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Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline in the United States

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Abstract

This visualization represents the historical patterns and trends in racial/ethnic differences in punitive school discipline over the last five decades in K–12 public schools in the United States. Overall, out-of-school suspension rates show an inverted-U trend with significant increases between 1970 and 2010 followed by decreases in the last decade. On the other hand, corporal punishment rates (and associated racial/ethnic disparities) show a consistent negative trend since the early 1980s following statewide bans in the use of corporal punishment in schools since the 1970s. However, racial/ethnic disproportionality in school discipline remains persistent across the board; indeed, increasing until the very last few years for Black and American Indian/Alaskan Native students compared to White students.

Keywords

suspension, corporal punishment, civil rights, disproportionality, school discipline

In 1975, the Children's Defense Fund's cross-sectional analysis highlighted the overrepresentation of Black students in exclusionary school discipline outcomes in data collected by the Office for Civil Rights (Children's Defense Fund 1975). Exclusionary discipline in schools has been tied to a host of longer-term negative outcomes—including lower educational attainment and increasing involvement in the criminal justice system (Bacher-Hicks, Billings, and Deming 2019; Billings, Deming, and Rockoff 2014). Although studies continue to find racial discipline disparities using statewide or district-level administrative data (Anderson and Ritter 2020; Gopalan and Nelson 2019; Skiba et al. 2002, 2014), to our knowledge, no other study has examined long-term, nationwide patterns in racial/ethnic disproportionality in student discipline using multiple indicators. Figure 1 fills this gap by illustrating historical patterns in out-of-school suspension (OSS) and corporal punishment (CP) over the last five decades, using the Civil Rights Data Collection.

Out-of-School Suspension

Our longitudinal graphs covering approximately five decades show a few distinct patterns, particularly the persistence of racial/ethnic discipline disparities. First, between 1970 and 1990, we see a steady increase in OOS suspension rates, with Black students facing 2 to 4 times higher likelihood of suspension than White students.[1] This early post-civil rights era trend exemplifies the resistance to court-ordered desegregation from several Southern states. In many Southern districts, "second-generation" segregation took hold as legal efforts reduced "first-generation" segregation (e.g., between schools; see McClellan 2024). Even during the turn of the century, the Black-White OSS risk ratio continued to rise to almost 4 to 1. Although not as stark, we see similar patterns for American Indian/Alaska Native students. The Hispanic-White risk ratio

[1]The sharp increase in risk ratios and risk differences (see supplemental material) seen in 1976 could be an artifact of shifting from a sample survey collection to universe collection in that year. For additional descriptions of survey sampling frame changes over time and additional robustness checks, see supplemental material.

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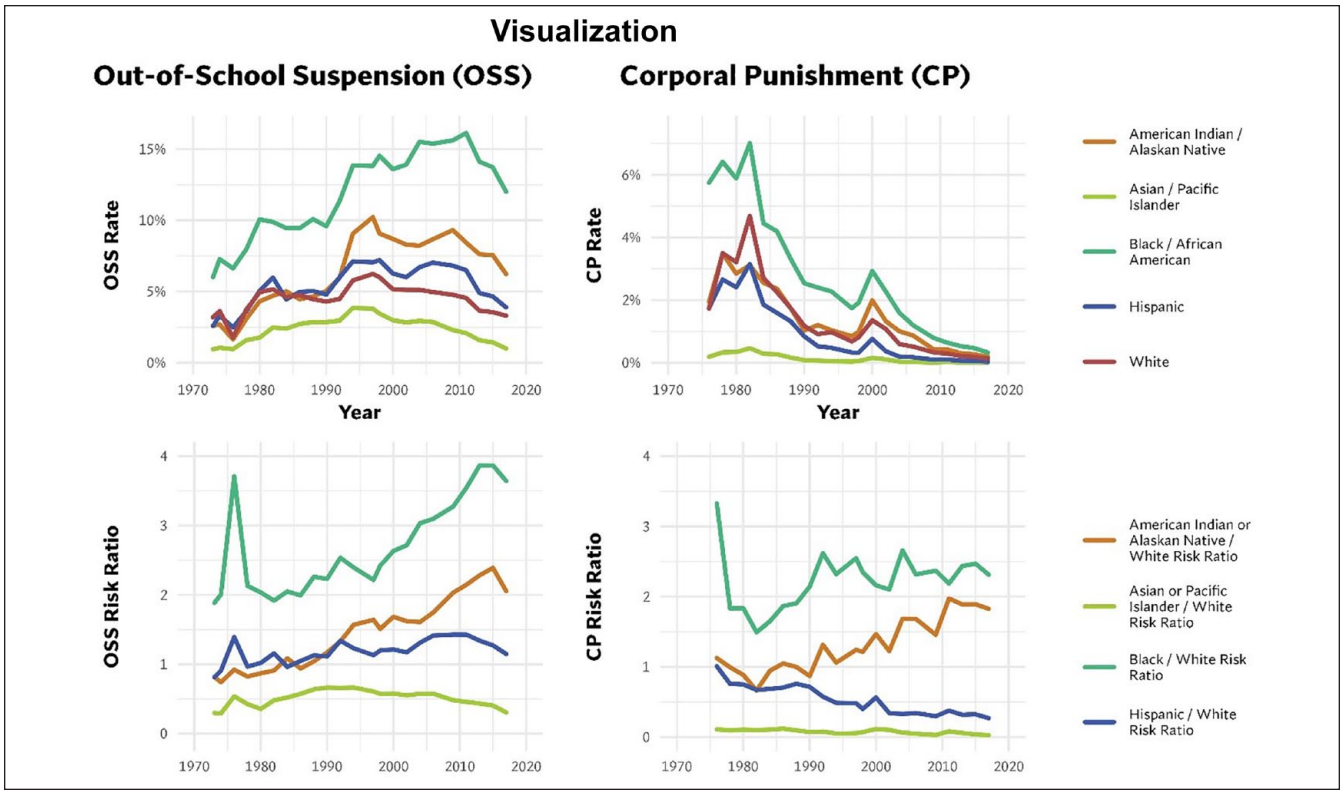

