

The Covid-19 Pandemic Disrupted School Bullying and Cyberbullying

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Motivation

- Covid-19 has dramatically disrupted the usual functioning of schools.
 - Spring 2020: all US schools shut down in-person learning.
 - Fall 2020: some schools fully re-opened, but many remained remote or hybrid.
 - Fall 2021: most schools in-person, but additional disruption as the Delta variant spread.
- Much of the research/media on Covid and schools has focused on negative consequences (learning loss, drops in enrollment, child mental health, labor market).
- But here and there we see stories of students for whom the dramatic change in schooling format has improved at least some aspect of their educational experience.
- In this paper, we argue that the move to remote schooling has lowered rates of school bullying and cyberbullying, particularly toxic behaviors that do serious damage to victims.

Prevalence and costs of bullying

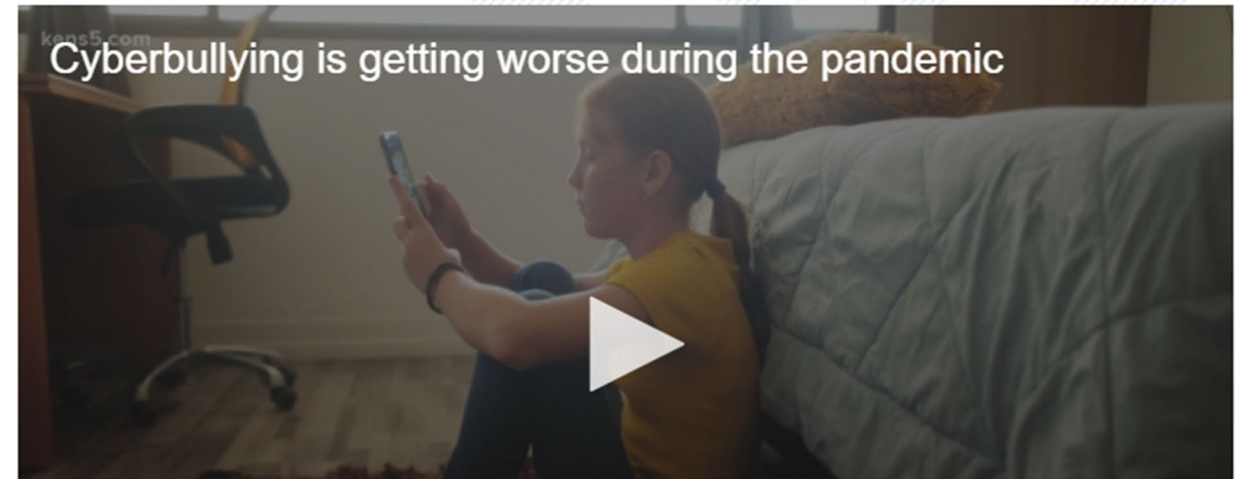
- School-based bullying and cyberbullying have been the focus of policy and legislative initiatives because they are common and have substantial impacts on the health and mental health of youth.
- Among U.S. high school students in 2019 (Basile et al., 2020):
 - 20% reported being bullied at school in 2019
 - 16% reported being cyberbullied in 2019
- Youth involved in bullying report more suicidal ideation, depression and anxiety. (Holt et., 2013; Kowalski & Limber, 2013; Wang et al., 2011).
- Childhood bullying is linked to negative physical, mental and economic outcomes in adulthood. (Takizawa et al., 2014; Wolke et al., 2013).

Concerns about bullying during the pandemic

- As Covid forced a shift to remote learning, concern arose about the potential for increased exposure to cyberbullying (Sang-Hun, 2020).
- Pre-pandemic research: internet use was associated with increased youth reports of cyberbullying (Kowalski et al., 2014, 2019).
- Media outlets expressed expectations that while in-person bullying might decline, cyberbullying would likely increase.
- Yet little good evidence about bullying and cyberbullying during the pandemic.

Cyberbullying is getting worse during the pandemic

The amount of cyberbullying has nearly doubled with so many children on computers at home.

