

**Student Misconduct and Learning Outcomes
Evidence from Pennsylvania's K-12
Building Records: 1999-2018**

Robert P Strauss

Professor of Economics & Public Policy

www.andrew.cmu.edu/user/rs9f

Heinz College, Carnegie Mellon

Human Development Seminar

Zoom Link: <https://teacherscollege.zoom.us/j/99013583690>

Teachers College, Columbia University

11:45 AM- 12:45 PM

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1.0 Introduction[s]

- Thanks to Bob Siegler and Xiaodong Lin for their invitation to give this paper. Happy there is a forum to discuss how student misconduct and poverty impacts learning outcomes through the analysis of administrative records in one major state.
- About me, see:
 - In general, www.andrew.cmu.edu/user/rs9f
 - In particular, www.paeducationquality.net
- Interest in researching k-12 student misconduct many years ago by happenstance due to a phone call from former student, then CFO of PPS, on behalf of the estranged PPS police chief, suggesting I ask for certain *interesting* data which I would get on CD's.
- Thanks to former students for research assistance: Ms. Shelby Cunningham, Mr. Rhajiv Ratunga, Ms. Tessa Hochberg, Ms. Natalie Bucklin, Ms. Natasha Nunnez and Esther Kim; and also to our son, a computer scientist; David A. Strauss and thanks also to Marcus Berliant, Miguel Gouveia, Dave Davare, Stuart Knade, Julie Cullen and Leanna Stiefel for comments and suggestions.
- Responsibility for what follows rests with me.

1.1 Introduction[s] The Flavor of Some Earlier Findings ...

- Earlier findings: i) knife incidents encourage male teacher retirements, and ii) impact where teachers and administrators want to double dip for post-retirement teaching/administrative jobs
- First and second cuts on school safety issues *per se*:
 - Comparison of PPS incident call reports to what PPS reported to Pa. Dept of Education in terms of school misconduct per NCLB reporting requirements: disparate universes. Shelby, Tessa and Rajiv, PPS alumns, were upset by data.
 - Accumulation of state rules and OLS analysis of misconduct in Pittsburgh and Philadelphia's learning outcomes reported in unpublished AEFA conference paper by Strauss, Hochberg and Bucklin (2015) looked at: 2001/12 - 2012/13). Philly and Pittsburgh quite similar.
https://www.andrew.cmu.edu/user/rs9f/rpstrauss_school_safety_3_1_2016.pdf

1.2 Introduction/Purpose of Today's Presentation

- Report independent investigation of administratively required LEA student misconduct reports over long period of time at the building level in a major industrial state (Pennsylvania);
- Analyze patterns of Pa. building level misconduct through the lens of the NCLB Unsafe School Choice Option to ascertain whether buildings are “persistently dangerous” (or not) with the mandatory arrest requirement on top of required duration and incident rates;
- Compare these patterns without the mandatory arrest requirement to ascertain how one’s perception of school safety may change; and,
- Explore the relationship between the level and variability of student learning outcomes due to misconduct incidents or arrests, and poverty, and use these simple estimation results to predict what reducing misconduct might achieve in terms of improved learning outcomes.

1.3 Structure of Presentation

- Section 2 explains general requirements of state school safety plans under NCLB, describes Pa's accepted school safety plan by the US Department of Education, and provides a counter-factual standard
- Section 3 provides statewide descriptive characteristics of student misconduct over time
- Section 4 looks more closely at districts which are unsafe, and at Philadelphia and Pittsburgh
- Section 5 presents a simple, exploratory regression model and results
- Section 6 summarizes and presents some notions about future research

2.0 School Safety Plans (Unsafe School Choice Option) Under NCLB

School Safety under NCLB: permissive, each state proposes how to measure it in a state plan, US Dept of Education accepts/rejects:

3 Key variables:

1. Definition of building school safety violation composed of 2 parts:
 - a) a building school safety violation or *dangerous acts* e.g. student assaults on students
 - b) a building *weapons violation*; e.g. knives found on students
2. Definition of a building dangerous *pattern* based on:
 - a) number of building dangerous acts and/or weapons dangerous acts; and/or
 - b) the *rate* of misconduct [(dangerous acts+ weapons)/enrollment in a building/year]
- 3 Specification of the *duration* of *dangerous* patterns, e.g. 2 of last 3 years

Determination: building is, or is not *persistently dangerous*.

If *persistently dangerous*, parents informed, and may move child to a safe school in the same district *if one exists*.

