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In this paper we document the prevalence and distribution of informal disciplinary consequences in K-12 public schools and examine how they contribute to disparities in school discipline. Using administrative data from North Carolina, we first describe the landscape of informal consequences across grade levels. Informal consequences are the most common disciplinary response in the early elementary grades. In kindergarten, 47% of disciplinary incidents result in an informal consequence, and informal consequences are more common than suspensions through second grade. They become much less common in middle and high school. Decompositions of unconditional racial and socioeconomic gaps show that, much like suspension patterns documented in prior work, disparities in informal consequences arise primarily within schools. Using two complementary fixed-effects econometric approaches—one focusing on single-student incidents among first-time kindergarteners and another comparing students within the same multi-student incidents—we show that Black and economically disadvantaged students are more likely to be suspended and less likely to receive informal consequences relative to their peers. We then descriptively explore the infraction-citation margin by documenting racial and socioeconomic differences in how students are cited for specific infractions within incidents. Our findings demonstrate that understanding K-12 school discipline disparities requires consideration of more than just suspension.

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More than Just Suspension: Informal Discipline in K-12 Schools*

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Abstract

In this paper we document the prevalence and distribution of informal disciplinary consequences in K-12 public schools and examine how they contribute to disparities in school discipline. Using administrative data from North Carolina, we first describe the landscape of informal consequences across grade levels. Informal consequences are the most common disciplinary response in the early elementary grades. In kindergarten, 47% of disciplinary incidents result in an informal consequence, and informal consequences are more common than suspensions through second grade. They become much less common in middle and high school. Decompositions of unconditional racial and socioeconomic gaps show that, much like suspension patterns documented in prior work, disparities in informal consequences arise primarily within schools. Using two complementary fixed-effects econometric approaches—one focusing on single-student incidents among first-time kindergarteners and another comparing students within the same multi-student incidents—we show that Black and economically disadvantaged students are more likely to be suspended and less likely to receive informal consequences relative to their peers. We then descriptively explore the infraction-citation margin by documenting racial and socioeconomic differences in how students are cited for specific infractions within incidents. Our findings demonstrate that understanding K-12 school discipline disparities requires consideration of more than just suspension.

Keywords: K-12 Education; School Discipline.

JEL: I21; I24; J15.

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1 Introduction

Exclusionary discipline remains common in K-12 public schools in the United States, even though overall rates of suspension have declined over the past decade (Leung-Gagné et al., 2022). This decline reflects several changes in policy, including federal action from the Obama Administration and state-level reforms designed to limit the use of exclusionary discipline (Rafa, 2019). At the same time, lawyers, journalists, and advocates have raised concerns that reductions in formally recorded discipline (e.g., suspensions) may coincide with increased use of less visible forms of exclusion (Green, 2023; Kolodner and Ma, 2022; Mathewson, 2023; National Disability Rights Network, 2022; Payne, 2022). These practices—often called informal exclusionary discipline—remove students from K-12 instructional settings in ways that are unlikely to appear in public reporting systems (Steyer et al., 2025a). Examples include timeouts, loss of recess, asking parents to collect a child before the end of the school day or keep them home (“soft suspension”), and encouraging or pressuring parents to disenroll their child (“soft expulsion”).

Although some of these concerns have arisen through investigative reporting and legal advocacy, a qualitative research literature has also documented the use of informal exclusionary discipline through small-scale studies (Bookser, 2025; Cruz and Myers, 2024; Gleit, 2025; Hoffstein-Rahmey et al., 2024; O’Grady et al., 2024; Steyer et al., 2025b). To date, however, the absence of systematically collected administrative data has limited researchers’ ability to examine informal exclusionary practices comprehensively (Hoffstein-Rahmey et al., 2024; Murphy et al., 2024; O’Grady et al., 2024; Williford et al., 2024). We address this limitation by leveraging detailed information within an existing state longitudinal data system to document the full spectrum of K-12 school disciplinary consequences—both formal and informal—at scale.

Our paper makes two primary contributions. First, we describe the landscape of informal discipline in K-12 public schools. To do this, we develop a classification scheme that

distinguishes informal consequences that remove students from the instructional or peer environment (“informal exclusionary” consequences) from those that primarily serve as warnings or signals (“informal cautionary” consequences). We then use this framework to document the prevalence and distribution of informal consequences across school and grade levels and decompose racial and socioeconomic disparities into component parts. We find that informal consequences exceed suspension consequences in the early elementary grades (i.e., kindergarten through second grades). In kindergarten, for example, 47% of all disciplinary incidents resulted in an informal consequence. The use of informal consequences declines in later elementary grades and is far less common in middle and high school. We examine gaps in informal consequences by student race and socioeconomic status, and, consistent with prior suspension research ([Barrett et al., 2021](#); [Liu et al., 2024](#)), find that most racial and socioeconomic gaps in informal consequences arise within schools rather than through across schools or districts.

Second, our paper integrates informal disciplinary consequences into the economics literature on racial and socioeconomic disparities in suspension. Using two distinct but complementary empirical strategies, we show that disparities in suspension and informal consequences are closely linked: Black and economically disadvantaged students are more likely to be suspended and less likely to receive informal consequences relative to White and non-economically disadvantaged students, respectively. We also provide descriptive evidence on the role of the infraction-citation margin in generating disparities in disciplinary consequences. Although not causal, our findings suggest that differences in assigned infraction severity within incidents may contribute to observed disparities in disciplinary consequences, particularly for suspension.

The paper contributes to two strands of literature. First, we produce quantitative evidence on informal disciplinary consequences in K-12 schools to complement existing work. Previous qualitative research has documented the use of informal practices in early childhood and has shown that despite restrictions on formal exclusionary discipline in these settings,

schools nonetheless use informal practices to remove children (Gilliam, 2005; Gilliam and Shahar, 2006; Giordano et al., 2024). Descriptive studies on K-12 settings highlight the use of conferences, parent involvement, warnings, and apologies (Anderson et al., 2019; Skiba et al., 1997; Wegmann and Smith, 2019), although this work has not yet developed a framework for understanding informal discipline or established empirical links between these practices and suspension inequality. Other work probes the perspectives of teachers (Williford et al., 2024) and parents (Wahman et al., 2024), highlights the range of informal strategies used, and explores the underlying reasons for the use of informal strategies, including limited staffing, inadequate training to manage complex student behavior (Bookser, 2025; Gleit, 2025; Hoffstein-Rahmey et al., 2024; O’Grady et al., 2024; Steyer et al., 2025b), pressure to meet academic targets, and desires to keep formal discipline rates low (Cruz and Myers, 2024; Steyer et al., 2025b; Williford et al., 2024).

Second, our work contributes to the literature on the formal dimensions of school discipline, especially suspension. Prior research shows that suspension is widespread and negatively affects student outcomes in the long-run (see e.g., Bacher-Hicks et al. (2024); Lacoë and Steinberg (2019)). Students who are economically disadvantaged, Black, male, and/or have disabilities are more likely to be suspended and receive longer suspensions than their peers (Anderson and Ritter, 2020; Gopalan and Nelson, 2019), even when conditioning on infraction type (Gilleskie and Li, 2022; Ritter and Anderson, 2018) or comparing students involved in the same incidents (Barrett et al., 2021; Liu et al., 2024; Shi and Zhu, 2022). Much of this literature focuses on middle and high schools, where suspension rates are highest; consistent with this emphasis, some evidence suggests that racial and economic disparities in suspension widen during K-12 (Barrett et al., 2021; Gilleskie and Li, 2022; Gopalan and Nelson, 2019; Liu et al., 2024). In contrast, elementary school—particularly the early grades—has received less attention (Karger and Komisarow, 2024; Lincove et al., 2024). Our work highlights this sensitive developmental period and cautions against exclusive focus on suspension.

Although several papers have considered non-suspension outcomes, most have treated these outcomes as a residual category rather than examining informal disciplinary consequences directly. A related literature has focused on office disciplinary referrals—the initial step indicating that a student’s behavior warrants formal sanction—and has shown that referrals are converted into suspensions at different rates across infraction types and demographic groups (Liu et al., 2024; Ritter and Anderson, 2018; Shi and Zhu, 2022; Skiba et al., 2011). However, this research has largely stopped short of characterizing the consequences within the non-suspension category. One exception is Ritter and Anderson (2018), which examines several non-suspension outcomes, including corporal punishment, placement in an alternative learning environment, no action, and a broad residual category labeled “other.” These categories are not organized around a conceptual distinction between formal exclusion and informal disciplinary practices and thus leave consequences outside of suspension largely uncharacterized. Our paper addresses this gap by identifying and quantifying a broader range of informal disciplinary practices, which allows us to examine how disciplinary responses outside the suspension margin contribute to previously documented patterns of inequality.

Our findings have implications for research and education policy. First, they reinforce the growing recognition that focusing narrowly on suspension produces an incomplete picture of school discipline (Steyer et al., 2025a). Informal consequences constitute a substantial share of disciplinary responses, particularly in the early grades, and thus are a core component K-12 school discipline. Second, our results suggest that racial and socioeconomic disparities in school discipline may emerge through a broader set of decision points than previously documented, including decisions about whether to assign formal versus informal consequences and which infractions students are cited for. Finally, the results highlight the value in expanding data systems and research frameworks to capture the full spectrum of disciplinary consequences. Doing so may improve both scholarly understanding of school discipline and the design of policies aimed at reducing inequities in students’ educational experiences.

