The Relationship between K-8 Suspensions and Early Juvenile Arrests

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All opinions are the authors' and do not represent the opinion of the MLDS Center or its partner agencies.

Motivation

- School suspensions are associated with negative educational outcomes and raise concerns of a school-to-prison pipeline, but the school's role in preventing or contributing to juvenile crime is not clearly defined in theory or policy

- Recent reforms restrict the use of out-of-school suspensions in favor of less punitive disciplinary practices, including a 2017 ban on primary grade suspension in Maryland

- If exclusionary discipline is a mechanism in a school-to-prison pipeline, should we expect suspension bans to improve student behavior and reduce the potential for future juvenile crime?

- This requires better understanding of the mechanisms through which suspensions are related to behavior outside of school

Mechanism of School Exclusion

- Skiba et al (2014) hypothesize that suspensions can lead to future criminal conduct through disengagement and lost educational opportunities
- In addition to the effect of missing days of school, individual behavioral responses to suspensions likely depend on immediate and lasting responses of peers, parents, and schools
- These responses likely differ for days missed due to exclusionary discipline, illness, or school delinquency (i.e. skipping school)
- We test whether exclusion due to suspensions has a unique association (positive or negative) with juvenile crime

Research Design

RQ 1: Does missing school due to suspensions predict future juvenile justice involvement?

RQ 2: Is this relationship different for suspensions for potentially criminal behavior (drugs and violence) and suspensions for breaking school rules?

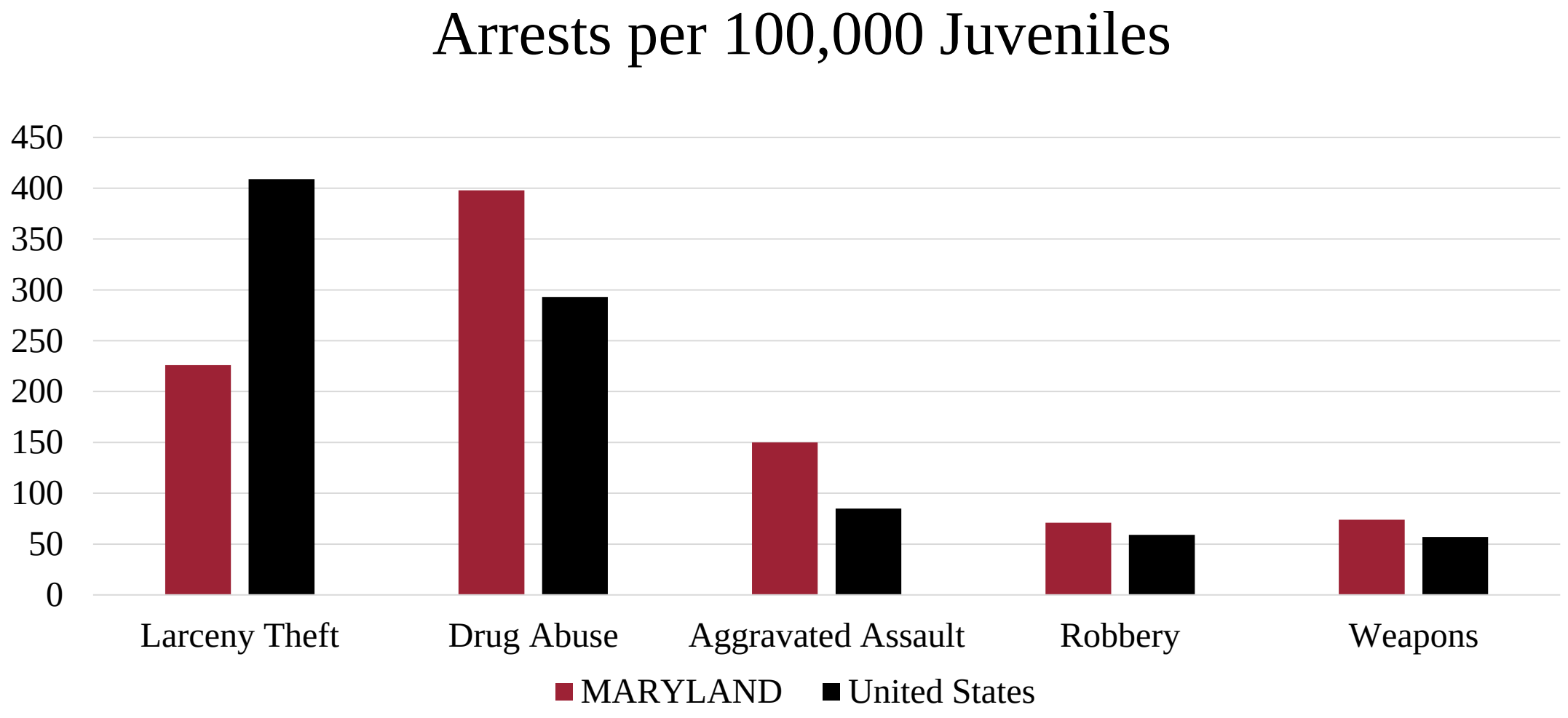
RQ 3: Is there a lasting association between early elementary suspensions and teenage crime?