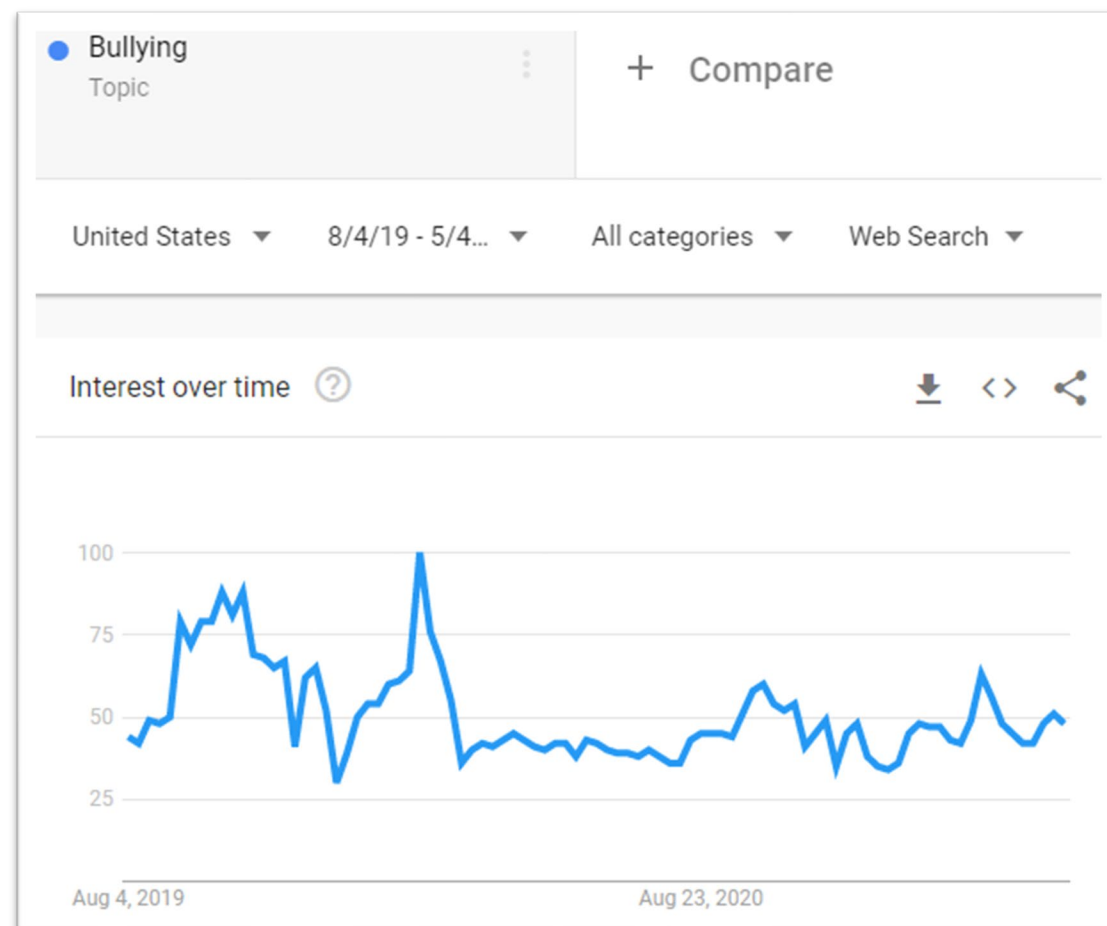


Empirical approach

- Draw on prior analysis showing that internet searches can provide valuable information about educational choices during Covid (Bacher-Hicks, Goodman, & Mulhern, 2021).
 - Particularly for things usually hard to observe in typical data or in real time (e.g., bullying).
- We combine data from Google Trends with data on historical bullying rates to argue that:
 1. Internet search for bullying is a good proxy for actual bullying behavior.
 2. Event Study: Covid dramatically lowered bullying and cyber-bullying rates.
 3. DID: Remote schooling is at least one important mechanism that explains this pattern.

