

Association Between Repeating a Grade and Parental Incarceration Status Among Low Income Children Aged 6-17 in the United States

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OBJECTIVE

Using the 2016 National Survey for Child Health, we conducted an analysis to assess the association between having a parent incarcerated at any point in life and repeating a grade among children aged 6-17 from low income families.

BACKGROUND

- The United States incarcerates more of its citizens than any other country in the world.
- Approximately 5 million children in the United States have had a parent be incarcerated at some point in their life.
- A study by Heard-Garris (2018) that examined the National Longitudinal Survey of Adolescent to Adult Health (from 1994-2008) found that children who had ever had a parent incarcerated were more more likely to have poor health outcomes compared to those who did not have parents incarcerated.

METHOD

- Data from the 2016 National Child Health Survey was used with 50,212 children, with reporting. This was reduced to a sample consisting of 3,211 low income children, aged 6-17 with no missing data for the exposure and outcome.
- The distribution of the exposure (parental incarceration), outcome (grades repeated) and confounders (being bullied, anxiety, depression, safety of neighbourhood, being a victim of violence, living with someone with an addiction) was obtained, as well for demographic data. The frequency and weighted proportions were assessed for all of the aforementioned variables.
- Logistic regression was done for the exposure adjusted individually for each variable. ORs were then adjusted for demographic variables as well as for living with someone who has an alcohol or drug problem. All statistical analysis was done using STATA version 15.0.

Heard-Garris N, Winkelman TNA, Choi H, et al. Health Care Use and Health Behaviors Among Young Adults With History of Parental Incarceration. Pediatrics 2018;142. <https://doi.org/10.1542/peds.2017-4314>

Why Children With Parents in Prison Are Especially Burdened, 2015. The Atlantic. at <https://www.theatlantic.com/politics/archive/2015/12/why-children-with-parents-in-prison-are-especially-burdened/433638/>

StataCorp. 2015. Stata Statistical Software: Release 15. College Station, TX: StataCorp LP.

Table 1 : Demographic characteristics of low income US children aged 6-17 (N=3211)

	Parent has been incarcerated ("Has Parent Spent Time in Jail?")	
	Yes 18.1% (n=607)	No 81.9% (n=2604)
Repeated Grades		
Yes	18.1%	10%
No	81.9%	90%
Sex		
Male	51.6%	49.2%
Female	48.4%	50.8%
Race		
White	54.0%	54.5%
Black	31.4%	22.1%
Other	6.3%	17.4%
Two or more races	8.3%	6.0%
Ethnicity		
Hispanic/Latino	26%	39.3%
Non Hispanic/Latino	74%	60.7%
Age		
6-9	32.2%	34.7%
10-13	28.7%	33.3%
14-17	39.1%	32.0%
Living with Person with Alcohol/Drug Problem*		
Yes	40.2%	8.1%
No	58.8%	91.1%

* Less than 5% of data missing.

Table 2: Unadjusted and Adjusted Odds Ratios of Repeating a Grade Amongst Children Aged 6-17 from Low Income Families

	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Parent has been incarcerated		
Yes	1.99 (1.20, 3.30)	2.40 (1.36, 4.22)
No	1.00	1.00
Sex		
Male	1.00	1.00
Female	0.88 (0.57, 1.35)	0.89 (0.58, 1.36)
Race		
White	1.00	1.00
Black	0.89 (0.56, 1.41)	0.81 (0.51, 1.29)
Other	0.52 (0.28, 0.96)	0.55 (0.28, 1.08)
Two or more races	1.14 (0.51, 2.55)	1.00 (0.46, 2.18)
Ethnicity		
Hispanic/Latino	0.95 (0.57, 1.57)	1.07 (0.63, 1.82)
Non Hispanic/ Latino	1.00	1.00
Age		
6-9	0.60 (0.32, 1.10)	0.62 (0.34, 1.14)
10-13	1.06 (0.67, 1.70)	1.11 (0.71, 1.74)
14-17	1.00	1.00
Living with Person with Alcohol/Drug Problem		
Yes	0.80 (0.49, 1.31)	0.51 (0.28, 0.91)
No		

RESULTS

- Among low income children aged 6-17 in the United States, 18.1% have had a parent incarcerated. Of the those with incarcerated parents, 18.1% have repeated a grade, compared to 10% amongst those who did not have a parent incarcerated.
- Those who have had a parent incarcerated have twice the odds of repeating a grade compared to those who have not had parent incarcerated.
- When adjusted for demographics and living with someone with an alcohol/drug problem, the odds go up to 2.40.
- Among white students those who have ever had a parent incarcerated have 2.67 (95% CI: 1.10, 6.43) times the odds of repeating a grade. Among black students, those odds are 1.39 (95% CI: 0.66, 2.92)
- Among those who live with someone who has a drug problem, those who have ever had a parent incarcerated have 1.81 (95% CI: 0.79, 4.16) times the odds of repeating a grade. Among those who don't live with someone who has a drug problem, those odds are 2.47 (95% CI: 1.31, 4.64).

DISCUSSION

- These results suggest a positive association between ever having a parent incarcerated and repeating a grade.
- This association gets stronger when we control for demographic variables like race, ethnicity, sex and language as well as for living with someone with an alcohol or drug problem.
- These results suggest that having a parent incarcerated can have an adverse impact on a child's performance in the classroom.
- These results add to a growing body of literature that shows the adverse impacts incarceration can have on children and the family members of those who are incarcerated.