→At the student level, estimate the relationship between days suspended and juvenile justice involvement controlling for days absent for other reasons

→Disaggregate estimates by the reason for suspension

→Disaggregate estimates by the age suspensions occurred

Maryland Context – Juvenile Justice



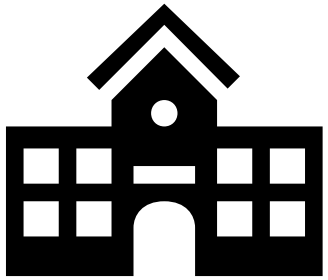
Dept of Justice, OJJDP Statistical Briefing Book, 2017

Maryland Context – Exclusionary Discipline

- History of disproportionality in use of suspensions
- Banned K-2 suspensions in fall 2017 for all non-violent behaviors
  - Lawmakers hypothesized that ending early suspension would reduce later suspensions through individual and school mechanisms
  - Led to reductions in K-2 suspensions, but no spillover effects in upper elementary grades (Lincove, Mata, & Cortes, 2024)
- Should we expect Maryland's suspension ban or a broader suspension ban in K-8 to decrease juvenile crime in the future?

Data Needs

elementary grade absenteeism and suspensions



middle school absenteeism and suspensions

juvenile justice involvement ~ages 12-18

MLDS Center Data

- Maryland State Dept of Ed
  - K-12 students in Maryland public schools
  - Annual K-12 attendance – unexcused and total absences
  - Annual K-12 discipline files – events leading to suspension, offense codes, length of exclusion

- Maryland Dept of Juvenile Services
  - Events leading to arrests in Maryland for children up to age 18
  - Follow events through adjudication, delinquency findings, and consequences

→Overlapping populations in MSDE and DJS
  - Maryland residents up to age 18
  - Enrolled in a Maryland public K-12 school
  - Arrested in Maryland and referred to DJS

Study Cohorts

Age is measured on September 1 of each academic year

✓Attend Maryland public schools from age 7 year through age 13 year

✓Omitted if exit codes indicate moving out of Maryland

✓After age 14, some students drop out of school but remain in the sample

Measure cumulative days out of school at the end of the school year

- Attendance and suspension measures at age 11, 13, 15, and 17
- Dropouts will not add to cumulative totals after age 13

Measure DJS involvement in the following academic year (Sept 1 – Aug 31)

- DJS outcomes at age 12,14, 16, 18

Study Cohorts

7 years old by	enrolled in elem/ms	18 years old by	DJS eligible
Sept 1, 2007	through June 2014	Sept 1, 2018	through August 2018
Sept 1, 2008	through June 2015	Sept 1, 2019	through August 2019

for student i from cohort c at middle school s at age T

$$DJS\ Outcome\ by\ age\ T_{isc}$$
$$= \beta_0 + \beta_1 cum\ days\ suspended_{T-1} + \beta_2 cum\ days\ unexcused\ absent_{T-1} + \beta_3 cum\ days\ absent_{T-1}$$