2.1 Example of Heterogeneity of State Definitions in 2013

Reportable Incident Type	# States	State Plans in 2013 Requiring Reporting on Incident Type
Arson	10	GA, ID, IA, ME, MD, MI, MO, NJ, NY, TX
Assaults	34	AL, AK, AR, CA, DC, FL, GA, HI, ID, IA, KS, KY, ME, MD, MI, MN, MS, MO, MT, NE, NH, NJ, NY, NC, ND, OR, PA, RI, SC, TX, UT, WA, WV, WI
Bullying	3	NE, NJ, WA
Kidnapping	17	DC, GA, ID, IA, KS, ME, MS, MO, NE, NY, ND, OR, PA, SC, TX, VA, WA
Homicide	25	VA, WA
Weapons	47	AL, AK, AZ, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NJ, NM, NY, NC, ND, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY
Violation of Gun Free Zone	19	AZ, CO, CT, FL, HI, ID, IL, IA, KS, KY, LA, ME, MA, MO, MT, NE, RI, UT, WA
Robbery	24	AL, AR, GA, HI, ID, KS, KY, ME, MS, MO, MT, NE, NH, NJ, NY, NC, ND, OR, PA, RI, SC, UT, VA, WA
Sexual Assault	29	AL, AR, CA, DC, GA, HI, ID, IA, KS, KY, ME, MD, MI, MS, MO, MT, NE, NJ, NY, NC, OR, PA, RI, SC, TX, UT, VA, WA, WY

2.2 Pennsylvania School Safety Reporting Plan under NCLB

A Pa. school building is deemed “dangerous” in a given school year if the school building meets one of the following three conditions in conjunction with a duration test:

1. For a school whose enrollment is 250 or less, at least 5 dangerous incidents *resulting in arrests*;
2. For a school whose enrollment is 251 to 1000, a number of dangerous incidents *resulting in arrests* that represents at least 2% of the school’s enrollment; or
3. For a school whose enrollment is over 1000, 20 or more dangerous incidents *resulting in arrests*.

Finally, for a Pennsylvania school building to be “**persistently dangerous**,” the above designation of a “dangerous” building must have occurred in 2 or more of the preceding 3 years.

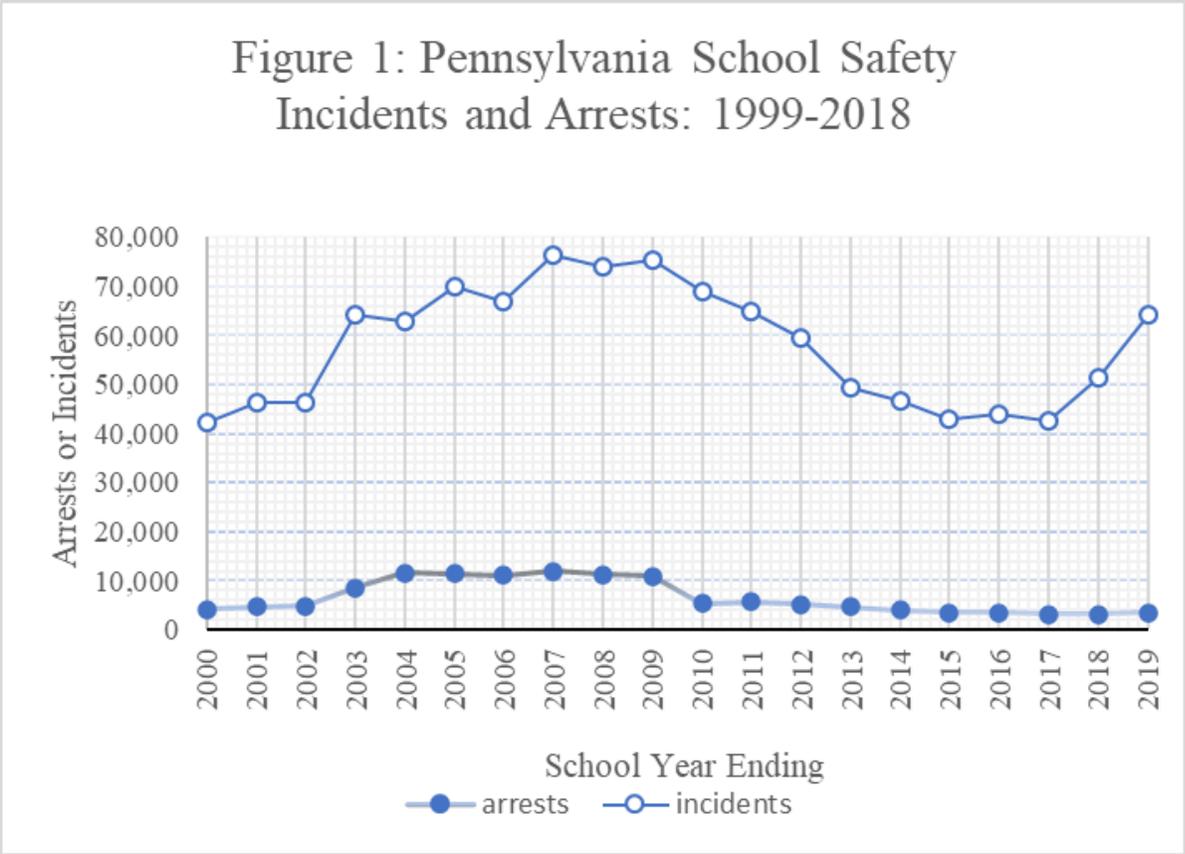
3.0 Statewide Patterns of Misconduct: 1999-2018