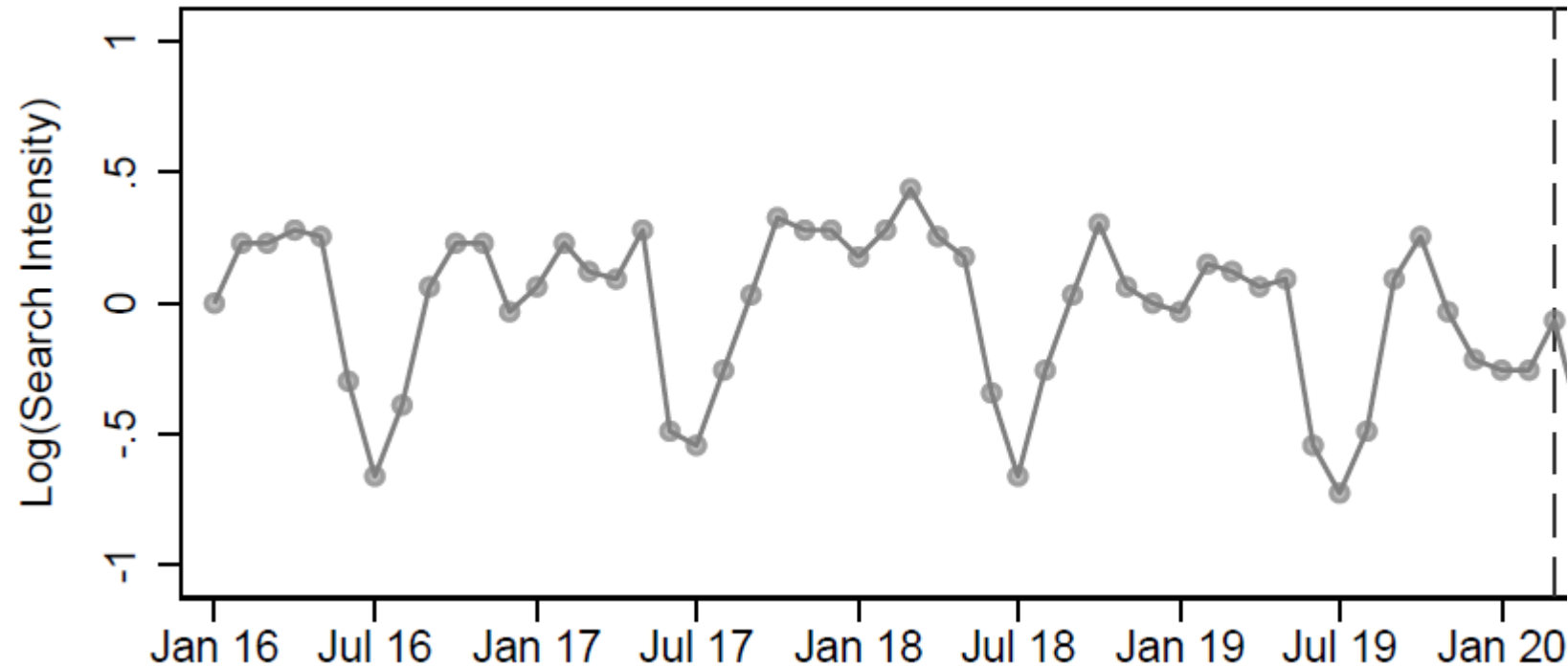
Google Trends search data

- Google Trends provides a measure of internet search behavior nationally, by state, and by various sub-regions (depending on the country).
- The publicly available measure (“search intensity”) is the fraction of Google searches devoted to a term (or set of terms).
- Raw search volume/intensity are not available. Intensity is on a 0-100 scale, with 100 being the maximum intensity in a geography and time span.
- We use the logarithm of search intensity so estimates can be interpreted as percent changes.
- We focus on three measures: “School bullying”, “cyberbullying”, and the total of those two, which we just call “bullying”.



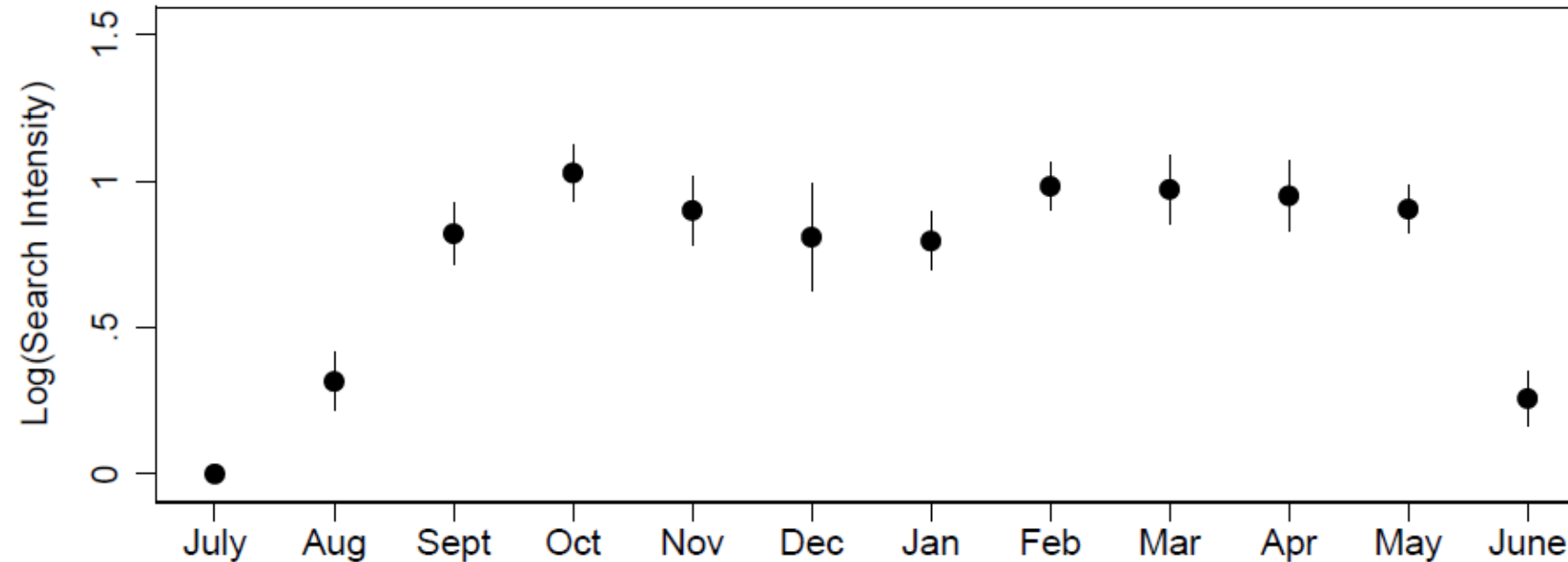
Pre-pandemic evidence I: Temporal changes

- Pre-Covid search intensity for school bullying is closely related to the school calendar.
 - Picks up as the school year begins;
 - Drops somewhat over winter recess;
 - Plummetes over summer break.