Add controls for demographics and education needs, cohort fixed effects, school fixed effects

Juvenile Justice Process

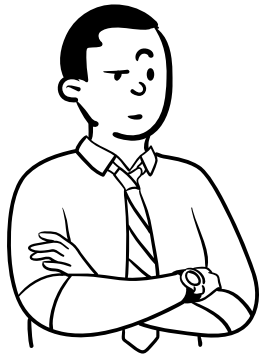
JUVENILES UNDER 18

ARRESTED BY LAW ENFORCEMENT IN MARYLAND

ADJUDICATED BY STATE'S ATTORNEY

DELINQUENCY FINDING BY JUVENILE COURT JUDGE

COMMITMENT TO DJS



PROBATION

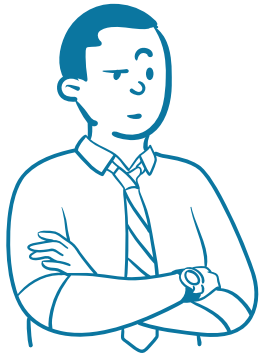
Study Cohort Outcomes by age 14

7 YO
N=92,763

ARRESTED
N=4,933

ADJUDICATED
N=2,155

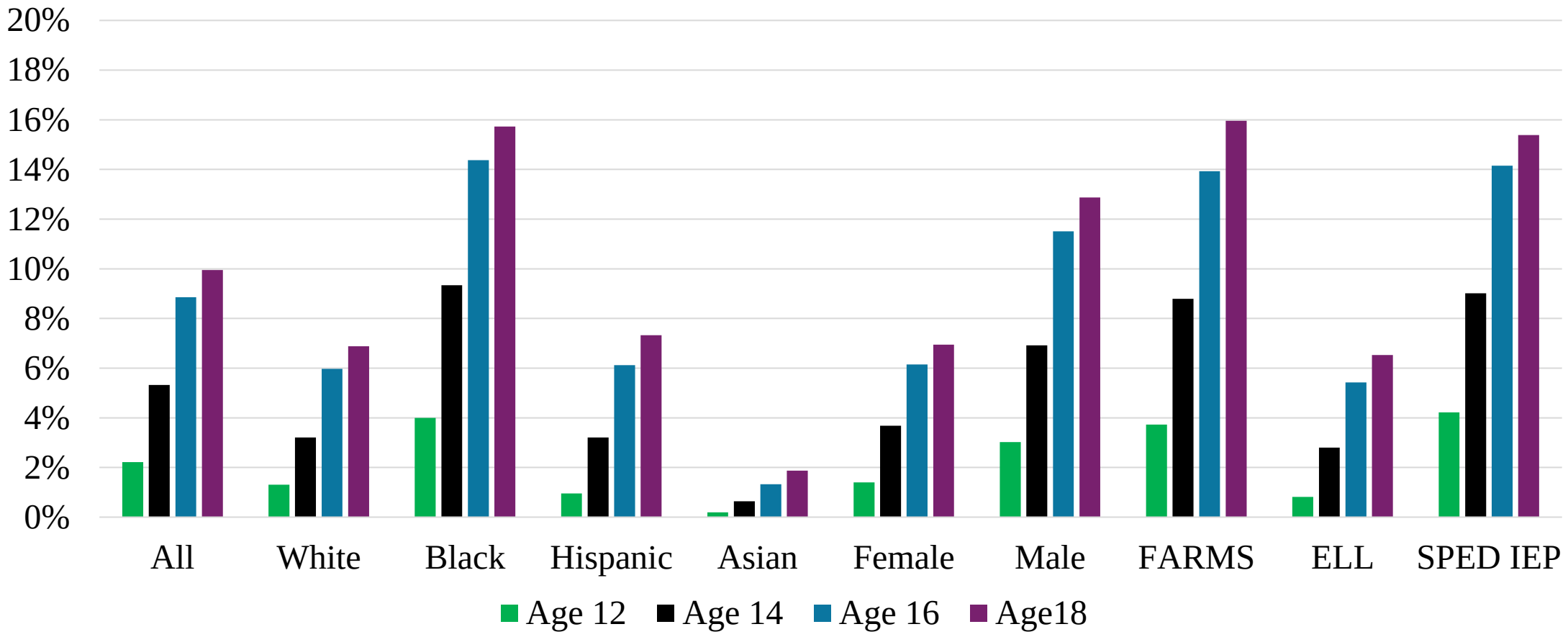
DELINQUENT
N=1,169



PROBATION
N=933

COMMITMENT TO DJS
N=183

% Arrested by Age & Subgroup



Student Demographics by Age 14 DJS Outcomes

	Arrested		Adjudicated		Delinquent	
	N	Y	N	Y	N	Y