3.1 Data sources (Right to Know Requests) and definitions

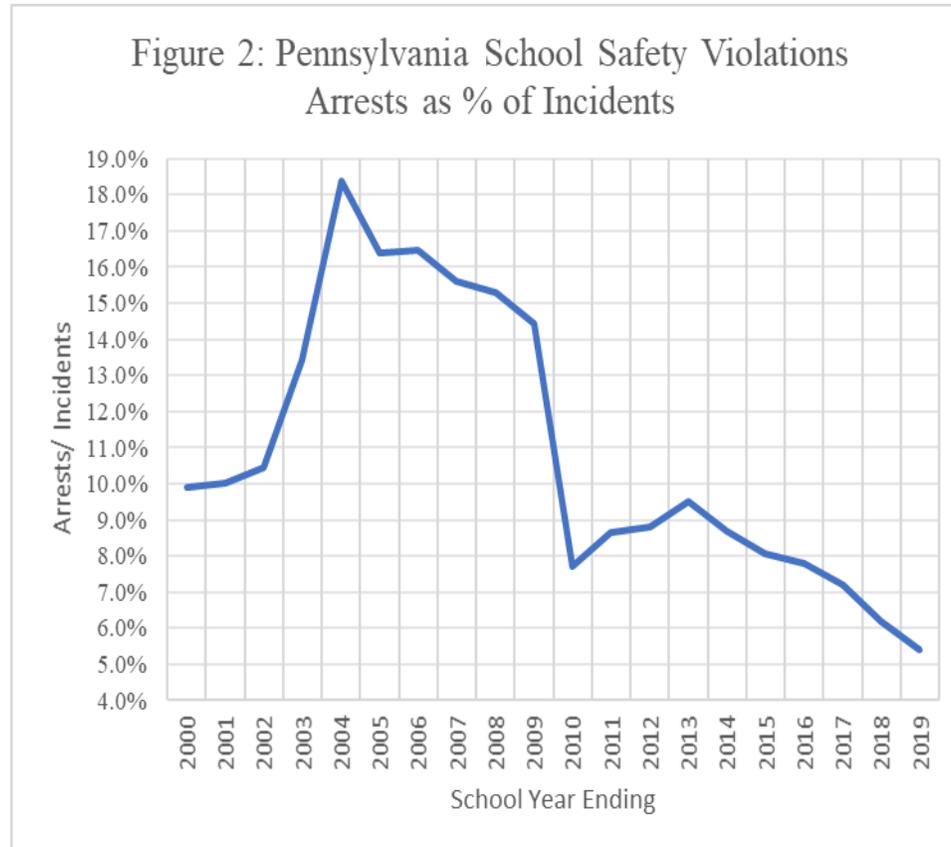
- Public School Buildings (not charter, not Intermediate Units, not central office)
- Incidents and Arrests as Reported to Pa Dept of Education by LEAs
- Fraction of students poor according to family FS, TANF participation
- Building and grade level mean scale scores on math & language arts
- Coefficient of variation of mean scale scores on same tests

Pa System State Assessments or PSSA tests due to Data Recognition Corp)

PA Total School Safety Incidents and Arrests



PA Ratio of Arrests to Incidents



Indices of Incident and Arrest Rates: Year 2000 =1.000

Note: rate is the ratio of total incidents/total enrollment or total arrests/total enrollment

