

Unequal Opportunity

Leveraging Blended Data to Assess Disparities in Dress Code and Discipline Among K-12 Students

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Applied Research and Methods

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(Based on GAO Report: [GAO-23-105348](#))

Agenda

- Issue Background
- Sources of Data
- Regression Modeling
- Sample Design and Analysis
- Recommendations

Issue Background

- Dress Codes
- School police

Issue Background

No standard dress code; variations across schools in:

- Guidelines
- Enforcement
- Student discipline

Concerns raised by researchers, parents, students:

- Dress codes tend to restrict clothing typically worn by girls (e.g. leggings)
- Prohibition of hair styles and head coverings unfairly target Black students and students of certain religions and cultures.
- Negative impacts of removal from classroom due to dress code infractions
- Disproportionate impact of discipline for some students

Examples of dress code enforcement reported in the media from April 2018 to June 2022

- A high school girl was told to “move around” for the school dean to determine if her nipples were visible through her shirt. The student was then instructed to put band aids on her chest.
- School staff drew on a Black boy’s head in permanent marker to cover shaved designs in his hair.
- A female transgender student was told not to return to school until she was following the school’s dress code guidelines for males.
- A high school girl was suspended for 10 days and prohibited from attending her graduation ceremony for wearing a top that showed her shoulders and back.
- Middle school girls were gathered at an assembly on dress code and told they should not report inappropriate touching if they were not following the dress code.
- A Black student was told he needed to remove his hair covering (also called a durag) because an administrator said it was gang-related.
- Two Asian American and Pacific Islander students were banned from wearing leis and tupenus (cloth skirts)—cultural symbols of celebration and pride—to their high school graduation.

Issue Background

Research Questions for 'dress code' report:

1. What are the characteristics of K-12 dress codes across school districts nationwide, and how Department of Education supports the design of equitable and safe dress codes.
2. What is known about the enforcement of dress codes, and how Education supports equitable dress code enforcement.

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Issue Background

- Widespread presence of police in schools
- Concerns raised by researchers, parents, students:
 - Overall disparities in arrests by police presence in schools
 - Disparities in arrests of students, by demographic
 - Questions about whether police presence makes schools safer