cumulative days suspended	**0.7**	**9.3**	**1.0**	**13.1**	**1.0**	**14.4**
cumulative days absent	**54**	**94**	**55**	**113**	**55**	**114**
White	0.500	0.296	0.493	0.224	0.492	0.235
Black	0.337	0.615	0.346	0.706	0.347	0.685
Hispanic	0.117	0.070	0.116	0.050	0.115	0.060
Asian	0.060	0.007	0.058	0.005	0.058	0.007
Female	0.503	0.343	0.499	0.232	0.498	0.221
FARMS	0.522	0.890	0.535	0.939	0.537	0.943
ELL	0.091	0.047	0.089	0.039	0.089	0.045
SPED IEP	0.177	0.310	0.181	0.375	0.181	0.385
SPED 504	0.086	0.120	0.087	0.124	0.087	0.134
N	89,787	5,108	93,312	1,583	93,688	1,207
%	95%	5%	98%	2%	99%	1%

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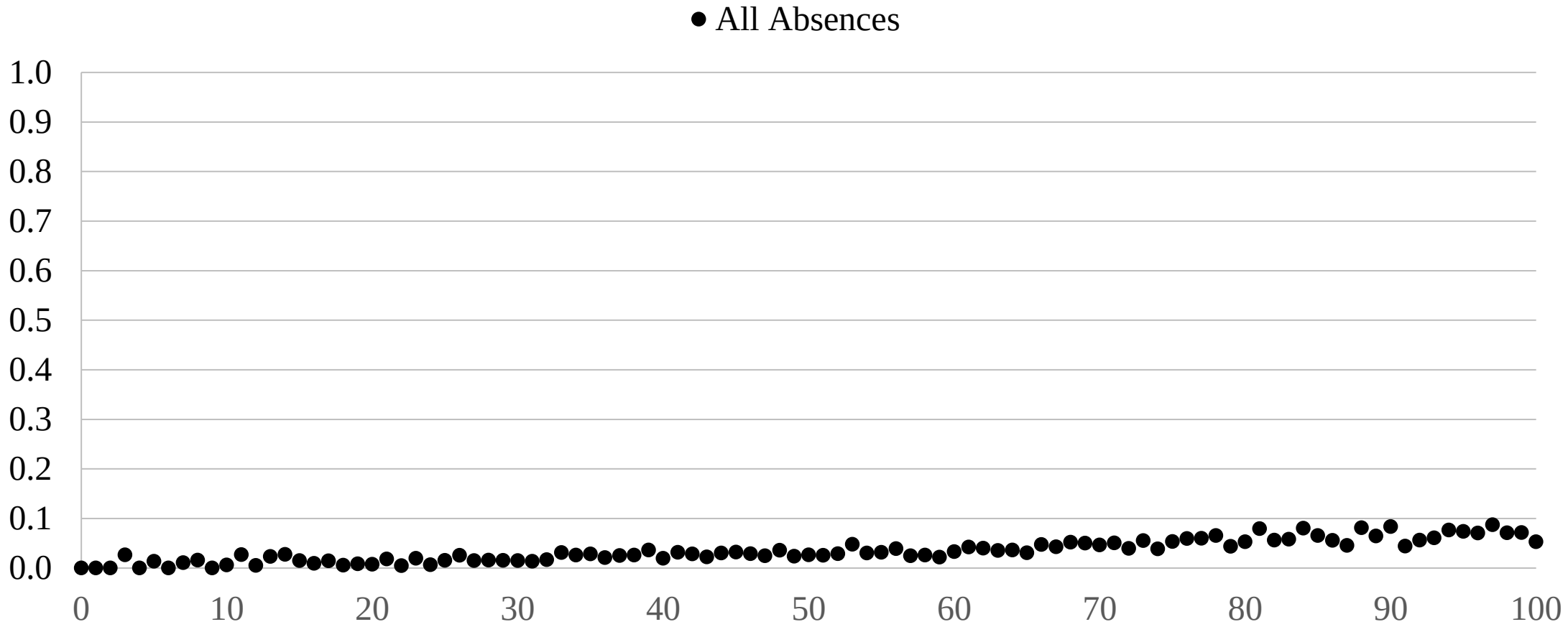
Cumulative Days out of School at 13 & Probability of Arrest by 14



