



# Which Schools Disproportionately Refer and Arrest Non-White Students?



Grace (Ha Eun) Kim, Dr. George Farkas  
University of California, Irvine

## Introduction

- Criminalized school discipline and increased methods of surveillance and detection have been a major reason for the rise of the school-to-prison pipeline, which has played a key role in the disproportionate incarceration of nonwhite males (Owens, 2017).
- The consequences have been devastating for nonwhite communities since it is well-established that school expulsion or involvement with the criminal justice system during K-12 is a strong predictor of later criminal activity and incarceration (Hirschfield, 2018), and is associated with lower lifetime educational attainment and earnings (Weisburst, 2019), as well as negative outcomes for spouses and children (Western & Wildeman, 2009).
- Past literature demonstrates that police in schools increase student arrest rates (Owens, 2017).
- Past research (Homer & Fisher, 2020) has analyzed the Civil Rights Data Collection (CRDC) and suggested that police presence results in more student arrests, and that this effect was stronger for Black than for White students. However, they analyzed data for schools, many of which did not provide appropriate racial comparisons and many of which had zero arrest rates.

## Goals

This is an exploratory study to use the CRDC to investigate which schools disproportionately refer and arrest non-white students. Homer & Fisher (2020) utilized the same dataset but did not restrict the analytic sample to schools that have sufficient students of each racial group and non-zero arrest rates to determine disproportional law enforcement on students of color. This poster reports on preliminary results using CRDC to address the following research questions:

## Research Questions

1. Which U.S. schools have demographics and referral and arrest rates in which it is appropriate to study racial disproportionality in these rates?
2. What is the distribution of race-specific referral and arrest odds ratios in schools?
3. Which school characteristics significantly predict higher referral and arrest odds ratios in schools?

## Methods

- 2013-2014 school year data from Civil Rights Data Collection (CRDC) and the Common Core of Data (CCD)
- Not all schools can be research venues for studying racially disproportionate criminal justice referral and arrest rates. There are two important considerations for such research.
  1. If schools do not have enough students of different racial backgrounds, they cannot be used as venues to study racially disproportionate referral and arrest rates.
  2. There can be no calculation of Black or Latinx to White rate ratios unless these numbers are greater than zero.
- Referral or Arrest Rate: # of referral or arrest events in student race group/# of students in race group
- Traditionally, studies of racial disproportionality have focused on the odds ratio which is the occurrence rate for the racial minority group divided by the occurrence rate for Whites.
- BlkWht Referral Odds Ratio: Black referral rate/White referral rate
- BlkWht Arrest Odds Ratio: Black arrest rate/White arrest rate
- Same principle for LatWht Odds Ratio
- Four analytic samples: Black & White Referral Rates, Latinx & White Referral Rates, Black & White Arrest Rates, Latinx & White Arrest Rates
- Multivariate linear regressions to predict race-specific referral and arrest rates and race-specific odds ratios
- Predictor variables: police presence in school, percentage of students qualifying for free or reduced-price lunch, school level (primary, middle, high), racial composition of school, number of students enrolled, geographic location of school (city, suburb, town, rural)

## Results

### 1. Which U.S. schools have demographics and referral and arrest rates in which it is appropriate to study racial disproportionality in these rates?

	BlkWhtRef	BlkWhtArr	LatWhtRef	LatWhtArr	Total Sample	
Officer	0.79	0.83	0.71	0.77	0.77	0.28
%Black/%Latinx	0.26	0.24	0.32	0.34	0.14/.21	
FRL	0.51	0.52	0.49	0.50	0.52	
Primary	0.09	0.02	0.10	0.03	0.56	
Middle	0.30	0.23	0.33	0.26	0.18	
High	0.59	0.72	0.55	0.69	0.20	
Other	0.03	0.02	0.02	0.02	0.06	
City	0.30	0.30	0.31	0.33	0.24	
Suburb	0.46	0.47	0.48	0.48	0.33	
Town	0.08	0.07	0.10	0.11	0.14	
Rural	0.17	0.16	0.10	0.08	0.29	
Total Enrollment	1344.49	1462.76	1377.86	1523.18	541.93	
N	2451	954	2651	921	86384	

### 2. What is the distribution of race-specific referral and arrest odds ratios in schools?

	0-.5	.5-1	1-1.5	1.5-2	2-2.5	2.5-3	3-3.5	3.5-4	4-4.5	4.5-5	>5	Total
BlkWht Ref	3.35%	12.44%	13.42%	19.79%	11.18%	9.59%	6.61%	0.00%	3.55%	4.57%	15.50%	2451
BlkWht Arr	2.94%	9.96%	13.10%	17.61%	11.01%	8.49%	7.86%	0.00%	4.51%	4.30%	20.23%	954
LatWht Ref	10.30%	23.50%	20.37%	16.45%	9.43%	6.19%	4.38%	0.00%	2.34%	1.51%	5.55%	2651
LatWht Arr	11.62%	22.26%	18.89%	15.64%	9.01%	6.41%	3.91%	0.00%	2.17%	2.06%	8.03%	921

