

The association between a biological parent spending time in jail/prison and the child ending up in jail/prison later in life.

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Introduction

The United States has the highest incarceration rates in the world according to The Population Reference Bureau (2016). Considering the impact that a person being incarcerated has on not only their personal social groups, but also their community, the reasons behind incarceration should be studied. Finding these connections is integral to developing effective interventions and reducing the amount of people incarcerated each year.

In addition to the social costs of mass incarceration are substantial financial costs. On average, according to the Legislative Analyst's Office, it cost almost \$71,000 a year to hold one inmate in California (2017).

Intergenerational incarceration, or different generations of a family being incarcerated at some point in their life, may increase the risk of the child being incarcerated later in life. If a connection is found, that would open more opportunities for intervention to prevent the child ending up in jail or prison later.

Background

Intergenerational incarceration

Most of the literature discusses that the child may be at an increased risk for being incarcerated later in life if that parent, or even grandparent, has spent time in jail or prison (Farrington, 2009). The literature leaves room for more studies to be done, specifically directly on looking at a population of parents that were incarcerated and then looking at if the child was later in life.

Effect of parental incarceration on a child's behavior

Almost all of the literature reviewed mainly looked at the effect that a parent's' incarceration has on the child's behavior. Then they touch on the risk or likelihood that the child will then later end up in jail or prison. Some of the behaviors sighted throughout the literature were antisocial behavior, aggression, depression, etc (Kinner, 2007).

Problem

- Incarceration rates are high in the United States
- High costs to society
- Prevention efforts could be implemented at different stages
 - Before involvement with criminal justice system
 - During incarceration prevent recidivism
 - After incarceration prevent recidivism
- •Research what leads a child to end up involved with the criminal justice system later
 - Childhood trauma
 - Parental incarceration
 - Role modeling
 - Trauma leading to depression, isolation, etc.

Hypothesis

There is a relationship between the effect a biological parent being in jail/prison and the child ending up in jail/prison later in life.

Methods

Participant response data is from the National Longitudinal Study of Adolescent to Adult Health (Wave IV, 2007-2008) which included 4,9993 men and women whose ages were between 24-32.

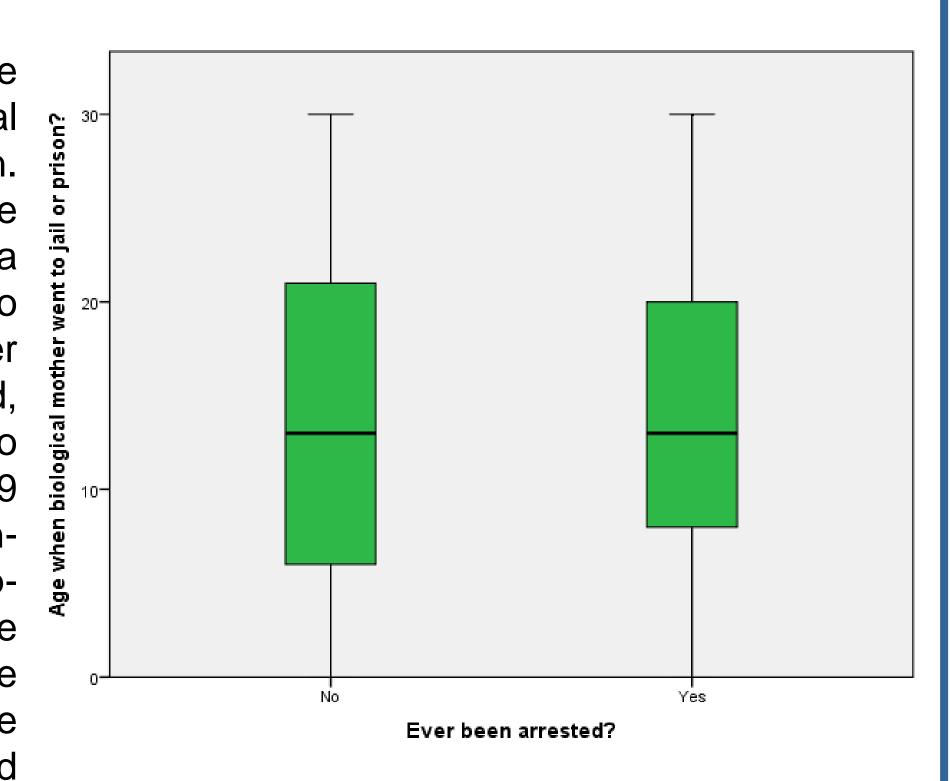
All sample characteristics (variables) where evaluated using descriptive tables and various graphs including bar charts and histograms. All variables showed a relatively normal distribution.

