Parent's Choice or School's Choice? Discrimination Against Students in Admission to Private, Charter, and Traditional Public Schools

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School Choice Programs are Expanding Rapidly

- **Education is strongly linked to economic mobility and non-economic benefits** (Chetty et al., 2014, 2016)

- **Minoritized groups, especially Black, Hispanic, and immigrant families, face educational disparities** (e.g., Bergman & McFarlin, 2020; Hadah, 2025)

- **While public and charter schools are available to all, there are still inequalities through:**

    - Resource and teacher quality imbalances (Ferguson, 1991, Johnson, 2019; Sass et al., 2012)

    - Larger class sizes and course placement (Boozer & Rouse, 2001; Francis, De Oliveira, & Dimmitt, 2019)

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- **Then there are private schools**

  - Less affirming of minoritized groups and less accessible

  - They can legally discriminate on any basis except race (Petrilli, 2017)

American education is undergoing one of its most significant shifts in the last half-century

- **Milton Friedman (1955) popularized vouchers in the wake of Brown v. Board of Education**

  - He tried to sell it knowing that southern states would use it to continue segregation

  - Recent evidence affirms this interpretation (DeAngelis et al., 2019)

- **8 states have universal vouchers (EdChoice, 2024)**

- **Voucher expansion aligns with broader discriminatory policy trends (e.g., anti-DEI, anti-CRT, etc.)**

- **Some argue that this would expand educational opportunities for low-income families, the more rigorous and relevant research calls this into question**

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- **To what extent do these programs discriminate against students is an open question**

We will conduct an audit experiment of public, charter, and private schools in the US

- We will send emails to receive admission information

- We will randomize several characteristics of the students to test for discrimination

    - **Race and Ethnicity:** Black, Hispanic, White, Arab

    - **LGBTQ+ Status:** gay/lesbian vs. presumed straight and transgender vs. presumed cis

    - **Disability Status:** ADHD, autism, no disability disclosed

    - **Academic achievement:** High vs low

    - **Socioeconomic Status (SES)/Income:** Ph.D. vs. MD vs. no mention

We contribute to the literature in several ways

- **We will be the first audit study to test for discrimination in access to education in public, charter, and private schools**

  - No previous audit studies included private schools

- **First to test for discrimination against LGBTQ+ and Arab people in access to education**

- **We will also test how some policies will influence discrimination**

  - DEI/CRT bans and LGBTQIA+ policies

- **Determining where discrimination occurs and informing policy to counteract it**

  - Testing mechanisms (e.g., statistical discrimination, implicit bias)

  - Spatial/school-level characteristics , such as district characteristics, segregation, and social views

Data

National Longitudinal School Database (NLSD)

- NLSD is a census of all schools in the US

  - Includes all private, charter, and traditional public schools from 1990-2019

  - Developed by Co-I Harris

- We will supplement the NLSD with data about voucher participation, discrimination law (e.g., anti-trans / anti-CRT / anti-DEI), and other socio-economic and demographic data of the state

- We will also supplement NLSD with data on school point of contact, from MDR Education dataset

Summary Statistics from the NLSD

| | Full Sample (N = 123,106) | | Private (N = 23,900) | | | | | | | | Charter (N = 7,719) | | Public (N = 91,487) | |
| | | | Nonsectarian (N = 3,971) | | Catholic (N = 6,983) | | Other Religious (N = 12,946) | | | | | | | |
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			Mean	SD	Mean	SD
% Black	14.1	22.8	13.2	22.0	8.7	18.1	12.5	24.1			26.2	32.0	13.7	21.7
% Hispanic	22.5	26.4	11.5	20.1	18.1	24.5	8.9	16.9			33.9	30.9	23.8	26.5
% White	52.9	33.4	58.3	30.1	62.2	32.1	70.0	33.0			30.9	30.8	52.0	32.6
% Asian	4.1	9.1	9.4	15.4	4.8	8.3	4.2	11.1			3.3	8.1	4.0	8.6
FTE Teachers	31.5	26.7	28.8	36.2	21.5	18.6	16.1	23.1			26.6	28.3	34.5	26.2
Mean Achievement (Math & RLA)	-0.0	0.4									-0.1	0.5	-0.0	0.4
Median HH Income (1999 $)	44,728	23,155	60,958	37,355	47,952	26,527	45,647	22,758			37,390	18,458	44,456	22,333
% in Poverty	7.0	8.0	4.7	6.3	5.5	7.2	6.5	7.3			10.4	10.2	7.0	7.8

