that people with disabilities experienced disproportionate financial hardship during the pandemic.

Table 2. Association between functional limitation status and financial insecurity, fully adjusted models, OLS regression

	(1)	(2)	(3)	(4)	(5)	(6)
	Financial insecurity index	Missed credit card payments	Missed rent/mortgage payments	Missed utility payments	Missed medical payments	Couldn't afford food
3 + limitations	0.07***	0.01*	0.01	0.02**	0.01**	0.02***
1 or 2 limitations	0.03	0.01	-0.00	0.01	0.01	0.01
Self-reported health	0.02**	0.00	0.00	0.00	0.01***	0.00
# of chronic conditions	0.00	0.00	-0.00	0.00	0.00**	-0.00
Depression	0.03***	0.01***	0.00***	0.01***	0.01***	0.01***
Reported having COVID	0.32***	0.06***	0.05***	0.09***	0.06***	0.06***
Age < 65	0.00	0.00	0.00	0.00	0.00	0.00
Age 65 - 74	-0.16***	-0.03***	-0.03***	-0.04***	-0.02***	-0.03***
Age > 65	-0.23***	-0.05***	-0.04***	-0.06***	-0.04***	-0.04***
Married	-0.03*	-0.01	-0.00	-0.01**	-0.00	-0.00
Hispanic	0.11***	0.02***	0.03***	0.02***	0.01	0.03***
Black	0.15***	0.03***	0.03***	0.05***	0.02***	0.02***
Female	-0.02	-0.00	-0.00	-0.00	0.00	-0.01*
Years of education	0.00	0.00***	0.00	0.00	0.00*	-0.00**
Income quintile	-0.03***	-0.00	-0.00	-0.01***	-0.00	-0.01***
Wealth quintile	-0.05***	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***

Constant	0.34***	0.04**	0.06***	0.06***	0.02*	0.16***
Observations	13083	13083	13083	13083	13083	13083
Adjusted R-squared	0.104	0.047	0.045	0.065	0.041	0.063

Note: + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

We next turn towards an examination of hypothesis 3 in Table 3. Here we see that the report of lower income during the pandemic and the report of losing one's job during the pandemic was not a statistically significant mediator of the relationship between disability and financial insecurity. However, as hypothesized, the report of increased spending during the pandemic did significantly mediate the relationship with 22% of the total effect mediated by the report of increased spending.

Mediator		Indirect effect	Direct effect	Total effect	% of total effect mediated
Report of lower income during pandemic	Mean	-0.008	0.064	0.057	-0.134
	Lower 95% CI	-0.016	0.036	0.028	-0.272
	Upper 95% CI	0.001	0.091	0.085	-0.089
Report of losing job/furloughed during pandemic	Mean	-0.004	0.061	0.057	-0.076
	Lower 95% CI	-0.009	0.032	0.028	-0.156
	Upper 95% CI	0.000	0.088	0.085	-0.051
Report increased spending during pandemic	Mean	0.013	0.044	0.057	0.220
	Lower 95% CI	0.007	0.016	0.028	0.147
	Upper 95% CI	0.018	0.071	0.085	0.442

Note: Analysis conducted using *medeff* program in STATA using two regression models in accordance with traditional Baron and Kenny (1986) mediation approach.

To try to understand which expenses increased during the pandemic for people with disabilities, we examined the available questions on out-of-pocket medical and food expenses available in the HRS. Here we examine two cross-sectional samples from the 2018 and 2020 HRS waves and examine if people with disabilities reported greater expenses in 2020 relative to 2018. These results are presented in Table 4. Compared to people with disabilities in 2018, people with disabilities in 2020 reported spending more on food delivery, more on their food budget at home, and were more likely to report out-of-pocket-costs for prescriptions. The share of respondents with disabilities reporting of out of pocket medical expenses, however, declined from 2018 to 2020, though the amount of costs reported did not change significantly. Interestingly, fewer respondents with disabilities reported not being able to afford medical care in 2020 relative to people with disabilities in 2018. The report of out of pocket costs for other medical items also declined. Moreover, there was no significant change identified in the report of paying out-of-pocket for in-home care and in the amount paid out-of-pocket for in-home care for those who used home healthcare. Similarly, there was no significant difference in the amount paid for prescriptions per month, the report of hospital costs and the amount of out-of-pocket expenses reported for hospital costs, and the report of out of pocket costs for special facilities or services.