2 Data

2.1 Data Source and Variables

We obtained administrative data from the North Carolina Education Research Data Center at Duke University. We focus on disciplinary incidents among students enrolled in traditional public schools in North Carolina during the 2015/16–2018/19 school years because information for early grades (K-2) is consistently available and disciplinary incident dates are complete. We exclude COVID-era school years because discipline data collection and reporting changed during this period.

For each disciplinary incident, we observe the date, infraction(s), consequence(s), and anonymized student identifier(s). Each incident is assigned a unique identifier, which allows us to determine whether it involved one or more students (important for defining our samples; described in detail in subsection 2.3). Incident data are collected from school districts by the North Carolina Department of Public Instruction ([North Carolina Department of Public Instruction, 2019](#)). School administrators report incidents by selecting one or more infraction(s) and one or more consequence(s) from pre-populated lists. Although multiple infractions may be reported, most incidents (92%) involve only one. For incidents with multiple infractions, we follow previous work and retain the first ([Shi and Zhu, 2022](#)). Most incidents (92%) have only one recorded consequence, while 6% have multiple consequences and 2% have none (we describe our approach to dealing with multiple consequences in subsection 2.2). We match incidents to student-level information including gender, race/ethnicity, economic disadvantage, whether the student is old-for-grade, lagged achievement, and lagged discipline history. In the data, student race and ethnicity are combined into a single measure, which we refer to throughout as race. Incident dates allow us to control for within-year and lagged school discipline history.

2.2 Defining and Categorizing Disciplinary Consequences

The main outcomes of interest are disciplinary consequences, which we classify into four categories: (1) Suspension, (2) Informal Exclusionary, (3) Informal Cautionary, and (4) Other. Suspension consequences include out-of-school and in-school suspensions. Informal exclusionary consequences involve loss of instructional time or separation from peers during the school day—such as timeouts, being sent home early, or detention—but fall short of formal suspension. We do not include detentions that occur outside the regular school day (i.e., before/after school or on Saturdays). Informal cautionary consequences capture warnings (written or oral) and conferences involving administrators, parents, and/or students. The other consequence category accounts for all remaining consequences. For a complete list, see Appendix B.

We code consequences hierarchically according to the following severity ranking: Suspension, Informal Exclusionary, Informal Cautionary, and Other. This ordering reflects the degree to which each consequence removes students from the instructional and/or peer environment and the extent to which it carries formal administrative consequences. Our classification departs from prior work (e.g., [Steyer et al. \(2025a\)](#)) by distinguishing informal exclusionary consequences, which remove students from instructional and/or peer settings, from informal cautionary consequences, which primarily serve as warnings. Our results are fully robust to alternative coding that relaxes this hierarchy and allows for non-mutually exclusive categories.

2.3 Samples

In this paper, we use four samples. The first includes all disciplinary incidents involving K-12 students and is used to characterize the distribution of informal disciplinary consequences across grade/school levels and to decompose racial and socioeconomic gaps into component parts. The second is restricted to single-student incidents among first-time kindergarten students (henceforth, “kindergarteners”). This sample allows us to focus on students without

prior school discipline histories and on incidents where there is no ambiguity about within-incident interactions between students. The third and fourth samples consist of multi-student disciplinary incidents and are restricted to incidents involving students with different racial identities and different socioeconomic statuses, respectively.

3 Descriptive Evidence

We begin by presenting summary statistics on student characteristics, disciplinary incidents, and consequences. We then document the use of informal disciplinary consequences in K-12 schools by presenting three key descriptive findings: how the number of disciplinary incidents varies across grade/school levels, how the distribution of consequences evolves as students progress through K-12, and how racial and socioeconomic gaps in informal disciplinary consequences can be decomposed into between-district, across-school within-district, and within-school components.

3.1 Disciplinary Incidents and Consequences in K-12

Table 1 reports summary statistics for elementary school students in traditional public schools in North Carolina during the 2015/16–2018/19 school years. Column (1) presents characteristics for the full student-year sample. Columns (2)–(5) report characteristics for subsamples defined by students’ prior disciplinary incidents or suspensions. While these subsamples condition on students’ discipline histories, our later analyses shift entirely to incident-level data rather than student-by-year data. Consistent with prior literature, students with prior disciplinary incidents or suspensions were more likely than the full sample to be Black, male, receiving special education services, or economically disadvantaged (Leung-Gagné et al., 2022).

We next examine how disciplinary incidents and the distribution of consequences vary across grade and school levels. Although the overall number of disciplinary incidents is lower at the elementary school level than at middle and high school levels, the percentage of incidents resulting in informal consequences is high, particularly in the early grades. Panel

(a) of Figure 1 shows that the number of disciplinary incidents increases gradually across elementary grade levels. Adjusted for grade-level enrollments, these correspond to around 19.5 incidents per 100 students in kindergarten and 35.5 incidents per 100 students in fifth grade.

Panel (b) depicts the distribution of disciplinary consequences by grade level and documents a pronounced shift in their composition. Informal consequences—defined as the sum of informal exclusionary and informal cautionary consequences—play a prominent role in the early grades. In kindergarten, 47% of disciplinary incidents result in an informal consequence, compared to 37% resulting in suspension. The percentage of incidents resulting in informal consequences declines steadily with grade level, while the percentage resulting in suspension increases. By fifth grade, 32% of incidents result in an informal consequence and 52% in suspension. In contrast, the proportion of incidents resulting in other disciplinary consequences remains relatively stable at approximately 16% across elementary grades.

Appendix Figure A1 shows that disciplinary incident counts and suspension rates are substantially higher in middle and high school. In middle schools, approximately 69% of incidents result in suspension, and in high school this ranges from 57%-65%, depending on grade level. Informal consequences are much less prevalent, which motivates our focus on elementary schools in later analyses.

3.2 Decomposing Disciplinary Consequence Gaps

After documenting how disciplinary incidents and consequences vary across grade and school levels, we analyze racial and socioeconomic gaps in these outcomes and decompose them into between-district, across-school within-district, and within-school components. Prior research consistently finds that the majority of unconditional suspension gaps—both Black-White and socioeconomic status—arise from within-school differences as opposed to sorting across districts or across schools within districts (Barrett et al., 2021; Liu et al., 2024). We follow the method presented in Barrett et al. (2021) to replicate this finding for suspension and then

document that the same pattern holds for informal consequences. This approach decomposes observed gaps by estimating how much is explained by differences between districts, differences across schools within the same district, and differences between students within the same school.

Panels (a)-(d) of Figure 2 depict results from the decomposition of Black-White gaps in suspension, informal exclusionary, informal cautionary, and other consequences into component parts. Three key findings emerge from this exercise. First, across all elementary grades, the majority of Black-White gaps in both formal and informal consequences are generated from within-school differences. Within-school differences account for around 70% of gaps in suspensions and around 80% of gaps in informal cautionary and other consequences. Within-school differences account for more than 100% of the gap in informal exclusionary consequences because of offsetting negative between-district components, which we discuss in more detail below. Second, sorting across schools within districts explains a smaller (approximately 20–30%) but consistent share of Black-White gaps in all disciplinary consequences. Finally, we find that between-district differences contribute little to Black-White gaps in suspension, informal cautionary, and other consequences but account for a large negative share for informal exclusionary consequences. We interpret these negative between-district components as evidence that Black students are more likely to be enrolled in districts that make less use of informal exclusionary consequences. The decomposition results are remarkably similar across outcomes and grades.

The decomposition of socioeconomic status gaps (i.e., economically disadvantaged versus not economically disadvantaged students) exhibits broadly similar patterns: across all disciplinary consequences and all elementary grades, within-school differences account for the majority of gaps, while sorting across schools explains a smaller share. Unlike Black-White gaps, however, socioeconomic gaps in suspensions include a meaningful positive between-district component, which we interpret as evidence that economically disadvantaged students are more likely to be enrolled in high-suspension districts. In contrast, between-district com-

ponents for the other three disciplinary outcomes are small or negative. We present visual results depicting the decompositions in Appendix Figure A2.

4 Empirical Strategies for Analyzing Disparities by Race and Socioeconomic Status

Building on the descriptive evidence, we follow prior work on racial and socioeconomic disparities in school discipline to examine how disciplinary consequences vary by student characteristics within the same school, controlling for infraction and school-year factors. Our first approach uses fixed-effects estimation on a sample of single-student disciplinary incidents among first-time kindergarteners. We focus on this sample for three reasons. First, restricting attention to first-time kindergarteners eliminates variation generated by prior school discipline histories. Most other work controls for prior discipline using one-year lags, but this measure may not capture the full extent of students’ histories that are considered by school administrators when assigning disciplinary consequences. Because discipline histories accumulate across K-12, residual differences in observed histories could bias estimates of differential consequences; our focus on first-time kindergarteners mitigates this concern. Second, single-student incidents reduce potential bias from unobserved within-incident differences in student behavior, such as victim-perpetrator dynamics. Third, we restrict the sample to incidents involving the five most common infraction types; although there are many more infraction types in the data, each accounts for only a small number of incidents.

