



Do anti-bullying policies deter in-school bullying victimization?



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ABSTRACT

Despite the significant increase in the number of anti-bullying laws between 2000 and 2015, there is little evidence on whether such policies can decrease the amount of bullying that occurs on school grounds. In this paper, I evaluate the effectiveness of bullying laws on decreasing the share of students who experience in-school bullying victimization using a difference-in-difference framework. The school-level results show that schools in states with such laws had less reported school bullying incidents (up to 8.4%) compared to schools in states without anti-bullying laws, and these effects are much stronger in states where there is a specific clause in the law defining the term bullying. Falsification tests for other crime-related behaviors, on which the anti-bullying laws should not have an effect, corroborate a causal interpretation of the results.

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1. Introduction

During the last two decades several states introduced policies to address bullying on school grounds. Since 2005, 26 additional states and District of Columbia implemented anti-bullying laws (ABLs), while Montana was the last to introduce such a law in 2015. Even though these policies intend to prevent bullying, it is unclear if they can change the actual number of in-school bullying. If ABLs increase the costs of engaging in bullying, then introducing a law will decrease bullying. But if the laws only change the chance that more students will come forth and report bullying to the authorities—without necessarily changing the actual incidents of bullying—then we could see an increase in bullying in schools with such statewide laws. Similarly, if ABLs increase monitoring by school staff for bullying, the laws may decrease the incentives of students to bully other students, especially in larger schools, and may also lead to a temporary decrease in bullying if bullies are suspended. Thus, ABLs can decrease bullying due to a deterrence, monitoring, or incapacitation effect, but they can also increase bullying due to a reporting effect.

No matter what the mechanism is behind the change in school bullying, policy makers are interested in identifying whether ABLs have been successful in preventing bullying-related behaviors.

However, there is limited evidence on whether school safety laws decrease in-school bullying. Using the Youth Risk Behavioral Surveillance (YRBS), [Sabia and Bass \(2017\)](#) show that (non-binding) school district mandates decrease the probability of bullying by 3.5–4.5%, and that stricter enforcement of these mandates leads to an even greater reduction in school violence, school shootings and bullying (8–12%). [Dasgupta \(2016\)](#) uses the same student-level reports on bullying and shows that cyberbullying laws have an insignificant effect on the probability of bullying, though the presence of criminal sanctions decreases bullying by 17.2%. However, because only 20–30% of bullied students report having been bullied to parents or teachers ([nobullying.com, 2016](#)), examining administrative data might give a more complete picture about in-school bullying, since they will account for both student-reported and school staff-observed bullying incidents. Thus, the goal of this paper is to evaluate whether the introduction of anti-bullying laws led to changes in bullying within schools as reported by principals, looking at specific, mandatory components of the statewide laws.

2. Background on anti-bullying laws

Before 1999 there was no official policy that specifically addressed the issue of bullying. Following the Columbine High School shooting of 1999, Georgia was the first state to adopt a law to prevent bullying. Subsequently, the number of states which adopted anti-bullying laws increased from two states in 2000

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Table 1
State anti-bullying policies and effective dates.

