Mizzou
University of Missouri

CJARS Criminal Justice Administrative Records System

Measuring Child Exposure to the U.S. Justice System: Evidence from Longitudinal Links between Survey and Administrative Data

Keith Finlay[1] Michael Mueller-Smith[2] Brittany Street[3]

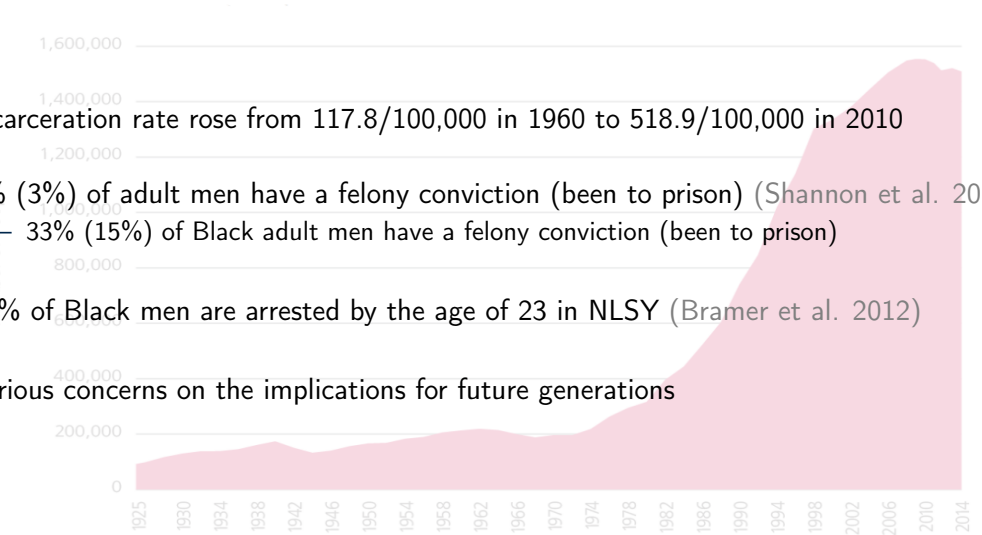
[1]U.S. Census Bureau [2]University of Michigan [3]University of Missouri

Spring 2022

Disclaimer

- Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau. While this work was not subject to formal Census Bureau content review, Census staff reviewed all statistical output to ensure that no confidential information was disclosed.
- This presentation meets all of the U.S. Census Bureau's Disclosure Review Board (DRB) standards and has been assigned DRB approval numbers CBDRB-FY22-ERD002-001 and CBDRB-FY22-ERD002-003 (approved 11/3/2021 and 02/15/2022)

Motivation



- Incarceration rate rose from 117.8/100,000 in 1960 to 518.9/100,000 in 2010
- 8% (3%) of adult men have a felony conviction (been to prison) (Shannon et al. 2017)
  - 33% (15%) of Black adult men have a felony conviction (been to prison)
- 49% of Black men are arrested by the age of 23 in NLSY (Bramer et al. 2012)
- Serious concerns on the implications for future generations

Prior efforts to quantify intergenerational exposure

Mumola (2002), Glaze and Maruschak (2008):

- 2.1% (2.3%) of minor children in U.S. had a parent in state/federal prison in 1999 (2007)
- Source: Survey of Inmates in State and Federal Correctional Facilities

Wildeman (2009):

- 3.6%–4.2% White children born in 1990 with parent incarcerated by age 14
- 25.1%–28.4% Black children born in 1990 with parent incarcerated by age 14
- Source: Survey of Inmates, NCRP, NPS, Natality Files
- Life Table methodology used to generate cumulative measures

In this paper, we do the following:

- Integrate over a terabyte of administrative and survey data:
  - 1040 tax filings (1968-2019), household survey data (2000/2010 Decennial, 2005-2019 ACS), caseload information (IHS, Medicaid, HUD), Social Security registration information (1999-2019), and longitudinal criminal history information (CJARS $\rightarrow \sim$ 50% of US pop.)
- Create longitudinal residential and relationship crosswalks for the entire US population
- Link children to adults in their home through constructed crosswalks and observe CJ events through CJARS, addressing three major shortcomings in the literature:
  1. Incorporate broader definitions of justice involvement beyond incarceration
  2. Generate cumulative exposure estimates to account for documented scarring effects of criminal records/sanctions
  3. Broaden definitions of intergenerational exposure to reflect non-traditional family structures
- Measure correlations of child wellbeing with range of intergenerational exposures to test for evidence of diminishing harms hypothesis

In this paper, we do the following:

- Integrate over a terabyte of administrative and survey data:
  - 1040 tax filings (1968-2019), household survey data (2000/2010 Decennial, 2005-2019 ACS), caseload information (IHS, Medicaid, HUD), Social Security registration information (1999-2019), and longitudinal criminal history information (CJARS $\rightarrow \sim$ 50% of US pop.)
- Create longitudinal residential and relationship crosswalks for the entire US population
- Link children to adults in their home through constructed crosswalks and observe CJ events through CJARS, addressing three major shortcomings in the literature:
  1. Incorporate broader definitions of justice involvement beyond incarceration
  2. Generate cumulative exposure estimates to account for documented scarring effects of criminal records/sanctions
  3. Broaden definitions of intergenerational exposure to reflect non-traditional family structures
- Measure correlations of child wellbeing with range of intergenerational exposures to test for evidence of diminishing harms hypothesis

In this paper, we do the following:

- Integrate over a terabyte of administrative and survey data:
  - 1040 tax filings (1968-2019), household survey data (2000/2010 Decennial, 2005-2019 ACS), caseload information (IHS, Medicaid, HUD), Social Security registration information (1999-2019), and longitudinal criminal history information (CJARS $\rightarrow \sim$ 50% of US pop.)
- Create longitudinal residential and relationship crosswalks for the entire US population
- Link children to adults in their home through constructed crosswalks and observe CJ events through CJARS, addressing three major shortcomings in the literature:
  1. Incorporate broader definitions of justice involvement beyond incarceration
  2. Generate cumulative exposure estimates to account for documented scarring effects of criminal records/sanctions
  3. Broaden definitions of intergenerational exposure to reflect non-traditional family structures
- Measure correlations of child wellbeing with range of intergenerational exposures to test for evidence of diminishing harms hypothesis