Figure 1. Historical patterns and trends in school discipline in the United States.
Note: Author calculations based on restricted-use data from the Civil Rights Data Collection 1968–2009 Timeseries and publicly available data from the Civil Rights Data Collection for 2011–2012, 2013–2014, 2015–2016, and 2017–2018 academic years from https://civilrightsdata.ed.gov. All estimates are unweighted.

(i.e., relative differences in discipline rates between White and Hispanic students), on the other hand, is much more modest, largely constant over time with slight declines in the last decade. Throughout this time, we do not observe significant disparities between Asian/Pacific Islander and White students; indeed, Asian/Pacific Islander students have lower OSS rates.

Corporal Punishment

In contrast, we see a more consistent decline in the use of CP during this period, as several states started banning its use in schools.[2] Despite the longitudinal, downward trend in CP rates across all race/ethnic categories, Black-White and Alaska Native-White disproportionality in CP remained persistent, with Alaska Native and Black students facing about 1 to 3 times higher likelihood of receiving CP than White students throughout this period. Both Hispanic and Asian/Pacific Islander students had lower rates of CP than White students throughout this period.

[2]Even in states that did not outright ban corporal punishment, we see sharp declines in the use of corporal punishment over the period, which is encouraging (see Figure S2 in the appendix).

Punitive School Discipline

Declines in overall use of punitive school discipline practices likely reflect the combined effects of significant advocacy by think tanks, such as the Children's Defense Fund, that led to policy reforms, including imposing state-level bans in the use of CP (Dhaliwal et al. 2024; Gershoff and Font 2016), issuing federal policy guidance (U.S. Department of Education & U.S. Department of Justice 2014), and banning suspensions for selective instances in some districts/schools (Anderson 2018; Hashim, Strunk, and Dhaliwal 2018; Steinberg and Lacoe 2018). Recognition of long-term harmful effects of punitive school discipline (Council on School Health et al. 2013; Curran 2016; Duarte et al. 2023) have also led to calls for using promising preventive approaches, such as restorative justice policies (Adukia, Feigenberg, and Momeni 2024; Davison, Penner, and Penner 2022), over the last decade.

Nevertheless, 70 years since *Brown v. Board* and 60 years since the 1964 Civil Rights Act, our visualization highlights that the racial/ethnic gradient in exposure to punitive school environments created by a series of interlocking, systemic factors (e.g., segregation, implicit and explicit bias) remained persistent and growing for Black and Alaska Native American students. Continued monitoring of

punitive student discipline[3] is warranted to understand whether minoritized students, who are more likely to attend low-resourced and punitive schools (Gopalan and Nelson 2019), continue to bear the brunt of exclusionary school discipline (Losen and Haynes 2016).