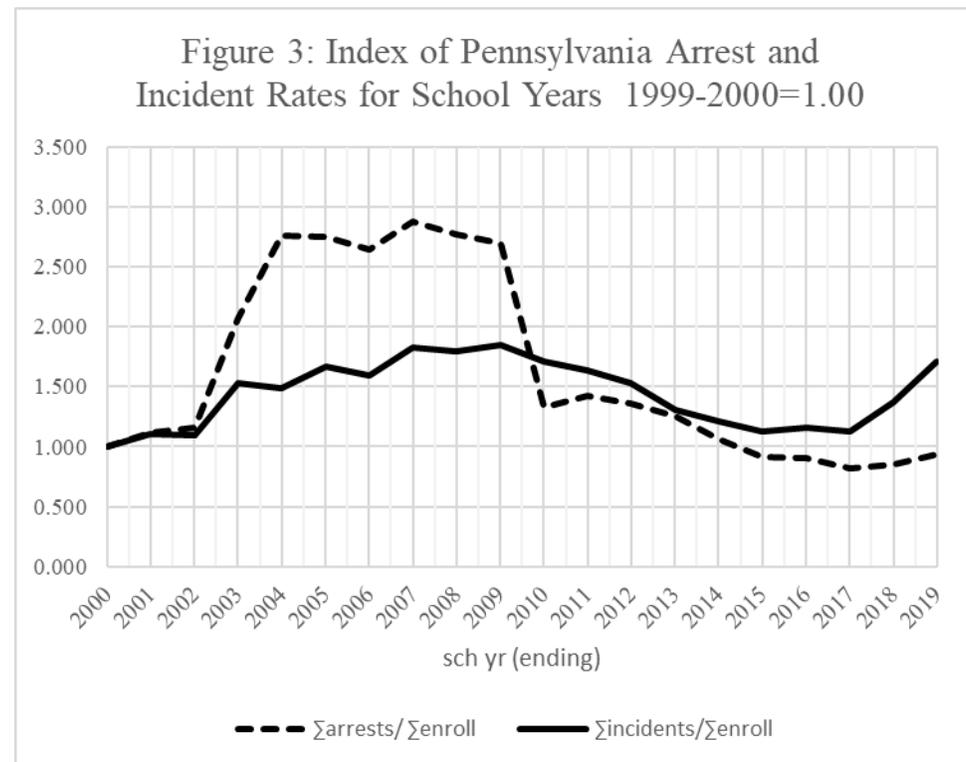


Table 1: Distribution of Pennsylvania School Safety Arrest Rates (Arrests/Enrollment) by Year

School Year Ending	Number of Buildings	Arrest Rate 75 th Percentile	Arrest Rate 90 th Percentile	Arrest Rate 95 th Percentile	Arrest Rate 99 th Percentile	Maximum Arrest Rate
2000	3,003	0.00000	0.00419	0.00891	0.02542	0.22353
2001	3,015	0.00000	0.00433	0.00990	0.02638	0.17757
2002	3,049	0.00000	0.00410	0.01004	0.03229	0.22148
2003	3,033	0.00131	0.00855	0.01951	0.04823	0.21505
2004	3,039	0.00264	0.01422	0.02618	0.06604	0.19920
2005	3,037	0.00245	0.01279	0.02684	0.06308	0.88000
2006	3,034	0.00226	0.01295	0.02505	0.06195	1.06667
2007	3,020	0.00217	0.01500	0.02813	0.07271	0.91429
2008	3,027	0.00187	0.01463	0.02736	0.07482	0.41429
2009	3,038	0.00179	0.01395	0.02828	0.07254	0.29412
2010	3,002	0.00000	0.00580	0.01400	0.04188	0.28571
2011	2,966	0.00000	0.00638	0.01472	0.04225	0.13953
2012	2,894	0.00000	0.00742	0.01505	0.03801	0.20227
2013	2,793	0.00000	0.00670	0.01395	0.04032	0.14286
2014	2,796	0.00000	0.00477	0.01089	0.03371	0.15385
2015	2,780	0.00000	0.00351	0.00939	0.02941	0.14286
2016	2,756	0.00000	0.00345	0.00940	0.02637	0.13333
2017	2,736	0.00000	0.00303	0.00708	0.02367	0.07164
2018	2,718	0.00000	0.00420	0.00962	0.02513	0.13253
2019	2,599	0.00000	0.00344	0.01043	0.03487	0.33333
Overall	58,335	0.00000	0.00735	0.01627	0.04594	1.06667