In this paper, we do the following:

- Integrate over a terabyte of administrative and survey data:
  - 1040 tax filings (1968-2019), household survey data (2000/2010 Decennial, 2005-2019 ACS), caseload information (IHS, Medicaid, HUD), Social Security registration information (1999-2019), and longitudinal criminal history information (CJARS $\rightarrow \sim$ 50% of US pop.)
- Create longitudinal residential and relationship crosswalks for the entire US population
- Link children to adults in their home through constructed crosswalks and observe CJ events through CJARS, addressing three major shortcomings in the literature:
  1. Incorporate broader definitions of justice involvement beyond incarceration
  2. Generate cumulative exposure estimates to account for documented scarring effects of criminal records/sanctions
  3. Broaden definitions of intergenerational exposure to reflect non-traditional family structures
- Measure correlations of child wellbeing with range of intergenerational exposures to test for evidence of diminishing harms hypothesis

Data Sources

1) Criminal Justice Administrative Records System (CJARS)

- Event-level criminal justice data with nationwide scope
- Tracking across key milestones in the justice system
- Capacity to link with individual-level survey and administrative data at the U.S. Census Bureau

2) Residency inputs:

- Decennial Census
- IRS 1040 tax forms
- American Community Survey (ACS)
- Public and Indian Housing (PIC), HUD
- Tenant Rental Assist. Cert. Sys. (TRACS)
- Centers for Medicaid & Medicare Serv. (CMS)
- Indian Health Services (IHS)
- MAF-ARF

3) Relations inputs:

- Residency crosswalk
- Decennial Census
- IRS 1040 tax forms
- American Community Survey (ACS)
- HUD, Longitudinal (PIC/TRACS)

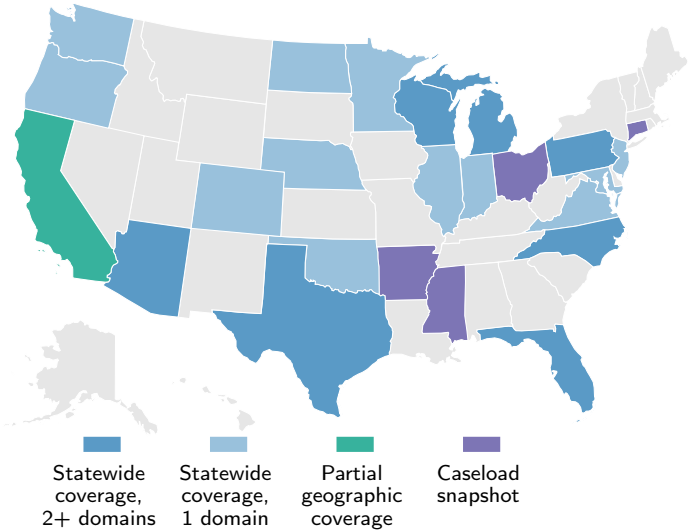
coverage

logic rules

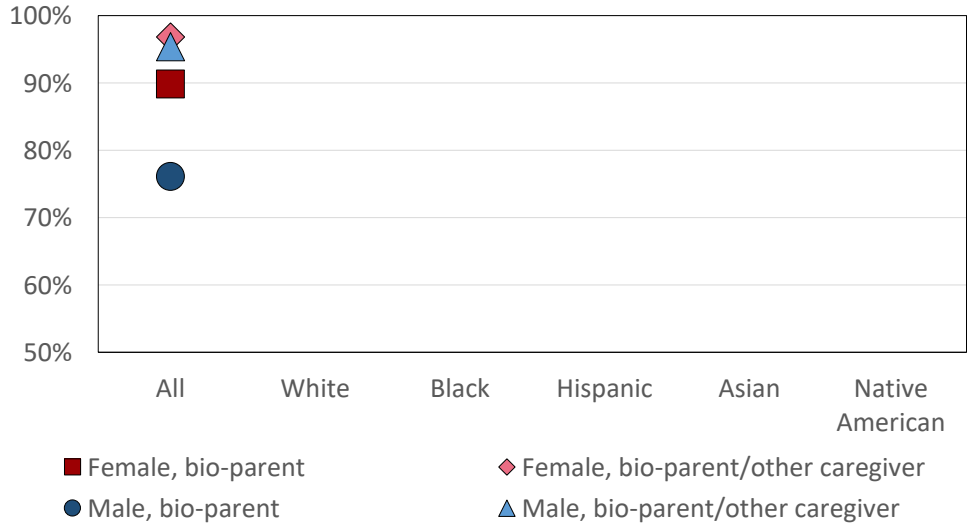
Consider 1999-2005 birth cohorts in CJARS covered states at the population level.

CJARS data coverage

- 175m CJ events
- CJ exposures are: criminal charge, felony charge, felony conviction, prison
- Charge/conviction exposure: AZ, FL, MD, MI, NJ, NC, ND, OR, TX, WI (∼29% of U.S.)
- Prison exposure: AZ, FL, MI, NE, NC, PA, TX, WA, WI (∼30% of U.S.)