Notes: The unit of observation is the school year from the 2019-2020 school year. The sample includes schools with an average of 20 or more students. Mean achievement represents the average academic achievement of students, measured through standardized test scores in mathematics and Reading Language Arts (RLA) for grades 3 through 8. The scores are standardized using the National Assessment of Educational Progress (NAEP) to allow comparisons across states, with data pooled across school years from 2008-09 to 2017-18. Higher values indicate better academic performance relative to the national standard and is only available for public schools.

Source: Authors' calculations based on the National Longitudinal School Database.

Study Design

We will consider many dimensions

- **At least 7 types of schools**

  - **Private**: Catholic, Protestant, secular, and single-sex

  - **Charter**: No-excuses/other, district/other authorizer

  - **Traditional public schools**

- **6 dimensions of potential discrimination**

  - **Race and ethnicity** (Black, Hispanic, White, Arab) signaled through names [Race and ethnicity signals]

  - **LGBTQ+ status** (lesbian, gay, trans girls and boys, non-binary)

  - **Disability status** (ADHD, autism, no disability disclosed)

  - **Academic achievement** (high vs. low)

  - **Socioeconomic status** (Ph.D., MD, no mention)

- We will assign each school to either the sexual orientation and gender identity (SOGI)---high schools only---or the disability treatment arms

[Treatment arms info]

Audit Study Email Template

From: [MOTHER'S FIRST AND LAST NAME] ()
Subject: [EMAIL SUBJECT]

Email Body: [GREETING],

[RECENTLY MOVED, RESEARCHING SCHOOLS] for our {daughter/son/child}, [CHILD's FIRST NAME]. {She/He/They} [IS IN] [GRADE] and [HAS ACADEMIC PERFORMANCE (Excluded for disability treatment arm)].

If assigned a disability:	If assigned to be LGBT:	Otherwise:
[{She/He} is on the spectrum and will need to be taught in a separate classroom.] (50%) **OR** [{She/He} has an IEP for {her/his} ADHD.] (50%)	[She is trans] (25%) **OR** [He is trans] (17%) **OR** [They are non-binary] (18%) **OR** [She is lesbian] (20%) **OR** [He is gay] (20%) and we are hoping to find a school that is LGBT friendly.	No additional sentence.

[APPLICATION QUESTIONS]

[VALEDICTION],

[MOTHER'S FIRST AND LAST NAME] (50%) **OR** Dr. [" "], MD (25%) **OR** Dr. [" "], PhD (25%)

[SOGI treatment arm] [Disability treatment arm] [Academic achievement, SES, and voucher info]

Coding response data

- Primary outcome: positive response

  - It will be coded as 1 if the school responds to our email in a way that is helpful (e.g., answers a question) or encouraging within two weeks and 0 otherwise

- Secondary outcome: Features of (un)helpful and discriminatory responses through qualitative thematic coding and large language models (LLMs) (e.g., Skeen and Button, 2024)

  - Analysis will correct for post-treatment bias (Coppock, 2019)

- Going beyond most audit studies which usually only consider response rates

[School communication] [Emailing strategy] [Regression models]

Hussain Hadah (Tulane/Murphy Institute) | Parent's Choice or School's Choice? | 13 June 2025

Thank you!