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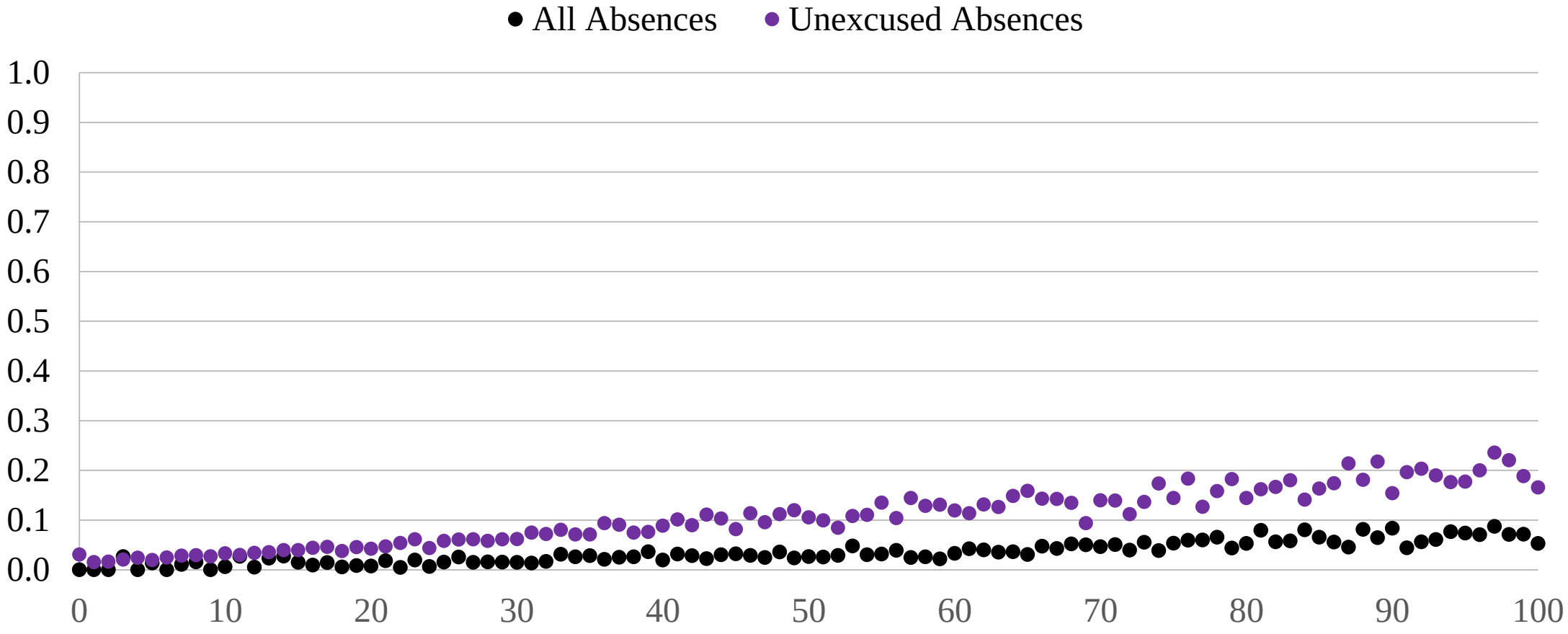