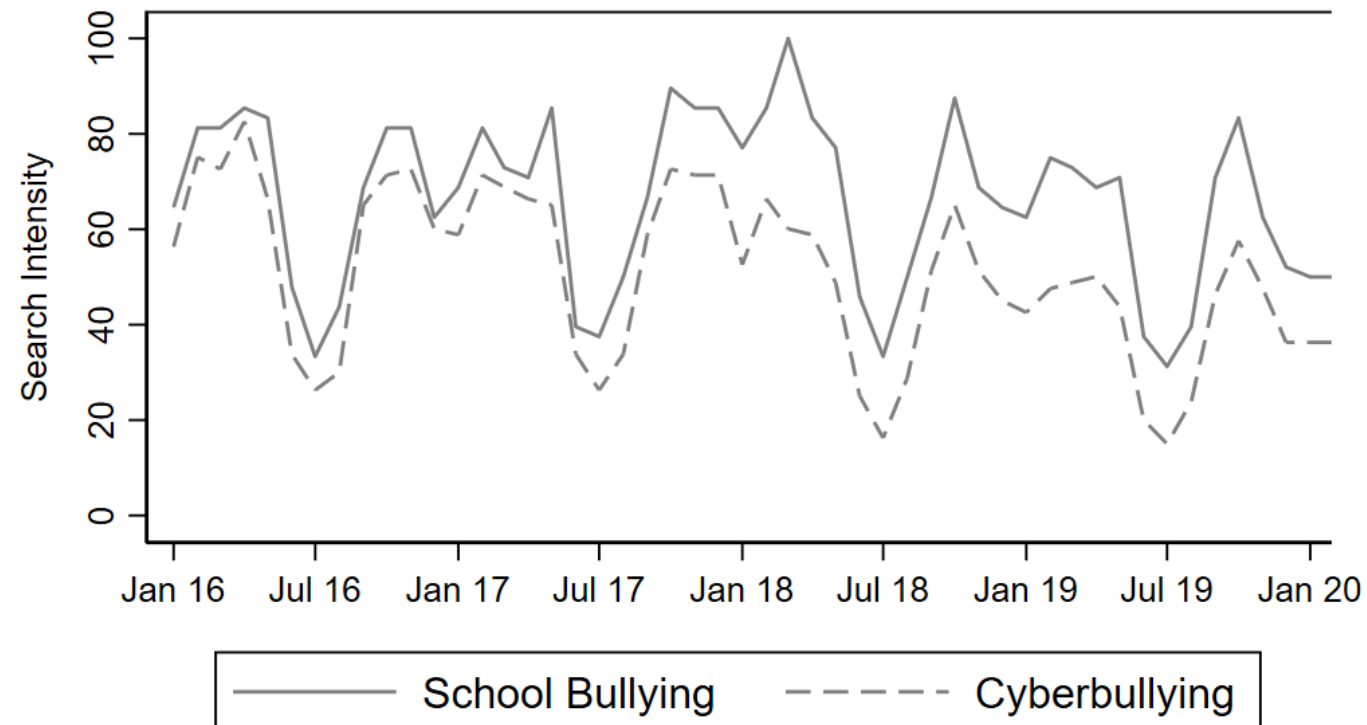
Pre-pandemic evidence I: Temporal changes

- This pattern is clearer when plotting month “effects” of bullying searches, relative to July.
- In pre-Covid data, total bullying-related searches are lowest in summer, ramp up when schools start in August/September, and stay relatively constant until school ends in June:



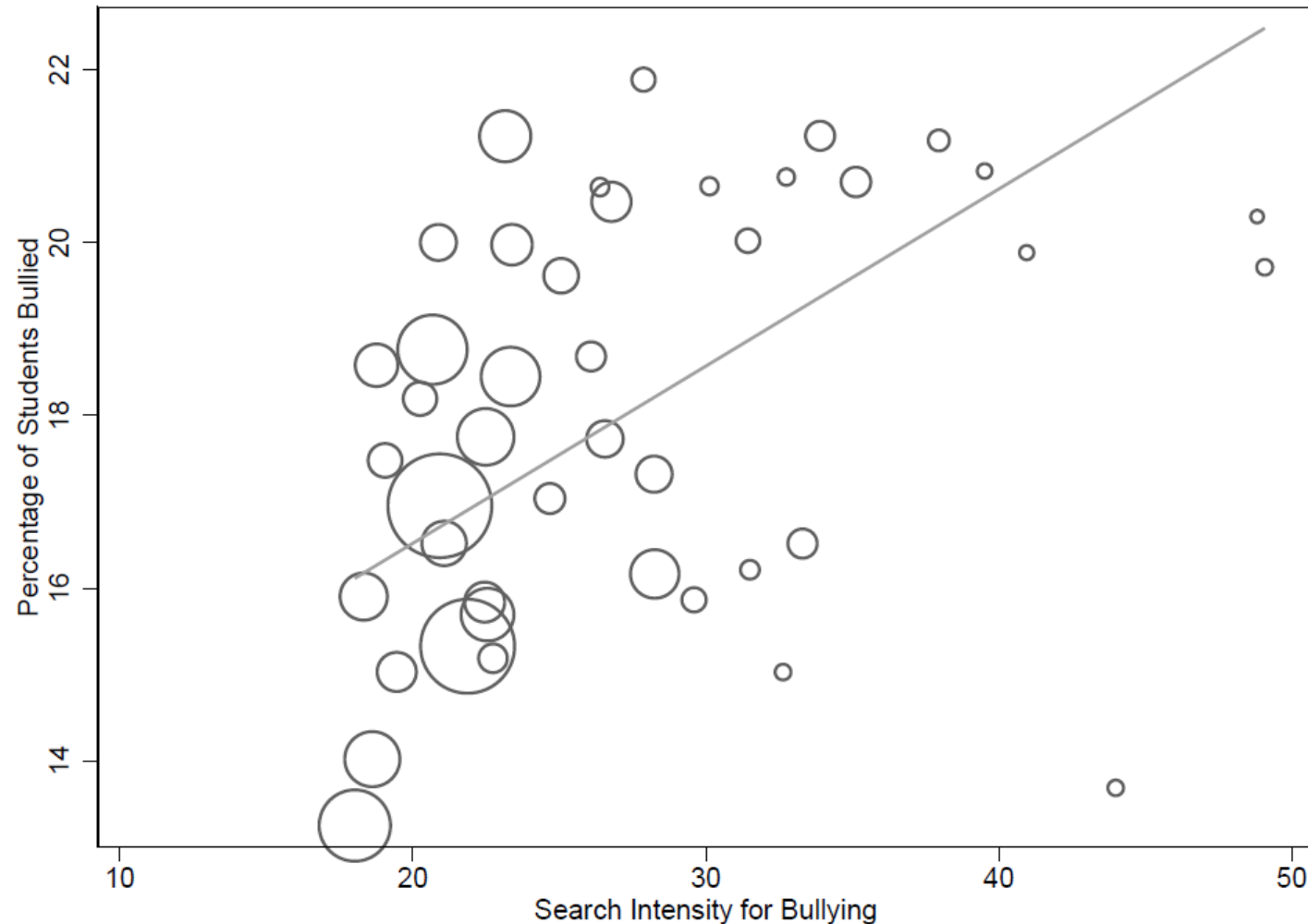
Pre-pandemic evidence II: National rates