Acknowledgments

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Supplemental Material

Supplemental material for this article is available online.

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[3]Particularly steep declines were observed in the 2020–2021 data collection. However, given that many districts, especially those disproportionately serving students of color, remained shut due to the COVID pandemic during this time period, data quality concerns remain. Therefore, we do not include this data collection year in the main visualization but do include it in Figure S3 in the supplemental materials.

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Author Biographies

Maithreyi Gopalan, PhD, is an associate professor of education and public policy at The Pennsylvania State University. She is interested in conducting policy-relevant, interdisciplinary research that explores the causes and consequences of racial and socioeconomic disparities in student outcomes using experimental and quasi-experimental research methods.

Sarah Asson, PhD, recently graduated from the educational leadership program in the Education Policy Studies Department at The Pennsylvania State University. Her research interests include examining patterns of racial segregation and inequality in K–12 schools and policy and legal solutions to foster equitable integration.

Michael Cattell, Jr. is an undergraduate student majoring in both education and public policy and geography at The Pennsylvania State University. He is interested in using cartography and broader data visualization strategies to describe school and policy contexts and examine how educational outcomes differ across those contexts.

Erica Frankenberg is a professor of education and demography in the College of Education, and affiliate law faculty at The Pennsylvania State University; she is also director of the Center for Education and Civil Rights. Her research interests focus on racial desegregation and inequality in K–12 schools and the connections between school segregation and other metropolitan policies.

Supplemental file for "Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline"

Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline in the US

Data

The data for this visualization are aggregated national summaries of school- or district-level data collected by the federal Department of Education's (ED) Office for Civil Rights (OCR) as part of the Civil Rights Data Collection (CRDC) since 1968. The code used to create the visualization are available here: https://github.com/mjcj01/mjcCRDC-Socius-Visual

Sample

The CRDC has collected information about student discipline since 1973 (the first survey was conducted in 1968); however, the exact indicators of school discipline and the level of aggregation (i.e., race/ethnicity, sex, disability, and English learner status) has varied over time. We chose two indicators—out-of-school suspensions and corporal punishment—for this visualization because these are the only discipline indicators that have been collected (and disaggregated by race/ethnicity) consistently over the years (from 1973 for out-of-school [OSS] and from 1976 onwards for corporal punishment [CP]). 1968-2009 data can be obtained using a restricted-use data license from the Institute of Education Sciences (IES). For 2011-12 data to the latest surveys, the CRDC is publicly available for download from https://civilrightsdata.ed.gov. Here we note several design considerations.

Measures

Our visualization contains two panels for both indicators of school discipline, each of which provide distinct yet complementary information. Rates of out-of-school suspension and corporal punishment were calculated for each academic year by dividing the number of students of a particular race/ethnicity category who were suspended by the total number of students belonging to that race/ethnicity category who were enrolled that academic year.

Additionally, we calculate risk ratio—a measure of disproportionality (i.e., relative comparisons)—for all minoritized student subgroups in comparison to white student subgroup. Specifically, for each minoritized subgroup (Black, Hispanic, Native American, and Asian/Pacific Islander), we separately calculate the risk ratio vis-à-vis white students using the equation (1) below. We then plot the long-term trends in risk ratios (separately for out-of-school suspensions and corporal punishments) for Black-white, Hispanic-white, Asian/Pacific Islander-white, and Native American-white students over time in addition to the discipline rates described above.

$$(1)\ Risk\ ratio = \frac{\left(\frac{Number\ of\ minoritized\ students\ diciplined}{Number\ of\ minoritized\ students\ enrolled}\right)}{\left(\frac{Number\ of\ White\ students\ diciplined}{Number\ of\ White\ students\ enrolled}\right)}$$

In the supplement, we also calculate another measure of disproportionality common in the school discipline literature—risk difference—using the equation (2) below. We include this secondary measure of disproportionality to ensure that the long-term trends show consistent patterns across

various measurement choices (Curran 2020). Even though risk ratios and risk differences each have specific advantages and disadvantages (see Curran 2020 for an in-depth discussion of the benefits and drawbacks of various measures of discipline disproportionality), they are both parsimonious measures that are easy to interpret. These measures also show broad consistency in patterns and trends.

$$(2)\ Risk\ difference = (Number\ of\ minoritized\ students\ disciplined / Number\ of\ minoritized\ students\ enrolled) - (Number\ of\ White\ students\ disciplined / Number\ of\ White\ students\ enrolled)$$

Both risk ratios and risk differences yield relative measures of discipline statistics between Black (Hispanic) and white students. While risk ratios should be interpreted as relative difference in the likelihood of suspension/corporal punishment, the risk difference yields differences in terms of percentage points. For example, if 25 percent of Black students and 5 percent of white students are suspended, the Black-white risk ratio would be 5 and Black-white risk difference would be 20 percentage points.