### 3. Which school characteristics predict higher referral and arrest odds ratios in schools?

	BlkWht_Ref_Ratio	BlkWht_Arr_Ratio	LatWht_Ref_Ratio	LatWht_Arr_Ratio
Officer	-0.172	0.0506	-0.00539	-0.276
FRL	-2.123***	-3.568***	-1.696***	-1.842***
Blk%/Lat%	-3.607***	-4.780***	-2.825***	-3.849***
Middle	0.607**	0.292	0.440**	0.365
High	0.777**	0.72	0.175	0.0535
Constant	4.773***	6.085***	3.424***	4.357***
N	2451	954	2651	921

Note: Total enrollment and school location were also controlled.  
 \* p<.05  
 \*\* p<.01  
 \*\*\* p<.001

- Out of approximately 96,000 schools nationwide, only 2,451 met the criteria for studying Black/White referral disproportionality, 954 for Black/White arrest disproportionality, 2651 for Latinx/White referral disproportionality, and 921 for Latinx/White arrest disproportionality.
- There are substantial differences from the total population of U.S. schools and those that are appropriate to study racial disproportionality in referrals and arrests. Homer & Fisher (2020) used the total population, making their results unreliable.
- The majority of schools in the analytic samples are high schools whereas the population of schools are majority primary.
- The analytic samples are more urban or suburban than the total population which had a higher percentage of town and rural schools.
- There is a stark contrast in the percentage of schools that have sworn law officers: approximately 30% of schools in the unrestricted sample vs. approximately 70% to 83% in the analytic samples.
- The analytic samples have a higher percentage of Black and Latinx students and are substantially larger than the population of schools.

- The vast majority of schools have racial odds ratios above 1.0, indicating that in schools appropriate for this study, Black and Latinx students have a higher risk than White students of coming in contact with the criminal justice system.
- Black students seem to experience greater disproportionality in referrals and arrests than Latinx students.

- Officer presence in schools was not significantly related to referral and arrest racial disproportionality odds ratios. Homer and Fisher (2020) find that police presence is associated with higher arrests for all student race groups, with the highest for Black students. They did not compute disproportionality odds ratios.
- The percentage of students who qualify for free and reduced priced lunch have significant and negative coefficients, suggesting that schools with higher proportions of students from economically disadvantaged backgrounds demonstrated less disproportionality in racial odds ratios for referrals and arrests.
- Trends were similar for the percentage of Black/Latinx students in schools: schools with higher Black/Latinx student percentages displayed less disproportionality in student referrals and arrests. Homer and Fisher (2020) find that the proportion of Black students is associated with a decrease in arrest across all student groups while the proportion of Latinx students is associated with an increase in arrest across all student groups (all coefficients were significant).
- In general, racial disproportionality for referrals was higher for both Black and Latinx students in middle school and for Black students in high school.

## Discussion

- This exploratory study of CRDC data revealed that only about 2% of schools nationally are appropriate to investigate racial disproportionality in student referral and arrest rates. This was largely due to the requirement for at least one referral or arrest for each arrest group. Otherwise, ratios cannot be calculated when there is a 0 in the denominator. These schools differ markedly from the full population of U.S. schools represented in these data—they are more likely to be high schools, have a police officer present, and have a higher percentage of nonwhite students. Police presence was associated with higher referral and arrest rates for Black students.
- By contrast, Homer & Fisher (2020) used the entire data set of all U.S. schools, likely introducing bias into their results.
- The distribution of odds ratios for the Black/White referral and arrest ratios show that most values were above 1.0, indicating an overall high level of racial disproportionality. Further, 15-20% of these Black/White odds ratios had extreme values above 5.0. These outliers deserve further investigation. Similar but less extreme patterns were observed for the Latinx/White ratios.
- Regression analysis showed that the presence of a police officer was not significantly related to racial odds ratios for any of the comparisons. A higher percentage of free lunch or Black or Latinx students reduced racial odds ratios. This is consistent with findings on the disproportional placement of non-White students into special education (Hibel, Farkas, & Morgan, 2010).

## Literature Cited

- Hibel, J., Farkas, G., & Morgan, P. (2010). Who is Placed into Special Education? *Sociology of Education*, 83(4), 312 – 332.
- Homer, E. M., & Fisher, B. W. (2020). Police in schools and student arrest rates across the United States: Examining differences by race, ethnicity, and gender. *Journal of School Violence*, 19(2), 192-204.
- Owens, E. G. (2017). Testing the school-to-prison pipeline. *Journal of Policy Analysis and Management*, 36(1), 11-37.
- Weisburst, E. (2019). Patrolling Public Schools: The Impact of Funding for School Police on Student Discipline and Long-term Education Outcomes. *Journal of Policy Analysis and Management*, 38(2), 338-365.
- Western, B., & Wildeman, C. (2009). The black family and mass incarceration. *The ANNALS of the American Academy of Political and Social Science*, 621(1), 221-242.