

# Role of SSA Disability Programs in the COVID Pandemic: SSDI/SSI and Poverty



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# Overview

- Key findings
- Background
- Research questions
- Data source
- Identification strategy
- Summary statistics
- Regression results
- Discussion/Conclusion

# Key Findings

- SSA disability programs provide significant financial protection during the pandemic.
  - For all households: 4.8 %p reduction in probability of being in poverty (15.6% to 10.8%)
  - Two-headed households with female householders: 11.9%p (24.2% to 22.3%)
- Poverty rates are high in female householders.
  - 1 in 5 female householders are living in poverty even with the SSA disability benefits.

# Background

- SSA disability income (SSDI/SSI) is a main driver of poverty reduction in people with disabilities (PWD) (Meyer and Wu, 2018).
- PWD are more likely to be poor than people without disabilities (Batavia and Beaulaurier 2001; She and Livermore 2007; R. Burkhauser, Rovba, and Weathers 2009; Huang, Guo, and Kim 2010; Cooper, O'Hara, and Zovistoski 2011; Brault 2012).
  - 19% of SSDI beneficiaries, 25% SSI recipients, and 3% concurrent SSDI/SSI beneficiaries (Brucker et al. 2015).

# Background (Cont'd)

- Economic shocks and PWD
  - PWD did not recover their income levels from the 1992 recession (Burkhauser et al. 2001).
  - A decline in employment rate for PWD after the 2008 recession (Livermore and Honeycutt 2015).
  - A quicker recovery in the employment rate of PWD after the COVID-19 pandemic (Ne'eman and Maestas 2022).

# Background (Cont'd)

- The Covid-19 pandemic has disproportionate effects on racial and ethnic minority groups and women in health and socioeconomic **outcomes** (Alon et al. 2020; Gaynor and Wilson 2020; Tai et al. 2021).
- More detrimental to PWD due to greater healthcare needs and personal and **environmental barriers** (Lund et al. 2020; Ned et al. 2020; Sutton 2020; Chakraborty 2021).

# Research Questions

- How do SSA disability programs (SSDI/SSI) provide financial protection against poverty during the COVID-19 pandemic?
- Are the protection effects different for marginalized groups by race/ethnicity and gender?



# Data Source

- 2019-2020 longitudinal panel of the Current Population Survey (CPS) – Annual Social and Economic Supplement (ASEC)
- Longitudinal data extracted from the IPUM CPS website with 84,174 observations (Flood et al. 2022).

# Identification Strategy

- Fixed effects linear regression model

$$\begin{aligned} &Poverty_{it} \\ &= \alpha + \beta_1 DisIncRatio_{it} + \beta_2 Pandemic_t + \beta_3 DisIncRatio * Pandemic_{it} \\ &+ \beta_4 X_{it} + \mu_i + \varepsilon_j + \gamma_{it} \end{aligned}$$

- $Poverty_{it}$ : 1 if household  $i$  is in poverty at time  $t$ ; 0 otherwise
- $DisIncRatio_{it}$ : Ratio of SSDI/SSI disability income in the total family income
- $Pandemic_t$ : Pandemic year effects. A dummy for year 2020.
- $X_{it}$ : a vector of household  $i$ 's socioeconomic status (e.g., family size, household with children under age 18, householder's age, education, and employment, etc.)
- $\mu_i$ : household fixed effects
- $\varepsilon_j$ : state fixed effects
- $\gamma_{it}$ : idiosyncratic error

# Identification Strategy (Cont'd)

- Subsamples by family structure and householder characteristics
  - Two-headed households with non-Hispanic Black householders
  - Two-headed households with female householders
  - Single-headed households with non-Hispanic Black householders
  - Single-headed households with female householders

# Summary Statistics

- Households with working-age adult householders ages between 18 and 64: 49,059 individual-year observations.
- 47% female, 69% non-Hispanic white, 62% less than bachelor's degree, 75% currently working, 21% any disability, and 8% in Official Poverty Measure (OPM) poverty.

# Regression Results – Panel A

Table 1: Comparison of Marginal Effects of Disability Income Pre- and Post-Pandemic

Subgroup	Pre-Pandemic* Disability Income Ratio	Pandemic* Disability Income Ratio	Difference
<b>Panel A: All households</b>			
All households (n=48,347)	0.156*** (0.029)	0.108*** (0.03)	-0.048** (0.023)

\*\*\* p<.01, \*\* p<.05, \* p<.1

Source: CPS ASEC 2019-2020 Panel

# Regression Results – Panel B

Subgroup	Pre-Pandemic* Disability Income Ratio	Pandemic* Disability Income Ratio	Difference
<b>Panel B: Two-headed households</b>			
Non-Hispanic Black householders (n=2,075)	0.41*** (0.11)	0.28** (0.012)	-0.125 (0.124)
Female householders (n=14,360)	0.342*** (0.059)	0.223*** (0.06)	-0.119** (0.057)

\*\*\* p<.01, \*\* p<.05, \* p<.1

Source: CPS ASEC 2019-2020 Panel

# Regression Results – Panel C

Subgroup	Pre-Pandemic* Disability Income Ratio	Pandemic* Disability Income Ratio	Difference
<b>Panel C: Single-headed households</b>			
Non-Hispanic Black householders (n=2,112)	-0.007 (0.093)	0.018 (0.083)	0.025 (0.048)
Female householders (n=7,239)	0.051 (0.055)	0.021 (0.055)	-0.03 (0.039)