State	Legislation	Effective date
Alabama	H.B. No. 216, Act No. 2009-571 The Alabama Student Harassment Prevention Act	October 1, 2009
Alaska	H.B. No. 482 Harassment, Intimidation, and Bullying Policy	November 6, 2006
Arizona	H.B. No. 2368 (updated in 2011 with H.B. No. 2415)	April 20, 2005
Arkansas	H.B. No. 2274, Act No. 681 Require Schools to Adopt Anti-Bullying Policies	March 26, 2003
California	S.B. No. 719	October 11, 2003
Colorado	S.B. No. 01-080 (revised statute 22-32-109.1(2)) Concerning the Prevention of Bullying	May 2, 2001
Connecticut	Substitute H.B. No. 5425	July 1, 2002
Delaware	H.B. No. 7 School Bullying Prevention Act	June 9, 2007
District of Columbia	D.C. Act 19-384, D.C. Law 19-167 – Youth Bullying Prevention Act of 2012	September 14, 2012
Florida	H.B. No. 669 Jeffrey Johnston Stand Up for All Students Act	June 10, 2008
Georgia	H.B. No. 84	July 1, 1999
Hawaii	H.B. No. 688 – Bullying, Cyberbullying, and Harassment Policies	July 1, 2011
Idaho	H.B. No. 750aa Jared's Law	July 1, 2006
Illinois	105 ILCS 5/27-23.7	June 26, 2006
Indiana	Senate Enrolled Act No. 285	July 1, 2005
Iowa	Senate File No. 61 – Anti-Harassment and Anti-Bullying Policies	July 1, 2007
Kansas	Substitute for H.B. No. 2310	April 27, 2007
Kentucky	H.B. No. 91, Chapter No. 125 The Golden Rule Act	April 15, 2008
Louisiana	H.B. No. 364, Act No. 230	June 1, 2001
Maine	L.D. No. 564, H.P. No. 419 An Act to Amend the Laws Governing the Student Code of Conduct	June 3, 2005
Maryland	H.B. No. 407 Safe School Reporting Act of 2005	July 1, 2005
Massachusetts	S.B. No. 2404, Chapter 92 of the Acts of 2010 Bullying in Schools Act	May 3, 2010
Michigan	Section 380.1310b – Matt's Safe School Law	December 6, 2011
Minnesota	S.B. No. 646 Electronic and Internet Intimidation and Bullying Prohibition in Schools	August 1, 2007
Mississippi	S.B. No. 2390 Conflict Resolution and Peer Mediation	July 1, 2001
Missouri	H.B. No. 1543	August 28, 2010
Montana	H.B. No. 284 – Bully-Free Montana	April 21, 2015
Nebraska	L.B. No. 205 – Require Schools to Adopt a Bullying Policy	February 7, 2008
Nevada	A.B. No. 202	July 1, 2005
New Hampshire	S.B. No. 360 Pupil Safety and Violence Prevention Act	January 1, 2001
New Jersey	A.B. 1874, 2002 New Jersey Laws	September 6, 2002
New Mexico	Department of Public Education Rule Title 6, Chap. 12, Part 7 Bullying Prevention	November 30, 2006
New York	A.B. No. 3661 Dignity for All Students Act 1987B	September 13, 2010
North Carolina	S.B. No. 526 School Violence Prevention Act	June 30, 2009
North Dakota	H.B. No. 1465 – Prevention of Bullying in Public Schools	August 1, 2011
Ohio	H.B. No. 276	March 30, 2007
Oklahoma	H.B. No. 2215	November 1, 2002
Oregon	H.B. No. 3403	January 1, 2002
Pennsylvania	H.B. No. 1067, Public School Code of 1949 – Omnibus Amendments	July 09, 2008
Rhode Island	H.B./A.B. No. 5919	July 15, 2003
South Carolina	H.B. No. 3573 – School Safety and Bullying	June 12, 2006
South Dakota	S.B. No. 130	March 19, 2012
Tennessee	H.B. No. 2114 (S.B. No. 1621)	May 19, 2005
Texas	H.B. No. 283	June 18, 2005
Utah	H.B. No. 325	May 5, 2008
Vermont	H.B. No. 113/General Assembly Act No. 91	July 1, 2004
Virginia	H.B. No. 2879	July 1, 2005
Washington	H.B. No. 1444	June 13, 2002
West Virginia	H.B. No. 3023	April 14, 2001
Wisconsin	S.B. No. 154 – 2009 Wisconsin Act 309	May 27, 2010
Wyoming	H.B. No. 0223 – Safe School Climate Act	March 2, 2009

Notes: Effective dates come from the General Assembly of each state. House Bill (H.B.), House File (H.F.), House Paper (H.P.), Senate Bill (S.B.), Assembly Bill (A.B.), Legislative Document (L.D.), Legislative Bill (L.B.).