National Student Data

50,922,024

Overall
Enrollment

229,470

Referrals to Law
Enforcement

54,321

School-related
Arrests

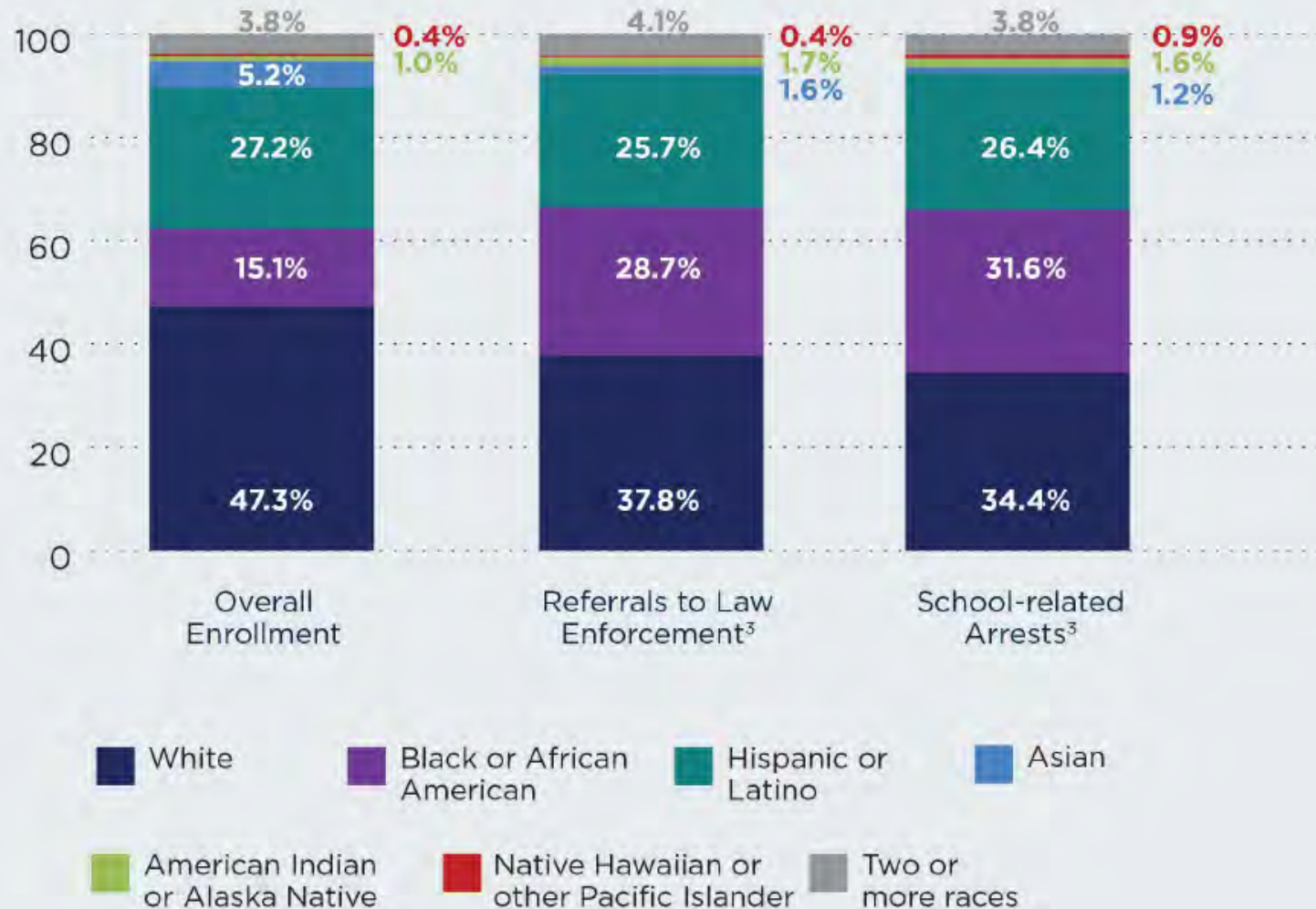
During the 2017-18 school year, 23.7% of referrals to law enforcement resulted in a school-related arrest.

BOYS

are 51% of the overall student enrollment but accounted for approximately 70% of referrals to law enforcement and student-related arrests.

Referrals and Arrests by Race and Ethnicity

Black and American Indian or Alaska Native students represented larger percentages of students referred to law enforcement or who received a school-related arrest than their overall enrollment.



Focus on Student Discipline: Referrals to Law Enforcement and School-Related Arrests in U.S. Public Schools (Jan. 2023)

U.S. Department of Education, Office of Civil Rights

<https://www2.ed.gov/about/offices/list/ocr/docs/referrals-and-arrests-part-5.pdf>

Issue Background

Research Question for 'Police' report:

1. Is the presence of police in K-12 schools associated with rates at which students are referred to law enforcement or arrested?