To implement this within-school empirical strategy, we estimate:

$$Y_{ikst} = X_i' \Theta + \alpha_{st} + \delta_k + \varepsilon_{ikst} \quad (1)$$

Y_{ikst} is a binary outcome indicating whether a disciplinary consequence (e.g., suspension) was received by student i involved in an incident for infraction k in school s and year t . The vector X_i includes student race, gender, special education status, an old-for-grade

indicator, an indicator for economic disadvantage, prior achievement, and previous school discipline history (within the kindergarten year only). α_{st} are school-by-year fixed effects, which control for time-varying factors at the school level (e.g., changes in leadership, staffing, or school climate). We also include δ_k to control for systematic differences across infractions (e.g., aggressive behavior, disruptive behavior, etc.). The idiosyncratic error term, ε_{ikst} , captures unobserved determinants of the outcome. We cluster standard errors at the school level to account for potential within-school correlation in the error term over time.

By controlling for infractions, school-by-year fixed effects, and student-level within-year discipline history, we interpret the estimated coefficients on race, gender, special education status, and economic disadvantage as evidence of differential assignment of disciplinary consequences across groups. For estimates of Θ to be interpreted as causal, we assume that after accounting for differences across school-years and infractions, there are no other unobserved student-level factors that are correlated with the characteristics of interest and that influence disciplinary consequence outcomes. Under this assumption, the coefficients reflect differential assignment of consequences across groups. Without it, our estimates still reveal how disciplinary consequences systematically vary with student characteristics within schools.

Our second empirical approach uses two samples of disciplinary incidents involving elementary school students in first through fifth grades. We exclude kindergarteners from this analysis because it is not possible to control for one-year lags in achievement or discipline history. Following previous work, we restrict our samples to multi-student incidents involving students of (1) different races or (2) different socioeconomic statuses. For each sample, we estimate:

$$Y_{ijt} = X_i' \Gamma + \kappa Ach_{it-1} + \nu Disc_{it-1} + \lambda_j + \eta_{ijt} \quad (2)$$

Y_{ijt} is a binary outcome indicating whether a disciplinary consequence (e.g., suspension) was received by student i involved in incident j during year t . The vector X_i includes race, gender, special education status, an old-for-grade indicator, and an indicator for economic

disadvantage. Ach_{it-1} and $Disc_{it-1}$ are controls for one-year lagged achievement and school discipline history, respectively. λ_j is an incident-specific fixed effect, which controls for all observed and unobserved factors common to the multi-student incident, including the time, place, and school-by-year. The idiosyncratic error term, η_{ijt} , captures unobserved determinants of the outcome. We again cluster standard errors at the school level. To interpret estimates of Γ as causal, we assume that conditional on incident fixed effects, lagged achievement, and lagged school discipline history, there are no unobserved incident-level factors that are correlated with student characteristics and that affect disciplinary consequences. Under this assumption, our estimates capture differential assignment of disciplinary consequences by race (or socioeconomic status) among students involved in the same disciplinary incident.

5 Results

5.1 Single-Student Incidents Among First-Time Kindergarteners

Table 2 presents estimates of Equation (1) for our sample of first-time kindergarteners. Panel A reports estimates separately for our four consequence outcomes of interest: suspension, informal exclusionary, informal cautionary, and other. Panel B reports the same estimates using an alternative coding of the consequence outcomes that does not impose hierarchy or require mutual exclusivity. Because the estimates are very similar across the two coding approaches, we focus our discussion on the estimates in Panel A.

The first three rows present results by student race, in which we compare Black, Hispanic, and students reporting other identities (labeled as “Other Race/Ethnicity”) to White students (omitted group). The results in Column (1) indicate that Black students are 2.4 percentage points more likely to receive suspension as a disciplinary consequence relative to White students. This effect is statistically significant and translates into a 6% increase relative to the baseline mean of 0.38 for White students (baseline means for all subgroups are reported in Appendix Table A1). Appendix Table A2 shows that this suspension result

is driven primarily by out-of-school suspension (versus in-school) and that the pattern of effects on the intensive margin (i.e., number of days suspended) is qualitatively similar.

The estimates in Columns (2)-(4) illustrate how increases in suspension likelihood are offset by decreases in the likelihood of alternative disciplinary consequences. For Black students, the increased likelihood of suspension is primarily explained by reallocation away from less severe, informal consequences. Turning first to Column (3), Black students are 1.4 percentage points (5%) less likely than White students to receive an informal cautionary consequence. By contrast, the estimated effects for informal exclusionary consequences (Column (2), -0.6 percentage points) and other consequences (Column (4), -0.4 percentage points) are both negative but statistically insignificant. The overall pattern suggests that conditional on the same infraction and school-year, Black students are more likely to receive the most severe formal disciplinary consequence—suspension—while White students receive more lenient punishment in the form of informal cautionary consequences. We do not find evidence of these patterns for other racial groups.

Economically disadvantaged students also receive more severe punishments relative to their non-economically disadvantaged peers. Results in the fourth row indicate that economically disadvantaged students are 1.1 percentage points (3%) more likely to receive suspension relative to their non-economically disadvantaged peers (omitted group). This increased likelihood of suspension is offset by reduced likelihood of receiving more lenient consequences: economically disadvantaged students are 1.0 percentage point (5%) less likely to receive an informal exclusionary consequence and 1.4 percentage points (5%) less likely to receive an informal cautionary consequence. Together, these estimates suggest substitution away from low-severity consequences toward more punitive consequences for economically disadvantaged students. In Column (4), we find that economically disadvantaged students are also 1.3 percentage points (11%) more likely to receive other disciplinary consequences. At first glance, this positive coefficient may appear inconsistent with the broader pattern of more punitive consequences for economically disadvantaged students. However, disaggregation of

the consequences grouped under “other” reveals that the increased likelihood of punishment in this category is driven entirely by bus suspension (see Appendix Table A3). Bus suspensions bar students from riding the school bus but do not explicitly exclude them from school; however, in practice, this loss of transportation is a significant barrier to attendance. Because bus suspension is arguably the most severe of the consequences grouped under “other” and is functionally similar to suspension, the positive estimate is consistent with the broader pattern that economically disadvantaged students receive harsher disciplinary consequences compared to their non-economically disadvantaged peers.

Although we do not find evidence of comparable patterns by gender or special education status, we note two suggestive differences for these groups. Female students are more likely to receive informal cautionary consequences (1.5 percentage points, 6%), while students receiving special education services are more likely to receive informal exclusionary consequences (1.3 percentage points, 7%). Overall, however, the strongest and most consistent patterns emerge by student race and socioeconomic status.

To date, the limited evidence on racial and socioeconomic disparities in informal consequences is qualitative, focused on early childhood (O’Grady et al., 2024; Steyer et al., 2025b) and kindergarten (Williford et al., 2024), and considers primarily informal exclusionary consequences. This literature suggests that informal exclusionary consequences represent an additional dimension of disciplinary disparity and highlights that Black and economically disadvantaged students experience these consequences at higher rates than their peers. Our results on informal consequences suggest a more nuanced interpretation of this relationship: differences in informal consequences are linked to differences in suspension and reveal broader disparities in how schools respond to comparable disciplinary incidents. Specifically, we find that Black and economically disadvantaged students are less likely to receive lower-severity informal consequences and more likely to receive suspension for comparable disciplinary incidents. These findings suggest that understanding racial and socioeconomic disparities in

school discipline requires consideration of the full spectrum of formal and informal disciplinary consequences.

5.2 Multi-Student Incidents Among Students of Different Races or Socioeconomic Statuses

We next present results from two samples of multi-student incidents. Table 3 presents estimates of Equation (2) for multi-student incidents involving students of different racial identities. In Columns (1) and (2) we find that Black students are 2.1 percentage points more likely to receive a suspension consequence (5%) and 1.6 percentage points less likely to receive an informal exclusionary consequence (8%) relative to White students (baseline means are reported in Appendix Table A4). Estimates in Columns (3) and (4) for informal cautionary (0.1 percentage points) and other (−0.6 percentage points) consequences are small and statistically insignificant. Although we do not find evidence of these patterns for other racial groups, our results for Black students in this sample are similar to our results from our sample of first-time kindergarteners: informal consequences are intertwined with existing suspension disparities.

In the remaining columns of Panel A, we partition the full sample of multi-student incidents involving students with different racial identities based on whether all students involved in the incident were cited for the same or different infractions. The results in Columns (5)–(8) closely mirror the design adopted in prior work (Barrett et al., 2021; Liu et al., 2024; Shi and Zhu, 2022), which intentionally restricts attention to multi-student incidents in which students were cited for the same infraction (henceforth, “same-infraction” subsample). The benefit of this approach is that it attempts to hold student behavior constant. The drawback, however, is that it excludes one possible margin through which racial disparities may emerge: differences in the infractions for which students are cited within the same incident. Consistent with prior work, we find that when students are cited for the same infraction within an incident, racial differences in disciplinary outcomes are small and statistically insignifi-

cant (Columns (5)-(8)). In contrast, Columns (9)-(12) show that when students involved in the same incident are cited for different infractions (henceforth, “different-infractions” subsample), substantial differences in disciplinary consequences emerge: Black students are 4.1 percentage points more likely to receive a suspension and 3.5 percentage points less likely to receive an informal exclusionary consequence than White students. Because we cannot distinguish differences in disciplinary treatment from differences in student behavior reflected in the cited infractions, we interpret these estimates as descriptive rather than causal.