(Georgia and New Hampshire) to twenty-three states in 2005. Today all 50 states and D.C. have adopted a law against bullying with Montana being the last state to introduce such a legislation in April 2015.¹

Table 1 shows that between 2002 and 2010—the years for which the School Survey on Crime and Safety (SSOCS) has

¹ Currently there is no federal law that prohibits bullying. However, some bills have been proposed for a federal law against bullying. For example, the Bullying Prevention and Intervention Act of 2011 includes provisions about how to identify and report incidents of bullying to parents, schools and law enforcement, but the definition of bullying is very broadly defined. Other bills focus more on collecting information on bullying and harassment within schools for reporting reasons to the Local Educational Agencies (LEAs) (Safe Schools Improvement Act of 2011), on allocating resources towards preventing bullying, among others, within schools (Empowering Local Educational Decision-Making Act of 2011), while the Anti-Bullying and Harassment Act of 2011 includes similar provisions for collecting information but also calls for use of sub-grants to prevent such incidents.

information on bullying victimization—forty-five states changed their anti-bullying legislation, with significant variability in terms of definition, provisions on reporting bullying incidents, and provisions on whether punishments are imposed by the state (i.e., criminal law) or the school (i.e., disciplinary actions). In terms of definition, thirty-two states and D.C. explicitly define bullying in the law, sixteen states mention the term bullying along with harassment and intimidation—but without a separate definition for each of them—and two states (Alabama and Minnesota) do not include the term bullying in their policy. Forty-three states and D.C. define in their statutes bullying or similar behaviors, five states (Hawaii, Maine, New Mexico, Virginia, and Wisconsin) leave the definition of bullying to the discretion of the state department of education, and two states (Arizona and Minnesota) leave the definition to local school districts (Sacco et al., 2012).

Within the existing laws, a third of the states require school staff to report bullying incidents to school administrators, a third

allow for anonymous reporting of such incidents, while nine states also require school principals to report these incidents to law enforcement officers. However, these reporting requirements are not linked with well specified disciplinary consequences for students who engage in bullying—even though a few state laws refer to expulsion of students from the school—and bullying is currently not a criminal action based on these anti-bullying laws. Recently, some states modified their criminal laws to explicitly include bullying (Georgia, Kentucky, Massachusetts, Missouri, Nevada) and some states created new laws in their criminal code (Idaho, Louisiana, North Carolina). Due to the absence of specific legal repercussions in the state laws, twenty-four states and D.C. include a provision that the policy does not deter bullied students from seeking other legal remedies as they pertain to violation of civil rights on harassment.²

3. Data

I use data that cover the 50 states and D.C. for the time period 2002–2010. Information comes from the School Survey on Crime and Safety (SSOCS), a school-level biennial survey regarding school safety with particular focus on the frequency various types of school crime and delinquency occur, including bullying. The data consists of a repeated cross-section of 3130 public high schools across the U.S. excluding schools that are designed for students with disciplinary problems. One important characteristic of the SSOCS is that every state participates in the survey in each year—though schools within each state vary across years—and that the survey was conducted during a time period when many states changed their anti-bullying policies. I use four school years (2003/2004, 2005/2006, 2007/2008, 2009/2010) for a final sample of 10,450 school-year observations.³

4. Empirical strategy

Assuming that there are no unobservable characteristics that affect the timing of a state's decision to enact an ABL, difference-in-difference (DiD) estimates will measure the extent to which ABLs caused changes in bullying. I estimate:

$$B_{jst} = \beta_0 + \beta_1 ABL_{st} + \beta_2 X_{jst} + \beta_3 Z_{st} + \mu_s + \gamma_t + \zeta_{jst} \quad (1)$$

for each school j in state s in year t , where the state fixed effect μ_s controls for time-invariant state characteristics and γ_t accounts for nationwide time effects. B_{jst} is a measure of in-school bullying.⁴ In

the dataset, school principals respond on the frequency that bullying occurs in their school (*daily, at least once a week, at least once a month, on occasion, never*) based on the question “How often does student bullying occur at your school?” I create a binary measure for whether bullying is a repeated victimization behavior within each school, taking the value 1 if it occurs daily or at least once a week, and 0 otherwise.