Sources of Data

Sources of Data

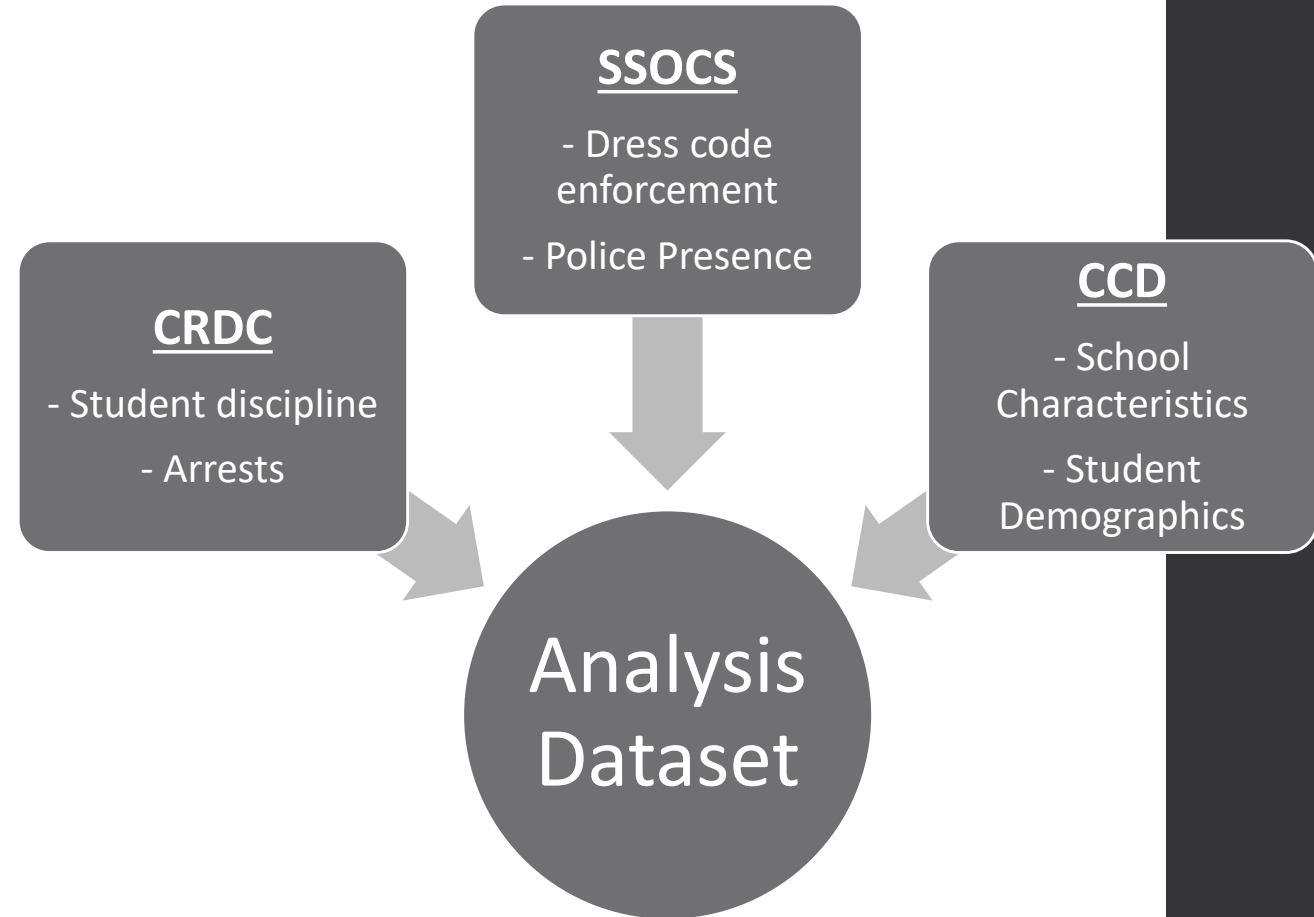
- We used Department of Education's school-level data:
 - Common Core of Data
(Annual admin. Census)
 - School Survey on Crime and Safety
(National survey)
 - Civil Rights Data Collection
(Mandatory biennial collection)



- We analyzed school years **2015-16, 2017-18**
 - Most recent available data at the time

Sources of Data

- Key variables are spread across data sources
- All 3 sources use common ID for linking
 - 97.4% of SOCCS records in CRDC & CCD
 - 92.3% match rate for CCD & CRDC– expected result because of differences in populations in file



Regression Modeling

- Dress Codes
- School Policing

Regression Modeling

- Two separate analyses looking at:
 - School dress codes
 - School police presence
- Used merged SSOCS-CCD-CRDC data for both analyses
 - Limited records to merged SSOCS records for both years

Regression Modeling

First, check for potential bias due to having unmatched schools

- Conceptually treat 'unmatched' as a 'nonresponse'
- Focused on SSOCS schools not matched to CRDC
- Performed essentially a non-response bias analysis to assess if non-matched schools are significantly different
 - Modeled propensity of a school match
 - Assessed variable distributions, estimates, and SE's across response groups
 - Also examined differences in SE's under two assumptions

Regression Modeling

- Based on evidence of checks, we assume the missing data are *likely* missing at random within subclasses
- These subclasses were all factors controlled for in later analyses, thus implicitly adjusting for potential bias introduced due to non-matched SSOCS schools