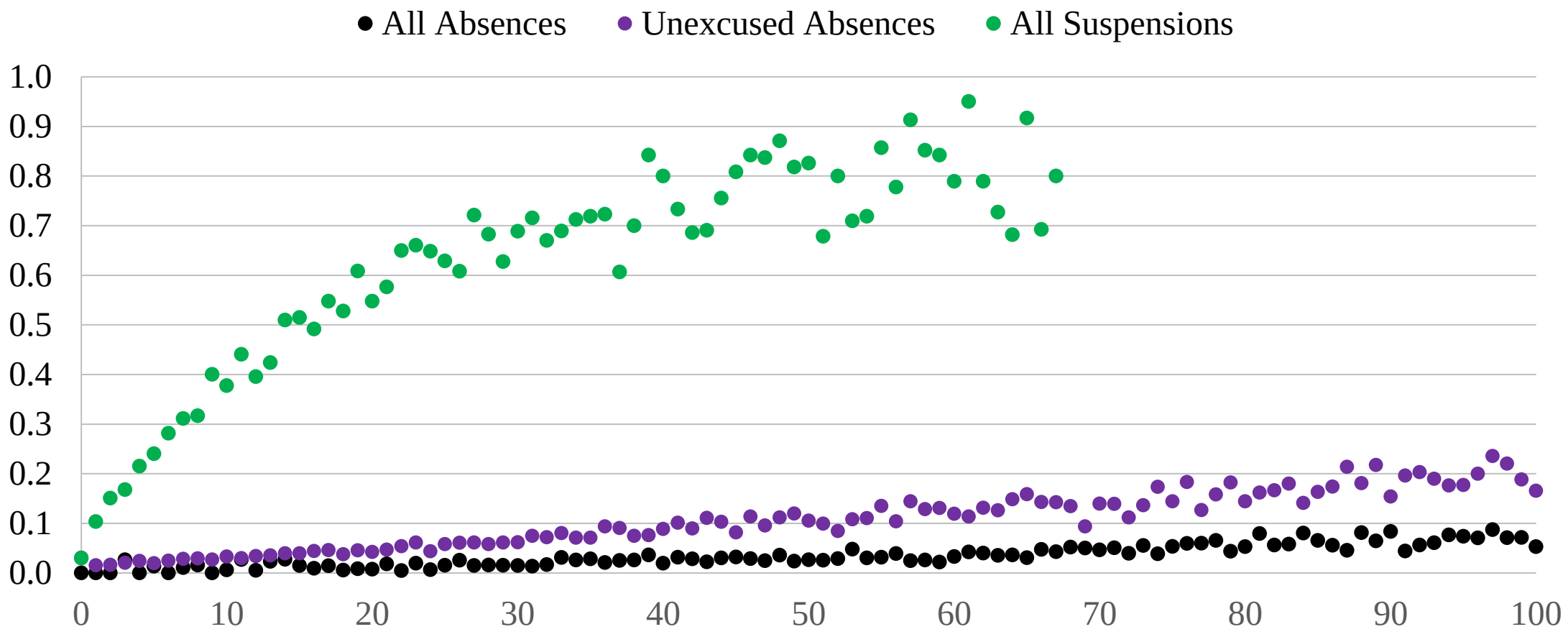
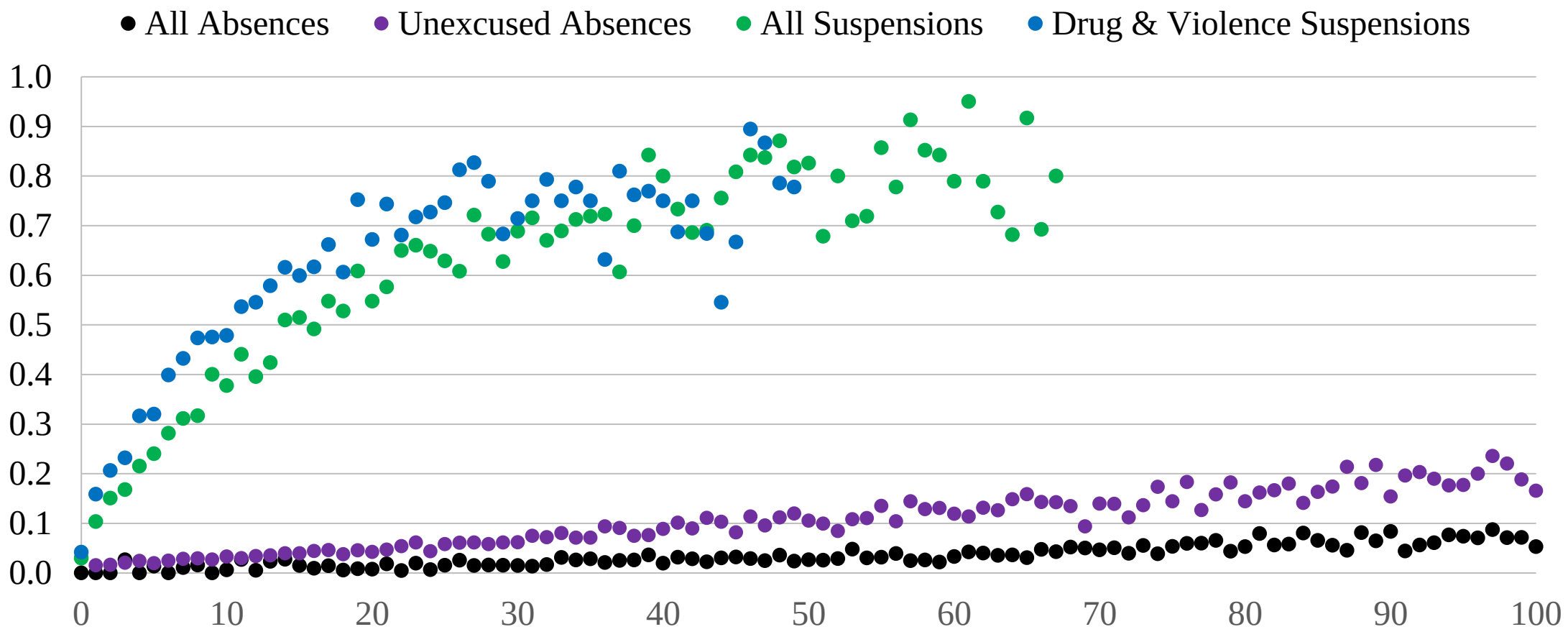