ABL_{st} is a binary measure on whether a state in each year has an effective anti-bullying law, with the legislation collected from the General Assembly of each state. β_1 captures the effectiveness of ABLs and identification comes from within-state variation during the 2002–2010 time period when 45 states enacted an ABL (see Table 1), suggesting that there is sufficient state-year variation to isolate this effect. If the law implementation was the result of previous school bullying trends, or other policies and economic conditions changed during the same time period—which may be associated with both the adoption of the law and the bullying outcome—the parallel trends assumption might be violated. For this reason, I control for state-specific linear trends and for time-varying economic and policy characteristics (Z_{st}), including state unemployment rates (Bureau of Labor Statistics), school expenditures (NCES Digest of Education Statistics), and per capita income (Bureau of Economic Analysis). For differences in the composition of the student body across schools I include in X_{jst} the percent of male, Black, and Hispanic students, and the percent eligible for free lunch. The average class size (student-teacher ratio) captures differences in school quality across states, the school size captures the possibility that larger schools may have more incidents of bullying simply by virtue of having more students, and the grade level captures that bullying may be more frequent in lower grades—since for high school seniors bullying rates are about 50% lower according to the YRBS.

In addition to the binary measure of ABL_{st} , to examine whether law heterogeneity may affect differently bullying victimization, I create binary measures on whether the anti-bullying law explicitly defines bullying, whether school personnel is mandated to report bullying to their supervisors or to law enforcement officers, and whether the provisions of the law refer to in-school disciplinary actions, refer to bullying as a criminal activity, or refer to the chance for the victims of bullying to take legal actions against their perpetrators. Descriptive statistics for all variables are given in Table 2.

An unintended consequence of ABLs could be the increased incentive of principals to under-report bullying, especially if statewide school funding is conditional on school quality—which bullying is an aspect of. In that case, the results may represent a lower bound for the effects of ABLs on bullying. However, comparing administrator and student reports of bullying I did not find significant discrepancies; data from the YRBS show that 26% of students report being bullied in-school while, during the same time period, 25% of students have experienced frequent bullying based on administrative reports from the SSOCS. Moreover, if there is perception bias in administrative reports, school reports of disciplinary incidents might be lower in the period after the law is introduced compared to the pre-law period. On average, schools after the law became effective both recorded (44.1 vs. 41.0) and reported to the police (20.8 vs. 19.0) more discipline-related incidents, and these differences are statistically significant at the 5% level of significance—though not significant if looking at per student incidents.

Eq. (1) is estimated through a probit for the probability of bullying victimization. Because the validity of the DiD findings may be questioned if the outcomes are serially correlated—which would

² Under federal civil rights anti-harassment laws a school or district may be charged with violation of the First Amendment, Title IX of the Education Amendments of 1972—and other laws such as Title IV and Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Titles II and III of the Americans with Disabilities Act, Individuals with Disabilities Education Act—if they do not respond appropriately to harassment of their students.

³ The School Crime Supplement (SCS) to the National Crime Victimization Survey (NCVS) by the National Center for Education Statistics (NCES) and the Bureau of Justice Statistics (BJS) is a national survey of approximately 6500 students ages 12 through 18 in U.S. public and private elementary, middle, and high schools that collects information about victimization, crime, and safety at school. Even though the SCS has information on school bullying for the 2000s, it does not allow for matching schools with states and, thus, for evaluating the impact of anti-bullying policies on school victimization.

⁴ Even though the anti-bullying laws are implemented within each state at the same time period, I do not average the school victimization incidence over the schools of each state to investigate the state-level bullying rates. Such an aggregation would impose the assumption that one tiny school in, say, the Chicago-land area is observationally equal to a big school in downtown Chicago. Previous studies report that violent behaviors in schools reflect the societal contexts schools are in (e.g., Carrell and Hoekstra, 2010; Eriksen et al., 2014) and, thus, ignoring school heterogeneity, even in broad terms like size or urbanicity, dilutes and may bias the results. For example, it is possible that the laws affect violent behavior more in schools that are located in more violent settings or in smaller schools where

student monitoring may be easier. Such differences are captured by the school-specific characteristics and the fixed effects.