Panel B of Table 3 presents results from multi-student incidents among students of different socioeconomic backgrounds. We find that economically disadvantaged students are 1.9 percentage points (5%) more likely to receive a suspension consequence (Column 1), and 1.1 percentage points (4%) less likely to receive an informal cautionary consequence (Column 3) relative to their non-economically disadvantaged peers (all baseline means are in Appendix Table A5). In contrast to our previous results, we find evidence of disparities in both the same-infraction and different-infractions subsamples. In the same-infraction subsample, economically disadvantaged students are 0.9 percentage points more likely to receive a suspension and 0.9 percentage points less likely to receive an informal cautionary consequence. In the different-infractions subsample, economically disadvantaged students are 2.8 percentage points more likely to receive a suspension and 1.7 percentage points (marginally statistically significant) less likely to receive an informal exclusionary consequence. Once again, we interpret these estimates with caution because of our inability to distinguish differences in treatment from differences in behavior. As with our prior findings, our results are robust to coding of consequence outcomes without imposing hierarchy or mutual exclusivity (see Appendix Table A6).

Our results suggest that Black and economically disadvantaged students are more likely to receive suspensions and less likely to receive more lenient, informal disciplinary consequences (i.e., informal exclusionary or informal cautionary consequences) than their peers, even when involved in the same disciplinary incident. While prior studies using incident-level

administrative data have documented similar disparities in suspensions, they have largely focused on samples in which students were cited for the same infraction (Barrett et al., 2021; Liu et al., 2024; Shi and Zhu, 2022). Our findings extend this in two ways. First, we show that suspension disparities are accompanied by offsetting disparities in more lenient, informal disciplinary consequences. Second, we demonstrate that disparities are substantially larger when attention is expanded to include incidents in which students are cited for different infractions and that the infraction-citation margin may represent an important pathway through which disparities in disciplinary consequences emerge. This raises the question of whether differences in the infractions assigned to students involved in the same incident help explain these larger disparities, which we explore descriptively in the next subsection.

5.3 Descriptive Exploration of the Infraction-Citation Margin

Our estimates in the previous section indicate that the infraction-citation margin may represent an important stage of the disciplinary process. In this subsection, we examine this margin descriptively in two ways. First, we test whether Black and economically disadvantaged students are more likely to be cited for more severe infractions than their peers involved in the same incident. Second, we assess whether accounting for differences in assigned infraction severity attenuates the estimated disparities in disciplinary consequences.

If the infraction-citation margin contributes to disparities in disciplinary consequences, we would expect Black and economically disadvantaged students to be cited for more severe infractions than their peers involved in the same incident. Appendix Table A7 presents estimates from the same within-incident models applied to the different-infractions subsample, using assigned infraction severity as the outcome. We code infractions as low, medium, and high severity (see Appendix B for complete details). We find that Black students are 2.9 percentage points more likely to be assigned a medium- or high-severity infraction than White students involved in the same incident. Similar patterns emerge by socioeconomic status: economically disadvantaged students are 1.7 percentage points more likely to be

assigned a medium- or high-severity infraction than their non-economically disadvantaged peers. Although these estimates should be interpreted with caution because we again cannot distinguish differences in disciplinary treatment from differences in underlying student behavior, they are consistent with the infraction-citation margin representing a pathway through which disparities in disciplinary consequences may emerge.

As a second exploration of this margin, we examine whether differences in assigned infraction severity are associated with the estimated disparities in disciplinary consequences. Using our different-infractions subsample, Appendix Table A8 presents results from regressions that augment our baseline models with controls for infraction severity. Including these controls reduces the estimated Black-White suspension gap by roughly 12 percent: the coefficient declines from 0.041 to 0.036 in the first row of Columns (1) and (2). We interpret this reduction as descriptive evidence that differential infraction assignment may contribute to observed disparities in disciplinary consequences. Unlike [Rehavi and Starr \(2014\)](#), who observe a non-discretionary measure of offense severity in their study of sentencing disparities, we do not observe a comparable measure of underlying student behavior. As a result, we cannot separately identify the extent to which these differences reflect disparities in the underlying conduct that generated the infraction classification versus discretion in the infraction-citation process. Nevertheless, the reduction in the suspension gap suggests that differences in infraction severity assignment, one stage of the disciplinary process in which discretion may operate, may account for a meaningful share of the observed disparity: even this coarse measure of severity explains approximately 12 percent of the Black-White suspension gap. In contrast, the estimated gaps in informal exclusionary, informal cautionary, and other consequences are largely unchanged after including severity controls, which suggests that differences in infraction severity assignment play a more limited role for these outcomes.

6 Conclusion

This paper makes two contributions to the study of K-12 school discipline. First, using administrative data from North Carolina, we describe the landscape of informal disciplinary consequences and show they constitute a substantial share of disciplinary responses at the elementary level, particularly in early grades. In the early elementary grades, informal consequences occur more frequently than formal suspensions, whereas in middle and high school suspensions dominate. We further decompose racial and socioeconomic gaps in informal consequences and find that the majority of disparities arise within schools rather than across schools or districts. These findings extend prior qualitative work documenting informal disciplinary practices ([Bookser, 2025](#); [Cruz and Myers, 2024](#); [Gleit, 2025](#)) and highlight the importance of considering informal consequences as a central component of the disciplinary process.

Second, we integrate informal consequences into the literature on racial and socioeconomic disparities in school discipline. Using fixed-effects estimation on two samples, we examine how disciplinary consequences differ by race and socioeconomic status and explore the role of the infraction-citation margin in generating these disparities. We find that Black and economically disadvantaged students are more likely to receive suspensions and less likely to receive informal consequences than their peers. We also provide descriptive evidence that differences in assigned infraction severity within incidents may contribute to observed disparities in disciplinary consequences, particularly for suspension. Overall, our findings help explain previously documented disparities in suspension ([Barrett et al., 2021](#); [Gilleskie and Li, 2022](#); [Liu et al., 2024](#)) and suggest that inequities emerge across multiple stages of the disciplinary process.

Several limitations should be noted. As with prior studies using incident (or “referral”) data, we observe only reported incidents, and both the decision to report and the characterization of behavior may be biased ([Liu et al., 2024](#)). This could lead us to underestimate

the prevalence of informal consequences if schools do not document all cases or to observe a nonrepresentative sample if reporting varies systematically by student, teacher, or school characteristics. More standardized reporting of non-suspension consequences across districts would improve future research. We also do not examine the causal effects of informal disciplinary consequences, leaving this as an important direction for future work. Despite these limitations, our findings have research and policy implications: understanding school discipline requires consideration of the full spectrum of consequences, not just formal suspensions.

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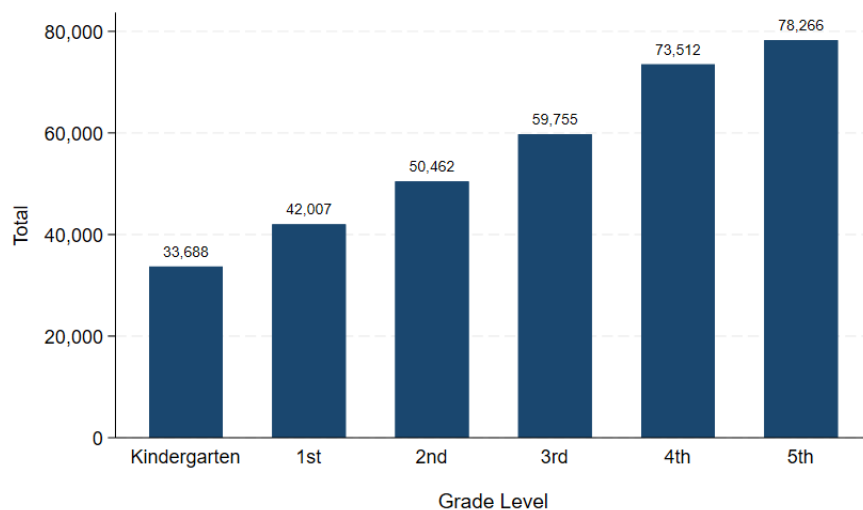
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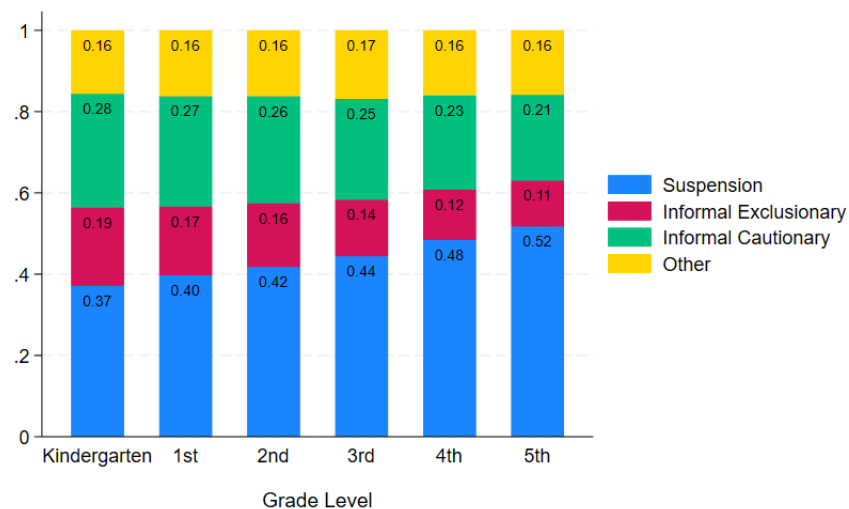
Figures and Tables

