

Do Anti-Bullying Laws Work?*

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Using data from the Youth Risk Behavior Surveys and the Uniform Crime Reports, this study is the first to examine the effect of state anti-bullying laws (ABLs) on school safety, crime, and human capital acquisition. While the typical ABL has little or no effect on these outcomes, we find that the strict enforcement of “high intensity” ABLs—as rated by the U.S. Department of Education—are associated with a substantial 11.5 to 21.3 percent reduction in school violence and a 15.6 to 22.0 percent reduction in property and violent crime arrests for those ages 13-to-17. A causal interpretation of our results is supported by their robustness to the inclusion of controls for state-specific time trends and policy leads, as well as falsification tests on older young adults ages 21-to-29 for whom ABLs do not bind. However, we find little evidence that ABLs are associated with consistent improvements in youths’ net psychological health or academic performance.

Keywords: bullying; youth violence; human capital

I. Introduction

Bullying is defined by the U.S. Department of Health and Human Services as “unwanted, aggressive behavior among school-aged children that involves a real or perceived power imbalance, and the behavior is repeated or has the potential to be repeated” (Department of Health and Human Services, 2014). It can take the form of verbal abuse or physical violence and may be transitory or permanent in nature (American Psychological Association, 2014). According to the National Center for Education Statistics, in 2011, nearly seven million youths—or 28 percent of those ages 12 to 18—were bullied in the United States (NCES, 2012). While bullying has been identified across all demographic groups, historically marginalized individuals, such as lesbian, gay, and bisexual (LGB) youth (Friedman et al., 2005; Daley et al., 2008; Kosciw et al., 2009), youths with disabilities (Blake et al., 2014; Turner et al., 2011; Cappadocia et al., 2012), females (Faris and Felmlee 2011; Kumpulainen et al., 1999; Craig 1998), and racial minorities (Langdon and Preble 2007; Fox and Stallworth 2005; Carlyle and Steinman 2007) have been found to be disproportionately affected.

The psychological and sociological literatures have linked bullying victimization to a variety of adverse health and human capital outcomes, including poor mental health (Juvonen et al., 2003; Duncan, 1999; Seals and Young, 2003; Bond et al, 2001), diminished student engagement (Nansel et al, 2001), poor academic performance (Konishi et al, 2010), and less social connectedness (Nansel et al, 2001; Nansel et al, 2004). Repeated incidents of bullying have been linked to suicide attempts and completed suicides (Kaltiala-Heino et al, 1999; Carney, 2000). Interestingly, studies have also found that those who perpetrate bullying are at higher risk for substance use,

academic problems, and violence in adulthood (Saluja et al., 2004; Arseneault et al., 2006; Bender and Losel 2011), raising the possibility that neither bullies nor the victims they target may be randomly drawn from the student population.¹

In response to increased public awareness of bullying—and its potentially adverse health and human capital consequences—49 states and the District of Columbia adopted anti-bullying laws (ABLs) between 2001 and 2013. However, there is substantial heterogeneity in the comprehensiveness and strictness of laws adopted. Some ABLs provide non-binding recommendations for school bullying policies, while others include comprehensive provisions requiring schools to (i) develop a system for victims to be able to anonymously report incidents of bullying to school officials, (ii) adopt a graduated range of sanctions and consequences for acts of bullying, and (iii) provide training for all school staff on preventing, identifying, and responding to bullying. Other ABLs require schools to report incident-by-incident school responses to bullying to both the state Department of Education and the public.

There are a number of channels through which ABLs could improve student safety and well-being. In a “rational bullying” framework (Becker 1965), potential bullies weigh the expected costs and benefits of bullying. ABLs raise expected costs of bullying by increasing the probability of punishment via increased school monitoring and by reducing victims’ reporting costs. ABLs may also increase the severity of punishments through graduated sanctions for bullying. In addition, the educational components of ABLs may change students’ tastes for bullying, reducing potential bullies’

¹Each of the above-cited studies treats bullying as orthogonal to unobserved determinants of student well-being. But if perpetrators of violence and the victims they target are drawn non-randomly from the population of students, then some of the observed correlation between bullying and adverse student well-being may be explained by unmeasured heterogeneity.

expected benefits. Finally, provisions of ABLs that require schools to make bullying policies—and school responses to violations of those policies—publicly available may incentivize reputation-minded schools to more efficiently allocate resources to deter bullying.

On the other hand, by mandating that schools devote additional resources to combat bullying, ABLs may require schools to change their mix of inputs to produce education, which could result in substitution away from other inputs (e.g. extracurricular activities/athletics, teacher quality) that have the unintended consequence of diminishing students' social connectedness or even reduce potential bullies' opportunity costs of time. Each of these consequences could increase bullying. Additionally, because ABLs only raise the costs of bullying on school property, these laws may simply shift bullying off of school property rather than reduce the overall prevalence of bullying. It is also possible that these laws may simply increase reporting of bullying rather than change individuals' behavior. Finally, the provision of public information on school bullying policies may increase the likelihood that potential bullies are able to avoid detection.

The current study presents the first comprehensive examination of the effect of state ABLs on school violence, crime, and human capital acquisition. We find that while the typical ABL has little effect on school violence, the strict enforcement of “high intensity” ABLs that most increase the expected costs of bullying are associated with a 11.5 to 21.3 percent reduction in high school violence and a 15.6 to 22.0 percent reduction in property and violent crime arrests for those ages 13-to-17. A causal interpretation of our results is supported by their robustness to the inclusion of controls for state-specific time trends and policy leads, as well as falsification tests on older young

adults ages 21-to-29 for whom ABLs do not bind. While we find evidence that strict ABLs may improve student safety, these benefits do not appear to extend to human capital acquisition or mental health capital.

II. Background

According to a 2013 survey, 92 percent of parents with children under age 18 agreed that bullying contributes to violence in the United States (Center for American Progress, 2013). Moreover, 78 percent of adults believe that bullying prevention programs should be part of school curricula (PDK/Gallup Poll, 2012). Reflecting this concern, public health and education agencies have taken a more high profile role in fighting and preventing bullying. For instance, in 2011, the Department of Health and Human Services (DHHS), in conjunction with the Department of Education's Federal Partners in Bullying Prevention Steering Committee (FPBPSC), launched Stopbullying.gov to provide information to parents, school officials, and students on how to identify, prevent, and respond to bullying (DHHS 2014).