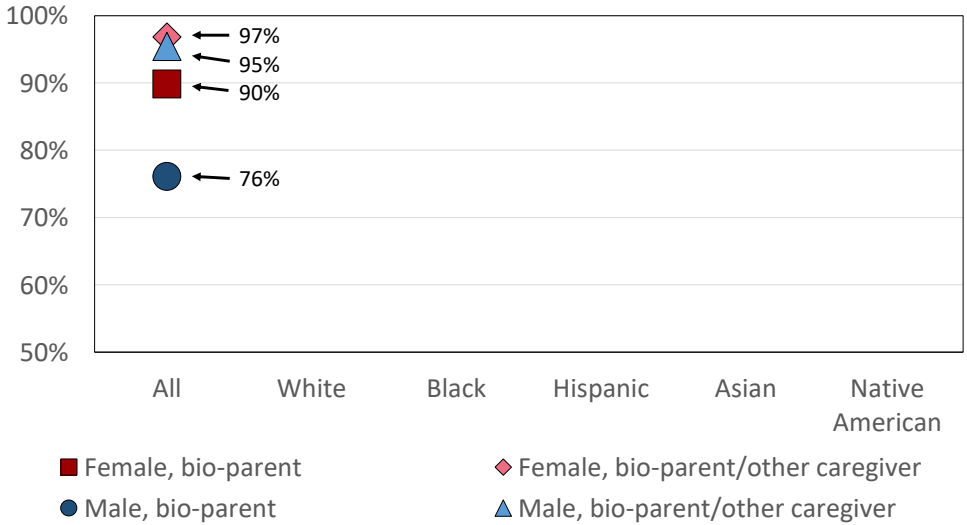


Intergenerational links identified by crosswalks



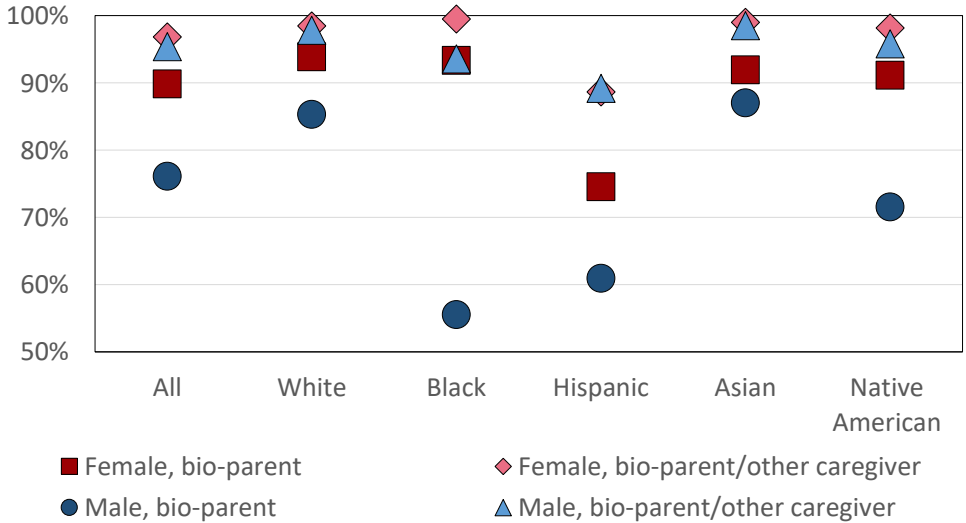
All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Intergenerational links identified by crosswalks



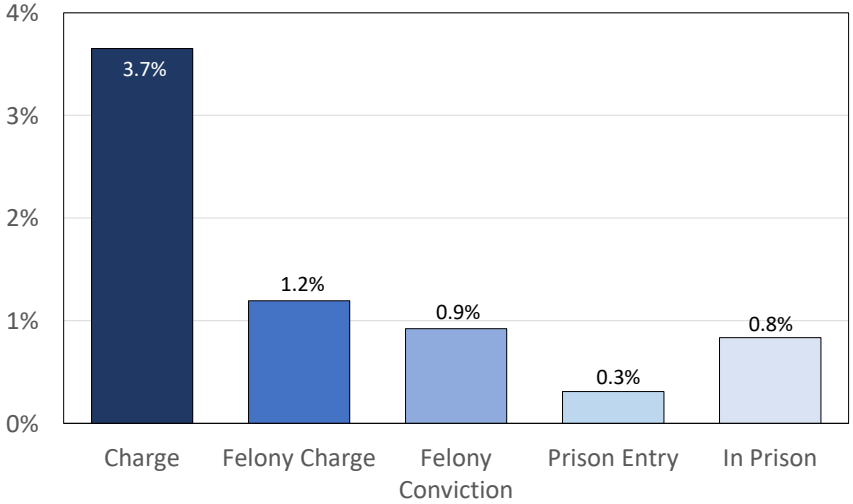
All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Intergenerational links identified by crosswalks



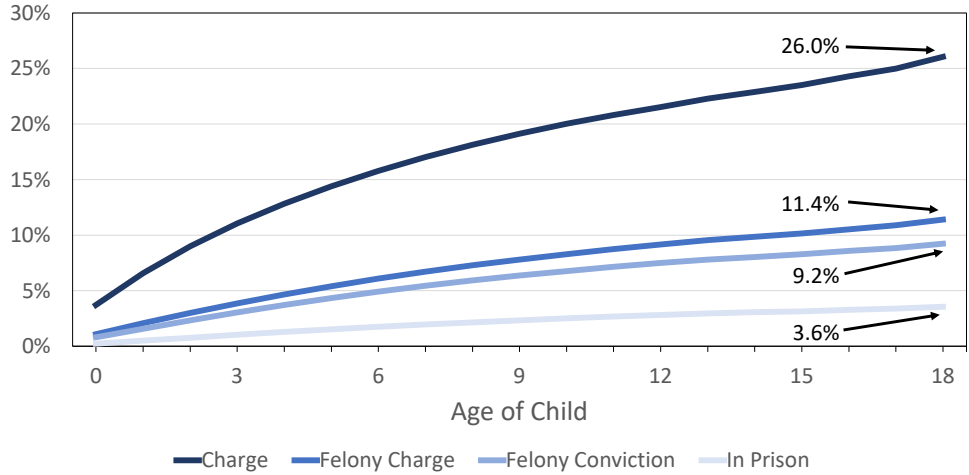
All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Contemporaneous bio-parent exposure estimates



All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Cumulative bio-parent exposure estimates