Cumulative Days out of School at 13 Probability of Arrest by 14



Cumulative Days out of School at 13 & Probability of Arrest by 14



Predicting Age 14 DJS Outcomes

	Arrested	Adjudicated	Delinquent	Probation	Committed
sample mean Y	0.0513	0.0159	0.0120	0.0102	0.0018
Coefficients					
days suspended	0.0147*	0.0066*	0.0056*	0.0047*	0.0014*
unexcused absences	0.0011*	0.0004*	0.0005*	0.0004*	0.0001*
total absences	0.0002*	0.0001*	0.0001*	0.0000*	0.0000*
% change from mean					
One day suspended	28.7%	41.5%	46.7%	46.1%	77.3%
One day unexcused	2.1%	2.5%	4.2%	3.9%	5.5%
One day absent	<1%	<1%	<1%	<1%	<1%
Observations	84,579	84,579	84,579	84,579	84,579

Includes controls for demographics, FARMS, SPED IEP, ELL, middle school & cohort fixed effects, *p<0.05

Omits students with SPED 504 and students who exit Maryland

Predicting Age 14 Arrest for Subgroups

	WHITE	BLACK	FEMALE	MALE	NOT FARMS	FARMS	NO IEP	IEP
sample mean Y	0.0302	0.0898	0.0360	0.0668	0.0117	0.0841	0.0434	0.0891
Coefficients								
days suspended	0.0146*	0.0140*	0.0181*	0.0139*	0.0155*	0.0143*	0.0154*	0.0144*
unexcused absences	0.0011*	0.0011*	0.0011*	0.0011*	0.0006*	0.0011*	0.0011*	0.0013*
total absences	0.0002*	0.0004*	0.0001*	0.0003*	0.0000	0.0003*	0.0002*	0.0002*
Observations	40,285	30,265	42,578	42,001	38,328	46,251	70,034	14,545