Table 2
Descriptive statistics for SSOCS 2002–2010.

Variables	Mean	S.D.
Bullying victimization	0.25	
Anti-bullying law	0.64	
Anti-bullying law components		
Specific bullying definition	0.65	
Mandatory reporting	0.35	
Law enforcement reporting	0.13	
Criminal law	0.14	
Disciplinary action required	0.74	
Reference to legal actions	0.46	
Male students (%)	49.65	(10.08)
Black students (%)	15.40	(24.50)
Hispanic students (%)	16.22	(24.61)
Students receive free lunch (%)	47.92	(28.34)
Student-teacher ratio	13.63	(12.72)
School size		
Less than 300 students	0.24	
300 to 499 students	0.29	
500 to 999 students	0.36	
More than 1000 students	0.11	
School grades		
Elementary school	0.59	
Middle school	0.18	
High school	0.14	
Combined school grades	0.09	
Educational expenses per capita (in million dollars)	94.25	(23.22)
Income per capita	357.68	(48.58)
Unemployment rate	6.38	(2.21)
Beer tax	0.24	(0.18)
Cigarettes tax	103.04	(64.82)
Zero tolerance drunk driving law	0.91	
Zero tolerance school violence law	0.63	
No Child Left Behind law	0.47	
Variables for falsification tests		
Shooting plans	0.81	
Bomb plans	0.94	
Natural disaster plans	0.95	
Hostage plans	0.73	
Number of hate crimes	0.11	(1.25)
Number of gang-related crimes	0.36	(3.18)
Number of alcohol possession	0.78	(3.13)
Number of drug possession	1.13	(4.35)

Notes: $N = 10,450$ school-year observations. Sample sizes are rounded to the nearest ten to maintain confidentiality. Panel sampling weights are used in all summary statistics. All monetary values are CPI-adjusted with 2005 as the base year.

lead to a policy autocorrelation problem (Hansen, 2007)—I cluster the standard errors at the state-level (Bertand et al., 2004) adjusted for sample weights.^{5,6}

5. Findings

Table 3, Panel A shows the effect of the presence of an ABL on bullying victimization. Having implemented an anti-bullying law in the state where the school is located decreases the probability of bullying by 2.1 percentage points or 8.4% ($=0.021/0.025$). This

⁵ The Wooldridge (2002) serial correlation test did not reject the null hypothesis of no first-order autocorrelation (F -stat = 0.458, p -value = 0.499). One concern, however, is that news coverage on bullying may change the perceptions of school administrators about which student behaviors constitute bullying. But, if this is true, in addition to state level dependence, there might be time level dependence in the data as well. For this reason, I also applied a two-way clustering on the state and year level as described in Cameron et al. (2011) adjusted for the binary structure of bullying victimization. Even when I cluster in both dimensions, the standard errors (and the levels of significance) do not significantly change for the estimates presented in Section 5 (results available upon request).

⁶ Similar results if sample weights are not used.

Table 3
Effects of anti-bullying laws on in-school bullying, by law components and dynamics.

	Bullying victimization
Panel A: Effect of anti-bullying laws on bullying	
Anti-bullying law	−0.021* (0.012)
Panel B: Lag and lead effects of anti-bullying laws	
3 Years prior to enactment	−0.049 (0.038)
2 Years prior to enactment	0.052 (0.035)
1 Year prior to enactment	−0.014 (0.029)
Effect of policy on year of enactment	−0.049*** (0.017)
1 Year after enactment	−0.039* (0.024)
2 Years after enactment	0.007 (0.026)
3 Years after enactment	0.018 (0.032)
Panel C: Specific components of anti-bullying laws	
Case C1: Definition	
Specific Bullying Definition	−0.029** (0.015)
Case C2: Reporting	
Mandatory Reporting	−0.024** (0.011)
Law Enforcement Reporting	0.024 (0.017)
Case C3: Discipline	
Criminal Law	−0.036** (0.014)
Disciplinary Action Required	−0.024** (0.010)
Reference to Legal Actions	−0.011 (0.012)

Notes: $N = 10,450$ school-year observations. Standard errors are given in parenthesis clustered at the state level. Average marginal effects are reported. Sample sizes are rounded to the nearest ten to maintain confidentiality. All other covariates are included along with state and time fixed effects but not reported for brevity.