In the main manuscript, we present the results just using risk ratios as they more intuitive and easier to interpret. However, the trends look fairly similar nationwide using both these metrics; We add the risk differences for completeness in the supplement (see appendix figure S4).

Other data considerations

Because the aggregated data presented in the visualization comes from various data collection years, here we note several data considerations and assumptions we made.

- For the discipline rate for all students (top panels), we calculate the total number of students enrolled (who received suspensions/corporal punishments) in a school/district by aggregating the numbers of enrolled students (who received suspensions/corporal punishments) reported across various race/ethnicity category groups for consistency. Even though the total number of students enrolled (who received suspensions/corporal punishments) in a school/district is provided in the data in some years, there are some minor discrepancies in the reported totals vs. the aggregated totals.
- In some data collections, reports of students who received one out-of-school suspension and those who receive more than one out-of-school suspension in the academic year are reported separately. To maintain consistency across the years, we aggregate those estimates to calculate total number of students in each race/ethnicity group who received one or more out-of-school suspensions.
- Descriptions and labels of race/ethnicity categories in the CRDC have undergone some minor changes over the years in the data. For example, American Indians/Alaska Natives were coded as "AME" in the historical years but "AI" subsequently). Similarly, beginning in 2009, the schools/districts could provide their data and race/ethnicity disaggregation using five race and ethnicity categories (Hispanic, White, Black/African-American, Asian/Pacific Islander, and American Indian/Alaska Native) or seven race and

ethnicity categories (Hispanic/Latino, White, Black/African-American, Asian, Native Hawaiian/Other Pacific Islander, American Indian/Alaska Native, and Two or More Races). In 2011, all districts were required to report using the seven race and ethnicity categories. To maintain consistency in reporting, we standardize variable names over time and report using the five race/ethnicity categories that were used consistently in the CRDC data across our panel. For example, Native Hawaiian/Pacific Islander students, reported separately, by some school districts since 2009 are combined with Asian students—the category used prior to 2009.

- We convert all reserve codes in the data to missing before aggregating the counts at higher levels (e.g., from school to district to national totals)
- Beginning in 2009, student counts of suspension and corporal punishment are reported by disability, gender, and race/ethnic categories. We aggregate these counts to the race/ethnic category level. In other words, we calculate the total number of boys and girls, with and without disability who received suspensions/corporal punishments for each race/ethnic category.
- In terms of final inclusion/exclusion of a district in the nationwide sample, we follow these rules. For each academic year, we include districts that report at least one non-missing value for any count by race/ethnic category or gender. If a district has missing across all suspension (or corporal punishment) variables, they are dropped from the sample when calculating rates. If a district has 0 across all suspension (or corporal punishment) variables, they are included in the sample.

Visualization Design

We provide code to create the visualization as well as alternate versions.

Characterizing the historical patterns and trends in student discipline:

- We use separate panels to depict the long-term trends in out-of-school suspensions and corporal punishments in the US. As described earlier, we chose to characterize the trend in student discipline using two extensively studied discipline indicators—out-of-school suspensions and corporal punishment—disaggregated by race/ethnicity for this visualization for both pragmatic and substantive reasons. First, these are the only discipline indicators that have been collected consistently over the years (1973-2020) at the level of disaggregation (race/ethnicity) we use in this visualization. Even though other indicators—such as expulsions, restraints and seclusions, in-school-suspensions, and others—have been collected in some years in the panel, they are not consistently available for all the collection years. Second, suspensions and corporal punishment, and in particular, the racial/ethnic disparities in suspensions and corporal punishments have been the most extensively examined stylized fact about discipline in the nation over the years. Indeed, the longer-term harms in exposure to suspensions and punitive school environments (Bacher-Hicks, Billings, and Deming 2019) highlights the importance and significance of a historical retrospective of patterns and trends in these measures that our visualization provides.
- A related visualization consideration is the focus on minoritized students and white students’ comparisons. We include the risk ratio comparisons for all minoritized student

subgroups. However, we also want to note that the Black-white and Hispanic-white comparisons are particularly noteworthy due to three reasons. First, these comparisons are the most relevant theoretically and empirically given past research on student discipline disproportionality that shows historic overrepresentation. Second, Black and Hispanic students form the largest minority subgroups that have been consistently measured over time in the CRDC. Relatedly, we are less constrained by statistical power issues when comparing these minority subgroups over this long panel. And third, these are easy to interpret in a single graph. Creating a parsimonious representation of key patterns and trends requires limiting the number of lines and statistics that can be shown in one figure. The inclusions of these groups provide informative contrasts about this topic that highlights that racially minoritized students are not a monolith and have significantly different experiences.