Includes controls for other demographics, FARMS, SPED IEP, ELL, middle school & cohort fixed effects, *p<0.05
Omits students with SPED 504 and students who exit Maryland

Predicting Age 14 DJS Outcomes - Reasons for Suspensions (conditioned on suspension)

	Arrested	Adjudicated	Delinquent	Probation	Committed
sample mean y	0.2190	0.0773	0.0584	0.0501	0.0100
Coefficients					
total days suspended	0.0112*	0.0070*	0.0065*	0.0057*	0.0018*
days for drug offenses	-0.0012	-0.0034*	-0.0032*	-0.0026*	-0.0016*
days for violent offences	-0.0023*	-0.0040*	-0.0036*	-0.0035*	-0.0009*
unexcused absences	0.0014*	0.0008*	0.0009*	0.0009*	0.0002*
total absences	0.0008*	0.0004*	0.0002*	0.0002*	0.0001*
Observations	13,848	13,848	13,848	13,848	13,848

Includes controls for demographics, FARMS, SPED IEP, ELL, middle school & cohort fixed effects, *p<0.05

Omits students with SPED 504 and students who exit Maryland

Predicting Juvenile Arrests – Age at Suspension

	by age 12	by age 14	by age 16	by age 18
sample mean y	0.0213	0.0513	0.0854	0.0960
Coefficients for days suspended				
age 7-9	0.0065*	0.0092*	0.0085*	0.0081*
age 10-11	0.0165*	0.0159*	0.0138*	0.0128*
age 12-13		0.0155*	0.0110*	0.0099*
age 14-15			0.0178*	0.0148*
age 16-17				0.0132*
% change from mean for +1 day				
age 7-9	30.5%	17.9%	10.0%	8.4%
age 10-11	77.5%	31.0%	16.2%	13.3%
age 12-13		30.2%	12.9%	10.3%
age 14-15			20.8%	15.4%
age 16-17				13.8%
unexcused absences	0.0006*	0.0011*	0.0014*	0.0009*
total absences	0.0002*	0.0002*	-0.0000	0.0001*
Observations	84,579	84,579	84,579	84,579

Summary

- Rates of suspensions and absenteeism are substantially higher among students with juvenile arrests. Whether through association or causation, early suspensions are strong predictors of future juvenile arrests.

- Missing school for any reason is positively associated with the probability of arrest, but there is a large, independent relationship for suspensions beyond missing a days of school. Each day of suspension is associated with a 30% increase in the likelihood of arrest, compared to <1% increase for each day absent for other reasons and 2% for each unexcused absence.

- This relationship in Maryland is linear (or quadratic) and does not depend on meeting minimum threshold for days of suspension

- Suspensions at any age are associated with a substantially elevated risk of arrest

- Suspensions for drugs and violence are associated with a lower probability of DJS outcomes suggesting that some offenses might trigger effective interventions and behavior change

Policy Implications

- DJS data can inform a more nuanced discussion of the school-to-prison pipeline. Arrest rates are high, but very few students are arrested by a local board of education, sent to DJS commitment, or referred to adult court.

- Unexcused absences are only weekly related to juvenile arrests, compared to experiencing exclusionary discipline.

- Through suspension decisions, schools might be selecting the right students for intervention, but exclusionary discipline is probably not the right strategy to reduce juvenile crime. Even under bans, schools should collect information on behavior referrals and interventions to identify the need for extra supports.

- Interventions and research should build our understanding of the conditions that contribute to behavior that leads to suspendable/potentially criminal behavior

- Further investigation of school, parent, and student responses to suspensions for potentially criminal behavior compared to suspension for disobedience might uncover effective strategies

Feedback is appreciated!

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