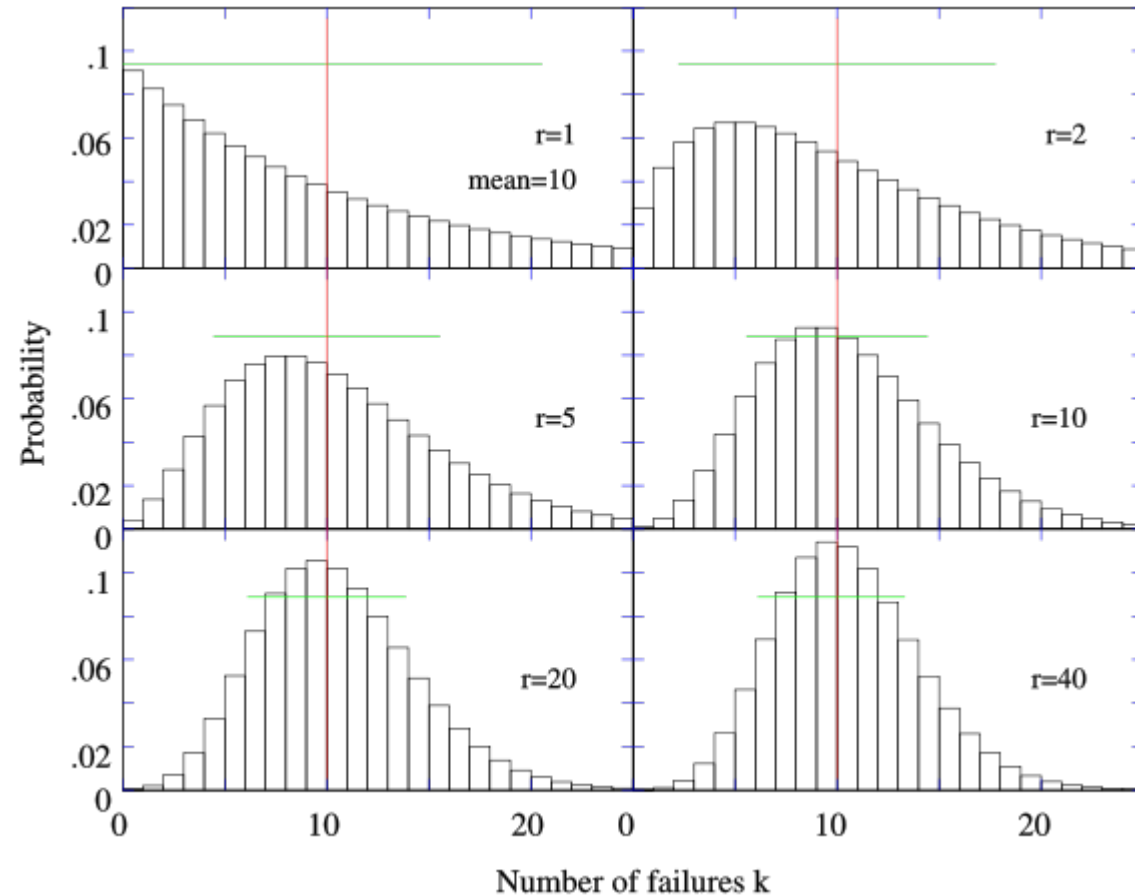
Regression Modeling

- Mainly interested in two outcomes:
 - Rates of discipline (by type)
 - Control for school enforcement of strict dress code
 - Rates of arrest
 - Control for presence of police at school
- Modeling rates/ratios/proportions using OLS can be problematic
 - Usually efficient for unbounded continuous variables
 - Not useful here since:
 - Data violate normality assumption
 - Can predict values beyond the range of $[0,1]$

Regression Modeling

Use Negative Binomial regression to model the count of students

- Evidence of overdispersion detected using Poisson regression (i.e. variance \neq mean)
- Exposure set to the total number of students at school



Regression Modeling

Limitations

- Data are by school, rather than by student. So can't speak to associations for students, but rather associations with schools
- Omitted variable bias
- Not causal
- Subject to sampling and non-sampling error

To account for this, we only reported direction of association, not magnitude

Findings

- Disparities in discipline of students in schools which enforce strict dress codes
- Dress code infractions remove students from the classroom
- Schools sometimes call student removals ‘informal removals’ – this data is not tracked by CRDC
- Department of Education lacked resources and guidance on how schools should address disparities in discipline

Figure 12: Estimated Percentage of Students Experiencing Exclusionary Discipline in Schools That Enforce Strict Dress Codes, School Year 2017-18