- Nationally school bullying is 30% more common than cyberbullying (measured in the CDC's Youth Risk Behavior Survey):
 - 14.8 percent of students cyberbullied; 19.2 percent bullied in school.
- Search intensity for school bullying is also 30% higher than for cyberbullying:



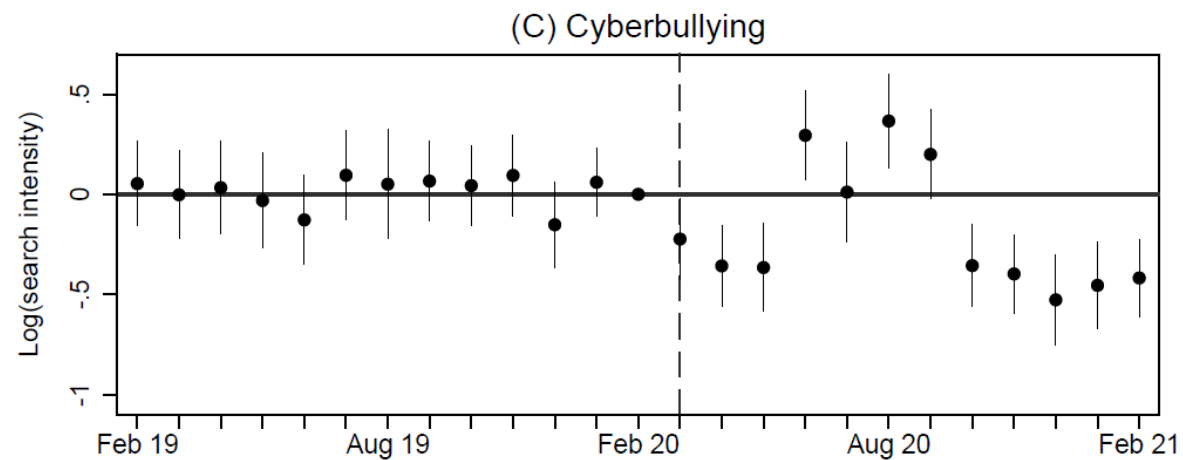
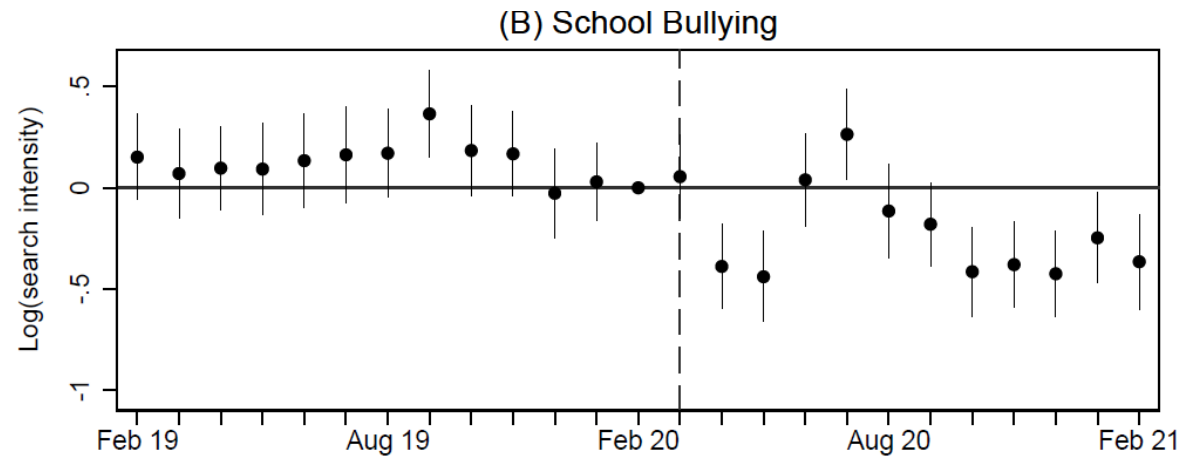
Pre-pandemic evidence III: State-level correlations

- Pre-pandemic, self-reported rates of bullying track online search intensity for bullying-related terms at the state level.