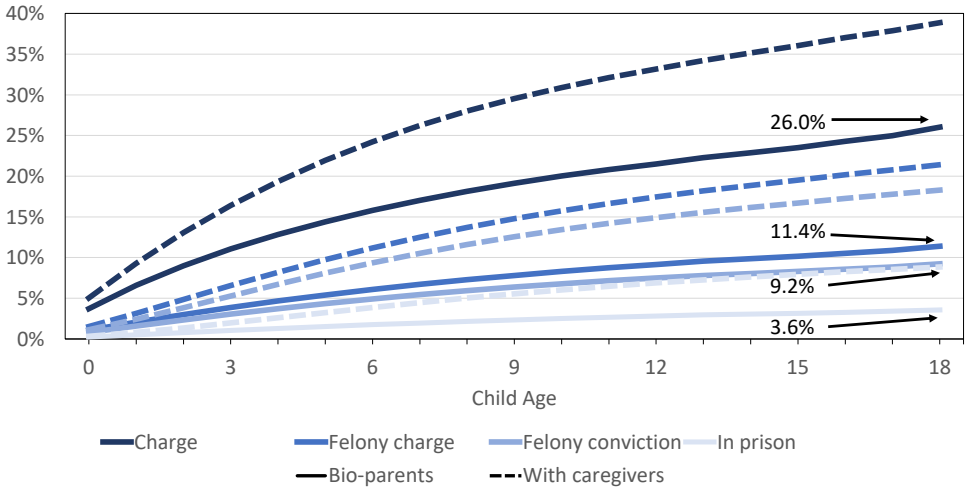


All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Adding other caregivers as sources of exposure

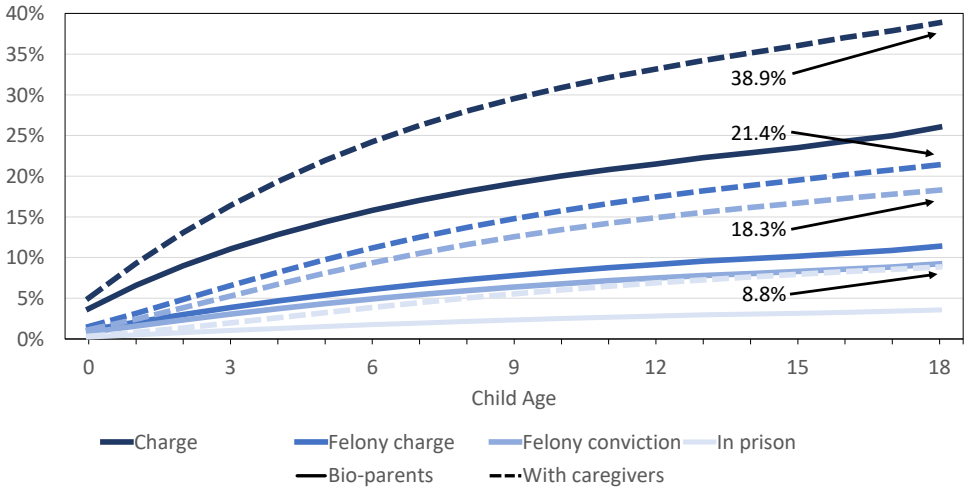
- Household formation and structure in U.S. has undergone significant transformations
  - Bumpass (1990), Cherlin and Furstenberg (1992), McLanahan and Sandefur (1994), Cherlin (2004), Andersson (2002), Heuveline, Timberlake and Furstenberg (2003), Brown (2010), Cherlin (2010), Curtin and Martinez (2014), Powell et al. (2016), Smock and Schwartz (2020), Raley and Sweeney (2020), Cavanagh and Fomby
- With important heterogeneity by race
  - Wilson (1987), Cherlin (1992), Lichter et al. (1992), Bumpass and Lu (2000), Raley and Wildsmith (2004), Fomby and Cherlin (2007), McLanahan and Percheski (2008), Isen and Stevenson (2011), Kreider and Ellis (2011), Raley, Sweeny, and Wondra (2015), Raley et al. (2015), Parker, Sassler, Tach (2021)
- Omitting caregivers who are not biological parents is a potential major source of bias
- Who can we observe?
  - Step, foster, and adoptive parents
  - Coresiding extended family members (aunts, uncles, grandparents — not siblings/cousins)
  - Unclassified caregivers (file 1040 but no rel. measure; inferred parent but not in SSA data)
  - Unclassified cohabitating adults (boyfriends, girlfriends, roommates, etc)

Adding other caregivers as sources of exposure



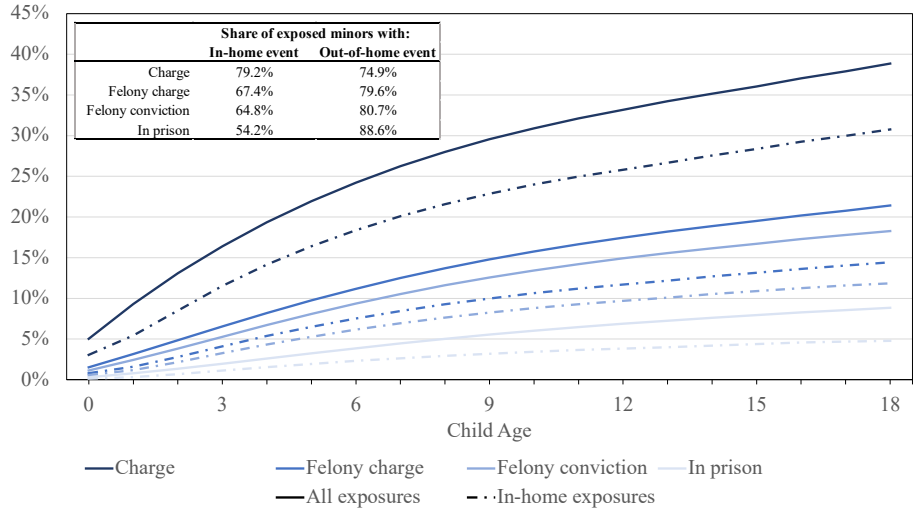
All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Adding other caregivers as sources of exposure



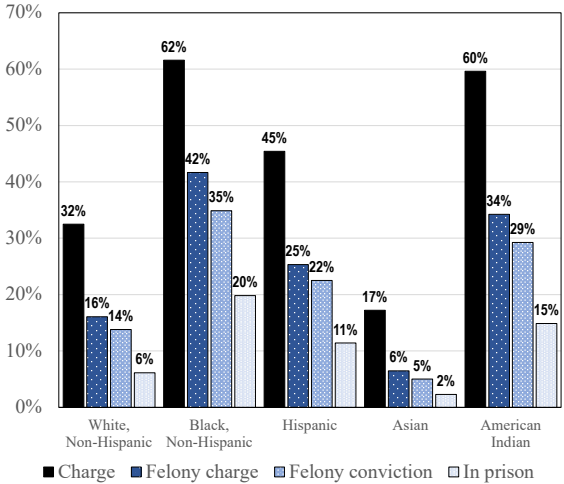
All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