A number of private not-for-profit firms have also taken action to combat school bullying. For instance, *Bully Police USA* is a high-profile private watchdog group that advocates for the adoption of strict state and local anti-bullying legislation. To take another example, the Parent Advocacy Coalition for Educational Rights' (PACER) National Bullying Prevention Center was founded in 2006 to:

“...actively lead social change, so that bullying is no longer considered an accepted childhood rite of passage. PACER provides innovative resources for students, parents, educators, and others, and recognizes bullying as a serious community issue that impacts education, physical and emotional health, and the safety and well-being of students.” (PACER, 2014)

A wide body of scholarship in the sociology and psychology literatures has found that bullying is associated with a myriad of adverse health and human capital outcomes (Rothson et al. 2011; Wolke et al. 2013; Wilkins-Shurmer et al. 2003; Hepburn et al. 2012; Bond et al. 2001; Glew et al. 2005; Kim et al. 2005; Gini and Pozzoli 2009). Victims of bullying have been found to be more emotionally distressed (Gladstone et al. 2006; O’Brennan et al. 2009; Duncan, 1999; Nansel et al., 2001), less socially connected (O’Brennan et al. 2009; Eisenberg et al. 2003; Juvoven et al., 2003), and less academically prepared (Eisenberg et al. 2003; Strøm et al. 2013; Juvoven et al. 2010) than their non-bullied counterparts. Moreover, perpetrators of bullying have been found to be in worse mental health (Undheim et al. 2010; Ng et al. 2008; Seals and Young 2003; Kaltiala-Heino et al. 1999), more likely to abuse alcohol and drugs (Kaltiala-Heino et al., 2000), and more likely to carry weapons (Nansel et al., 2004) than those who do not bully.

An important limitation of these studies, however, is that they treat the decision to bully and the targeting of victims as econometrically exogenous to student well-being. This assumption may be problematic if difficult-to-measure characteristics of bullies and their targets—such as discount rates, personality, or family background characteristics—are related to both the likelihood of bullying and student-well-being.

A few recent studies have examined the relationship between anti-bullying policies—a potentially more plausibly exogenous source of variation in bullying—and student well-being. However, these studies have been either case studies of particular school policies (Jeong and Lee 2013; Salmivalli et al. 2011) or focused on one or two

states (Green 2014), and used either a simple before-after estimator (Fekkes et al. 2006) or cross-sectional variation in policies for identification (Due et al. 2005). The results of these studies have been mixed. A study of Texas schools found higher rates of bullying in schools that had anti-bullying policies as compared to schools without such policies (Jeong and Lee 2013); a study comparing Illinois and Delaware anti-bullying statutes, found that a higher prevalence of bullying among high school students in Illinois, which had a less anti-bullying statute (Green 2014); and a study of Finnish schools found that students in schools with an anti-bullying program faced 1.32 to 1.94 times less bullying than students in schools without such programs (Salmivalli et al., 2011).

Our study contributes to the existing literature in several ways. First, we exploit arguably more credible identifying variation in ABLs—within-state changes in bullying laws—to estimate their effect on student well-being. Importantly, we attempt to the credibility of the “common trends” assumption of our identification strategy through the inclusion of state-specific time trends and policy leads, as well as falsification tests on older young adults not in high school who should be unaffected by ABLs. Second, while previous studies in this literature have focused on one or two states, we provide more generalizable estimates of the effects of ABLs by using large national data sources. Importantly, this study is the first to explore heterogeneity in the effects of different types of state ABLs. Finally, in addition to student safety and psychological well-being, our study is the first to estimate whether the effects of ABLs extend to crime and academic achievement.

III. Data and Measures

Data. Our primary analysis uses data drawn from repeated cross-sections of both the National and State Youth Risk Behavior Surveys (YRBS) from 1993 to 2013. The National YRBS is conducted biennially by the Centers for Disease Control and Prevention (CDC) and, when weighted, is representative of the population of U.S. high school students. The State YRBS surveys are also administered to high school students and contain most of the questions in the NYRBS. While the state surveys are coordinated by the CDC, they are usually conducted by state education and health agencies.² The augmentation of national with state YRBS data has been employed in a number of recent studies examining the effects of a number of state-level public policies—cigarette taxes (Hansen et al. 2014), medical marijuana laws (Anderson et al. 2014), parental involvement laws for abortion (Sabia and Anderson 2014), and minimum wages (Sabia et al. 2014)—on risky behaviors.

The YRBS is well suited for this study because it contains data on several measures of student well-being, including perceived school safety, physical fights, weapons threats, mental health, and academic performance.

Student Safety Measures. Using the YRBS data, we identify four key measures of student safety. First, we measure whether the respondent avoided school because of concerns about safety issues using answers to the following questionnaire item:

“During the past 30 days, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?”

We generate a dichotomous variable, *Unsafe*, set equal to 1 if the student reported a positive number of days not attending school and equal to 0 otherwise. In the YRBS, 6.3

²Estimates from the state YRBS are designed to be representative at the state level, but recent research with these data has utilized Census population estimates to introduce weights that will make these data representative at the national level as well (Anderson, Hansen, and Rees Forthcoming; Sabia and Anderson 2014).

percent of respondents in our sample reported not attending school at least one day in the last 30 days because they felt unsafe (see Table 1).

Next, respondents were asked whether they had been in a physical altercation on school property during the previous year:

“During the past 12 months, how many times were you in a physical fight on school property?”

Fight in School was coded equal to 1 if the student reported being in a physical fight on school property at least once during the past 12 months, and 0 otherwise. We find that 12.2 percent of respondents reported having been in a physical fight on school property. In addition to the above coding, we also experiment with creating a continuous measure of this outcome.

As noted above, ABLs could incentivize bullies to change the location of bullying rather than reduce total bullying. Therefore, we also generate a dichotomous variable, *All Fight*, set equal to 1 if the student reported being in any physical fights during the past 12 months and 0 otherwise.³ In our sample, 31.2 percent of students reported any fighting.

Finally, students were asked about weapons-related threats in school. Specifically, respondents were asked:

“During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property?”

³The questionnaire item in the YRBS about total physical fights was, “*During the past 12 months, how many times were you in a physical fight?*”

Threat was coded equal to 1 if the student reported being threatened or injured at least once during the past 12 months, and coded as 0 if the student had not been threatened. We find that 8.0 percent of the sample reported being threatened or injured during the past 12 months.