Selecting Universe Biennial Data Collections Years Only to Present (see alternate versions using universe data collection years only in Figure S1):

- Between 1968 and 1974, the CRDC (called the Elementary and Secondary School Civil Rights Survey until 2004) was collected every year from a sample of school districts and all schools within those districts in the US. Post-1974, the data was collected biennially from a sample of school districts (and all schools within those districts) in the country with the exceptions of 1976, 2000, 2006, and 2011-onwards when the collection became a census (i.e., data was collected from the universe of school districts and all schools). Since the 2011-12 collection, the census CRDC has also been administered every two years. However, due to the COVID-19 pandemic that resulted in school closures nationwide, OCR postponed the 2019-20 CRDC and instead collected data from the 2020-21 school year. We chose to present our main visualization to include data from all the collections that included the discipline indicators of interest, though in the main text, we end prior to the 2020-21 collection due to concerns about interpretation regarding student discipline amid remote schooling. However, it is important to note that some of these nationwide estimates are from the sample survey (and unweighted), while the others are from universe collections.
- Even though the CRDC’s restricted-use data files report a “district weight” in some data collection years to account for the sampling strategy, clear documentation on the methodology used to create those weights and generate national estimates with standard errors is not consistently available across all collection years. Therefore, as a robustness check we include only the universe data collection years (1976, 2000, 2011-12, 2013-14, 2015-16, 2017-18) in an alternative visualization (see figure S1 in appendix). Because these nationwide estimates from universe collections do not need any additional weight adjustments for comparisons, this alternative visualization, which shows fairly similar trends over time increases our confidence on the longer-term trend and patterns that we describe in the main text.

Inclusion of latest 2020-21 data collected amidst COVID (see alternate versions that includes 2020-21 in appendix Figure S3)

- Particularly steep declines occurred in the overall use of out-of-school suspensions and corporal punishment in the 2020-21 data collection, when many districts, especially those disproportionately serving students of color, remained shut due to the COVID pandemic.

Supplemental file for “Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline”

Distinguishing between Intensive and Extensive Margins on Use of Corporal Punishment:

- Since the 1970s, we see that the number of students receiving corporal punishment declined roughly four-fold. Most of this decline can be attributed to state-level bans on the use of corporal punishment in schools. These state-level bans were led by states in the northeast (only New Jersey had banned its use since 1867; Massachusetts banned in 1971 followed by Maine, Washington DC, Rhode Island and Hawaii later in the 1970s). These bans led to extensive declines in the overall use of corporal punishments in the nation during the period given their school-aged population sizes. However, empirically, it is interesting to ask if the use of corporal punishments declined intensively even in states that did not outright ban corporal punishment during this period. We show the rates of corporal punishment (and the related disproportionality metrics) in an alternative visualization (see figure S2 in appendix) that only includes data from states that never banned corporal punishment in schools during this period. Indeed, 19 states do not outright ban the use of corporal punishment in schools still as of 2020. We see sharp declines in the use of corporal punishment over the period on this intensive margin as well, which is encouraging, though persistent racial gaps in corporal punishment regardless of which set of states used.

Supplemental file for “Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline”