Majority of exposure during/following coresidency



All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

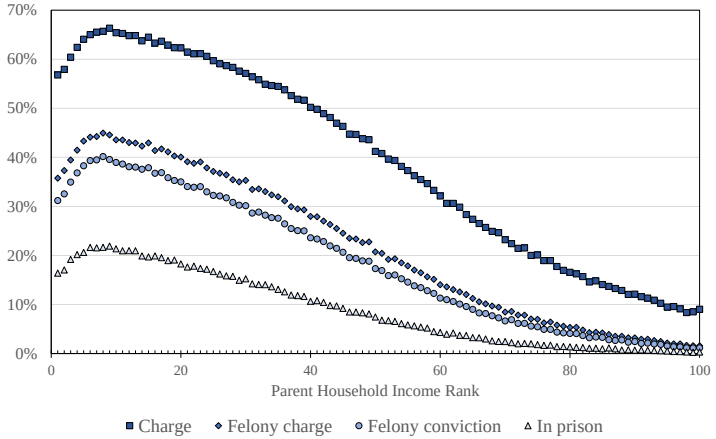
Minority children have substantially higher risk



All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-001.

intensive margin

Children in low-income households have higher exposure rates



All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-003.

by race

Are all exposures made equal?

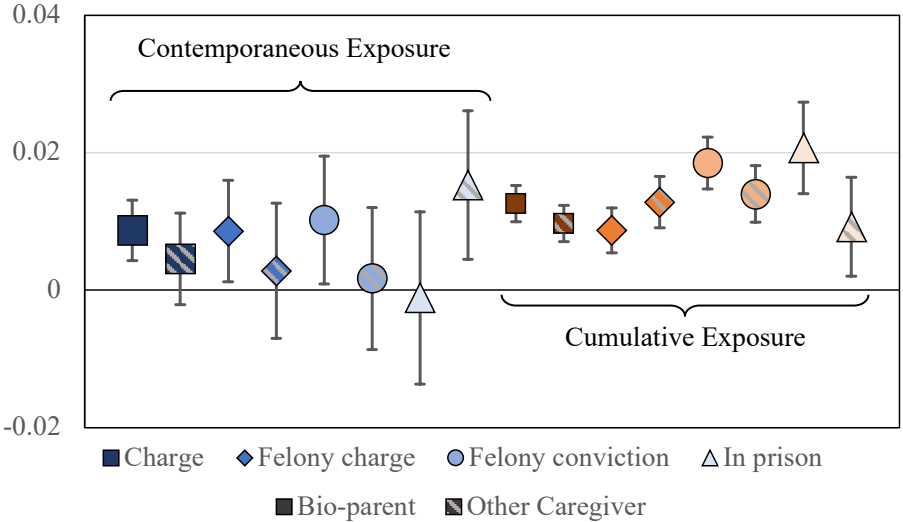
- Not clear that we should worry about larger exposure estimates, if:
  - reflect less serious types of contact with justice system, or
  - capture less meaningful adult-child relationships
- Investigate through regression analysis:

$$Y_i = \alpha + \rho_1 \text{Bio-Parent Exposure}_i + \rho_2 \text{Other Caregiver Exposure}_i + \beta X_i + \epsilon$$

- Outcomes: Behind in school, difficulty remembering, dropped out of highschool, teen pregnancy, charged with a crime, household poverty status, grandparents are primary caregivers
- Exposure: charge, felony charge, felony conviction, and incarceration, differentiated by contemporaneous and cumulative
- Controls: adult linkages, birth year, commuting zone of birth, gender by race, survey year, age
- Diminishing harms hypothesis would suggest smaller $\hat{\rho}$ for: less serious types of exposure, less recent exposure, and for less central adult-child relationships

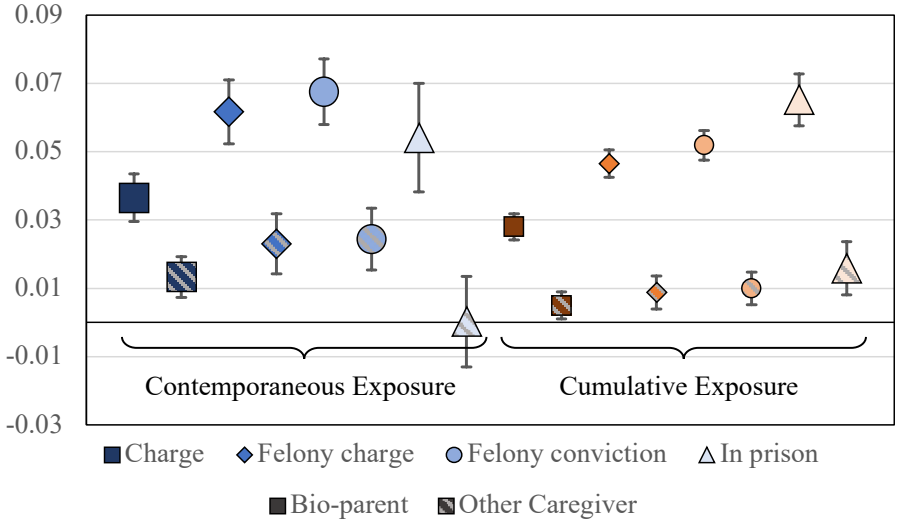
Many estimates are statistically indistinguishable

Behind in school (control mean = 0.052)



Many estimates are statistically indistinguishable

Grandparent as primary caregiver (control mean = 0.029)



Discussion of results & conclusion

- Intergenerational exposure to the U.S. justice system much larger than previously thought
- Improved data availability/integration eliminate need for strong methodological assumptions
- Clear implications for inequality and intergenerational mobility in U.S.

Thank you!

Brittany Street
streetb@missouri.edu

Discussion of results & conclusion

- Intergenerational exposure to the U.S. justice system much larger than previously thought
- Improved data availability/integration eliminate need for strong methodological assumptions
- Clear implications for inequality and intergenerational mobility in U.S.