Source: GAO analysis of School Survey on Crime and Safety (SSOCS) and Civil Rights Data Collection (CRDC) data for school year 2017-18. | GAO-23-105348

Regression Modeling

- For police report, we used the same data but took a different approach
- **Goal:** Reduce confounding due to using ‘observational’ data (e.g. not from randomized experimental design)
- **Doubly robust method:**
 - Create a ‘matched’ dataset of similar schools using propensity score matching
 - Perform a negative binomial regression using matched dataset

Regression Modeling

Propensity score matching:

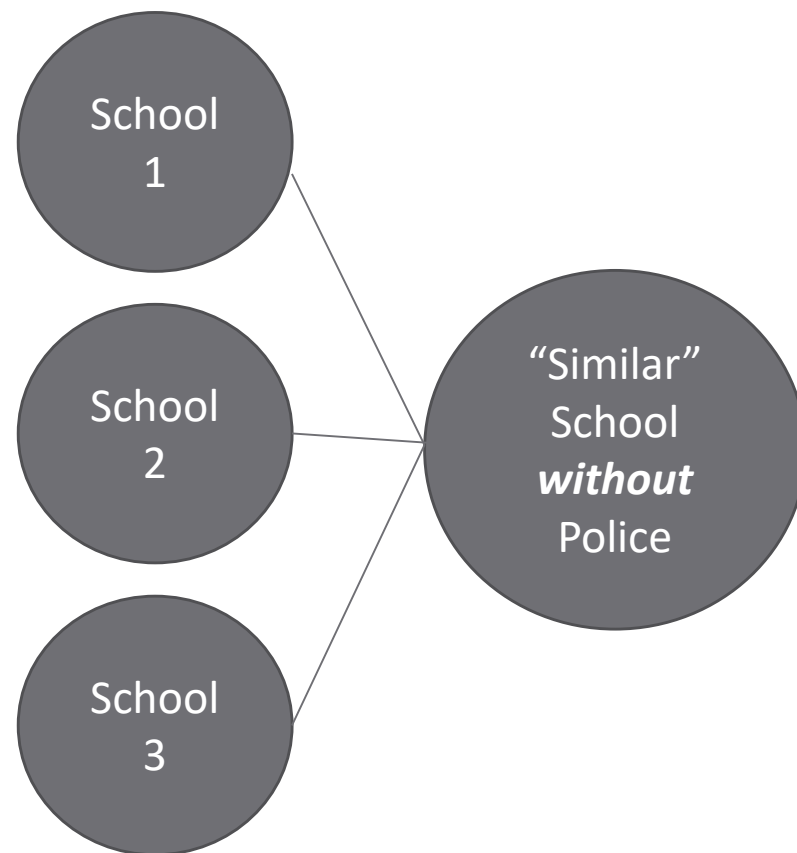
- 'Treatment' is presence of police at a school
- 'Control' is a school without police
- Interested in the average treatment effect in the treated (ATT)
- To create propensity score:
 - Logistic regression with police presence as the outcome
 - Controlled for school characteristics and policies associated with police presence
 - Used survey weights

Regression Modeling

Propensity score matching:

- ‘Treatment’ group larger than ‘Control’ group
- One-to-One matching would discard records, reducing precision
- N-to-One matching increases precision, but introduces bias
- Considerations given to weighting adjustment
- Good covariate balance between groups after matching

Schools with Police Presence



Regression Modeling

- We performed a similar regression analysis using this matched data
 - Used the 'new' weight instead of the original sampling weight
 - Considerations given to variance estimation and interpretation of variable coefficients
- Results are ongoing, stay tuned!

Sample Design and Analysis

- Dress Codes

Goal

- Select a sample of Local Education Agencies (LEAs) – school districts – in order to examine dress code policies through a pre-defined set of questions
- Generalizable estimates to the population of all public LEAs in the 50 states, the District of Columbia, and territories...plus other properties I will describe

Sample Frame

- Common Core Data (CCD) for the 2020-2021 School Year
- 17,600 public K-12 school districts
- Excluded LEAs:
 - Under Bureau of Indian Education, Department of Defense.
 - Closed, not operational, supervisory unions, or federally operated agencies.
 - Without schools or students.
- Combined the 33 NYC LEAs into one unit with aggregated school and student sizes.
- Charter schools are generally their own LEAs