\*\*\* p<.01, \*\* p<.05, \* p<.1

Source: CPS ASEC 2019-2020 Panel

# Discussion/Conclusion

- Overall protection effects from SSA disability income exists.
  - 4.8%p reduction in all households.
- Single-headed households do not see significant impacts.
  - Cross-program participation (Houtenville and Brucker 2014).
  - More likely to be in poverty than other minority groups (Brucker 2020).
- Only 26% of PWD in the US receive SSDI/SSI disability benefits (Houtenville et al. 2023; SSA 2022).





Q&A

**THANK YOU!**



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# APPENDIX



## Appendix I: Demographic Characteristics by Family Structure

Demographic Characteristics	Family Structure				Total	
	Two-headed		Single-headed		n	%
	n	%	n	%		
<b>Sex</b>						
Female	14,947	41.80%	7,586	58.20%	22,533	46.20%
Male	20,837	58.20%	5,451	41.80%	26,288	53.80%
<b>Race/ethnicity</b>						
Non-Hispanic White	25,764	72.00%	7,880	60.40%	33,644	68.90%
Non-Hispanic Black	2,247	6.30%	2,208	16.90%	4,455	9.10%
Non-Hispanic Other	3,032	8.50%	1,022	7.80%	4,054	8.30%
Hispanic	4,741	13.20%	1,927	14.80%	6,668	13.70%
<b>Education</b>						
Less than bachelor's	21,042	58.80%	8,949	68.60%	29,991	61.40%
Bachelor's or more	14,742	41.20%	4,088	31.40%	18,830	38.60%
<b>Work status</b>						
Not working	8,415	23.50%	4,173	32.00%	12,588	25.80%
Working	27,385	76.50%	8,878	68.00%	36,263	74.20%

## Appendix I: Demographic Characteristics by Family Structure Continued

Demographic Characteristics	Family Structure				Total	
	Two-headed		Single-headed		n	%
	n	%	n	%		
<b>Disability status</b>						
No disability	28,546	79.70%	10,136	77.70%	38,682	79.20%
Any disability	7,254	20.30%	2,915	22.30%	10,169	20.80%
<b>OPM Poverty</b>						
Above poverty	33,901	94.70%	10,905	83.60%	44,978	91.70%
Below poverty	1,899	5.30%	2,146	16.40%	4,081	8.30%
<b>Household with children under 18</b>						
No children	20,798	58.10%	11,054	84.70%	31,852	65.20%
Children	15,002	41.90%	1,997	15.30%	16,999	34.80%
<b>Age</b>	47.8	-12	47.2	-15.4	47.7	-13
<b>Family size</b>	3.4	-1.5	2.1	-1.4	3.1	-1.6

Age and family size report mean values. Standard deviations in parenthesis.

Sex, age, race/ethnicity, education, and work status are householder demographics, while poverty status, children, disability status, and family size are household characteristics.

## Appendix II: Fixed Effects Regression Results on Probability of being in Poverty by Family Structure

Variable	(1) All Households	Two-headed		Single-headed	
		(2) NH Black Householders	(3) Female Householders	(4) NH Black Householders	(5) Female Householders
<b>Disability income ratio</b>	0.156*** (0.029)	0.406*** (0.111)	0.342*** (0.059)	-0.007 (0.093)	0.051 (0.055)
<b>Pandemic (2020)</b>	-0.003 (0.002)	0.021** (0.009)	0.003 (0.004)	-0.02 (0.017)	0.002 (0.008)
<b>Pandemic* Disability income ratio</b>	-0.048** (0.023)	-0.125 (0.124)	-0.119** (0.057)	0.025 (0.048)	-0.03 (0.039)
<b>N</b>	48,347	2,075	14,360	2,112	7,239

\*\*\* p<.01, \*\* p<.05, \* p<.1

Source: CPS ASEC 2019-2020 Panel

Reference categories for the family employment are two full time workers and one full time worker in two-headed and single-headed households respectively.

# Appendix III: Marginal Effects on Poverty by Family Structure and Householder Characteristics

Subgroups	Pandemic	Disability Income Ratio	Pandemic* Disability Income Ratio
<b>Panel A: All households</b>			
All (n=48,347)	-0.005** (0.002)	0.13*** (0.027)	0.108*** (0.03)
<b>Panel B: Two-headed households</b>			
Non-Hispanic Black householders (n=2,075)	0.016 (0.01)	0.34*** (0.01)	0.28** (0.012)
Female householders (n=14,360)	0.0002 (0.004)	0.279*** (0.053)	0.223*** (0.06)
<b>Panel C: Single-headed households</b>			
Non-Hispanic Black householders (n=2,112)	-0.017 (0.016)	0.006 (0.084)	0.018 (0.083)
Female householders (n=7,239)	-0.001 (0.008)	0.035 (0.051)	0.021 (0.055)

\*\*\* p<.01, \*\* p<.05, \* p<.1

Source: CPS ASEC 2019-2020 Panel