* $p < 0.10$.

** $p < 0.05$.

*** $p < 0.01$.

result provides preliminary evidence that ABLs were effective in decreasing in-school bullying.⁷

Up to now it has been assumed that anti-bullying laws have a contemporaneous impact on in-school bullying victimization. To ensure that the results are not driven by divergence in the patterns of school bullying in the years before the policy is enforced for the treatment and control groups, I re-estimate Eq. (1) including three-year policy lags prior to the enforcement of the anti-bullying law.⁸ If these lagged policy variables are statistically different from zero it would suggest that the control and treatment groups are not on the

⁷ Table A1 shows the marginal effects for all covariates included in the difference-in-difference model. The first column shows the marginal effects for the binary measure of school bullying victimization. To evaluate if the law has a differential impact on how frequently bullying happens within schools, I also used a categorical measure for bullying occurring at least once a week, at least once a month, on occasion, or rarely, for which I combined the categories of daily and at least once a week because daily bullying represents only 2.2% of the overall weighted sample. Thus, the last three columns in Table A1 show the marginal effects from the ordered probit model, where the reference group is that bullying rarely happens in school. However, these results showed that implementing an effective anti-bullying legislation does not have different effects on the frequency of bullying.

⁸ I stop at three lags since the data on bullying are available starting in 2002 and the first anti-bullying law was enacted in 2000.

Table 4
Additional tests.

Panel A: Falsification tests on safety measures								
	Shooting plans	Bomb plans	Natural disaster	Hostage plans	Hate crimes	Gang crimes	Possess alcohol	Possess drugs
Anti-bullying law	−0.019 (0.013)	0.003 (0.008)	0.000 (0.008)	−0.017 (0.015)	−0.012 (0.009)	−0.006 (0.011)	−0.019 (0.015)	−0.016 (0.015)
Panel B: Robustness analysis								
	Grade level				School size			
	Primary	Middle	High	Combined	≤300	300–499	500–999	≥1000
Anti-bullying law	−0.036* (0.022)	−0.078*** (0.022)	−0.003 (0.018)	−0.042 (0.046)	−0.050* (0.030)	−0.044* (0.025)	−0.037* (0.019)	−0.030 (0.022)

Notes: $N = 10,450$ school-year observations. Standard errors clustered at the state level are given in parenthesis. Sample sizes are rounded to the nearest ten to maintain confidentiality. All other covariates are included along with state and time fixed effects but not reported for brevity. Marginal effects are reported for the effect of anti-bullying laws on the schools having written crisis plans for shootings, bombing, natural disaster, and hostage situations, the number of in-school hate and gang-related crimes, and the number of high students with in-school alcohol and drug possession.

* $p < 0.10$.

*** $p < 0.01$.

same trajectory before the treatment, and the impact of the state anti-bullying legislation on bullying victimization may be driven by policy endogeneity. However, the results in Panel B of Table 3 corroborate that these lagged coefficients are not significant, and so the control and treatment groups are on the same trajectory before the treatment. Thus, the DiD is a valid method for identifying the effect of interest.