Supplemental Figures

Figure S1

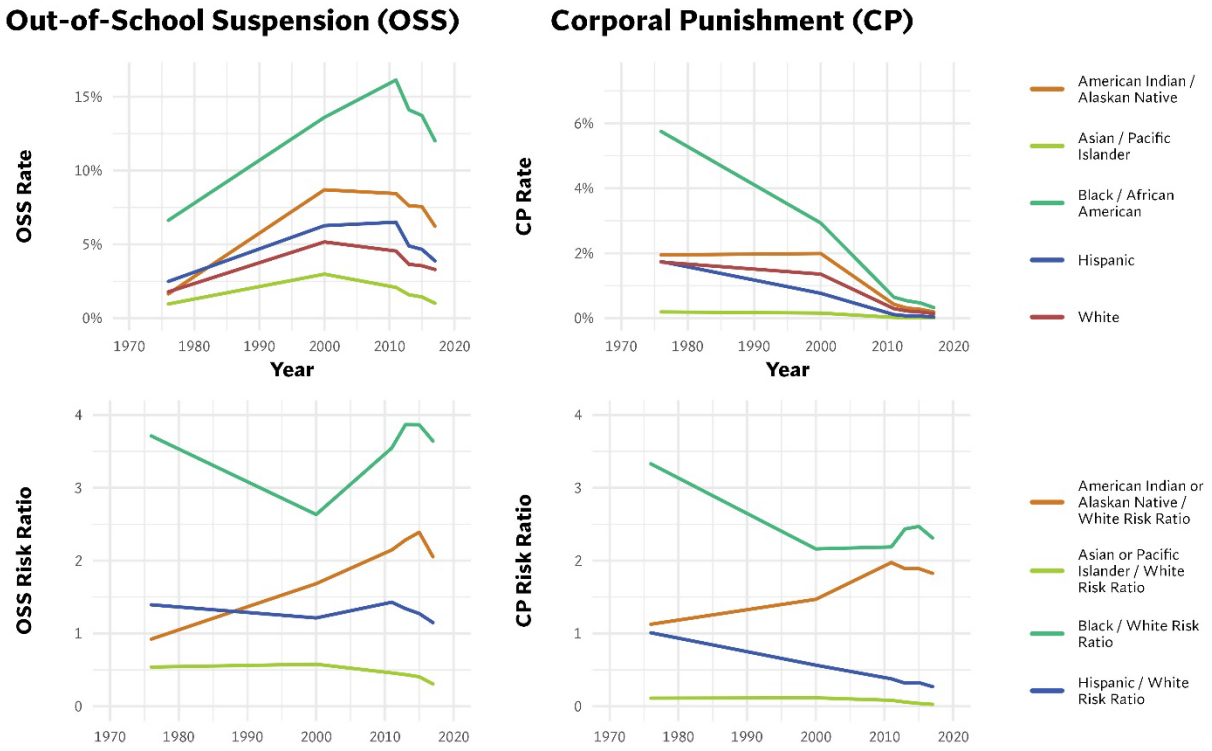

Figure S1. Historical Patterns and Trends in School Discipline from the Civil Rights Data Collection (CRDC) Universe data collection years only (1976, 2000, 2012, 2014, 2016, and 2018). Author calculations based on restricted-use data from the 1968-2009 Timeseries and publicly available data from the Civil Rights Data Collection for 2011-12, 2013-14, 2015-16, and 2017-18 academic years from https://civilrightsdata.ed.gov

Supplemental file for “Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline”