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Appendix

Assigning treatment arms

- We will assign each school to either the sexual orientation and gender identity treatment arms (65%) or the disability treatment arm (35%)

  - We randomize these separate treatment arms to avoid detection

  - Signaling SOGI is unusual for younger children

  - We want to avoid signaling too many uncommon characteristics in the same email

  - We also want to avoid signals that could complicate the interpretation of the results

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We will use names to signal race and ethnicity

- The names have been tested by Gaddis (2022; White, African American, and Hispanic names) and Baert, Lippens & Van Borm (2022; Arab)

- We will assign a different race and ethnicity to each family in our email pairs:

  - Emails assigned to the disability treatment: probabilities 33% White, 23% Black, 23% Hispanic, and 21% Arab

  - Emails assigned to the SOGI treatment: probabilities 40% White, 30% Black, and 30% Hispanic

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Signaling sexual orientation or gender identity

- We will only use high school for this treatment arm

- When we do signal SOGI, the mother's email mentions that the child is either gay (20%), lesbian (20%), transgender (15% trans girl, 15% trans boy), or non-binary (10%) by adding

  - "[He/She/They] [is/are] [gay/lesbian/trans], and we are hoping to find a school that is [supportive / LGBT friendly]"

  - Mirroring language used in Pfaff et al. (2021) of religious beliefs

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Signaling disability status

- For schools assigned to the disability treatment arm we will randomly assign the child to have:

    - Equal probabilities of ADHD or autism

    - The remaining emails will not mention a disability

- We will add a sentence:

    - "[She/he] has an IEP for [her/his] ADHD"

    - "[She/he] is on the spectrum and will need to be taught in a separate classroom"

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Signaling academic achievement, socioeconomic status (SES), and voucher

- We will signal academic achievement by mentioning that the child:

  - "typically gets As and Bs"

  - "typically gets Cs"

- We will signal SES by either including or omitting degree information like "MD" or "PhD" in the mother's email signature

- For schools that accept vouchers, we will include signals of voucher eligibility

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Communication with the Schools

- There is an extensive literature on how to write the emails to the schools (Patrick is the expert)

- We will send two emails to school administrators (available in the MDR Education data)

- We will randomize the characteristics of the students in the emails to signal our dimensions of interest

- The emails will be realistic and will ask for information about the admissions process

  - We will use some of Doug's extensive contacts with educators to ensure the emails are realistic

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Emailing Strategy

- ## We will send two emails to each school

  - One email will be "treatment" (e.g. parent mention their child is transgender) and the other will be "control" (no mention)

  - We will randomize the order of the emails

  - Send at least one month apart

- ## Sending two emails substantially increases statistical power

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Short regression model

We will estimate a linear probability model (LPM) called the "short" model (following Muralidharan, Romero & Wüthrich, 2019):

$$PositiveResponse_i = \beta_1 Black_i + \beta_2 Hispanic_i + \beta_3 Arab_i + \beta_4 LGT_i + \beta_5 Disability_i$$
$$+ \beta_6 FemmeName_i + \beta_7 LowGrades_i + \beta_8 HighGrade_i + \beta_9 SESMD_i$$
$$+ \beta_{10} SESPhD_i + EmailCongrols_i \beta_{11} + SchoolControls_i \beta_{12} + \epsilon_i$$

Where i indexes each email:

- $PositiveResponse_i$ is a binary outcome variable for receiving a positive response

- $Black_i$, $Hispanic_i$, and $Arab_i$ are indicator variables for race and ethnicity

- LGT_i is an indicator variable for lesbian, gay, trans, or non-binary students

- $Disability_i$ is an indicator variable for students with ADHD or autism

- $FemmeName_i$ is an indicator variable for a feminine name

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Short regression model (continued)

$$PositiveResponse_i = \beta_1 Black_i + \beta_2 Hispanic_i + \beta_3 Arab_i + \beta_4 LGT_i + \beta_5 Disability_i$$
$$+ \beta_6 FemmeName_i + \beta_7 LowGrades_i + \beta_8 HighGrade_i + \beta_9 SESMD_i$$
$$+ \beta_{10} SESPhD_i + EmailCongrols_i \beta_{11} + SchoolControls_s \beta_{12} + \epsilon_i$$

Where i indexes each email and s indexes each school:

- $LowGrades_i$ and $HighGrades_i$ are indicator variables for low and high academic achievement

- $SESMD_i$ and $SESPhD_i$ are indicator variables for high socioeconomic status (SES) parents with MD or PhD degrees

- $EmailControls_i$ includes indicator variables for different randomized email features, and controls for email timing

- $SchoolControls_s$ which includes state fixed effects and school characteristics from the NLSD

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