School Year Ending	Number of School Buildings	Table 2: Distribution of Pennsylvania School Safety Violations: Incident Rates at Percentile							Maximum Incident Rate
		25 th	50 th	75 th	90 th	95 th	99 th		
2000	3003	0.00000	0.00627	0.02439	0.05696	0.08489	0.19058	1.15152	
2001	3015	0.00000	0.00816	0.02714	0.05875	0.09344	0.23633	1.10714	
2002	3049	0.00000	0.00861	0.02837	0.05519	0.08571	0.24242	2.25000	
2003	3033	0.00000	0.00877	0.02913	0.06271	0.09836	0.49470	4.17011	
2004	3039	0.00000	0.00727	0.02484	0.05281	0.09121	0.52412	3.83634	
2005	3037	0.00000	0.00748	0.02844	0.06513	0.11203	0.47688	4.96000	
2006	3034	0.00000	0.00786	0.03002	0.06274	0.10984	0.60811	4.00000	
2007	3020	0.00000	0.01017	0.03361	0.07571	0.12893	0.67282	10.11429	
2008	3027	0.00000	0.01208	0.03853	0.08974	0.14972	0.71193	4.96296	
2009	3038	0.00188	0.01437	0.04087	0.09137	0.16410	0.70956	4.06122	
2010	3002	0.00000	0.01390	0.04179	0.09318	0.14749	0.46578	10.92857	
2011	2966	0.00154	0.01235	0.03946	0.08052	0.12766	0.51111	12.17391	
2012	2894	0.00146	0.01280	0.03951	0.08361	0.13251	0.37539	14.18750	
2013	2793	0.00000	0.01081	0.03520	0.07007	0.11260	0.24553	1.87758	
2014	2796	0.00000	0.00959	0.03175	0.06316	0.09766	0.24286	0.86798	
2015	2780	0.00000	0.00890	0.02930	0.06106	0.10015	0.24744	0.91743	
2016	2756	0.00000	0.00980	0.03080	0.06299	0.09474	0.24064	1.02273	
2017	2736	0.00000	0.00857	0.02922	0.06096	0.09310	0.20254	0.67191	
2018	2718	0.00122	0.01112	0.03548	0.07365	0.11670	0.32819	3.92771	
2019	2599	0.00000	0.01048	0.04348	0.09635	0.14865	0.37500	5.40741	
Overall	58,335	0.00000	0.00976	0.03284	0.07050	0.11364	0.36538	14.18750	

Table 3: Fraction of Buildings “*Persistently Dangerous*” with and without Arrest Requirement

	% of Pa. Public School Buildings NCLB Persistently Dangerous [3]	% of Pa. Public School Buildings NCLB Persistently Dangerous (Weighted by Enrollment) [3]*	% of Pa. Public School Buildings under Simulation of NCLB Persistently Dangerous [4]	% of Pa. Public School Buildings under Simulation of NCLB Persistently Dangerous (Weighted by Enrollment) [4]*
Arrest ?	Yes	Yes	No	No
2001/2002	1.9%	4.0%	31.1%	42.0%
2002/2003	2.7%	5.7%	33.3%	44.8%
2003/2004	4.0%	8.2%	33.0%	44.5%
2004/2005	6.8%	13.0%	32.0%	43.5%
2005/2006	6.7%	12.6%	32.8%	43.6%
2006/2007	6.4%	12.1%	34.6%	45.7%
2007/2008	6.6%	12.5%	37.9%	48.2%
2008/2009	7.1%	12.5%	40.6%	50.6%
2009/2010	5.9%	10.3%	42.6%	51.8%
2010/2011	3.9%	7.3%	42.9%	51.9%
2011/2012	3.2%	6.3%	42.3%	51.1%
2012/2013	3.5%	6.6%	40.6%	49.2%
2013/2014	3.1%	6.0%	38.8%	47.6%
2014/2015	2.5%	4.8%	36.6%	45.1%
2015/2016	1.9%	3.9%	35.2%	43.5%
2016/2017	1.8%	4.2%	34.6%	43.5%
2017/2018	1.8%	3.9%	36.3%	45.5%
2018/2019	1.9%	4.2%	39.2%	48.9%
Totals	4.1%	7.8%	36.9%	46.7%

Table 4 Pennsylvania’s Top 20 School Districts’ Share of Total Arrests, Incidents, and Enrollment: School Years 1999/2000 through 2018/2019. Note: PA has 500 school districts.