Post-pandemic evidence: Event study

- After removing calendar effects, search intensity for school bullying and cyberbullying both drop in **non-summer months** after Covid:



Post-pandemic evidence: Pre-post regression estimates

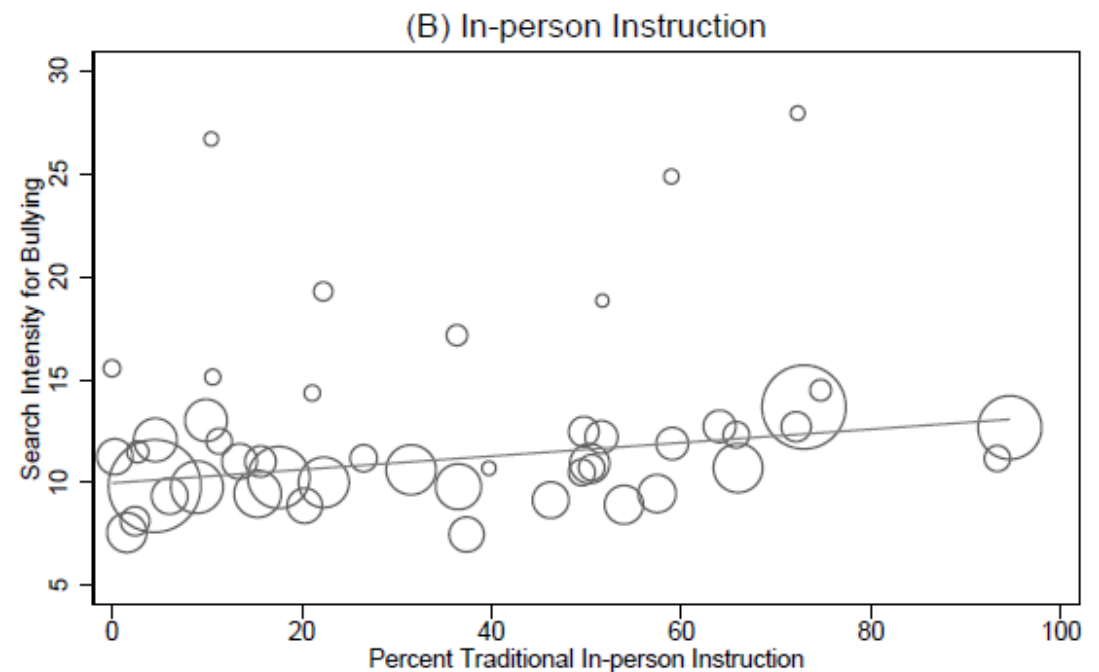
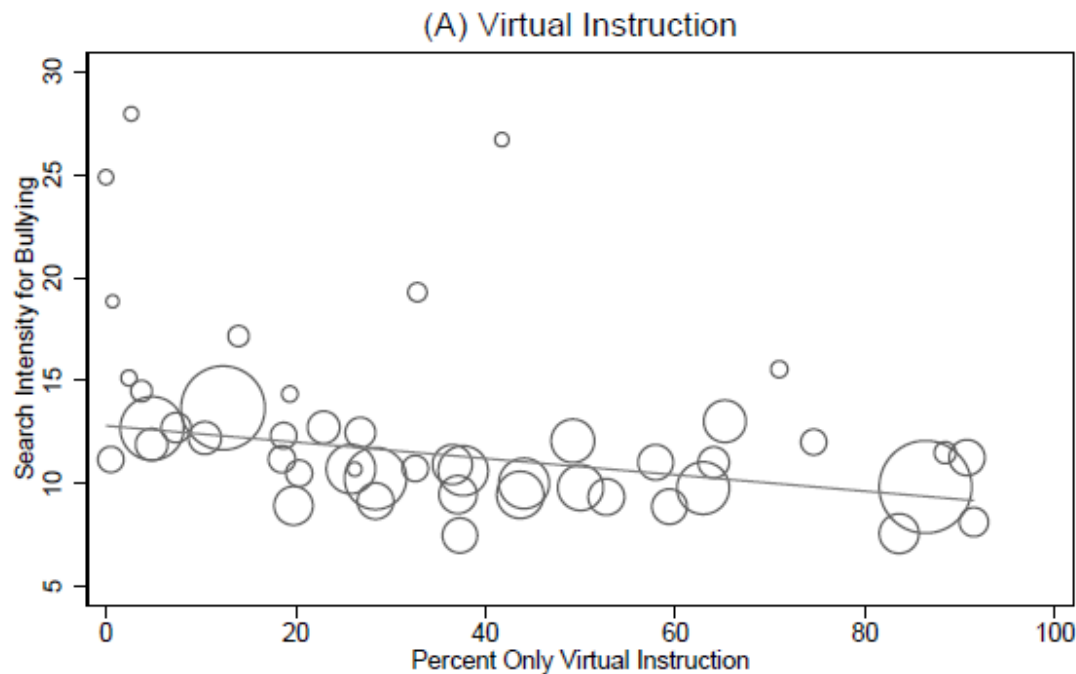
- Post-Covid (3/20–2/21), bullying search drops by roughly 30% (-32 log points), driven by larger drop in school bullying and smaller (but still large!) drop in cyberbullying.
- Changes are concentrated while school is in session, with summers largely “normal”.