Figure 1: Disciplinary Incidents and Consequences, Kindergarten through Fifth Grades

(a) Disciplinary Incidents by Grade Level

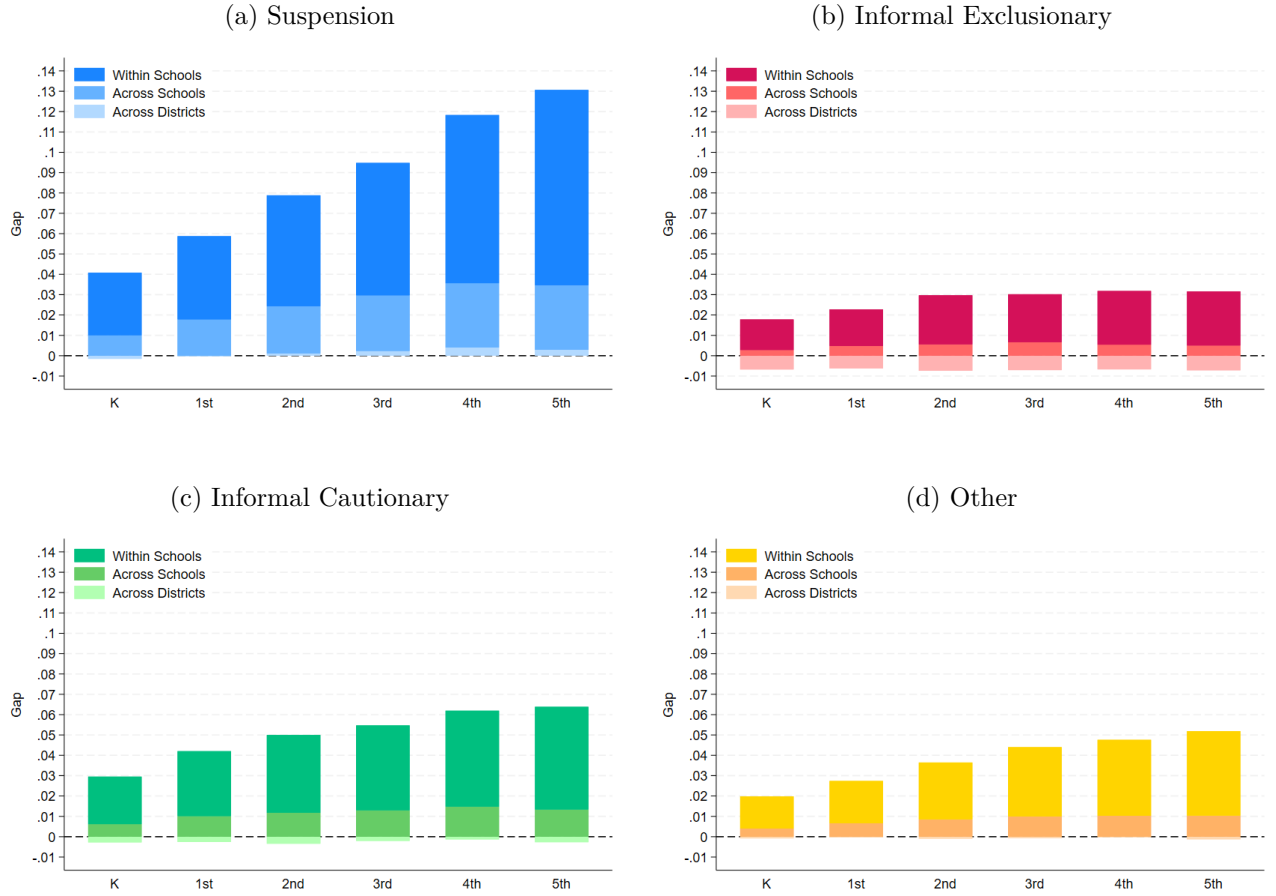


(b) Distribution of Disciplinary Consequences by Grade Level



Notes: Plots use data on all reported disciplinary incidents in North Carolina traditional public schools during the 2015/16–2018/19 school years. Panel (a) shows the average annual number of disciplinary incidents over the four school years. Panel (b) shows the average proportion of incidents resulting in each of four disciplinary consequence outcomes: Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences).

Figure 2: Decomposition of Disciplinary Consequence Gaps, Black-White



Notes: Panels (a)-(d) show the results from decompositions of unconditional Black-White gaps in disciplinary consequence outcomes for students in kindergarten through fifth grades. The four panels correspond to four binary consequence outcomes: Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences). For each grade and outcome, the unconditional gap is decomposed into three components: (1) differences across districts, (2) differences across schools within the same district, and (3) differences within schools.

Table 1: Descriptive Statistics, Elementary School Students

	(1) Elementary	(2) ≥ 1 Incident	(3) ≥ 2 Incidents	(4) ≥ 1 Suspension	(5) ≥ 2 Suspensions
<i>Panel A. Student Characteristics</i>					
Black	0.255	0.479	0.544	0.531	0.596
Hispanic	0.186	0.122	0.097	0.104	0.079
Other Race/Ethnic.	0.094	0.077	0.073	0.075	0.071
White	0.465	0.322	0.286	0.290	0.254
Female	0.486	0.258	0.217	0.228	0.190
Special Education	0.143	0.224	0.260	0.250	0.290
Econ. Disadvantaged	0.507	0.715	0.757	0.746	0.784
Old for Grade	0.083	0.085	0.089	0.081	0.087
<i>Panel B. Incident Characteristics</i>					
Aggressive Behavior	0.032	0.325	0.452	0.401	0.552
Disruptive Behavior	0.025	0.248	0.386	0.322	0.498
Bus Misbehavior	0.021	0.207	0.265	0.130	0.177
Inappropriate Behavior	0.008	0.051	0.078	0.084	0.119
Insubordination	0.009	0.091	0.159	0.119	0.205
Other	0.059	0.598	0.722	0.671	0.786
<i>Panel C. Consequence Characteristics</i>					
Suspension	0.059	0.581	0.716	1.000	1.000
Informal Exclusionary	0.022	0.214	0.304	0.149	0.210
Informal Cautionary	0.038	0.377	0.486	0.231	0.321
Other	0.026	0.259	0.380	0.195	0.283
N (Student-Year)	2,825,007	280,154	133,650	165,907	70,783

Notes: Observations are at the student-year level. Column (1) includes all students enrolled in traditional public elementary schools in North Carolina during the 2015/16–2018/19 school years. Column (2) includes elementary school students with at least one reported disciplinary incident, and Column (3) includes those with at least two reported incidents. Column (4) includes all elementary school students with at least one reported suspension, and Column (5) includes those with at least two reported suspensions. All student characteristics in Panel (A) are binary. Incident characteristics in Panel (B) are binary and indicate whether the student has at least one incident of the infraction type listed in the row; categories are not mutually exclusive, as some students have multiple incidents. Consequence characteristics in Panel (C) are binary and indicate whether the student has at least one disciplinary consequence in the reported category; categories are not mutually exclusive, as some students have multiple incidents.

Table 2: Estimating the Likelihood of Disciplinary Consequences, Single-Student Incidents Among First-Time Kindergarteners

	(1) Suspension	(2) Informal Exclusionary	(3) Informal Cautionary	(4) Other
<i>Panel A. Mut. Excl. Outcomes</i>				
Black (0/1)	0.024*** (0.006)	-0.006 (0.006)	-0.014** (0.006)	-0.004 (0.005)
Hispanic (0/1)	-0.008 (0.008)	-0.004 (0.008)	0.014 (0.010)	-0.001 (0.008)
Other Race/Ethnic. (0/1)	-0.006 (0.009)	-0.007 (0.008)	0.012 (0.009)	0.002 (0.008)
Economic Disadvantage (0/1)	0.011** (0.005)	-0.010** (0.005)	-0.014** (0.006)	0.013*** (0.004)
Female (0/1)	-0.008 (0.005)	0.002 (0.005)	0.015*** (0.005)	-0.008* (0.004)
Special Education (0/1)	-0.003 (0.007)	0.013** (0.006)	-0.008 (0.006)	-0.001 (0.005)
<i>Panel B. Not Mut. Excl. Outcomes</i>				
Black (0/1)	0.024*** (0.006)	-0.004 (0.006)	-0.013** (0.006)	-0.004 (0.005)
Hispanic (0/1)	-0.008 (0.008)	-0.005 (0.008)	0.013 (0.010)	-0.001 (0.008)
Other Race/Ethnic. (0/1)	-0.006 (0.009)	-0.008 (0.008)	0.013 (0.009)	0.002 (0.008)
Economic Disadvantage (0/1)	0.011** (0.005)	-0.009* (0.005)	-0.016*** (0.006)	0.013*** (0.004)
Female (0/1)	-0.008 (0.005)	0.002 (0.005)	0.014*** (0.005)	-0.008* (0.004)
Special Education (0/1)	-0.003 (0.007)	0.013** (0.006)	-0.007 (0.006)	-0.001 (0.005)
Observations	58,734	58,734	58,734	58,734
Infraction FE	Yes	Yes	Yes	Yes
School X Year FE	Yes	Yes	Yes	Yes