School Year Ending	Top 20 Districts' Share of Arrests	Top 20 Districts' Share of Enrollment	Top 20 Districts' Share of Incidents	Top 20 Districts' Share of Enrollment
2000	65.9%	19.9%	33.6%	21.6%
2001	65.6%	19.8%	35.1%	21.1%
2002	65.9%	18.3%	37.7%	21.4%
2003	51.9%	18.7%	56.6%	21.0%
2004	46.9%	20.6%	62.4%	20.9%
2005	50.1%	19.2%	69.3%	21.1%
2006	52.0%	19.4%	66.4%	21.8%
2007	55.7%	19.3%	65.4%	19.1%
2008	50.9%	19.0%	61.6%	19.0%
2009	50.1%	19.2%	58.1%	18.3%
2010	58.3%	18.4%	52.1%	19.7%
2011	55.5%	18.8%	50.6%	19.1%
2012	53.0%	18.5%	48.4%	20.4%
2013	52.5%	17.1%	47.4%	20.4%
2014	57.3%	17.0%	48.2%	19.4%
2015	52.3%	17.7%	47.6%	20.7%
2016	51.3%	17.6%	47.0%	19.8%
2017	53.7%	17.9%	47.9%	19.2%
2018	48.4%	17.6%	47.2%	20.6%
2019	46.6%	18.1%	47.8%	20.9%

Table 5: Pennsylvania School Districts among Top 20 Annually in Terms of Highest Share of Arrests or Incidents at Least 10 Years or More Out of Possible 20 Years. Panel A: Arrests

School District	2018/2019 Enrollment	Share of Statewide Arrests
Panel A: Arrests		
Albert Gallatin Area	3,313	2.2%
Allentown City *	16,821	4.9%
Bethlehem Area *	13,618	3.1%
Central Dauphin	11,880	2.9%
Chambersburg Area	9,315	5.0%
DuBois Area	3,465	1.5%
Easton Area	8,584	2.1%
Hazleton Area	11,406	5.2%
Philadelphia City *	128,110	45.4%
Pittsburgh *	22,567	10.2%
Pottstown	3,221	1.2%
Red Lion Area	5,132	2.2%
Scranton City	9,932	2.5%
Upper Darby	12,439	2.9%
Wilkes Barre Area	7,138	4.5%
York City	6,019	3.0%

Table 6: Pennsylvania School Districts among Top 20 Annually in Terms of Highest Share of Arrests or Incidents at Least 10 Years or More Out of Possible 20 Years Panel B: Incidents

Panel B: Incidents		
School District	2018/2019 Enrollment	Share of Statewide Incidents
Allentown City *	16,821	7.4%
Bensalem Township	6,474	0.7%
Bethlehem Area *	13,618	1.9%
Central Bucks	18,144	1.1%
Erie City	10,773	10.4%
Harrisburg City	6,383	3.7%
Lancaster	11,003	1.4%
Norristown Area	7,491	2.4%
Philadelphia City *	128,110	20.6%
Pittsburgh *	22,567	41.8%
Reading	17,725	8.6%
Southeast Delco	4,342	2.1%
Upper Darby	12,439	1.5%
William Penn	5,069	1.8%

4.0 Concentrations of Misconduct: Arrests vs. Incidents: *Philadelphia SD*

Table 7: Unweighted and Weighted Percentage of Philadelphia Public School Buildings under Alternative Definitions of “Persistently Dangerous”

Philadelphia	% Bldgs NCLB "Persistently Dangerous"	% Enrollment NCLB "Persistently Dangerous" Enrollment Weighted	% Bldgs Based on Incidents "Persistently Dangerous"	Based on Incidents "Persistently Dangerous" Enrollment Weighted
Arrests Counted?	Yes	Yes	No	No
2001/2	14.80%	26.60%	30.40%	84.40%
2002/3	17.10%	30.10%	36.40%	89.90%
2003/4	16.60%	28.30%	45.90%	95.50%
2004/5	19.50%	30.90%	65.20%	98.20%
2005/6	17.20%	28.70%	86.70%	98.80%
2006/7	17.60%	26.50%	92.20%	97.30%
2007/8	19.80%	29.00%	90.70%	96.20%
2008/9	20.40%	27.80%	90.70%	97.10%
2009/10	18.30%	24.50%	86.30%	96.10%
2010/11	15.10%	20.90%	80.70%	91.90%
2011/12	11.30%	16.60%	78.60%	88.20%
2012/13	11.20%	15.80%	75.90%	86.40%
2013/14	9.90%	15.60%	72.40%	80.70%
2014/15	8.90%	13.50%	68.00%	78.20%
2015/16	4.30%	4.40%	58.30%	83.30%
2016/17	1.00%	1.20%	59.00%	83.00%
2017/18	0.50%	0.80%	64.00%	87.70%
2018/19	0.50%	0.80%	68.50%	86.10%
Total	13.00%	20.40%	69.80%	90.60%