In addition to the four main measures of school safety defined above, we also indirectly attempt to measure non-physical instances of school bullying. During the shorter 2009-2013 period, respondents to the YRBS were asked:

“During the past 12 months, have you ever been bullied on school property?”

We code *Bullied* equal to 1 if the student responded “yes” and 0 otherwise. The advantage of this measure is that it may capture non-physical bullying such as teasing or name-calling; the chief disadvantage is that it is only available in the final few years of the YRBS. In our sample, 8.8 percent reported being the victim of bullying on school property.

Crime. Finally, to capture bullying behavior that crosses the legal threshold into criminal activity, we draw data from the Federal Bureau of Investigation’s Uniform Crime Reports (UCR) from 1993 to 2012 and measure property and violent crime arrests for 13-to-17 year-olds. During this period, the average number of property crime arrests (per 100,000) for minor teens was 1,999.9 and the average violent crime arrest rate was 802.04.

Academic Performance. In addition to the measures of student safety, we also explore whether there are human capital effects of ABLs using two measures of academic

achievement. First, we measure respondents' grade point average using responses to the following survey item:

“During the past 12 months, how would you describe your grades in school?”⁴

This survey item was available in the 1999 to 2013 surveys. Following several prior YRBS studies (see, for example, DeSimone & Wolaver 2005), *GPA* was coded continuously with a response of “mostly A’s” receiving a 4.0, “mostly A’s and B’s” receiving a 3.5, “mostly B’s” receiving a 3.0, “mostly B’s and C’s” receiving a 2.5, “mostly C’s” receiving a 2.0, “mostly C’s and D’s” receiving a 1.5, “mostly D’s” receiving a 1.0, and “failing” receiving a 0. The average GPA in our sample is 2.95.

Next, we measure high school dropout rates of individuals ages 16-to-18 using state-level data from the 1993 to 2013 Current Population Survey (CPS). This measure may be important not only because ABLs could affect the probability of high school completion, but also because the YRBS is a school-based survey and ABLs could also affect the distribution of students who are in school, creating a sample selection bias. The average high school dropout rate was 0.163.

Psychological Well-Being. Finally, given that policymakers often cite the need to combat psychological harm of bullying, we measure mental health capital using two measures of suicide. We measure suicide ideation and suicide planning using responses to the following questionnaire items:

⁴Two other measures of student's academic performance were used to create the GPA variable: “*What best describes the grades you get at school?*” and “*What kind of grades do you earn in school?*” Measures of GPA are available from 1999 to 2011, and are excluded from the surveys in Iowa and the District of Columbia.

"Did you consider suicide during the past 12 months?"

"During the past 12 months, did you make a plan about how you would attempt suicide?"

Suicide Ideation (Plan) was coded equal to 1 if the student reported considering suicide (making a plan about attempting suicide) during the past 12 months, and equal to 0 if the student did not. In our sample, 17.3 percent of respondents reported seriously considering suicide during the past 12 months and 13.9 percent of respondents indicated making a plan about attempting suicide during the past 12 months.

Anti-Bullying Laws. We begin by generating a dichotomous measure, *ABL*, which measures whether a state had enacted and was enforcing an anti-bullying law. Table 2 presents the date of enactment for each state's anti-bullying law, and states that contribute identifying variation to our analysis are noted with an asterisk. Every state except Montana enacted an anti-bullying law during the 2000 to 2013 period, with Colorado passing the first law in August 2001, and New York and Virginia most recently passing a law in July 2013.

Given that there was substantial heterogeneity in the type of anti-bullying law enacted by each state, the U.S. Department of Education (DOE) categorizes these laws by their comprehensiveness and strictness. We first use DOE guidelines to measure whether a state *ABL* was accompanied by a "model policy." A model policy is defined as an anti-bullying policy established by state Departments of Education that provides guidance to districts and schools on how to address bullying. Twenty percent of states that that adopted an *ABL* also adopted a model policy.

Next, in an effort to categorize the breadth and strictness of state ABLs, the DOE evaluated the comprehensiveness, strength of enforcement, and reporting strictness of 15 components of each state law. Importantly, these DOE evaluations were not based on case studies of policy impacts, but by legal interpretation of the statutes. Included among the dimensions evaluated were state requirements for schools to develop systems for (i) school reporting of bullying, (ii) conducting investigations of reports or incidents of bullying, (iii) developing communication plans for students and parents, and (iv) training for school staff on identifying and responding to bullying.⁵ The DOE assigns a score of 0 to 2 to each component, measuring the overall expansiveness of each provision, and creates an aggregate “intensity rating” based on these scores (see U.S. Department of Education 2011 for a detailed discussion of these ratings).

Components rated a “0” by the DOE were usually those components not present in a state ABL, or required the state to take little to no action. Components rated as a “2” (most expansive) were more inclusive in nature, more prescriptive, used less discretionary language, and established clearer measures of accountability (Department of Education 2011). The score assigned to each component was then summed to generate a composite score ranging from 0 to 32. Table 2 shows the DOE intensity rating for each state. Washington received the highest score from the DOE with 30 points, and Minnesota and Texas have the lowest scores with 3 and 5 points, respectively.

Using these intensity ratings, we generate categories of laws (Department of Education 2011): *High Intensity ABL*, set equal to 1 if the state has a composite score

⁵These 15 dimensions are Purpose, Scope, Prohibited Behavior, Enumerated Groups, District Policy, Definitions, Reporting, Investigations, Written Records, Consequences, Mental Health, Communications, Training/Prevention, Transparency/Monitoring, and Legal Remedies, and can be found at: www.stopbullying.gov/laws/key-components/index.html

between 21 and 32, and 0 otherwise; *Moderate Intensity ABL* set equal to 1 if the state has a composite score was between 15 and 20, and 0 otherwise; and *Low Intensity ABL* set to 1 if the score was between 0 and 14, and 0 otherwise. In our sample, 13.2 percent of respondents lived in states enforcing high intensity ABLs. In addition to following DOE categorization of intensity scores (see Exhibit 16 of DOE 2011), we experiment with other cutoffs to delineate the categories, but results are qualitatively similar to those presented here.