Figure S2

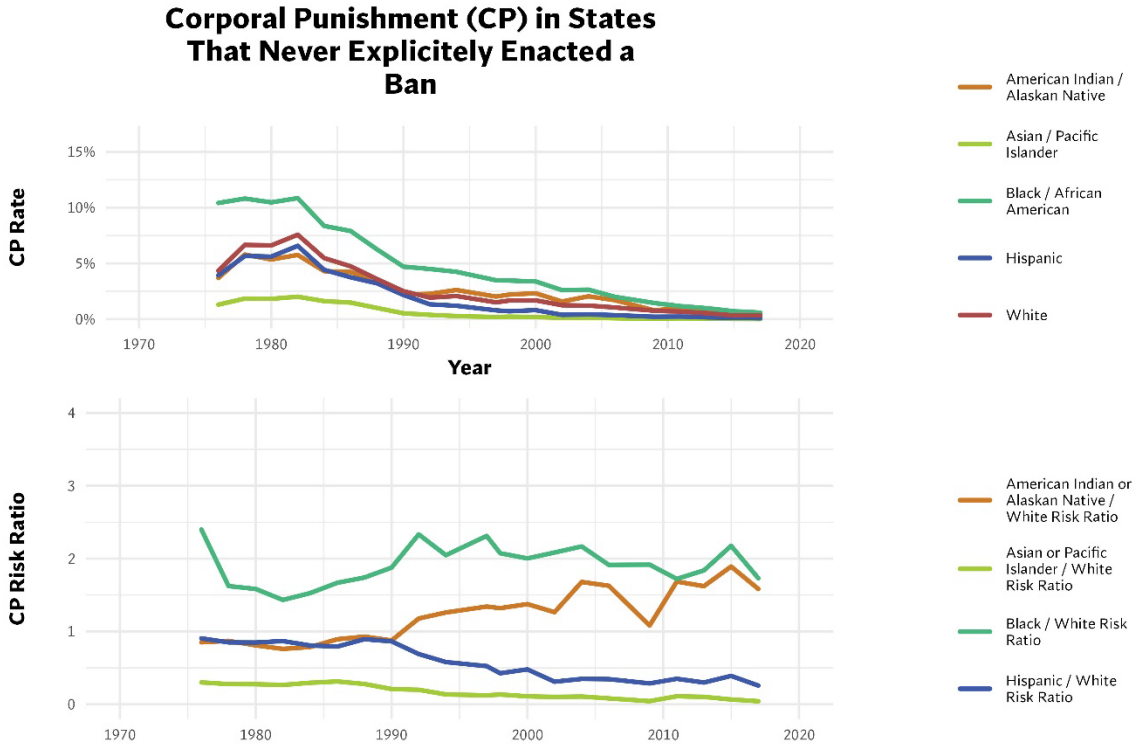

Figure S2. Historical Patterns and Trends in Corporal Punishment in States that Never Explicitly Enacted a CP Ban in the US. Author calculations based on restricted-use data from the Civil Rights Data Collection 1968-2009 Timeseries and publicly available data from the Civil Rights Data Collection for 2011-12, 2013-14, 2015-16, and 2017-18 academic years from https://civilrightsdata.ed.gov

Supplemental file for “Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline”