	2018	2020	Difference (2020 - 2018)	Significance
Reports paying out-of-pocket for in home healthcare	1.66%	1.28%	-0.38%	NS
About how much did you pay out-of-pocket for in-home medical care in last two years?	\$ 3,842	\$ 1,623	\$ (2,219.00)	NS
Report out of pocket medical	17.91%	14.69%	-3.22%	***
Out of pocket medical costs reported	\$ 1,072.00	\$ 1,085.00	\$ 13.00	NS
Reports out of-pocket-costs for prescriptions	50.02%	55.24%	5.22%	***
Average amount paid out-of-pocket per month for prescriptions	78.35	94.1	\$ 15.75	NS
Had hospital costs	11.53%	10.51%	1.02%	NS
Out of pocket hospital costs	2294	4917	\$ 2,623.00	NS
Out of pocket costs for other medications,	18.07%	14.69%	3.38%	***

special food, equipment such as a special bed or chair, visits by health professionals, or other costs				
Out of pocket costs for use of any special facility or service which we haven't talked about, such as: an adult care center, a social worker, an outpatient rehabilitation program, physical therapy, or transportation for the elderly or disabled	7.91%	6.83%	-1.08%	NS
Reports not being able to afford medical care	13%	9.45%	-3.55%	***
Reports spending food on delivery	5%	7.47%	2.94%	***
Amount spent on food delivery week	\$ 33.00	\$ 49.00	\$ 16.00	***
Reports eating out in a typical week	51.86%	50.64%		NS
Amount spent eating out per week	\$49	\$48	\$ (1.00)	NS
Amount spent on food budget at home	\$97	\$107	\$ 10.00	***
Number of respondents with 3 or more limitations	3,199	3,588		
Number of total respondents age 51+	11,840	10,144		

Note: Authors calculations of 2018 and 2020 HRS waves. Significance determined by t-test for standard of living index and age, and by chi-squared test statistic of no group differences for remaining categorical variables. NS = not significant, + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

Prior research has indicated that people with disabilities experienced greater rates of financial insecurity during the COVID-19 pandemic. Drawing on data from the HRS, this paper,

incorporating a larger sample and longer time span than prior research, confirmed that households including those with people with disabilities did experience a higher risk of financial deprivation relative to adults without disabilities during the pandemic period, when controlling for numerous health and sociodemographic factors.

The paper further attempts, however, to understand the mechanisms behind this disparity. It argues that the economic disadvantages experienced by people with disabilities can be grouped into two categories, which can serve as a framework for evaluating disparities experienced during the pandemic. The first category, what we refer to as the “income disadvantage”, incorporates the financial challenges experienced by people with disabilities that result from systemic educational and labor market disadvantages. These disadvantages result in lower earnings on average for people with disabilities leading to greater risk of financial insecurity.

The income disadvantage represents one potential mechanism for the financial inequities experienced during the pandemic for people with disabilities. For example, it is feasible that the economic downturn of the labor market that occurred in the early stages of the pandemic, which resulted in wide scale job loss, disproportionately impacted people with disabilities, thus increasing their financial insecurity. However, as we hypothesized, the report of less income or of work being affected as a result of the pandemic did not significantly mediate the relationship between disability and financial insecurity. We suspected this to be the case as far fewer people with disabilities were in the labor market, either because of age or, if of working age, as a result of receiving disability benefits, which provides a degree of financial immunity to labor market turmoil.

Yet, the income disadvantage is not the only mechanism weighing against the financial security of people with disabilities. Compared to those without disabilities, people with disabilities also incur numerous and varied disability-related expenses that are required to perform their work, complete their daily activities, and engage on an equal basis in society (Morris et al., 2021). Moreover, there was some evidence to suggest of growing costs for disability-related goods and services during the pandemic. We thus hypothesized that the report of increased expenses during the pandemic would significantly mediate the relationship between disability and financial insecurity. In applying a formal mediation analyses, this hypothesis was supported as we identified the report of increased spending during the pandemic as a statistically significant mediator of the relationship between disability and financial insecurity. This result suggests that increasing were a major driver of the financial hardships experienced by people with disabilities during the pandemic.

