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A School-to-Prison Pipeline?: Understanding the Relationship Between Exclusionary Discipline
Juvenile Justice Contact Using School and Justice Administrative Data

Statement of research question and underlying theory

RQ: Does receiving a suspension increase the risk of juvenile justice contact?

Suspended students have higher odds of having juvenile justice contact when controlling for a host of demographic and contextual variables (Fabelo et al 2011; Mowen and Brent 2016; Mittleman 2018; Nicholson-Crotty, Birchmeier, and Valentine 2009). These associations show students within the juvenile justice system also experience exclusionary discipline in schools. Recently, researchers have made causal links between suspensions and juvenile justice contact. Using the Fragile Families & Child Wellbeing dataset and neighborhood data, Mittleman (2018) uses a mediation analysis technique and finds over half of the association of juvenile arrests are due to a suspension before the age of 9. Although receiving a suspension in lower grades is also linked to an increase in self-reported behavioral problems, a suspension by the third grade has the strongest association (Mittleman 2018).

While several studies find associations between suspensions and juvenile justice contact, even the most recent research is relatively limited in linking suspensions and juvenile arrest. Mittleman's (2018) examines the effects of receiving a suspension by around the third grade until around the age of 15. Students receiving a suspension by the 3rd grade are the most disadvantaged youths and the study misses critical contexts where students are suspended the most. Suspensions occur more frequently during middle and high school, rather than elementary school (Duffy 2018; Skiba et al 2011). Additional temporal models using more precise time frames are needed to understand how suspensions lead to subsequent juvenile justice contact.

Prior studies include survey-based data with the strength of including measures of self-reported individual behaviors neighborhood contexts, but do not include administrative data that looks at the actual date of suspensions or juvenile justice contact.

Data

This study uses administrative school data from the Houston Independent School District (HISD) and administrative data from the Harris County Juvenile Probation Department (HCJPD) from the 2007-2008 school year to the 2017-2018 school year. The HISD school data is a longitudinal dataset that includes student demographics for 507,423 students which includes information on race, sex, special education status, gifted/talented status, limited English learner status, and an economic disadvantage status. Also included in these data are discipline information including in-school suspensions (ISS), out-of-school suspensions (OSS), and offense information for all students during all years. The date for each discipline offense is included. The juvenile justice referral data includes matched HISD student information. These data include date of student referral to HCJPD. While I do not have arrest data, the date of student referral should be a good approximation of when students enter state custody.

Research Methods

Using dates of both suspensions and juvenile justice contact, a series of event history analysis will be conducted to test the relationship between punishment within both systems. Event history analysis, particularly Cox Proportional hazard models, allows the ability to understand if a suspension and other explanatory variables increase any student's risk of juvenile justice contact. Every HISD student is theoretically at risk of having juvenile justice contact, and Cox Proportional hazard model will demonstrate how a student's risk increases or decreases as a result of a suspension.

Expected Findings

Using early descriptive statistics and association models, I expect to find a suspension increases the risk of juvenile justice contact. For this early analysis, any discipline action is defined as a student who receives at least 1 in-school suspension (ISS) or at least 1 out-of-school suspension (OSS). Within the any discipline action variable, an additional categorical variable designates whether students have at least 1 ISS only, at least 1 OSS only, or at least 1 ISS and at least 1 OSS during the allotted time frame. The goal of this early analysis is to capture the degree of punishment for various students.

Table 1. (below) shows the distribution of students with HCJPD contact and school discipline outcomes. About 79% of students with HCJPD contact have at least some type of discipline action. Breaking down this category, about 10% of students with HCJPD contact have at least an ISS only, while about 12% of these students have at least an OSS only. About 57% of students with HCJPD contact have at least one ISS and at least one OSS.

Table 2 (below) shows a negative binomial regression of juvenile justice contact and school discipline controlling for a host of student demographic variables. Model 1 indicates students with any discipline action have 12.552 higher odds of having HCJPD contact compared to students who have are not disciplined. The any discipline variable is categorized in Model 2. Compared to students who are not disciplined, students with both ISS and OSS have 23.298 higher odds of juvenile justice contact, while both students with only ISS or OSS also have higher odds of contact.

Table 1. Preliminary Summary Statistics

	Percent of Students with HCJPD Contact
Not Disciplined	20.93
Any Type Discipline Action	79.07
At Least One ISS Only	9.78
AT Least One OSS Only	12.32
At Least One ISS and OSS	56.96

Table 2. Negative Binomial Regression of Juvenile Justice Contact and HISD Student Characteristics and School Discipline

	Model 1	Model 2
Student demographic controls	<i>a</i>	<i>a</i>
Any Discipline Action	12.552***	
In School Suspension Only		3.937***
Out of School Suspension Only		7.175***
Both In-School and Out-School Suspension		23.298***
Pseudo R2	0.136	0.157

Note: Odds ratio presented. Model 1 is baseline model for negative binomial regression. Model 1 accounts for "any discipline action" or students who have had at least 1 in-school and/or 1 out of school suspension compared to those who have not. Model 2 compares students who have no discipline action as reference compared to students with only in school suspensions, only out of school suspensions, or students who have both in-school and out-school suspensions. *a* signifies all student demographic controls of race, gender, special education status, gift/talented status, and limited English proficiency status coefficients.