Next, we examine five key components of *High Intensity ABLs*, which we identify as those most likely to affect incentives for bullying behavior. The first component, *Student Reporting* mandates a procedure for students, students' families, staff and others to report incidents of bullying to schools, and to maintain written records of all bullying incidents, as well as their resolution. Second, a *State Reporting* component requires local educational agencies to annually report the number of reported bullying incidents and responsive actions taken. This provision imposes an accountability standard on schools that raise the costs of failing to take actions to deter bullying. Third, an *Investigate* component requires that schools strictly enforce a procedure for promptly investigating and responding to any reported incidents of bullying on school grounds. Fourth, a *Sanctions* component requires schools to provide students and parents a detailed description of a range of consequences and sanctions for bullying occurrences. Finally, a *Communications & Training* component requires notifying students, students' families, and staff of policies and consequences related to bullying, as well as a provision for school districts to provide training for all school staff and faculty on preventing, identifying, and responding to bullying.

Taken together, these components are hypothesized to raise the expected costs of bullying behavior to potential bullies by either raising the probability of detection (via better detection methods and lowering the costs of reporting to victims) and mandating harsher punishments if detected. In Table 2, we show the states that have strictly enforced each of these components of ABLs.

Finally, focusing on these five main components, we examine whether there are interactive effects of strictly enforcing multiple “high intensity” components. For instance, Connecticut, Hawaii, Michigan, New Hampshire, New Jersey, Vermont, and Washington are examples of states strictly enforcing four or five high intensity components of ABLs (*Strict High Intensity*), while Alaska, Arizona, Maine, and Nevada are examples of those strictly enforcing one component. We explore whether there are differential student well-being effects of these types of ABLs.

IV. Empirical Approach

We begin by pooling data from repeated cross-sections of the 1993-2013 National and State YRBS and, for our dichotomous outcomes, estimate the following difference-in-difference model via probit:

$$Y^*_{ist} = \beta_0 + \beta_1 ABL_{st} + \beta_2' Z_{it} + \beta_3' E_{st} + \beta_4' X_{st} + \alpha_s + \pi_t + \varepsilon_{ist} \quad (1)$$

where Y^*_{ist} is a latent variable measuring safety or well-being of student i residing in state s at year t ; ABL_{st} is an indicator for whether an anti-bullying law is in effect in state s in year t (or a set of indicators indicating the strength of that law, or the components of

that law); \mathbf{Z}_{it} is a vector of demographic controls including gender, age, grade, and race/ethnicity; \mathbf{E}_{st} is a set of state-specific time-varying education controls, including average pupil-teacher ratio, state average teacher salary, National School Lunch Program (NLSP) participation rates, and the share of population with a Bachelor's degree; and \mathbf{X}_{st} is a vector of state-specific time-varying economic and policy controls, including alcohol policies (beer taxes, zero-tolerance laws, BAC08 laws), cigarette taxes, the state unemployment rate, and per capita income; α_s is a time-invariant state effect; π_t is a state-invariant time effect; and $\varepsilon_{ist} \sim N(0,1)$. Continuous outcomes, such as GPA and high school dropout rates, are estimated using Ordinary Least Squares (OLS) and include the same set of right-hand-side variables described above.

Identification of β_1 comes from within-state variation in ABLs during the 1993-2013 period. As noted above, 49 states and the District of Columbia enacted bullying laws during the period under study (Table 2). To produce unbiased estimates of β_1 , the parallel trends assumption of difference-in-difference models must be satisfied. This may be violated if, for example, (i) states enact ABLs in response to school bullying trends or (ii) if there are time-varying state characteristics not captured in state-specific time-varying education controls or economic and policy controls that are associated with both the adoption of ABLs and with the outcomes under study.

We take a number of tacks to address the possibility of policy endogeneity. First, we add state-specific linear time trends to the right hand-side of equation (1) to control for unmeasured state trends unfolding linearly. Second, to examine whether results are driven by student well-being trending differently prior to the implementation of state bullying laws we test the robustness of our estimates to the inclusion of policy leads.

Finally, we conduct a set of falsification tests on a set of outcomes similar to those under study for young adults ages 21 to 29, for whom high school ABLs should not be binding.

Our key estimation results are shown in Tables 3 through 12. All models present marginal effects from probit or OLS models. For ease of presentation, we focus on estimates of β_1 , but estimated coefficients on the controls are available upon request. Standard errors are corrected for clustering on the state and are in parentheses.

V. Results on School Safety and Crime

Typical State ABL. In Panel I of Table 3, we present estimates of equation (1) for our measures of student safety. Difference-in-difference estimates show little evidence that the enforcement of the average state ABL is associated with economically or statistically significant changes in the probability of not attending school due to an unsafe environment, physical altercations on or off school property, or weapons-related threats. The precision of our estimates are such that we can rule out, with 95 percent confidence, student safety benefits of ABLs of greater than 6.8 percent.

Could the estimated association we observe in Panel I be biased toward zero? This could occur if states that adopt ABLs are experiencing declining trends in student safety and these trends are confounding true beneficial effects of these laws. Moreover, the effects of these laws may be small initially, but could take time to unfold. We explore each possibility in Panel II of Table 3, where we include three years of policy leads and three years (or more) of lagged policy effects. With regard to policy leads, our results provide little support for the hypothesis that student safety was trending differently in the years prior to the adoption of ABLs, both in individual and joint tests of

the leads. Moreover, we find little consistent evidence that the enforcement of an ABL is associated with significant changes in student safety in the years following the year of enactment. In Panel III, we test the sensitivity of our estimates to the inclusion of state-specific linear time trends as additional controls. The results show a similar pattern of results. In the remaining tables, all specifications include these controls for state-specific time trends.

Heterogeneity in Type of ABL. While the average state ABL appears to have little or no effect on school safety, we next explore whether there might be heterogeneity in the effect of ABLs by the type of law adopted. In Panel I of Table 4, we explore the effect of ABLs with and without a model policy adopted by the state. We find little evidence that state ABLs either with or without model policies affect school safety.

In Panel II, we explore heterogeneity in the effects of ABLs using DOE intensity ratings. High intensity ABLs are expected to have larger effects than low intensity laws because they are hypothesized to change the incentives faced by potential bullies and victims the most. And, indeed, here we find evidence that the enforcement of “high intensity” state ABLs—those with composite scores of 21 to 32—is associated with a 11.5 percent reduction in the probability of fighting on school property (column 2). The beneficial in-school fighting effect of high intensity state ABLs is larger than for moderate intensity (composite score of 15 to 20) or low intensity (composite scores of 14 or less) ABLs (see χ^2 tests in the final rows of Panel II). The results also suggest that the effect of high intensity ABLs on overall fighting remains negative (though insignificant), suggesting that high intensity ABLs do not simply induce changes in the location of student fighting, but rather reduce net fighting.