4.0 Concentrations of Misconduct: Arrests vs. Incidents: *Pittsburgh*

Table 8: Unweighted and Weighted Percentage of Pittsburgh Public School Buildings under Alternative Definitions of “Persistently Dangerous”

Arrests Counted?	Yes	Yes	No	No
Pittsburgh	% Bldgs NCLB "Persistently Dangerous"	% Enrollment NCLB "Persistently Dangerous" Enrollment Weighted	Based on Incidents "Persistently Dangerous"	Based on Incidents "Persistently Dangerous" Enrollment Weighted
2001/2	0.00%	0.00%	79.70%	84.40%
2002/3	0.00%	0.00%	85.00%	89.90%
2003/4	0.00%	0.00%	93.70%	95.50%
2004/5	24.70%	39.30%	97.50%	98.20%
2005/6	25.60%	40.10%	98.80%	98.80%
2006/7	22.20%	34.80%	93.70%	97.30%
2007/8	20.60%	32.60%	90.50%	96.20%
2008/9	14.70%	25.70%	91.20%	97.10%
2009/10	5.00%	7.70%	90.00%	96.10%
2010/11	0.00%	0.00%	84.70%	91.90%
2011/12	1.80%	0.40%	82.50%	88.20%
2012/13	2.00%	0.50%	78.00%	86.40%
2013/14	2.00%	0.60%	74.00%	80.70%
2014/15	2.00%	0.50%	70.60%	78.20%
2015/16	0.00%	0.00%	75.00%	83.30%
2016/17	0.00%	0.00%	75.90%	83.00%
2017/18	1.80%	0.40%	78.60%	87.70%
2018/19	5.60%	7.70%	79.60%	86.10%
Total	8.10%	12.10%	85.60%	90.60%

5.0 Learning Outcomes, Poverty and Misconduct: Exploratory Model and Descriptive Statistics

Unit of Observation: PA school buildings across time

General Hypotheses:

household poverty lowers scale scores, increases cv of scale scores

misconduct lowers scale scores, increases cv of scale scores

Estimation Issues:

poverty and misconduct are interconnected

(Attention Identification Police!)

tests change by type and grade level and over time as standards evolve

5.0 Learning Outcomes, Poverty and Misconduct:

Operational OLS Exploratory Model

Note: poverty and misconduct are inter-acted in Model

For each school building year, test grade level, (k=5, 8, 11 with grade 5 the dropped category),
test type mathematics or reading/language arts (math=1), school years 1999/2000 through 2018/2019:

Mean Building Scale Score (or Coefficient of Variation in Mean Building Scale Score)_t

$$= \beta_1 + \beta_2 \text{Poverty Rate}_t + \beta_3 \text{School Misconduct Rate}_t + \beta_4 \text{Poverty Rate}_t \times \text{School Misconduct Rate}_t + \beta_5 \text{Test Type}_t + \delta \text{Test Grade}_t + \Omega \text{Year} + \varphi_t \quad [1]$$

where δ and Ω are vectors of dummy variable coefficients and φ_t is an error term.

Table 9 Descriptive Statistics Used in Regression Analysis

Variable	Observations	Mean	Std. Dev.	Min	Max
Mean Scale Score	78,964	1316.3770	193.0575	782.7273	1805.8260
Coefficient of Variation of Mean Scale Score	78,964	12.7989	4.3609	1.0776	27.6087
Poverty Rate	78,964	.3815	.2463	0.0000	1.0000
Arrest Rate	78,964	0.0031	.0094	0.0000	0.4143
Incident Rate	78,964	.0308	.0634	0.0000	2.5776

Table 10: Model with Arrest as Misconduct Measure
(Time dummies not displayed)