At the same time, because the laws may have a dynamic effect on bullying, I also include three-year lead policy variables. There is only some evidence that the law has a short-run effect since one year after its implementation an anti-bullying law decreases the probability of bullying by 15.6%. It is also likely that the law has a delayed effect before it has a permanent effect on schools. Re-estimating the model with an indicator for having a law present for more than three years, the results showed a marginal effect of -0.011 (significant at the 10% level) suggesting that the laws may indeed have an additional delayed effect of at least three years (results available upon request). For example, there may be some learning curve during which schools and students are informed about the disciplinary actions undertaken if they are charged with bullying. This empirical evidence provides support that adoption of ABLs is likely exogenous, and that the state decisions to enact the legislation is uncorrelated with time-varying state-specific characteristics that are also correlated with in-school bullying.

The ABLs are also highly heterogeneous in terms of definition, reporting, and disciplinary actions. In Panel C, I examine whether the laws affect bullying differently based on these characteristics, where I report the marginal effects of each specific law component conditional on the presence of an ABL. Panel C1 identifies states that explicitly define bullying, and states that do not use the term bullying (even though the law may define harassment or intimidation). In states where there is a clear *definition* of what comprises bullying, the beneficial effects of the policy are much stronger; defining bullying in the provisions decreases school victimization by 11.6% relative to schools in states where the law does not define bullying. In Panel C2 I examine whether *reporting* of bullying may induce different behaviors. Since laws with provisions for reporting bullying may impose higher burdens on bullies, the beneficial effects might be higher for schools where reporting of bullying to school administrators is mandatory relative to laws that do not address this issue. Such a provision decreases the probability of bullying by 9.6%, but requiring reporting to law enforcement authorities does not affect bullying. Panel C3 shows how adopting even stricter punishments for bullying may act as a deterrent for engaging in bullying. I compare laws that require—in

addition to the ABLs—to introduce a criminal code against bullying, to take disciplinary actions against students who bully other students, and to inform bullied students that they can take other legal actions against their perpetrators. Despite that all three *discipline* items further increase the cost of bullying, there is evidence that school-mandated disciplinary actions lead to decreases in the probability of bullying, though the preventative effects are lower compared to provisions for criminal codes. This might be an indication that students are aware of both immediate punishments they may incur as a result of their bullying behaviors (i.e., detention, expulsion) and state-level punishments as implemented by a criminal or anti-harassment law. All these findings support that anti-bullying legislation can deter bullying and that, the more specific the policy, particularly in terms of definition and reporting, the higher the benefits realized from ABLs.^{9,10}

Despite the insignificant lagged policy effects shown in Panel B, there may still be a concern that the estimates violate the parallel trends assumption. To alleviate such concerns, I run a set of falsification tests on school safety outcomes that should not be affected by the implementation of state ABLs; whether the schools have adopted a written plan against bombing, natural disasters and hostage scenarios, the number of in-school hate and gang-related crimes, and the number of students who possess alcohol or drugs while in school. Table 4, Panel A reveals insignificant effects of the ABLs on all the safety-related outcomes suggesting that the change in the probability of bullying is specific to the year in which the ABLs became effective, and that the method does not mechanically identify effects where it should not. Finally, Panel B shows that ABLs have heterogeneous effects based on the grade level: they decrease bullying by 31.2% for middle school where students may more frequently experience bullying. However, separate analysis for the size of the school does not support that ABLs are an efficient way to deal with potential concentration effects. ABLs decrease bullying more in smaller schools where concentration of students is already low, and they do not affect bullying in large schools.

⁹ These results are consistent with Sabia and Bass (2017) who show that more comprehensive anti-bullying laws are associated with a greater reduction in bullying (8–12%). However, their focus is on school district mandates that do not bind schools, contrary to my study where I look at specific components of the statewide law.

¹⁰ If I use an ordinal measure for the frequency of bullying I find that ABLs do not have differential effects on bullying as the frequency increases. There is only some evidence that mandatory reporting and criminal charges for bullying have a stronger effect for more frequent cases of bullying.

6. Conclusion

Despite increased attempts to improve the safety of the school environment—as partially seen from the introduction of many laws addressing school harassment—it is still unclear how policy interventions affect bullying victimization. I use school-level data from the SSOCs to evaluate whether anti-bullying legislation was effective in limiting experiences of in-school bullying as reported by school principals. The analysis provides strong evidence that ABLs lead to decreases in school bullying by up to 2.1 percentage points (8.4%), and these beneficial legislation effects are stronger in states that explicitly define bullying in their provisions, that require schools to report such incidents, and that adopt disciplinary actions against bullies.