In Panel III of Table 4, we examine the five key components of ABLs most likely to affect marginal bullying decisions. Our results suggest consistent evidence that strictly enforced student reporting requirements—which allow victims to report incidents of bullying anonymously—are associated with substantial improvements in school safety. We find that the enforcement of ABLs with strict student reporting requirements is associated with a 20.5 percent reduction in the probability of fighting on school property, a 8.7 percent reduction in the probability of overall fighting, a 25.0 percent reduction in the probability of weapons-related threats, and a (statistically insignificant) 19.0 percent decline in the probability of safety-related school absences. These results are consistent with the hypothesis that policies that reduce the costs of student reporting increase expected punishments from bullying and reduce its likelihood.

In Panel IV we explore whether interactive effects of the high intensity policy components in Panel III lead to improvements in school safety. We find that the enforcement of *strict high intensity* ABLs (those with four or five components strictly enforced) is associated with a 21.3 percent reduction in the probability of fighting on school property, a 6.7 percent decrease in the probability of fighting off of school property, and a 18.8 percent decline in the probability of weapons-related threats. Moreover, it also appears as though the effects of enforcing more components of ABLs are greater than enforcing fewer components. These findings are consistent with the hypothesis that more comprehensive ABLs with strictly enforced components that raise the costs of bullying are associated with improvements in school safety.

To ensure that the findings in Table 4 on high intensity ABLs were not driven by differential state trends in school safety in the years prior to the enforcement of these

laws, we re-estimate all models in Table 5, but also include policy leads for three years prior to the enforcement of an ABL. The pattern of results in Table 5 suggests that trends prior to the implementation of strictly enforced ABLs cannot explain the school safety effects we observe in Table 4.

All prior estimates focused on school safety measured on the extensive margin. In Table 6, we use continuous measures of frequency of school absences, physical fights, and weapons-related threats to capture safety measured along the intensive margin. The pattern of results is generally consistent with Table 4 as we find that the enforcement of 3 strict high intensity ABLs is associated with a 26.7 percent decline in the number of days of school absences related to safety concerns, a 27.7 percent reduction in the frequency of fighting on school property, a 9.8 percent decrease in the frequency of overall fighting, and a 26.3 percent decline in the frequency of weapons-related threats.

In Table 7, we turn to alternate measures of student and public safety. In column (1), we use *Bullied*, which might capture non-physical related bullying behavior. Our findings suggest little evidence that, during the 2009 to 2013 period, high intensity ABLs were effective at reducing self-reported bullying.

In the final two columns, we examine the effect of ABLs on property and violent crime arrests for minor teens. Here, we do find some evidence that the average state ABL, particularly when coupled with a model policy (Panel II), is associated with a 19.5 to 20.3 percent decline in arrest rates for minor teens. Moreover, high intensity ABLs (Panel III) are associated with a 20.5 to 24.3 percent reduction in arrest rates.

Interestingly, for these criminal outcomes, it is *State Reporting* requirements that emerge as most important for crime-reducing effects (Panel IV). And while imprecisely

estimated, the effects of ABLs with strict enforcement of multiple high intensity components (Panel V) again seem most important for reducing crime.

V. Falsification Tests

While the above analyses have included controls for state-specific time trends and policy leads, we next conduct a set of falsification tests on older young adults ages 21-to-29, who should be largely unaffected by state ABLs absent any longer-run lagged effects. These findings appear in Table 8. First, we draw data from the General Social Survey from 1993 to 2010⁶ to construct two additional measures of safety-related outcomes for those ages 21-to-29 using responses to the following questionnaire items:

“Is there any area right around here – that is, within a mile – where you would be afraid to walk alone at night?”

“Do you happen to have any pistols in your home or garage?”

We generate dichotomous indicators for safety and gun ownership from these measures. In columns (1) and (2), we find little evidence that ABLs are associated with changes in young adult neighborhood safety or pistol ownership.

Next, we draw state-by-year arrest data from the Department of Justice’s Uniform Crime Reports from 1993 to 2012 and estimate the effect of state ABLs on rates of property crime and violent crime for individuals ages 21-to-29. The results in columns (3) and (4) suggest that ABLs are associated with small and statistically insignificant changes in property or violent offenses of older young adults. And when we estimate

⁶We average data provided in the GSS’s even-numbered survey years to generate state-level measures of safety for the years included in the YRBS.

difference-in-difference-in-difference models of the effect of state ABLs on crime rates of 13-to-17 year-olds relative to 21-to-29 year-olds (columns 5 and 6), the results suggest that high intensity state ABLs have the largest crime reducing effects among minors (15.6 to 18.0 percent). In summary, the findings in the first four columns of Table 8 suggest that unmeasured state-specific trends likely do not explain the relationship between state ABLs and public safety.

VI. Human Capital Effects

Given that we find some evidence that strictly enforced, comprehensive ABLs are associated with improvements in school safety, we next explore whether the benefits of ABLs extend to education and mental health capital. Table 9 explores the effect of ABLs on grade point average (GPA) and the high school dropout rate. Across the various types of ABLs, we find little evidence that anti-bullying statutes are associated with significant changes in GPAs (column 1). While the signs on the estimated coefficients are generally positive, the magnitudes are very small. For instance, the enforcement of ABLs with four or five high intensity components is associated with a (statistically insignificant) 0.012-point increase in GPA (Panel V, column 1), which represents a 0.4 percent increase in average grades. The precision of our estimates suggests that we can, with 95 percent confidence, rule out GPA declines of greater than 1.1 percent and GPA increases greater than 1.9 percent. In column (2) of Table 8, we also find little evidence that ABLs reduce dropout rates, suggesting small academic benefits of ABLs.

In columns (3) and (4), we examine whether ABLs affect youth psychological health. The results suggest relatively little evidence that ABLs affect the probability of

suicide ideation or suicide planning. In fact, while statistically indistinguishable from zero at the 5 percent level, most of the estimates are actually *positive*. Taken together, these findings provide little support for academic or psychological benefits of ABL-induced improvements in school safety.⁷

VI. Conclusions

This study presents the first comprehensive examination of the relationship between state ABLs and student well-being. Difference-in-difference estimates suggest that the enforcement of the typical ABL is associated with small and statistically insignificant changes in student safety in school. However, when we explore heterogeneity in anti-bullying statutes, we find that more strictly enforced comprehensive ABLs are associated with significant improvements in student safety. Specifically, the enforcement of ABLs with strict student reporting requirements is associated with a 19.0 percent reduction in the probability of school-safety related absences, a 20.5 percent reduction in student fighting, and a 25.0 percent reduction in weapons-related threats. These safety related benefits also extend to reductions in crime. We find that strict, high intensity ABLs are associated with a 15.6 to 18.0 percent reduction in property and violent crime arrests of minor teens. ABLs may improve student safety, we find little evidence that these benefits extend to academic performance or suicide prevention.