Thank you!

Brittany Street
streetb@missouri.edu

Discussion of results & conclusion

- Intergenerational exposure to the U.S. justice system much larger than previously thought
- Improved data availability/integration eliminate need for strong methodological assumptions
- Clear implications for inequality and intergenerational mobility in U.S.

Thank you!

Brittany Street
streetb@missouri.edu

Discussion of results & conclusion

- Intergenerational exposure to the U.S. justice system much larger than previously thought
- Improved data availability/integration eliminate need for strong methodological assumptions
- Clear implications for inequality and intergenerational mobility in U.S.

Thank you!

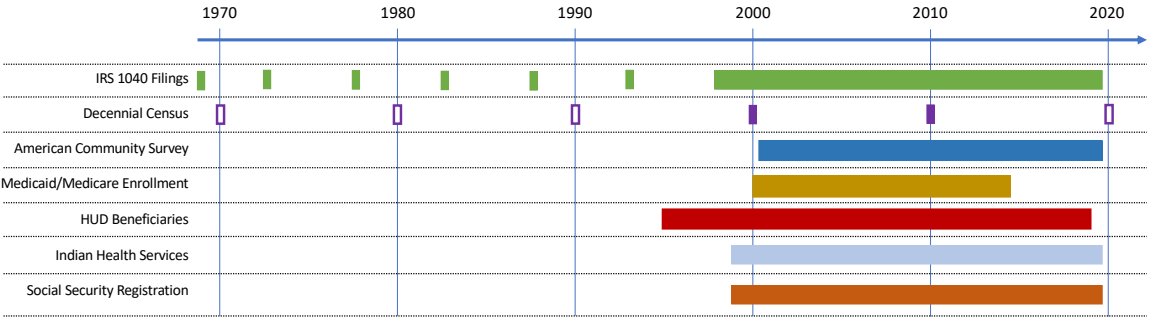
Brittany Street
streetb@missouri.edu

Appendix Slides

Details on residency crosswalks

Data are linked at the person-level using a Protected Identification Key (PIK) created through the Census Bureau's Person Identification Validation System (PVS). Similarly, addresses are assigned MAFIDs, a numeric key, to protect PII.If more than one MAFID (i.e., address) is provided for an individual in a given year, the following ranking is applied: Decennial Census, IRS 1040, IRS 1040 ELF, American Community Survey, CMS EDB, HUD LNG, HUD PIC, HUD TRACS, IHS, MAF-ARF, CMS MSIS (county level information only)

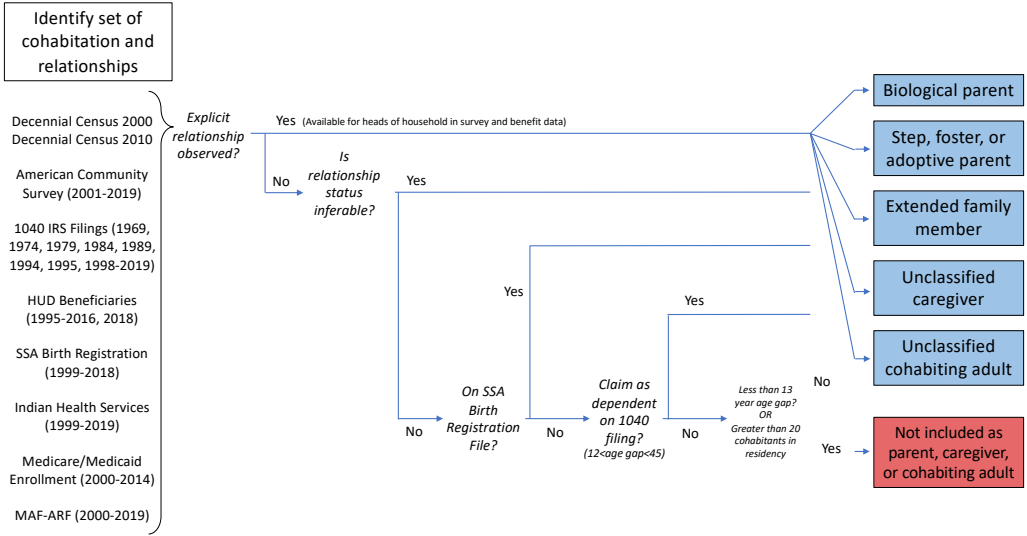
Building national residency crosswalks



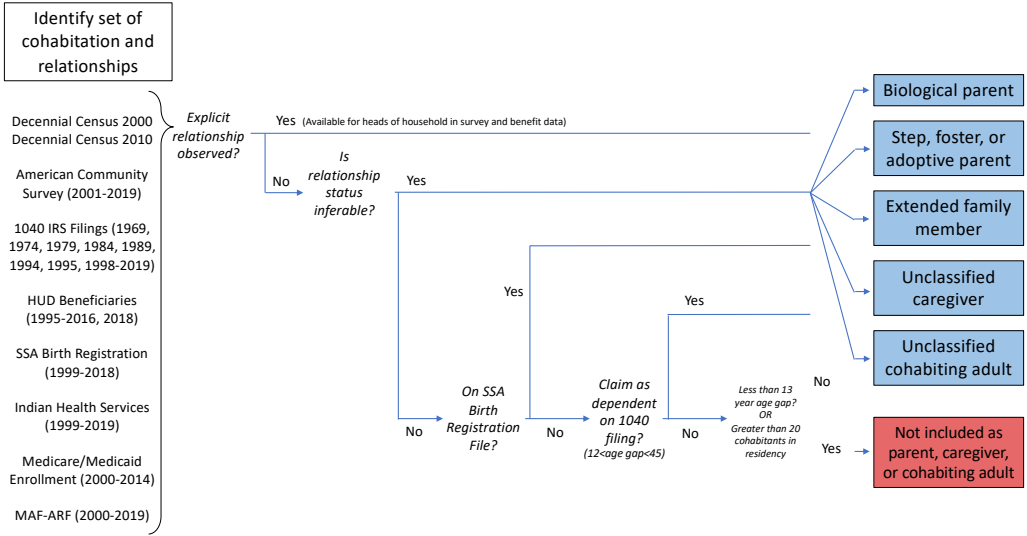
- Very good coverage starting in 1999
- Ability to track older cohorts will improve dramatically with new 1970, 1980, and 1990 Decennial files in FSRDC
  - Trent Alexander, UM PI for digitization/linkage project