We further drew on the relatively limited number of questions relating to expenses that were available in the HRS to explore the kinds of costs that increased during the pandemic. More respondents with disabilities reported of out-of-pocket costs for prescription drugs during the pandemic and more reported expenses on food delivery and budgets, as would be expected during a pandemic that generated stay at home orders. While we did not observe reported increases in in-home health care costs, we advise caution in interpreting this result given the small sample. With less than 2% of the respondents with disabilities (N=46) in 2020 reporting the use of in-home health care, this is unlikely to be representative of the national population of in-home health care users. Moreover, we also identified fewer respondents with disabilities

reporting out-of-pocket medical expenses and a greater share reporting the ability to afford medical expenses in the pandemic. This may be explained by the hesitancy to seek medical care during the pandemic as a result of fear of contacting the COVID 19 virus, which would result in less medical expense.

Conclusion

The objective of this paper was to analyze why older adults with disabilities experienced increased financial hardships during the COVID-19 pandemic. We hypothesized that increased household spending during the pandemic, and not job loss, would mediate the relationship between disability and financial insecurity as a result of increased disability-related costs. The results of the analysis supported this hypothesis as they indicated that people with disabilities were more likely to report increased expenses during the pandemic and that the report of increased expenses significantly mediated the relationship between disability and financial insecurity. Future research could investigate in more depth the kinds of disability-related costs that may have increased during the pandemic, including analysis of more specific questions on personal protective equipment, disability-related goods and services, as well as incorporating a larger sample of households using in-home health aids. Such research can provide policy makers with key information on potential items to subsidize, compensate for, or provide in future disaster events in order to protect the financial security of people with disabilities.

References

- Altindag, O., Schmidt, L., & Sevak, P. (2012). The great recession, older workers with disabilities, and implications for retirement security. *Michigan Retirement Research Center Research Paper*, (2012-277).
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical consideration. *Journal of Personality & Social Psychology*, 51, 1173-1182.
- Boyle, C. A., Fox, M. H., Havercamp, S. M., & Zubler, J. (2020). The public health response to the COVID-19 pandemic for people with disabilities. *Disability and Health Journal*, 13(3), 100943.
- Bureau of Labor and Statistics (2022). *Persons with a disability: Labor force characteristics – 2021*. United States Department of Labor.
- Choi, S. L., Carr, D., & Namkung, E. H. (2021). Physical disability and older adults' perceived food and economic insecurity during the COVID-19 pandemic. *J Gerontol B Psychol Sci Soc Sci*, 76, e249-55.
- Covinsky, K. E., Lindquist, K., Dunlop, D. D., & Yelin, E. (2009). Pain, functional limitations, and aging. *Journal of the American Geriatrics Society*, 57(9), 1556-1561.
of the American Geriatrics Society, 57(9), 1556–1561.
- Denny-Brown, N., O'Day, B., & McLeod, S. (2015). Staying employed: Services and supports for workers with disabilities. *Journal of Disability Policy Studies*, 26(2), 124-131.
- Duchowny, K. A., & Noppert, G. A. (2021). The Association Between Cytomegalovirus and Disability by Race/Ethnicity and Sex: Results From the Health and Retirement Study. *American Journal of Epidemiology*, 190(11), 2314-2322.
- Friedman, C. (2020). The relationship between disability prejudice and disability employment rates. *Work*, 65(3), 591-598.
- Genworth (February 16, 2022). Genworth's 2021 Cost of Care Survey: Long-Term Care Costs Increase Due to Labor Market Shifts and Costs Associated with Continued COVID-19 Response. Retrieved October 19, 2020 from <https://genworth2014.q4web.com/investors/news-releases/archive/archive/2022/Genworths-2021-Cost-of-Care-Survey-Long-Term-Care-Costs-Increase-Due-to-Labor-Market-Shifts-and-Costs-Associated-with-Continued-COVID-19-Response/default.aspx>
- Goodman, N., O'Day, B., & Morris, M. (2017). *Financial capability of adults with disabilities*. Findings from the National Financial Capability Study. Retrieved June 9, 2022 from