Although our study contributes to estimating the effect of ABLs on school safety and well-being, our analysis could benefit from more comprehensive measures of student safety. Because ABLs are intended to deter aggressive bullying behavior and harassment

⁷Appendix Tables I through II explore whether there were heterogeneous effects of ABLs by gender, but find little evidence of differential effects.

on school property, questions regarding bully victimization and physical or verbal harassment would be useful. Additionally, numerous psychology and sociology studies on bullying and victimization suggest that victims of bullying and bullies themselves exhibit adverse health and psychological effects later in life. Utilizing data over longer time periods would be useful in order to explore whether anti-bullying policies alter individuals' life trajectories. In addition, future work using better data to identify lesbian/gay/bisexual/transgendered (LGBT) and disabled youth will be important to explore whether the benefits of ABLs extend to these groups.

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Table 1. Means of Outcomes and Key Control Variables, by Data Source

	YRBS	Source	Year
<i>Dependent Variables</i>			
Unsafe	0.063 (0.243) [1,102,565]	YRBS	1993-2013
Fight in School	0.122 (0.327) [1,051,782]	YRBS	1993-2013
All Fight	0.312 (0.463) [1,029,301]	YRBS	1993-2013
Threat	0.080 (0.271) [1,067,501]	YRBS	1993-2013
GPA	2.945 (0.937) [430,330]	YRBS	1997-2013
Suicide Plan	0.139 (0.346) [1,045,427]	YRBS	1993-2013
Suicide Idea	0.173 (0.379) [1,037,818]	YRBS	1993-2013
Bullied	0.088 (0.283) [932,957]	YRBS	2009-2013
HS Dropout Rate	0.163 (0.050) [886,621]	CPS	1993-2013
Violent Crime ^a (Ages 13-17)	324.58 (232.68) [979]	FBI Uniform Crime Reports	1993-2012
Violent Crime ^a (Ages 21-29)	802.04 (463.38) [980]	FBI Uniform Crime Reports	1993-2012
Property Crime ^a (Ages 13-17)	1,999.90 (1060.77) [981]	FBI Uniform Crime Reports	1993-2012
Property Crime ^a (Ages 21-29)	2,067.44 (887.00) [981]	FBI Uniform Crime Reports	1993-2012
Fear	0.369 (0.214) [299]	GSS	1993-2009
Pistol	0.167 (0.178) [298]	GSS	1993-2009
<i>Independent Variables</i>			
Age	15.96 (1.259)	YRBS	1993-2013
Male	0.491 (0.500)	YRBS	1993-2013
White	0.592 (0.491)	YRBS	1993-2013
Black	0.151 (0.358)	YRBS	1993-2013
Grade	10.355 (1.122)	YRBS	1993-2013
BAC_08	0.781 (0.401)	Updated from Anderson et al. (2013)	1993-2013
Zero Tolerance Laws	0.910 (0.275)	Updated from Anderson et al. (2013)	1993-2013
Cigarette Taxes (2005\$)	0.974 (0.777)	Tax Burden on Tobacco	1993-2013
Beer taxes (2005\$)	0.252 (0.191)	Beer Institute	1993-2013
Unemployment Rates	0.061 (0.02)	Bureau of Labor Statistics	1993-2013
Per Capita Income (2005\$)	34,447.37 (6,133.80)	US Census Bureau	1993-2013
National School Lunch Participation	0.098 (0.019)	US Dept of Agriculture	1993-2013
Pupil : Teacher Ratio	14.625 (2.873)	NCES Digest of Education Statistics	1993-2013

	YRBS	Source	Year
Teacher Salary (2005\$)	47,302.4 (7,691.3)	NCES Digest of Education Statistics	1993-2013
Share of Population with Bachelor's Degree	0.28 (0.06)	Current Population Survey	1993-2013
N	1,102,565		

Notes: The means are unweighted. Crime rates are arrest rates per 100,000 US population of the appropriate ages.

Table 2. State Anti-Bullying Laws (ABLs), 2001-2013

State	Effective Date	DOE Intensity Rating	Student Reporting	State Reporting	Investigate	Sanctions	Training & Communication
AL*	07/01/2010	20		X	X		
AK*	07/01/2007	10		X			
AZ*	04/20/2005	13	X				
AR*	03/26/2003	21					
CA*	10/10/2003	17		X		X	
CO*	08/08/2001	11				X	
CT*	02/01/2009	22	X	X	X	X	X
DC	06/22/2012	22	X		X	X	X
DE*	01/01/2008	22		X		X	X
FL*	12/01/2008	24		X	X	X	
GA	08/01/2011	13				X	
HI	07/11/2011	12	X	X	X	X	
ID*	03/06/2006	06					
IL*	06/28/2010	16				X	
IN*	03/10/2005	08					
IA*	09/01/2007	19					
KS*	04/27/2007	06					
KY*	11/30/2008	15		X	X	X	
LA*	09/28/2001	17		X			
ME*	09/01/2006	20				X	
MD*	07/01/2009	28		X		X	X
MA*	12/31/2010	23			X	X	X
MI	12/06/2011	28	X	X	X	X	X
MN*	01/31/2007	03					
MS*	12/31/2010	11					
MO*	09/01/2007	10					
MT	No Law	-	-	-	-	-	-
NE*	07/01/2009	06					
NV*	06/01/2005	19		X			X
NH	01/01/2011	27		X	X	X	X
NJ	09/01/2011	30	X	X	X	X	X
NM*	04/01/2007	16					
NY	07/01/2013	20		X		X	
NC*	12/31/2009	20					
ND	07/01/2012	20			X		X
OH*	09/29/2010	18			X		
OK	06/10/2013	14					
OR*	01/01/2002	21			X		

State	Effective Date	DOE Intensity Rating	Student Reporting	State Reporting	Investigate	Sanctions	Training & Communication
PA*	01/01/2007	13					
RI*	09/01/2004	14					X
SC*	01/01/2007	19			X		X
SD	03/19/2012	07				X	
TN*	01/01/2006	14			X		
TX	05/09/2011	05				X	
UT	09/01/2012	13					
VT*	01/15/2007	22	X	X	X	X	
VA	07/01/2013	18		X		X	
WA	08/01/2011	30	X		X	X	X
WV*	12/01/2001	23		X	X		
WI*	08/15/2010	09					
WY*	12/31/2009	19			X		X

Note: * indicate states contributing identifying variation to the model.