back

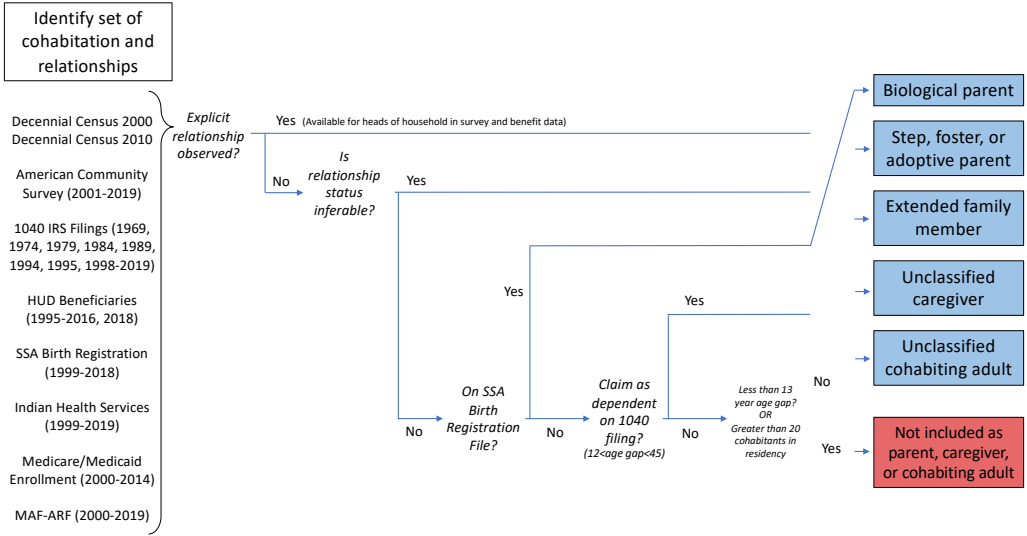
Building national relationship crosswalks back



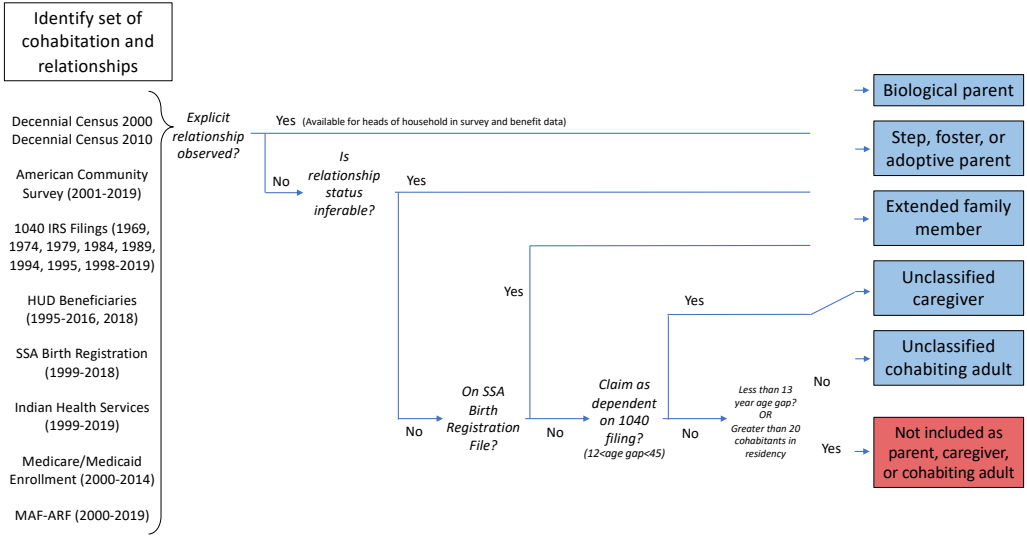
Building national relationship crosswalks back



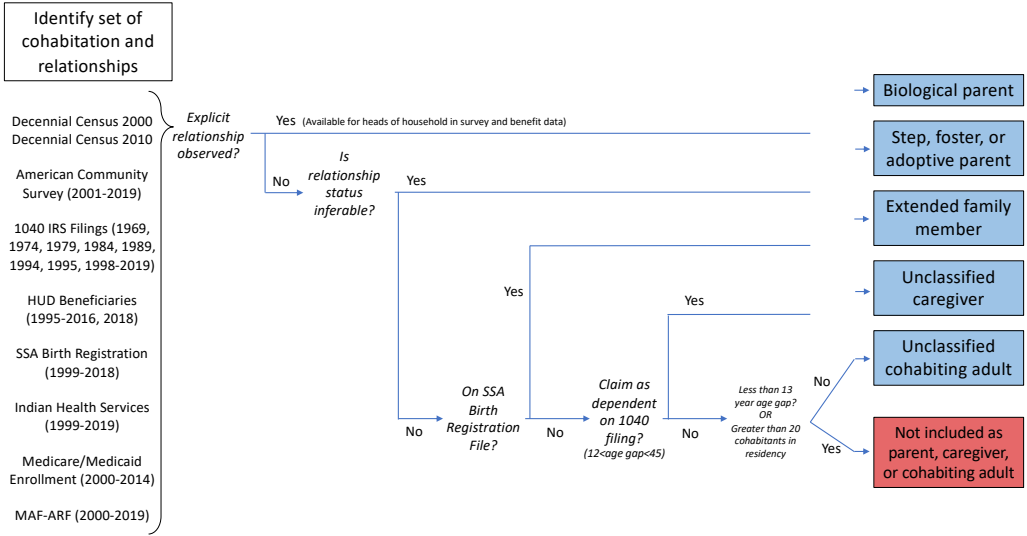
Building national relationship crosswalks back