Notes: The sample includes all single-student incidents among first-time kindergarteners during the 2015/16–2018/19 school years. First-time kindergarteners are those not previously enrolled in kindergarten in a prior school year (i.e., the student has not been retained in kindergarten). The dependent variables in Columns (1)–(4) are binary indicators for whether the incident resulted in (1) suspension, (2) informal exclusionary, (3) informal cautionary, or (4) other disciplinary consequences, respectively. All regressions control for student demographics and within-year prior discipline history, including old-for-grade, reading achievement, any pre-kindergarten suspension, number of previous incidents (within school year), and number of previous suspensions (within school year). Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

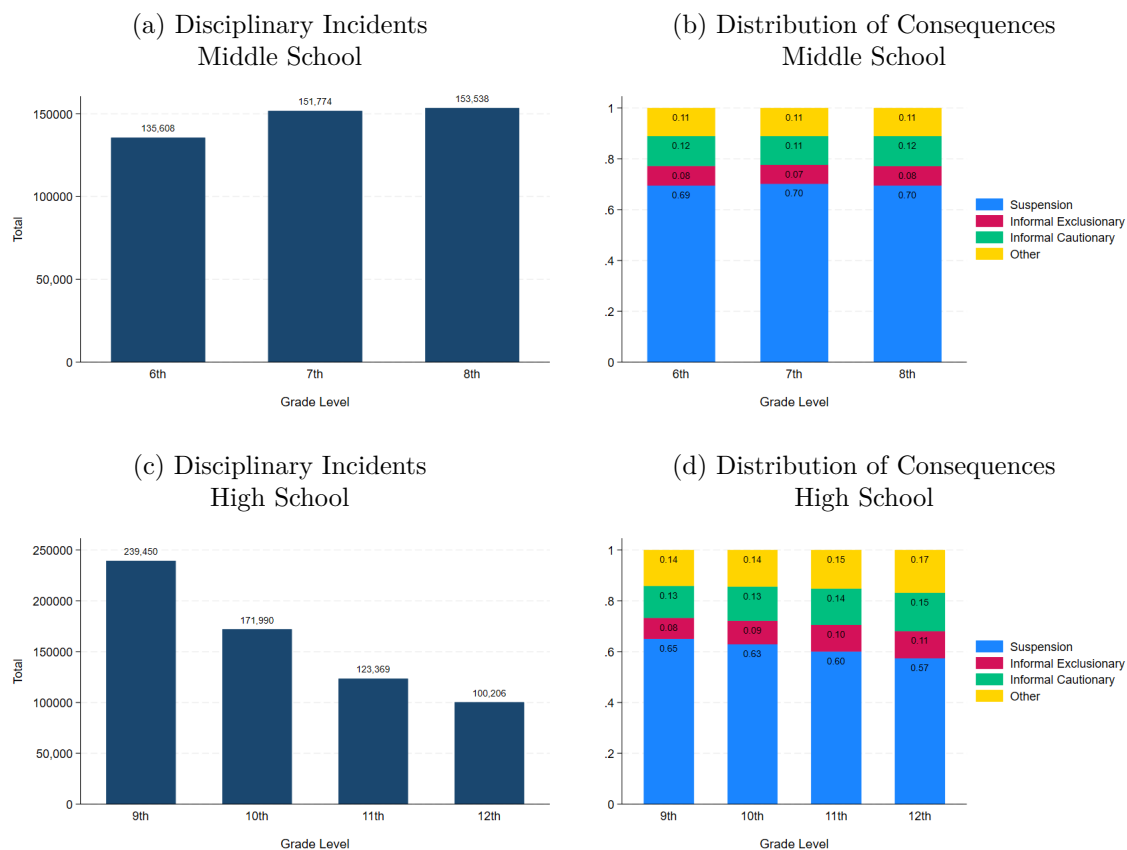
Table 3: Estimating the Likelihood of Disciplinary Consequences, Multi-Student Incidents Among First through Fifth Grade Students

	All Incidents				Same Infraction				Different Infractions			
	(1) Suspension	(2) Informal Excl.	(3) Informal Caut.	(4) Other	(5) Suspension	(6) Informal Excl.	(7) Informal Caut.	(8) Other	(9) Suspension	(10) Informal Excl.	(11) Informal Caut.	(12) Other
<i>Panel A. Multi-Race Sample</i>												
Black (0/1)	0.021*** (0.008)	-0.016** (0.008)	0.001 (0.007)	-0.006 (0.005)	0.004 (0.005)	-0.001 (0.003)	-0.003 (0.005)	0.000 (0.003)	0.041*** (0.015)	-0.035** (0.015)	0.003 (0.013)	-0.009 (0.009)
Hispanic (0/1)	-0.015 (0.010)	-0.012 (0.009)	0.015 (0.010)	0.012* (0.006)	-0.002 (0.006)	-0.000 (0.004)	0.002 (0.006)	0.001 (0.004)	-0.016 (0.017)	-0.030* (0.018)	0.025 (0.019)	0.021* (0.011)
Other (0/1)	0.011 (0.009)	-0.009 (0.007)	-0.000 (0.007)	-0.001 (0.007)	0.001 (0.006)	0.003 (0.004)	-0.005 (0.006)	0.001 (0.004)	0.026 (0.019)	-0.026 (0.016)	0.004 (0.016)	-0.004 (0.016)
Observations	63,013	63,013	63,013	63,013	24,212	24,212	24,212	24,212	38,801	38,801	38,801	38,801
Incident FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Panel B. Multi-SES Sample</i>												
Econ. Disadvantaged (0/1)	0.019*** (0.005)	-0.009 (0.006)	-0.011** (0.005)	0.001 (0.003)	0.009** (0.003)	-0.000 (0.002)	-0.009** (0.004)	0.001 (0.006)	0.028*** (0.008)	-0.017* (0.009)	-0.014 (0.009)	0.002 (0.006)
Observations	58,229	58,229	58,229	58,229	18,983	18,983	18,983	18,983	39,246	39,246	39,246	39,246
Incident FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The sample includes multi-student incidents for students enrolled in first through fifth grades during the 2015/16–2018/19 school years. The sample in Panel (A) contains multi-student incidents involving students of different races. The sample in Panel (B) contains multi-student incidents involving students of different socioeconomic statuses. The dependent variables are binary indicators for whether the incident resulted in (1) suspension, (2) informal exclusionary, (3) informal cautionary, or (4) other disciplinary consequences, respectively. Columns (1)-(4) include all incidents, Columns (5)-(8) restrict to the subsample of incidents where all involved students were cited for the same infraction, and Columns (9)-(12) restrict to the subsample of incidents where students were not cited for the same infraction. All regressions control for student demographics, lagged achievement, and lagged school discipline history. Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix A: Supplemental Results

Figure A1: Disciplinary Incidents and Consequences, Middle School and High School



Notes: Plots use data on all disciplinary incidents in North Carolina traditional public schools during the 2015/16–2018/19 school years. Panels (a) and (c) show the average annual number of disciplinary incidents over the four school years, separately for middle and high schools. Panels (b) and (d) show the average proportion of incidents resulting in each of four disciplinary consequence outcomes: Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences), separately for middle and high schools.

Figure A2: Decomposition of Consequence Gaps, Socioeconomic Status (Economic Disadvantage)



Notes: Panels (a)-(d) show the results from decompositions of socioeconomic status (economically disadvantaged versus not economically disadvantaged) gaps in disciplinary consequence outcomes for students in kindergarten through fifth grades. The four panels correspond to four binary consequence outcomes: Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences). For each grade and outcome, the unconditional gap is decomposed into three components: (1) differences across districts, (2) differences across schools within the same district, and (3) differences within schools.

Table A1: Baseline Means, Single-Student Incidents Among First-Time Kindergarteners

	(1)	(2)	(3)	(4)
	Suspension	Informal Exclusionary	Informal Cautionary	Other
Black (N=27,271)	0.478	0.152	0.233	0.137
Hispanic (N= 5,616)	0.368	0.188	0.293	0.152
Other Race/Ethnic. (N= 4,302)	0.425	0.170	0.254	0.151
White (N=21,545)	0.380	0.226	0.257	0.137
Econ. Disadvantaged (N=14,785)	0.442	0.172	0.241	0.146
Not Econ. Disadvantaged (N=43,949)	0.386	0.220	0.275	0.119
Female (N=11,761)	0.397	0.182	0.274	0.147
Male (N=46,973)	0.435	0.184	0.243	0.137
Special Education (N=13,182)	0.428	0.207	0.233	0.132
No Special Education (N=45,552)	0.428	0.177	0.254	0.141

Notes: This table reports the share of disciplinary incidents resulting in each consequence type, by student subgroup. Outcomes are mutually exclusive and sum to one within rows. Sample sizes for each subgroup are shown in parentheses. Consequences (columns) are mutually exclusive and categorized as Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences).