Figure S3. Including 2020-21 CRDC in Long-term Trend

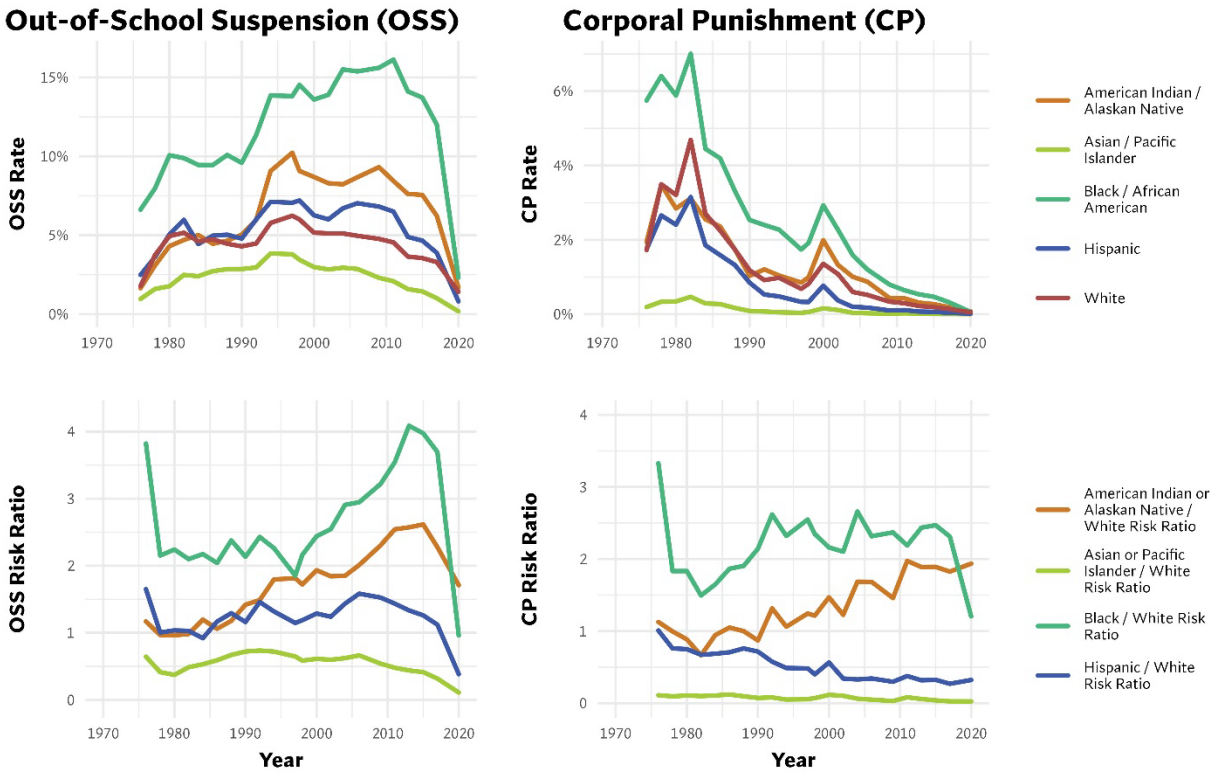

Figure S3. Historical Patterns and Trends in School Discipline Including Latest 2020-21 Data Collection. Author calculations based on restricted-use data from the Civil Rights Data Collection 1968-2009 Timeseries and publicly available data from the Civil Rights Data Collection for 2011-12, 2013-14, 2015-16, and 2017-18 academic years from https://civilrightsdata.ed.gov

Supplemental file for “Historical Patterns and Trends in Racial/Ethnic Disproportionality in School Discipline”

Figure S4. Including Additional Disproportionality Metric – Risk Difference

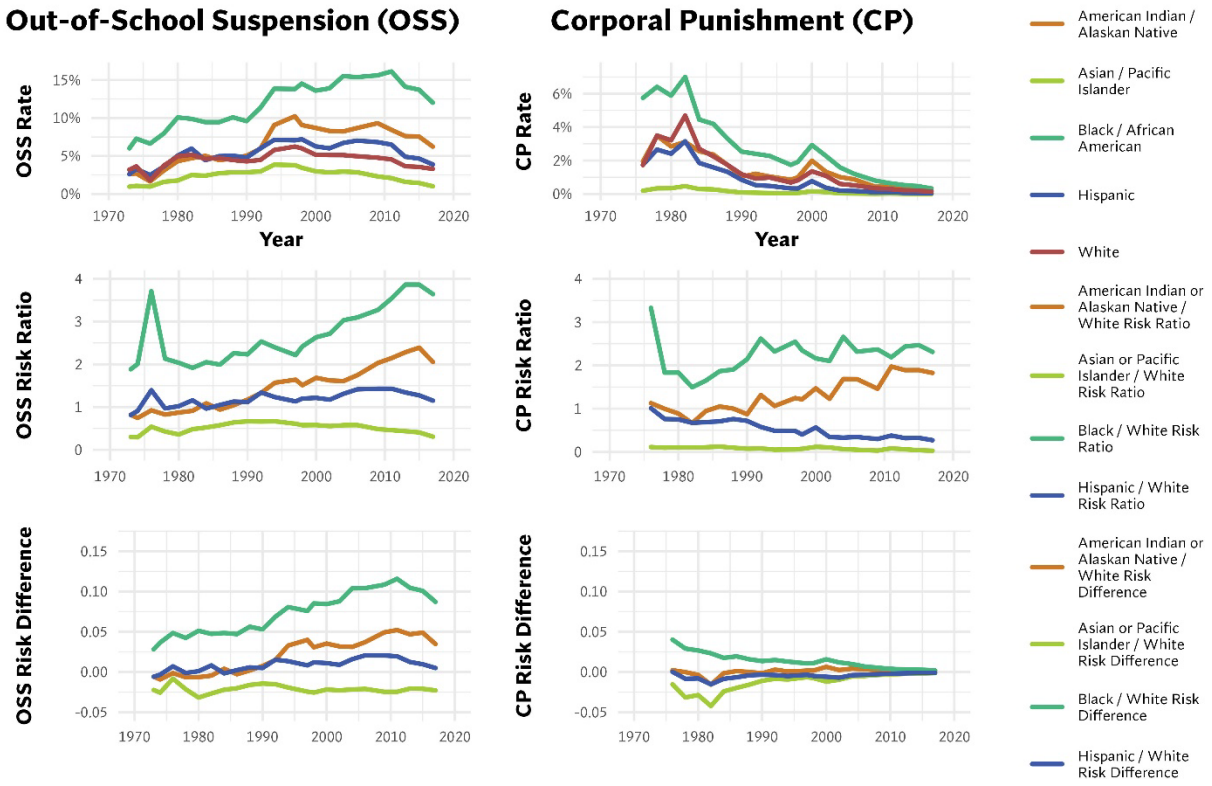

Figure S4. Historical Patterns and Trends in School Discipline in the US. Author calculations based on restricted-use data from the Civil Rights Data Collection 1968-2009 Timeseries and publicly available data from the Civil Rights Data Collection for 2011-12, 2013-14, 2015-16, and 2017-18 academic years from https://civilrightsdata.ed.gov

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