<https://www.nationaldisabilityinstitute.org/wp-content/uploads/2019/01/ndi-finra-report-2017.pdf>

- Hicks, R., & Tingley, D. (2011). Causal mediation analysis. *The Stata Journal*, 11(4), 605-619.
- Iyengar, K., Bahl, S., Vaishya, R., & Vaish, A. (2020). Challenges and solutions in meeting up the urgent requirement of ventilators for COVID-19 patients. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(4), 499-501.
- Kendall, E., Ehrlich, C., Chapman, K., Shirota, C., Allen, G., Gall, A., ... & Palipana, D. (2020). Immediate and long-term implications of the COVID-19 pandemic for people with disabilities. *American Journal of Public Health*, 110(12), 1774-1779.
- Lebrasseur, A., Fortin-Bédard, N., Lettre, J., Bussièrès, E. L., Best, K., Boucher, N., ... & Routhier, F. (2020). Impact of COVID-19 on people with physical disabilities: A rapid review. *Disability and Health Journal*, 101014.
- Maestas, N., Mullen, K. J., & Rennane, S. (2019). Unmet need for workplace accommodation. *Journal of Policy Analysis and Management*, 38(4), 1004-1027.
- McGarity, S. V., & Caplan, M. A. (2019). Living outside the financial mainstream: Alternative financial service use among people with disabilities. *Journal of Poverty*, 23(4), 317-335.
<https://doi.org/10.1080/10875549.2018.1555731>
- Mitra, S., Findley, P. A., & Sambamoorthi, U. (2009). Health care expenditures of living with a disability: total expenditures, out-of-pocket expenses, and burden, 1996 to 2004. *Archives of physical medicine and rehabilitation*, 90(9), 1532-1540.
- Mitra, S., & Kruse, D. (2016). Are workers with disabilities more likely to be displaced?. *The International Journal of Human Resource Management*, 27(14), 1550-1579.
- Mont, D. & Cote, A. (2020). *Considering the disability related extra costs in social protection* (CIP working paper). Center for Inclusive Policy. Retrieved June 9, 2022 from <https://www.social-protection.org/gimi/RessourcePDF.action?id=56925>
- Morris, Z. A. (2021). Making ends meet on disability benefits: How well do programs decommodify?. *Alter*, 15(1), 15-28.
- Morris, Z. A., McGarity, S. V., Goodman, N., & Zaidi, A. (2020). The Extra Costs Associated With Living With a Disability in the United States. *Journal of Disability Policy Studies*.
- Nowicki, J. M. (2020). K-12 Education: School Districts Need Better Information to Help Improve Access for People with Disabilities. Report to Congressional Requesters. GAO-20-448. *US Government Accountability Office*.

Office of Disability Employment Policy (2022). *Employment of Persons with a Disability: Analysis of Trends during the COVID19 Pandemic*. United States Department of Labor.

Paul, S., Rafal, M., & Houtenville, A. (2020). *Annual Disability Statistics Compendium: 2020*. Durham, NH: University of New Hampshire, Institute on Disability.

Ranney, M. L., Griffeth, V., & Jha, A. K. (2020). Critical supply shortages—the need for ventilators and personal protective equipment during the Covid-19 pandemic. *New England Journal of Medicine*, 382(18), e41. <https://doi.org/10.1056/NEJMp2006141>

Sen, A. (2004). *Disability and justice*. Disability and Inclusive Development Conference. The World Bank.

Tucker-Seeley, R. D., Li, Y., Subramanian, S. V., & Sorensen, G. (2009). Financial hardship and mortality among older adults using the 1996–2004 Health and Retirement Study. *Annals of Epidemiology*, 19(12), 850-857.

Turk, M. A., Landes, S. D., Formica, M. K., & Goss, K. D. (2020). Intellectual and developmental disability and COVID-19 case-fatality trends: TriNetX analysis. *Disability and Health Journal*, 13(3), 100942.