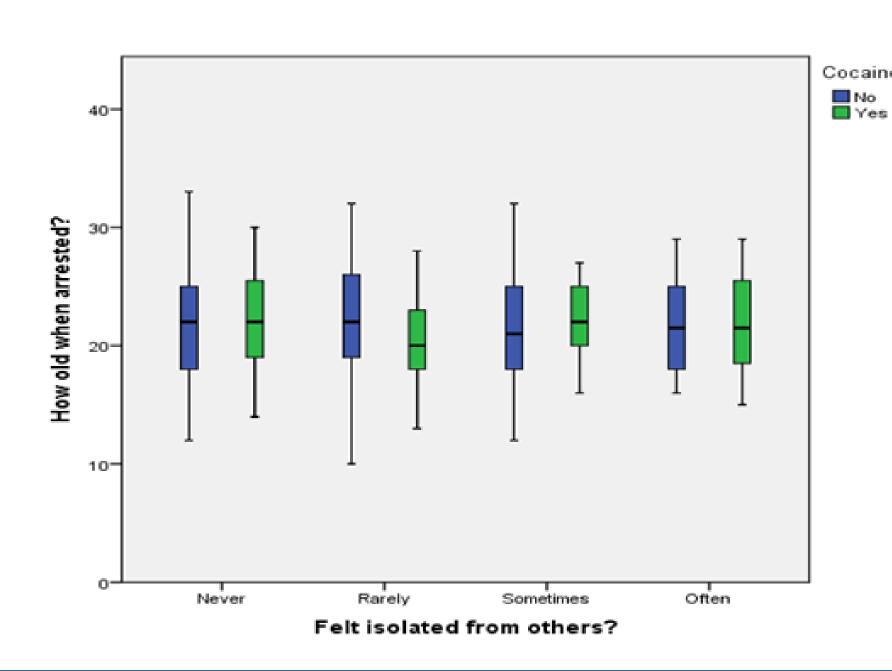
Table 1: Sample Characteristics

- H4WP3 Has your biological mother ever spent time in jail or prison? (m=.03)
- H4WP5 How old were you when your biological mother went to jail or prison (the first time)? (m=13.55)
- H4CJ1 Have you ever been arrested? (m=.29)
- H4CJ3 How old where you when you were arrested? (21.80)
- H4ID5H Has a doctor, nurse or other health care provider ever told you that you have or had: depression? (m=.16)
- H4MH2 How often do you feel isolated from others? (m=.95)
- BIO_SEX Gender (m=1.52)

Results

This graph looks at participants that had a biological 🔁 30mother spend time in jail/prison. Out of the participants who have been arrested, they had a biological mother that went to jail/prison at a slightly lower average age at 13.45 years old, which is .038 less than those who have not been arrested (13.49 years old). This is a nonsignificant difference with a pvalue of .978. Do not reject the null hypothesis. Looking at the Levene's test of .200, the variance is about the same and conforms to the assumption of homogeneity of variance.





The original ANOVA and the stratified ANOVA models were not significant with a p-value of .401 and .383 respectively. There is not a clear difference in the relationship between the average age of when someone was arrested and whether they have felt isolated from others when cocaine use was taken into account. So, cocaine use is not a moderating variable for this relationship.

Results

After adjusting for the potential confounding factor of gender, having a mother go to jail or prison (2.3, (1.40, 3.77), p = .000) was significantly and positively associated with the likelihood of being arrested. In this analysis, the odds ratio tells us that those who are who have had a mother been in jail or prison are 2.3 times more to be arrested. Based on these analyses, gender is not a confounding factor because the association between explanatory and response is still significant after accounting for gender.

Changes in associations between a biological mother having spent time in jail/prison and being arrested depending on gender		
	OR	95%CI
Biological Mother Ever Spent Time in Jail/Prison	2.3**	(1.4 - 3.77)
Gender MF (1)	.27**	(.238309)
Binary Logistic Regression	*p<.01	**p<.001

Conclusion

According to the results from the multiple tests run on these variables, there seems to be a relationship between having a biological mother having spent time in jail or prison and then ending up being arrested later in life. This is shown by the multivariate analysis of if the mother went to jail or prison and if the participant has been arrested at some point (p-value of .001). The initial literature review discussed the possibility of intergenerational incarceration being related to being arrested, which seems to be in line with my results.

Implications

Some limitations of this study were the limited number of related variables. A survey using only related questions would be more informative. There needs to be more research done with intergenerational incarceration to be able to accurately identify if there is a relationship between a parent being incarcerated and the participant being arrested later in life. There also should be further research done on what the factors are that lead to that. (i.e. behavior changes, poverty levels, etc.)

References

- 1. Tsai, T. & Scommegna, P. (2016). U.S. Has the World's Highest Incarceration Rates. Population Reference Bureau. Retrieved from 2. http://www.prb.org/Publications/Articles/2012/us-incarceration.aspx
- 3. Farrington, D. P., Coid, J. W. and Murray, J. (2009), Family factors in the intergenerational transmission of offending. Criminal Behav. Ment.
- Health, 19: 109–124. doi:10.1002/cbm.717

 4. Kinner, S. A., Alati, R., Najman, J. M., & Williams, G. M. (2007). Do paternal arrest and imprisonment lead to child behaviour problems and substance use? A longitudinal analysis. Journal Of Child Psychology & Psychiatry, 48(11), 1148-1156, doi:10.1111/j.1469-7610.2007.01785.x
- substance use? A longitudinal analysis. Journal Of Child Psychology & Psychiatry, 48(11), 1148-1156. doi:10.1111/j.1469-7610.2007.01785.x

 5. Legislative Analyst's Office. (2017). How much does it cost to incarcerate an inmate? Retrieved from http://www.lao.ca.gov/PolicyAreas/CJ/6_cj_inmatecost
- Murray, J., & Farrington, D. (2005). Parental imprisonment: Effects on boys' antisocial behaviour and delinquency through the life-course.
 Journal of Child Psychology and Psychiatry, 46(12), 1269-1278.
 Ng, I. H., Sarri, R. C., & Stoffregen, E. (2013). Intergenerational Incarceration: Risk Factors and Social Exclusion. Journal Of Poverty, 17(4),
- 437-459. doi:10.1080/10875549.2013.833161

 8. IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.
- 9. National Longitudinal Study of Adolescent to Adult Health (Wave IV, 2007-2008)