:Model: Mean Scale Score	Regression Coefficient	Std. Err.	t
Intercept	1350.314	2.3024	586.5
Poverty Rate	-240.0016	2.0199	-118.8
Arrest Rate	-3202.225	108.853	-29.4
Interaction: Poverty Rate x Arrest Rate	2992.409	190.4254	15.7
Test Type: Math=1, Reading=0	5.7553	0.8911	6.5
Grade 8	11.986	1.068	11.2
Grade 11	122.4671	1.1907	102.9
Observations	78,964		
R ²	0.5796		
Adjusted R ²	0.5794		

Table 11 Model with Incident Rate as Misconduct Measure
(time dummies not displayed)

:Model: Mean Scale Score	Regression Coefficient	Std. Err.	t
Intercept	1358.192	2.33488	581.7
Poverty Rate	-247.5707	2.1062	-117.6
Incident Rate	-553.7207	25.1663	-22
Interaction: Poverty Rate x Incident Rate	641.7331	33.0995	19.4
Test Type: Math=1, Reading=0	5.7559	0.8958	6.4
Grade 8	12.3474	1.1039	11.2
Grade 11	118.1371	1.214	97.3
Observations	78,964		
R ²	0.5751		
Adjusted R ²	0.5750		

Table 12: CV of Scale Score: Arrest Rate as Misconduct Measure (time dummies not displayed)

	Regression Coefficient	Std. Err.	t
Model: CV of Mean Scale Score			
Intercept	13.5922	0.055	246
Poverty Rate	0.8847	0.049	18.3
Arrest Rate	96.9674	2.612	37.1
Interaction: Poverty Rate x Arrest Rate	-126.8347	4.570	27.75
Test Type: Math=1, Reading=0			
Grade 8	-0.4634	0.021	-21.7
Grade 11	0.3462	0.026	13.5
	-1.6777	0.029	-58.7
Observations	78,964		
R2	0.5254		
Adjusted R2	0.5253		

Table 13: CV of Scale Score:
Incident Rate as Misconduct Measure (time dummies not displayed)

Model: CV of Mean Scale Score	Regression Coefficient	Std. Err.	t
Intercept	1358.192	2.33488	581.7
Poverty Rate	-247.5707	2.1062	-117.6
Incident Rate	-553.7207	25.1663	-22
Interaction: Poverty Rate x Incident Rate	641.7331	33.0995	19.4
Test Type: Math=1, Reading=0	5.7559	0.8958	6.4
Grade 8	12.3474	1.1039	11.2
Grade 11	118.1371	1.214	97.3
Observations	78,964		
R2	0.5751		
Adjusted R2	0.575		

5.1 Table 14 Model Interpretations with Some RHS Experiments

Compared to a building with no poverty, no misconduct, what happens to scale score where impact is a % of standard deviation of scale score?

Base Model with variable values	Impact as % of Std dev of Dep variable	Model with Child Care Credit Impact	Percentile of RHS Variable Values
LHS: Mean Scale Scores			Location
RHS: arrest rate, poverty rate	-43.00%	-21.50%	Median
RHS: incident rate, poverty rate	-59.60%	-42.10%	Median
LHS: Mean Scale Scores			Location
RHS: arrest rate, poverty rate	-65.00%	-33.80%	75th percentile
RHS: incident rate, poverty rate	-95.90%	-78.90%	75th percentile
LHS: Mean Scale Scores			Location
RHS: arrest rate, poverty rate	-100.50%	-58.00%	90th Percentile
RHS: incident rate, poverty rate	-128.90%	-123.40%	90th Percentile

6.0 Summary, Caveats

- PA State Board of Education required arrests in conjunction with a fairly typical set of triggers.
- **Result:** few persistently dangerous schools.
- Buildings which are persistently dangerous are concentrated, and the list of worst buildings/districts is rather static over 20 years. Philadelphia and Pittsburgh are far more dangerous than generally appreciated.
- Simulation with PA data on triggers without arrest requirement leads to far different picture about school safety.
- There seems to be little talk of effecting the Unsafe School Choice Option in PA, and the federal office at US Department of Education in charge of it does not issue reports that I've been able to locate.
- Regression modeling confirms the obvious, student misconduct is associated with lower and more variable math and language arts scores. Actually big effects.

Caveats/Outstanding Questions

- Outstanding research issues deserving follow up include:
 - Which kinds of incidents adversely impact learning the most, the least?
 - What are the underlying structural relations between poverty and student misconduct?
 - Are there known or attempted interventions which can be used with models developed here to see if they actually reduce student misconduct, and improve student learning outcomes?
 - What are the costs of ignoring the general findings of the student misconduct linkage reported here in terms of trying to reduce the achievement gap in urban schools?

Questions/Comments from Audience?