My paper shows that the laws were successful in accomplishing their initial set goals. However, to bring out more solid policy implications, future research should examine the potential heterogeneous effects of interventions based on school grade and size. Given that in-school bullying is more prevalent in middle school (Robers et al., 2015), my finding that bullying-prevention policies have a stronger beneficial effect for earlier grades suggests that earlier policy interventions could have a spillover effect by further reducing bullying in higher grades. This is particularly important for high school students for whom cyberbullying is an even more prevalent type of bullying. Also, the finding that ABLs have a stronger beneficial effect for smaller schools suggests that future research should investigate if this concentration effect is partly the reason for in-school bullying and, in particular, if students could further benefit from attending smaller schools.

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Appendix A.

Table A1
Marginal effects for bullying victimization and frequency of bullying.

	Bullying victimization [1]	Bullying on occasion [2]	Bullying once a month [3]	Daily bullying [4]
Anti-bullying law	-0.021*	-0.002	-0.006	-0.006
	(0.012)	(0.001)	(0.005)	(0.005)
Male students (%)	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Black students (%)	-0.073***	-0.012***	-0.039***	-0.041***
	(0.025)	(0.003)	(0.011)	(0.011)
Hispanic students (%)	-0.173***	-0.024***	-0.077***	-0.080***
	(0.028)	(0.004)	(0.012)	(0.012)
Students receive free lunch (%)	0.002***	0.000***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Student-teacher	0.000	-0.000	-0.000	-0.000

Table A1 (Continued)

	Bullying victimization [1]	Bullying on occasion [2]	Bullying once a month [3]	Daily bullying [4]
ratio	(0.000)	(0.000)	(0.000)	(0.000)
Elementary school	0.024*	0.001	0.002	0.002
	(0.013)	(0.002)	(0.005)	(0.006)
Middle school	0.211***	0.030**	0.098**	0.102***
	(0.011)	(0.002)	(0.005)	(0.005)
Combined school	0.000	-0.001	-0.004	-0.004
	(0.024)	(0.003)	(0.010)	(0.010)
300-499 students	0.066***	0.011***	0.037***	0.039***
	(0.017)	(0.002)	(0.007)	(0.007)
500-999 students	0.133***	0.021***	0.069***	0.071***
	(0.016)	(0.002)	(0.007)	(0.007)
More than 1000 students	0.182***	0.028***	0.092***	0.096***
	(0.018)	(0.003)	(0.007)	(0.008)
Education expenses per capita	0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Income per capita	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Unemployment rate	-0.009*	-0.002**	-0.005**	-0.006**
	(0.004)	(0.000)	(0.002)	(0.002)
Beer tax	-0.119**	-0.016**	-0.051**	-0.053**
	(0.030)	(0.004)	(0.012)	(0.012)
Cigarettes tax	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Zero tolerance drunk driving law	0.312	0.220	0.711	0.740
	(2.214)	(0.263)	(0.850)	(0.884)
Zero tolerance school violence law	-0.008	-0.002	-0.005	-0.005
	(0.011)	(0.001)	(0.004)	(0.005)
No Child Left Behind law	0.001	0.001	0.003	0.003
	(0.011)	(0.001)	(0.004)	(0.004)

Notes: $N = 10,450$ school-year observations. Standard errors are given in parenthesis clustered at the state level. Column [1] includes marginal effects from a binary measure of bullying victimization. Columns [2]–[4] show the marginal effects from an ordered probit for the frequency of bullying with bullying rarely occurs as the reference group. Sample sizes are rounded to the nearest ten to maintain confidentiality. All other covariates are included along with state and time fixed effects but not reported for brevity.

* $p < 0.10$.
** $p < 0.05$.
*** $p < 0.01$.

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