Table 3: Difference-in-Difference Estimates of Relationship between Anti-Bullying Laws and Student Safety

	Unsafe	Fight in School	All Fight	Threat
	(1)	(2)	(3)	(4)
<i>Panel I: Difference-in-Difference</i>				
ABL	0.001 (0.003)	0.001 (0.003)	0.004 (0.005)	-0.000 (0.002)
<i>Panel II: Difference-in-Difference, Leads and Lags of ABLs, without State Linear Trends</i>				
3 Years Before	-0.002 (0.004)	-0.007* (0.004)	-0.012 (0.008)	-0.003 (0.004)
2 Years Before	-0.001 (0.004)	0.007** (0.003)	0.001 (0.005)	0.004 (0.003)
1 Year Before	0.001 (0.005)	-0.002 (0.004)	0.001 (0.006)	-0.002 (0.004)
Year of Law Change	-0.002 (0.004)	0.004 (0.004)	0.006 (0.006)	0.001 (0.004)
1 Year After	0.001 (0.004)	-0.005 (0.006)	-0.009 (0.011)	-0.002 (0.004)
2 Years After	0.002 (0.005)	0.006 (0.006)	0.010 (0.010)	0.001 (0.005)
3+ Years After	0.001 (0.005)	-0.001 (0.007)	-0.002 (0.010)	0.000 (0.004)
χ^2 of $\beta_{lead1} = \beta_{lead2} = \beta_{lead3} = 0$	$\chi^2 = 0.59$ p=0.90	$\chi^2 = 11.72$ p=0.01	$\chi^2 = 2.63$ p=0.45	$\chi^2 = 3.35$ p=0.34
χ^2 of $\beta_{lead1} + \beta_{lead2} + \beta_{lead3} = 0$	$\chi^2 = 0.06$ p=0.81	$\chi^2 = 0.08$ p=0.78	$\chi^2 = 0.58$ p=0.45	$\chi^2 = 0.01$ p=0.93
χ^2 of $\beta_{yrchange} + \beta_{lag1} + \beta_{lag2} + \beta_{lag3} = 0$	$\chi^2 = 0.02$ p=0.89	$\chi^2 = 0.07$ p=0.80	$\chi^2 = 0.03$ p=0.86	$\chi^2 = 0.00$ p=0.97
<i>Panel III: Difference-in-Difference with State Linear Trends</i>				
ABL	0.000 (0.003)	-0.001 (0.003)	0.002 (0.005)	-0.002 (0.003)
State FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes
N	1,102,565	1,051,782	1,029,301	1,067,501

Notes: Unweightedprobit estimates obtained using data from the 1993 to 2013 Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Table 4: Exploring Heterogeneity in the Effects of ABLs by Types of Law

	Unsafe (1)	Fight in School (2)	All Fight (3)	Threat (4)
<i>Panel I: Model Policy</i>				
ABL with Model Policy	0.000 (0.003)	-0.003 (0.003)	0.001 (0.005)	-0.001 (0.003)
ABL without Model Policy	0.000 (0.006)	0.004 (0.005)	0.006 (0.007)	-0.006 (0.004)
χ^2 of $\beta_{MP} = \beta_{No MP}$	$\chi^2=0.00$ p=1.00	$\chi^2=1.47$ p=0.22	$\chi^2=0.34$ p=0.56	$\chi^2=1.37$ p=0.24
<i>Panel II: Intensity Rating</i>				
Rating of 21 or more	0.002 (0.006)	-0.014** (0.005)	-0.010 (0.007)	-0.002 (0.006)
Rating of 15-20	-0.004 (0.005)	0.005 (0.004)	0.013 (0.007)	-0.001 (0.004)
Rating of 14 or less	0.002 (0.003)	0.005 (0.004)	0.003 (0.006)	-0.003 (0.003)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=0.61$ p=0.44	$\chi^2=9.03$ p=0.00	$\chi^2=7.29$ p=0.01	$\chi^2=0.08$ p=0.78
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=0.00$ p=0.96	$\chi^2=5.98$ p=0.01	$\chi^2=2.21$ p=0.14	$\chi^2=0.01$ p=0.92
<i>Panel III: High Intensity Components</i>				
Student Reporting	-0.012 (0.008)	-0.025** (0.008)	-0.027* (0.011)	-0.020** (0.005)
State Reporting	-0.010 (0.007)	-0.007 (0.005)	-0.005 (0.010)	0.001 (0.005)
Investigate	0.006 (0.006)	-0.006 (0.005)	0.003 (0.007)	-0.002 (0.006)
Sanctions	0.007 (0.005)	0.006 (0.005)	0.007 (0.009)	0.000 (0.004)
Training & Communications	0.005 (0.007)	0.011 (0.006)	0.004 (0.007)	0.016** (0.005)
<i>Panel IV: Number of Components</i>				
4 or 5 Components	-0.009 (0.007)	-0.026** (0.007)	-0.021* (0.008)	-0.015* (0.007)
2 or 3 Components	0.003 (0.006)	0.002 (0.005)	0.010 (0.008)	0.006 (0.005)
Less than 2 Components	0.001 (0.003)	0.004 (0.003)	0.004 (0.005)	-0.003 (0.003)
χ^2 of $\beta_{4-5 comps} = \beta_{2-3 comps}$	$\chi^2=1.70$ p=0.19	$\chi^2=9.40$ p=0.00	$\chi^2=8.85$ p=0.00	$\chi^2=5.99$ p=0.01

χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=2.18$ p=0.14	$\chi^2=16.32$ p=0.00	$\chi^2=7.74$ p=0.01	$\chi^2=2.94$ p=0.09
State FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes
N	1,102,565	1,051,782	1,029,301	1,067,501

Notes: Unweightedprobit estimates obtained using data from the 1993 to 2011State and National Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Table 5: Tests of Policy Leads for DOE Intensity Ratings and Strictly Enforced Components of ABLs