Table A2: Estimating the Likelihood of Suspension, Single-Student Incidents Among First-Time Kindergarteners

	Any Suspension (0/1)			By Suspension Type		Intensive Margin	
	(1)	(2)	(3)	OSS (0/1) (4)	ISS (0/1) (5)	OSS Days (6)	ISS Days (7)
Black (0/1)	0.049*** (0.010)	0.026*** (0.006)	0.024*** (0.006)	0.027*** (0.006)	-0.004 (0.005)	0.058*** (0.014)	0.012* (0.006)
Hispanic (0/1)	-0.003 (0.012)	-0.008 (0.008)	-0.008 (0.008)	0.004 (0.007)	-0.012* (0.006)	0.005 (0.016)	-0.009 (0.009)
Other Race/Ethnic. (0/1)	0.024* (0.013)	-0.001 (0.009)	-0.006 (0.009)	0.012 (0.008)	-0.019** (0.008)	0.017 (0.018)	-0.007 (0.011)
Economic Disadvantage (0/1)	0.037*** (0.008)	0.009* (0.005)	0.011** (0.005)	0.015*** (0.005)	-0.004 (0.004)	0.031*** (0.012)	-0.001 (0.005)
Female (0/1)	-0.015** (0.006)	-0.005 (0.005)	-0.008 (0.005)	-0.010** (0.005)	0.002 (0.004)	-0.018 (0.011)	-0.002 (0.007)
Special Education (0/1)	-0.002 (0.007)	0.001 (0.007)	-0.003 (0.007)	0.033*** (0.006)	-0.035*** (0.006)	0.024* (0.013)	-0.038*** (0.008)
Observations	58,734	58,734	58,734	58,734	58,734	58,734	58,734
Year FE	Yes	Yes					
Infraction FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
School FE		Yes					
School X Year FE			Yes	Yes	Yes	Yes	Yes

Notes: The sample includes all single-student incidents among first-time kindergarteners during the 2015/16–2018/19 school years. First-time kindergarteners are those not previously enrolled in kindergarten in a prior school year (i.e., the student has not been retained in kindergarten). All regressions control for student demographics and prior discipline history, including old-for-grade, reading achievement, any pre-kindergarten suspension, number of previous incidents (within school year), and number of previous suspensions (within school year). Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A3: Estimating the Likelihood of Bus Suspension, Single-Student Incidents Among First-Time Kindergarteners

	(1)	(2)	(3)
Black (0/1)	0.014*** (0.004)	0.002 (0.003)	0.001 (0.004)
Hispanic (0/1)	0.001 (0.005)	-0.004 (0.005)	-0.003 (0.005)
Other Race/Ethnic. (0/1)	0.018*** (0.006)	0.008 (0.006)	0.008 (0.006)
Economic Disadvantage (0/1)	0.011*** (0.003)	0.013*** (0.003)	0.014*** (0.003)
Female (0/1)	-0.013*** (0.004)	-0.012*** (0.003)	-0.012*** (0.003)
Special Education (0/1)	-0.013*** (0.003)	-0.010*** (0.003)	-0.009*** (0.003)
Observations	58,734	58,734	58,734
Year FE	Yes	Yes	
Infraction FE	Yes	Yes	Yes
School FE		Yes	
School X Year FE			Yes

Notes: The sample includes all single-student incidents among first-time kindergarteners during the 2015/16–2018/19 school years. First-time kindergarteners are those not previously enrolled in kindergarten in a prior school year (i.e., the student has not been retained in kindergarten). The dependent variable is bus suspension (0/1), previously considered as part of the Other consequence category. All regressions control for student demographics and prior discipline history, including old-for-grade, reading achievement, any pre-kindergarten suspension, number of previous incidents (within school year), and number of previous suspensions (within school year). Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A4: Baseline Means, Multi-Student, Multi-Race Incidents Among First through Fifth Grade Students

	(1)	(2)	(3)	(4)
	Suspension	Informal Exclusionary	Informal Cautionary	Other
Black (N=37,943)	0.405	0.169	0.293	0.133
Hispanic (N= 8,931)	0.373	0.165	0.305	0.157
Other Race/Ethnic. (N= 5,013)	0.435	0.153	0.260	0.151
White (N=11,126)	0.394	0.193	0.270	0.142
Econ. Disadvantaged (N=16,999)	0.417	0.162	0.278	0.143
Not Econ. Disadvantaged (N=46,014)	0.357	0.197	0.315	0.131
Female (N=13,258)	0.372	0.156	0.331	0.141
Male (N=49,755)	0.409	0.176	0.277	0.139
Special Education (N=14,194)	0.412	0.186	0.268	0.135
No Special Education (N=48,819)	0.398	0.167	0.294	0.141

Notes: The unit of observation is student-incident. This table reports the share of disciplinary incidents resulting in each consequence type, by student subgroup. Outcomes are mutually exclusive and sum to one within rows. Sample sizes for each subgroup are shown in parentheses. Consequences (columns) are mutually exclusive and categorized as Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences).

Table A5: Baseline Means, Multi-Student, Multi-SES Incidents Among First through Fifth Grade Students

	(1)	(2)	(3)	(4)
	Suspension	Informal Exclusionary	Informal Cautionary	Other
Black (N=38,995)	0.410	0.165	0.294	0.131
Hispanic (N= 6,549)	0.334	0.177	0.332	0.156
Other Race/Ethnic. (N= 2,774)	0.395	0.177	0.286	0.142
White (N= 9,911)	0.368	0.206	0.287	0.140
Econ. Disadvantaged (N=20,145)	0.402	0.168	0.292	0.138
Not Econ. Disadvantaged (N=38,084)	0.378	0.185	0.306	0.132
Female (N=12,401)	0.375	0.156	0.332	0.137
Male (N=45,828)	0.398	0.179	0.287	0.136
Special Education (N=12,869)	0.396	0.194	0.280	0.130
No Special Education (N=45,360)	0.393	0.168	0.301	0.138

Notes: The unit of observation is student-incident. This table reports the share of disciplinary incidents resulting in each consequence type, by student subgroup. Outcomes are mutually exclusive and sum to one within rows. Sample sizes for each subgroup are shown in parentheses. Consequences (columns) are mutually exclusive and categorized as Suspension, Informal Exclusionary, Informal Cautionary, and Other (all other reported consequences).

Table A6: Estimating the Likelihood of Disciplinary Consequences, Multi-Student Incidents Among First through Fifth Grade Students (Outcomes are Not Mutually Exclusive)

	All Incidents				Same Infraction				Different Infractions			
	(1) Suspension	(2) Informal Excl.	(3) Informal Caut.	(4) Other	(5) Suspension	(6) Informal Excl.	(7) Informal Caut.	(8) Other	(9) Suspension	(10) Informal Excl.	(11) Informal Caut.	(12) Other
<i>Panel A. Multi-Race Sample</i>												
Black (0/1)	0.021*** (0.008)	-0.016** (0.008)	-0.002 (0.007)	-0.006 (0.005)	0.004 (0.005)	-0.001 (0.003)	-0.003 (0.005)	0.000 (0.003)	0.041*** (0.015)	-0.035** (0.015)	-0.003 (0.014)	-0.009 (0.009)
Hispanic (0/1)	-0.015 (0.010)	-0.012 (0.009)	0.012 (0.010)	0.012* (0.006)	-0.002 (0.006)	0.001 (0.004)	-0.001 (0.006)	0.001 (0.004)	-0.016 (0.017)	-0.030* (0.017)	0.021 (0.019)	0.021* (0.011)
Other (0/1)	0.011 (0.009)	-0.009 (0.007)	-0.002 (0.007)	-0.001 (0.007)	0.001 (0.006)	0.003 (0.004)	-0.004 (0.006)	0.001 (0.004)	0.026 (0.019)	-0.026 (0.016)	-0.002 (0.016)	-0.004 (0.016)
Observations	63,013	63,013	63,013	63,013	24,212	24,212	24,212	24,212	38,801	38,801	38,801	38,801
Incident FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Panel B. Multi-SES Sample</i>												
Econ. Disadvantaged (0/1)	0.019*** (0.005)	-0.009 (0.006)	-0.010* (0.006)	0.001 (0.003)	0.009** (0.003)	-0.000 (0.002)	-0.008** (0.004)	0.001 (0.006)	0.028*** (0.008)	-0.015 (0.009)	-0.013 (0.009)	0.002 (0.006)
Observations	58,229	58,229	58,229	58,229	18,983	18,983	18,983	18,983	39,246	39,246	39,246	39,246
Incident FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The sample includes multi-student incidents for students enrolled in first through fifth grades during the 2015/16–2018/19 school years. The sample in Panel (A) contains multi-student incidents involving students of different races. The sample in Panel (B) contains multi-student incidents involving students of different socioeconomic statuses. The dependent variables are binary indicators for whether the incident resulted in (1) suspension, (2) informal exclusionary, (3) informal cautionary, or (4) other disciplinary consequences, respectively. Columns (1)-(4) include all incidents, Columns (5)-(8) restrict to the subsample of incidents where all involved students were cited for the same infraction, and Columns (9)-(12) restrict to the subsample of incidents where students were not cited for the same infraction. All regressions control for student demographics, lagged achievement, and lagged school discipline history. Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A7: Estimating the Likelihood of Severe Infractions, Multi-Student Incidents