Sample Design Considerations

- Dress code review would be a manually intensive process
- Features that GAO considered important in the design:
 - LEA size (number of students)
 - Urbanity
 - Racial/Ethnic make-up of the LEAs ← **Key reporting group**
 - Charter status
- 90% expected response rate based on GAO pre-testing and previous GAO work

Sample Design

- Certainty strata: 10 largest LEAs (student size)
- Within **Majority White** and **Majority Non-White LEAs**, proportionately allocate sample across Urbanity (Urban/Suburban/Town Rural) and Charter/Non-Charter for a total of 13 strata
- Sample size = 236, with an expected 213 completes
- 95% Margins of Errors for percentage estimates are within:
 - **+/-9.8** percentage points in **White Majority** and **Non-White Majority** LEAs
 - **+/-7** percentage points for **overall estimates**
 - Other groups: between **+/- 9** (non-charter LEAs) and **+/- 14.4** (urban LEAs)

Non-Response Adjustment

- 92% response rate with an overall correction for non-response
- Within strata non-response adjustment factor
- Generally, surveys of schools and districts based on the Common Core Data sampling frame have variables available for a nonresponse bias analysis and weighting adjustments
 - Variables that form the stratification
 - Size of schools and districts
 - Type of school or district
 - Grades offered

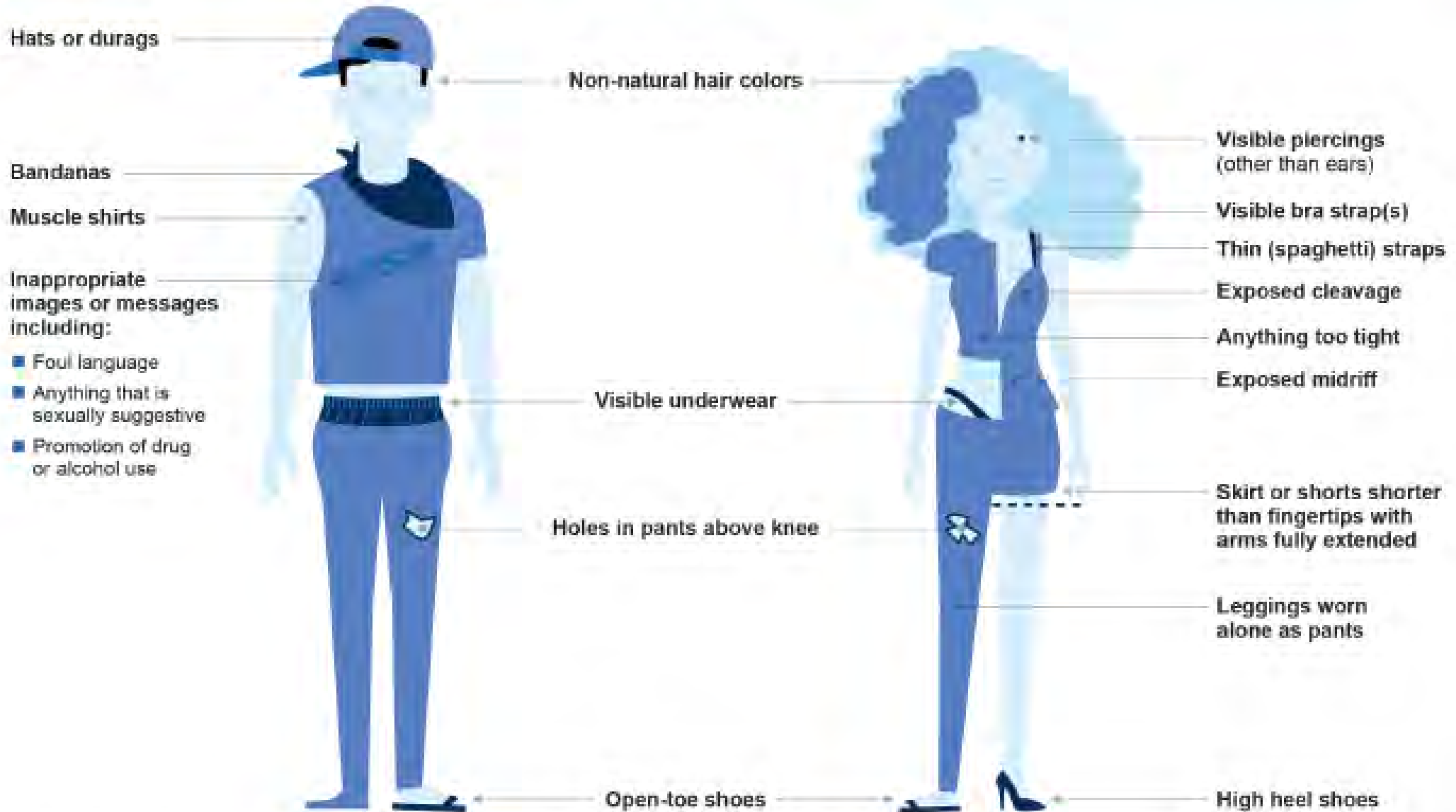
Estimation

- Used SUDAAN to produce estimates that incorporate the sample design
- Flagged instances where the margin of error was large

Figure 1: Examples of Items Prohibited by School Dress Code Policies

Example of K-12 School Dress Code

Prohibited items may not be worn on campus or at school-sponsored activities



Findings

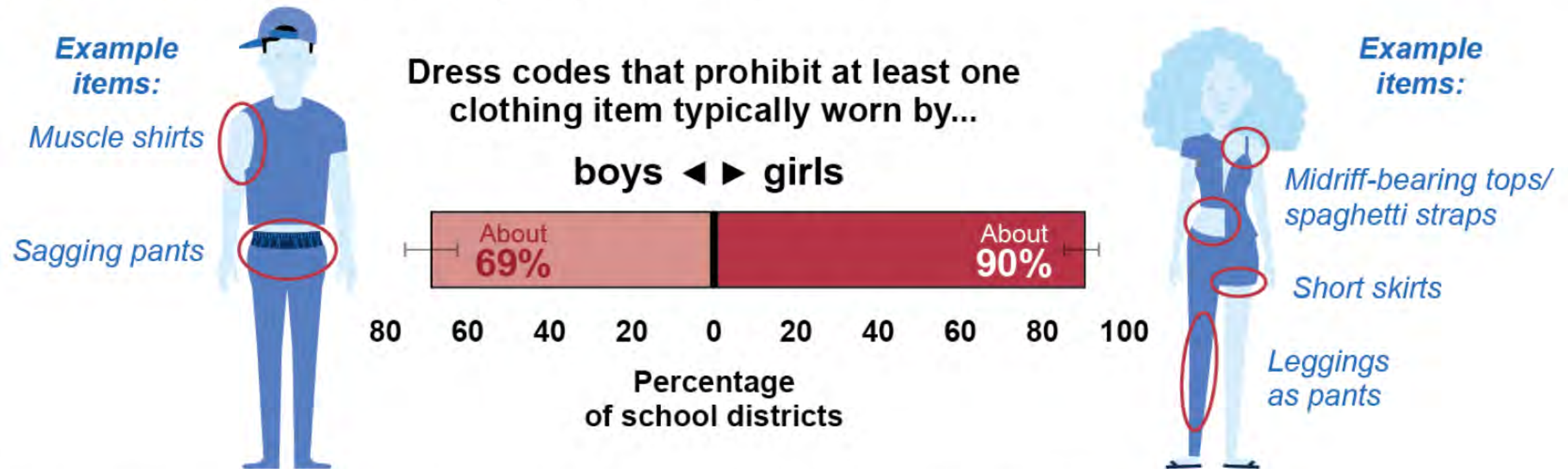
Department of Education lacked resources and guidance on how schools should design equitable and safe dress codes

- While school districts often cite safety as the reason for having a dress code, many dress codes include elements that may make the school environment less equitable and safe for students.
- For example, an estimated **60 percent of dress codes** have rules involving measuring students' bodies and clothing—which may involve adults touching students.

Findings continued

- Districts more frequently restrict items typically worn by girls—such as skirts, tank tops, and leggings—than those typically worn by boys—such as muscle shirts.

Items Commonly Prohibited by School Dress Codes



Findings continued

- Most dress codes contain rules about students' hair, hair styles, and head coverings, which may disproportionately impact Black students and those of certain religions and cultures. Few specify religious, cultural, or medial exemptions.