Table 1: Changes in Search Intensity for Bullying Following Covid-Induced School Closures

	Bullying (1)	School Bullying (2)	Cyberbullying (3)
<hr/> (A) Overall Pre-Post Changes <hr/>			
Post Covid	-0.318*** (0.071)	-0.397*** (0.068)	-0.223** (0.092)
<hr/> (B) Changes by Specific Time Periods <hr/>			
Post Covid 19–20 SY (3/20–5/20)	-0.388*** (0.091)	-0.438*** (0.131)	-0.353*** (0.038)
Post Covid Summer 2020 (6/20–8/20)	0.003 (0.032)	-0.117 (0.090)	0.189** (0.089)
Post Covid 20–21 SY (9/20–2/21)	-0.440*** (0.067)	-0.516*** (0.047)	-0.361*** (0.108)

In-person schooling as mechanism

- We use data from Burbio, which tracks school re-openings (matches government data well).
- In fall 2020 and winter 2021, search intensity for bullying is lower in states with a higher fraction of schools offering only virtual instruction.
- Opposite pattern for only offering in-person instruction.



In-person schooling as mechanism

- In Fall 2021, bullying reverts closer to pre-Covid levels in states with more in-person schooling.
- Our estimates imply that:
 - If no schools offered in-person instruction, bullying would drop by more than 50% (-55 log points).
 - If all schools offered in-person instruction, bullying would drop by about 20% (-55+34 log points).

	Bullying (1)	School Bullying (2)	Cyberbullying (3)
<hr/>			
<u>(C) Changes by Proportion of Schools Reopened</u>			
[Post Covid 20-21] * [Pr(In Person) 20-21]	0.342*** (0.102)	0.309*** (0.097)	0.411*** (0.123)
Post Covid 20-21	-0.553*** (0.055)	-0.618*** (0.042)	-0.498*** (0.082)
N	3,100	3,100	3,100

COVID-19: What can Google searches tell us about bullying during the pandemic?

People's online activity reveals a close link between cyber bullying and students attending school sites.