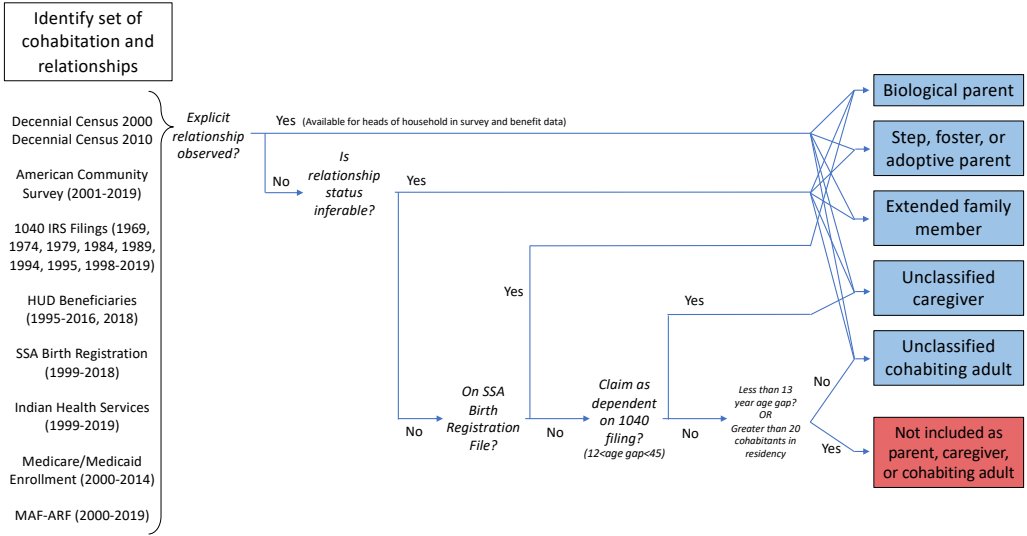
Building national relationship crosswalks back



Building national relationship crosswalks back



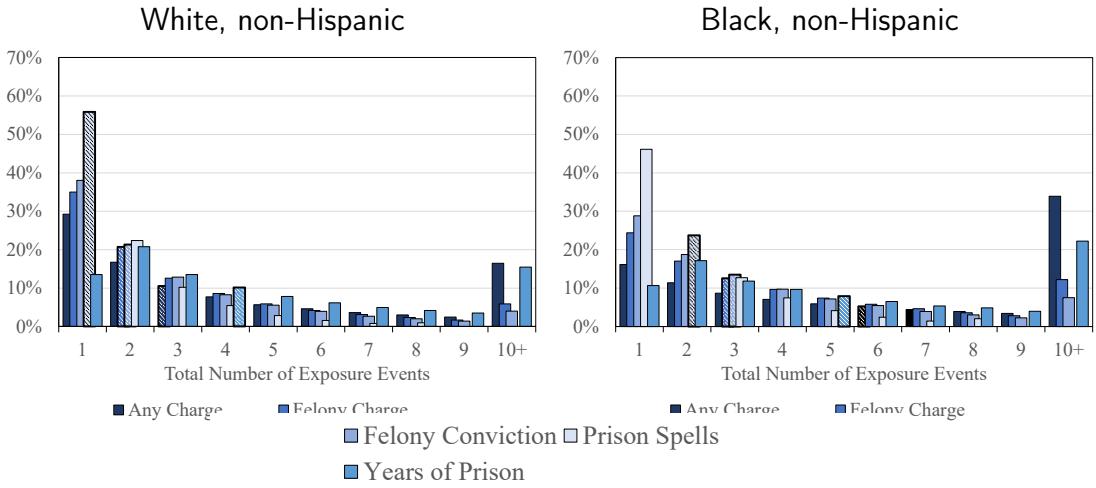
Building national relationship crosswalks back



Details on relationship crosswalks

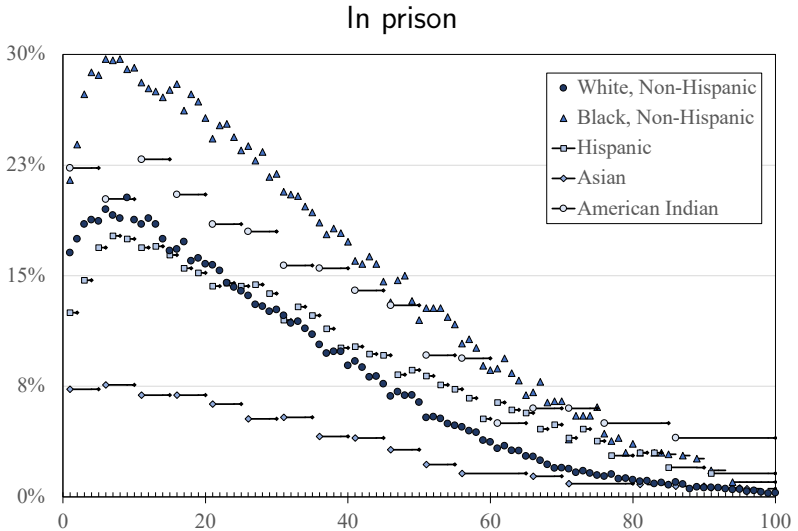
1. Residency crosswalk
   - All pair-wise cohabitations (households with <20 persons and not group quarters)
2. Decennial Census, ACS, & HUD have relations to the household head
   - Household head and spouse share bio children
   - Household head is step parent, then spouse is bio parent
   - Household head is adopted/foster parent then spouse is too
   - Household head is grandparent/aunt/uncle, then spouse is too
   - Household head is grandparent, then bio child is parent to grandchild (age difference>13)
   - Household head is aunt/uncle, then sibling is parent to niece/nephew
3. Tax filing behavior
   - Co-filers are married
   - Filers claiming dependents are parents if 12<age difference<45
   - Filers claiming dependents are grandparents if age difference>45
   - Dependents are siblings (unless age gap>45, then grandparent-grandchild relation)
4. Census Household Composition Key (CHCK)
   - Establishes parent-child links from SSA information
   - Primarily bio children (%), unclassified caregivers from above steps are presumed to be bio

With stark differences on intensive margin back



All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-003.

Returns to household income vary by race back



All results were approved for release by the U.S. Census Bureau, authorization number CBDRB-FY22-ERD002-003.