Figure 7: Examples of religious and culturally significant head coverings

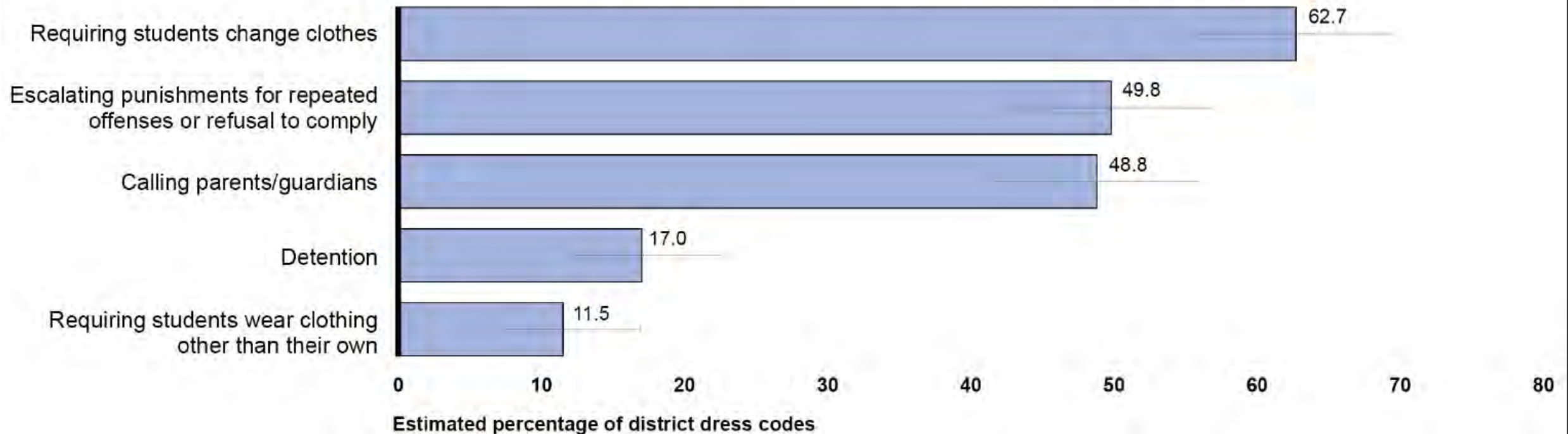
Students may wear head coverings as a form of religious observance or a way to express cultural identity. Here are three examples:



Findings continued

- More than three-quarters of dress codes contain non-exclusionary disciplinary options for enforcing dress codes.
- An estimated 44 percent of dress codes outlined “informal” removal policies, such as removing a student from class without documenting it as a suspension.

Figure 14: Non-Exclusionary Discipline Cited in Dress Codes Violations, by Estimated Percent of Districts



Impact

Dress Codes

Statistical Impact

- Surveys designed with purpose can have impact
- By combining methodologies and using blended data, this report resulted in a comprehensive view of disparities in dress code and discipline among K-12 students

NEA News

Equitable Dress Codes Missing From Schools

Nearly all K-12 public school districts have restrictive dress codes that disproportionately impact female students, students of color and LGBTQ+ students.

Los Angeles Times

Commentary: Why are school districts still using dress codes to discriminate against girls?

The Washington Post
Democracy Dies in Darkness

School dress codes can discriminate against many students, report finds

The GAO does not condemn dress codes but does emphasize the need for equity and safety in their design and implementation. The

USA
TODAY

Sexist, racist and classist: Why the feds are getting involved in school dress codes

EducationWeek[®]

Districts Need Guidance on Designing Dress Codes That Are Fair to All. It Might Be On the Way

Recommendations

The Secretary of Education should:

1. Provide resources to help districts and schools design equitable dress codes
2. Include dress code information in existing resources on safe and supportive schools (e.g. body autonomy)
3. Provide resources for states, school districts, and schools on equitable enforcement of dress codes and the use of discipline
4. Collect information on the prevalence and effect of removing students from the classroom (and other discipline)

Recommendations

Department of Education [released guidance](#) addressing safe inclusive climates in school

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K-12 EDUCATION

Department of
Education Should
Provide Information
on Equity and Safety
in School Dress
Codes

For more information please
see:

<https://www.gao.gov/products/gao-23-105348>

Thank you!