	(1) Medium/High	(2) High
<i>Panel A. Multi-Race Sample (N= 38,801)</i>		
Black (0/1)	0.029** (0.015)	0.016* (0.008)
Hispanic (0/1)	0.005 (0.016)	0.006 (0.010)
Other (0/1)	0.018 (0.023)	0.002 (0.012)
<i>Panel B. Multi-SES Sample (N= 39,246)</i>		
Econ. Disadvantaged (0/1)	0.017** (0.009)	0.007 (0.006)
Incident FE	Yes	Yes

Notes: The sample includes multi-student incidents for students enrolled in first through fifth grades during the 2015/16–2018/19 school years. The sample in Panel (A) contains multi-student incidents involving students of different races. The sample in Panel (B) contains multi-student incidents involving students of different socioeconomic statuses. The dependent variables are binary indicators for whether the incident resulted in a medium- or high- severity infraction (Column (1)) or a high-severity infraction (Column (2)). All regressions control for student demographics, lagged achievement, and lagged school discipline history. Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Estimating the Likelihood of Disciplinary Consequences, Multi-Student Incidents Among First through Fifth Grade Students

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Suspension	Suspension	Informal Excl.	Informal Excl.	Informal Caut.	Informal Caut.	Other	Other
<i>Panel A. Multi-Race Sample</i>								
Black (0/1)	0.041*** (0.015)	0.036** (0.015)	-0.035** (0.015)	-0.034** (0.015)	0.003 (0.013)	0.006 (0.013)	-0.009 (0.009)	-0.008 (0.009)
Hispanic (0/1)	-0.016 (0.017)	-0.016 (0.016)	-0.030* (0.018)	-0.030* (0.018)	0.025 (0.019)	0.026 (0.018)	0.021* (0.011)	0.021* (0.011)
Other (0/1)	0.026 (0.019)	0.023 (0.019)	-0.026 (0.016)	-0.026 (0.016)	0.004 (0.016)	0.006 (0.016)	-0.004 (0.016)	-0.003 (0.015)
Observations	38,801	38,801	38,801	38,801	38,801	38,801	38,801	38,801
Incident FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Severity Controls	No	Yes	No	Yes	No	Yes	No	Yes
<i>Panel B. Multi-SES Sample</i>								
Econ. Disadvantaged (0/1)	0.028*** (0.008)	0.025*** (0.008)	-0.017* (0.009)	-0.016* (0.009)	-0.014 (0.009)	-0.012 (0.009)	0.002 (0.006)	0.003 (0.006)
Observations	39,246	39,246	39,246	39,246	39,246	39,246	39,246	39,246
Incident FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Severity Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The sample includes multi-student incidents for students enrolled in first through fifth grades during the 2015/16–2018/19 school years. The sample in Panel (A) contains multi-student incidents involving students of different races. The sample in Panel (B) contains multi-student incidents involving students of different socioeconomic statuses. The dependent variables are binary indicators for whether the incident resulted in (1) suspension, (2) informal exclusionary, (3) informal cautionary, or (4) other disciplinary consequences, respectively. Both panels use subsamples of incidents where students do not have the same infraction. All regressions control for student demographics, lagged achievement, and lagged school discipline history. Heteroskedasticity-robust standard errors are clustered at the school level. Asterisks indicate statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix B: Data Description

Description of Data Source

We obtained student-level data from the North Carolina Education Research Data Center (NCERDC) at the Center for Child and Family Policy at Duke University. More information on this data source and procedures to obtain the data can be found here: <https://childandfamilypolicy.duke.edu/north-carolina-education-research-data/>.

Student Characteristics

- **Race/Ethnicity:** Black, Hispanic, White, Other Race/Ethnicity (coded as mutually exclusive and exhaustive binary indicators)
 - Other Race/Ethnicity combines Asian, American Indian, Multi-Racial, and Native Hawaiian/Pacific Islander
 - We combine students who identify as Asian, American Indian, Multi-Racial, and Native Hawaiian/Pacific Islander because of small sample sizes in the incident data
- **Gender:** Male, Female (coded as mutually exclusive and exhaustive binary indicators)
- **Special Education:** Binary indicator equal to one if student has an Individualized Education Plan (IEP)
- **Economic Disadvantage:** Binary indicator equal to one if student is from economically disadvantaged background
- **Old for grade:** Equal to one if student is older than age 5 at the beginning of kindergarten
- **Reading Test Scores:** For students enrolled in kindergarten through second grades, we consider student achievement in reading on the Dynamic Indicators of Basic Early Literacy (DIBELS) test. For students enrolled in third through fifth grades, we consider student achievement in reading on the End-of-Grade (EOG) test. All test scores are normalized using the statewide mean and standard deviation within subject, year, and grade level

Coding of Disciplinary Consequences

Our four categories were developed by considering the following two dimensions: First, we consider whether the consequence is reported as part of the child and/or school’s administrative record (formal vs. informal), and second, we consider whether the consequence excludes a child from the instructional or peer environment (exclusionary vs. non-exclusionary). Our four categories thus correspond as follows: Suspension (formal and exclusionary), Informal Exclusionary (informal and exclusionary), Informal Cautionary (informal and non-exclusionary), and Other. Although the two dimensions allow for the possibility of a “formal and non-exclusionary” category, we do not observe any instances of this in our data.

- **Suspension:** Out-of-School Suspension, In-School Suspension

- **Informal Exclusionary:** Timeout, Sent Home Early, In-School Detention, Lunch Detention
- **Informal Cautionary:** Conference, Administrative Conference with Parent, Administrative Conference with Student, Student Written Warning, Student Oral Warning
- **Other:** Supervised Activities, Corporal Punishment, Alternative School, Alternative Learning Program, Community Based or Other Agency ALP, Report to Law Enforcement, After School Detention, Bus Suspension, Student Pays Restitution, Revoke Driving Privileges, Work Detail, Homebound Instruction, Saturday Academy, DJJDP Alternative Program, NCDPI Alternative Program, EC Serve LTS in ALP, Other, School Related Arrest, Unilateral change in placement (EC only), Hearing held, no change in placement (EC only), Hearing held, change in placement (EC only), Before School Detention, Referral to Community Agency, Restriction of School Privileges, Tobacco Awareness Class, Drug/Alcohol Class

Coding of Infraction Severity

- **High:** Assault resulting in a serious injury, Assault involving the use of a weapon, Assault on school personnel not resulting in a serious injury, Homicide, Possession of a firearm or powerful explosive, Possession of a weapon (excluding firearms and explosives), Robbery with a dangerous weapon, Robbery without a dangerous weapon, Rape, Sexual offense, Sexual assault not involving rape or sexual offense, Taking indecent liberties with a minor, Kidnapping, Unlawfully setting a fire, Communicating threats, Extortion, Fighting, Bomb threat, Assault on student, Assault–other, Assault on non-student w/o weapon & not resulting in serious injury, Assault on student w/o weapon & not resulting in serious injury, Violent assault not resulting in serious injury, Robbery without a weapon, Robbery with a firearm or explosive device, Physical attack with a firearm or explosive device, Threat of physical attack with a firearm, Threat of physical attack with a weapon, Threat of physical attack without a weapon
- **Medium:** Possession of controlled substance in violation of law–cocaine, Possession of controlled substance in violation of law–marijuana, Possession of controlled substance in violation of law–Ritalin, Possession of controlled substance in violation of law–other, Alcohol Possession, Affray, Disorderly conduct, Harassment–verbal, Hazing, Aggressive behavior, Insubordination, Harassment–sexual, Possession of tobacco, Use of alcoholic beverages, Use of controlled substances, Use of narcotics, Possession of chemical or drug paraphernalia, Bullying, Burning of a school building, Sale of controlled substance–cocaine, Sale of controlled substance–marijuana, Sale of controlled substance–Ritalin, Sale of controlled substance–other, Distribution of a prescription drug, Use of tobacco, Possession of a prescription drug, Gang activity, Discrimination, Possession of student’s own prescription drug, Possession of another person’s prescription drug, Cyber-bullying, Under the influence of alcohol, Under the influence of controlled substances, Harassment–Racial, Harassment–Disability, Harassment–Sexual orientation, Harassment–Religious affiliation, Indecent Exposure

- **Low:** Honor code violation, False fire alarm, Truancy, Dress code violation, Inappropriate language/disrespect, Gambling, Falsification of information, Theft, Bus misbehavior, Property damage, Inappropriate items on school property, Disruptive behavior, Possession of counterfeit items, Use of counterfeit items, Other School Defined Offense, Being in an unauthorized area, Cell phone use, Disrespect of faculty/staff, Excessive display of affection, Excessive tardiness, No Immunization, Leaving class without permission, Leaving school without permission, Mutual sexual contact between two students, Other, Skipping class, Cutting class, Skipping school, Physical exam, Late to class, Misuse of school technology, Repeat offender, Inappropriate Behavior