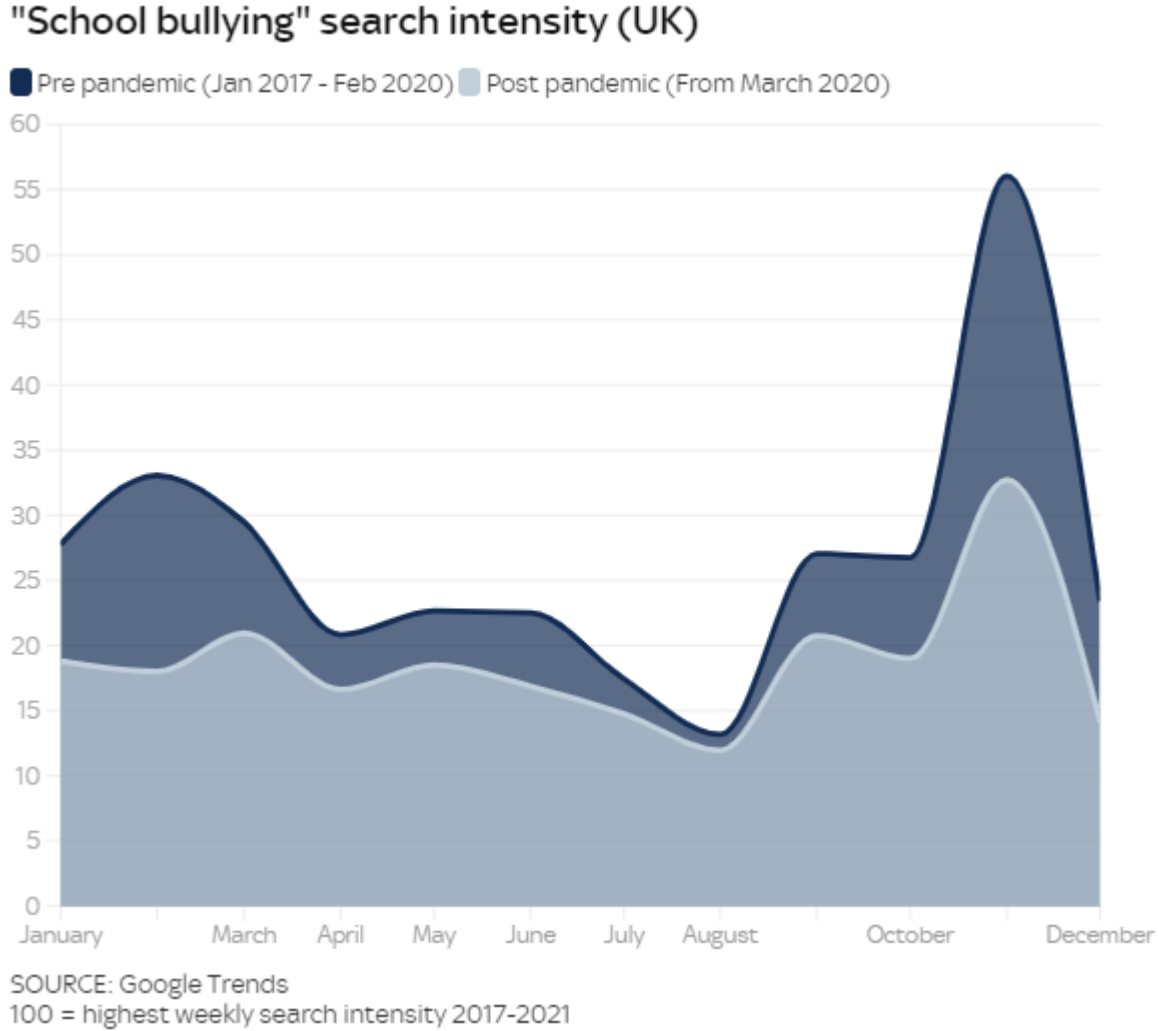
Kieran Devine

Digital investigations journalist @kierand99

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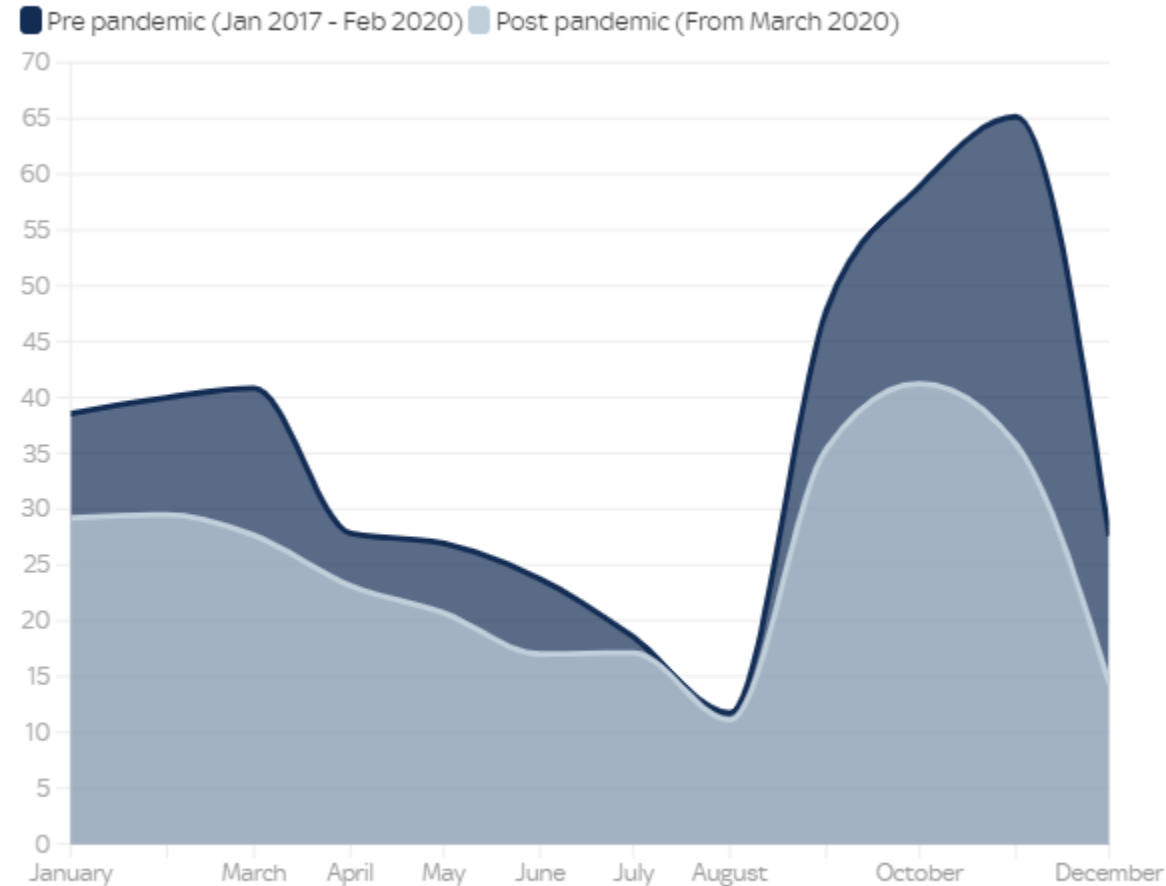


During the pandemic, searches relating to school bullying in the UK were down by 30% compared to the pre-pandemic period.



During the pandemic, searches relating to cyberbullying in the UK were also down by 30% compared to the pre-pandemic period.

"Cyberbullying" search intensity (UK)



SOURCE: Google Trends
100 = highest weekly search intensity 2017-2021

Summary of Findings

- Online search data for bullying:
 - Has temporal and spatial patterns suggesting it's a good proxy for actual bullying;
 - Shows **both** school bullying and cyberbullying declined during the pandemic (both in the US and the UK);
 - Suggests school reopenings **partially** sent patterns back toward pre-pandemic normal.
- It's striking that cyberbullying does not substitute for school bullying.
 - Supports the hypothesis that much of cyberbullying may originate in person and then spread online.

Discussion

- Why did the pandemic, and particularly the move to virtual instruction, disrupt bullying?
 - Much less contact overall between peers
 - In virtual instruction, students are more closely observed by teachers
 - Fewer unstructured moments (hallways, lunchtime, outside building) whether virtual or in-person
- Going forward, what lessons might schools draw from pandemic-era schooling to keep bullying rates lower when the world has returned to normal?

Thanks!

Questions/comments:

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