	Unsafe	Fight in School	All Fight	Threat
	(1)	(2)	(3)	(4)
<i>Panel I: Intensity Rating</i>				
Rating of 21 or more	-0.003 (0.005)	-0.020** (0.006)	-0.022* (0.010)	-0.005 (0.009)
<i>Panel II: High Intensity Components</i>				
Student Reporting	-0.011 (0.009)	-0.026* (0.011)	-0.020 (0.021)	-0.027** (0.011)
<i>Panel III: Number of Components</i>				
4 or 5 Components	-0.012 (0.008)	-0.033** (0.009)	-0.036** (0.013)	-0.023* (0.011)
State FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes
N	1,102,565	1,051,782	1,029,301	1,067,501

Notes: Unweightedprobit estimates obtained using data from the 1993 to 2011 State and National Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5%

Table 6: Difference-in-Difference Estimates of Relationship between ABLs and Student Safety Using Continuous Measures

	Unsafe	Fight in School	All Fight	Threat
	(1)	(2)	(3)	(4)
<i>Panel I: Any ABLs</i>				
ABLs	-0.001 (0.008)	-0.006 (0.009)	-0.013 (0.019)	-0.001 (0.013)
<i>Panel II: Model Policy</i>				
ABL with Model Policy	0.001 (0.009)	-0.002 (0.010)	-0.007 (0.021)	0.004 (0.015)
ABL without Model Policy	-0.012 (0.019)	-0.023 (0.014)	-0.045 (0.031)	-0.031 (0.019)
χ^2 of $\beta_{MP} = \beta_{No MP}$	$\chi^2=0.42$ p=0.52	$\chi^2=1.59$ p=0.21	$\chi^2=1.21$ p=0.28	$\chi^2=2.74$ p=0.10
<i>Panel III: Intensity Rating</i>				
Rating of 21 or more	-0.006 (0.019)	-0.027 (0.019)	-0.043 (0.036)	-0.011 (0.030)
Rating of 15-20	-0.005 (0.012)	-0.001 (0.012)	0.005 (0.035)	0.005 (0.022)
Rating of 14 or less	0.007 (0.009)	0.011 (0.018)	0.001 (0.036)	0.003 (0.013)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=0.00$ p=0.96	$\chi^2=1.37$ p=0.25	$\chi^2=0.90$ p=0.35	$\chi^2=0.22$ p=0.64
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=0.38$ p=0.54	$\chi^2=1.67$ p=0.20	$\chi^2=0.62$ p=0.43	$\chi^2=0.16$ p=0.69
<i>Panel IV: High Intensity Components</i>				
Student Reporting	-0.064** (0.023)	-0.100** (0.029)	-0.109 (0.057)	-0.121** (0.031)
State Reporting	-0.027 (0.015)	-0.009 (0.023)	-0.049 (0.048)	-0.004 (0.021)
Investigate	0.023 (0.014)	-0.013 (0.018)	0.014 (0.037)	0.010 (0.024)
Sanctions	0.016 (0.016)	0.017 (0.021)	0.016 (0.047)	0.002 (0.023)
Training & Communications	0.024 (0.019)	0.033 (0.027)	0.049 (0.047)	0.083** (0.026)
<i>Panel V: Number of Components</i>				
4 or 5 Components	-0.044 (0.025)	-0.083** (0.029)	-0.099 (0.057)	-0.082 (0.041)
2 or 3 Components	0.016 (0.012)	0.019 (0.019)	0.020 (0.033)	0.043 (0.022)
Less than 2 Components	0.004	0.005	-0.002	-0.002

	(0.009)	(0.012)	(0.029)	(0.015)
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{2-3 \text{ comps}}$	$\chi^2=4.15$ p=0.05	$\chi^2=6.44$ p=0.01	$\chi^2=2.69$ p=0.11	$\chi^2=6.68$ p=0.01
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=3.66$ p=0.06	$\chi^2=8.24$ p=0.01	$\chi^2=2.16$ p=0.15	$\chi^2=3.89$ p=0.05
State FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes
N	1,102,565	1,051,782	1,029,301	1,067,501

Notes: Unweighted OLS estimates obtained using data from the 1993 to 2011 State Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Table 7: Sensitivity Check of Relationship between ABLs and Alternative Outcomes

	Bullied (1)	Property Crime (2)	Violent Crime (3)
<i>Panel I: ABLs</i>			
ABLs	0.003 (0.014)	-0.191* (0.078)	-0.217** (0.075)
<i>Panel II: Model Policy</i>			
ABL with Model Policy	0.007 (0.014)	-0.217* (0.091)	-0.227* (0.086)
ABL without Model Policy	-0.040* (0.020)	-0.045 (0.078)	-0.158 (0.133)
χ^2 of $\beta_{MP} = \beta_{No MP}$	$\chi^2=4.42$ p=0.04	$\chi^2=1.99$ p=0.16	$\chi^2=0.18$ p=0.68
<i>Panel III: Intensity Rating</i>			
Rating of 21 or more	0.020 (0.019)	-0.230* (0.109)	-0.279* (0.124)
Rating of 15-20	0.013 (0.020)	-0.335 (0.241)	-0.366 (0.215)
Rating of 14 or less	-0.023* (0.010)	-0.041 (0.059)	-0.046 (0.082)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=0.11$ p=0.74	$\chi^2=0.13$ p=0.72	$\chi^2=0.10$ p=0.75
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=5.02$ p=0.03	$\chi^2=2.12$ p=0.15	$\chi^2=2.34$ p=0.13
<i>Panel IV: High Intensity Components</i>			
Student Reporting	-0.003 (0.035)	0.151 (0.289)	0.147 (0.283)
State Reporting	-0.039 (0.041)	-0.527 (0.341)	-0.417 (0.330)
Investigate	-0.024 (0.056)	-0.171 (0.230)	-0.143 (0.233)
Sanctions	0.026 (0.029)	0.276 (0.262)	0.186 (0.280)
Training & Communications	0.073 (0.056)	-0.030 (0.209)	-0.094 (0.220)
<i>Panel V: Number of Components</i>			
4 or 5 Components	0.033 (0.017)	-0.175 (0.152)	-0.228 (0.135)
2 or 3 Components	0.003 (0.029)	-0.515 (0.329)	-0.450 (0.303)
Less than 2 Components	-0.007 (0.013)	-0.073 (0.051)	-0.129 (0.067)

χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{2-3 \text{ comps}}$	$\chi^2=1.22$ 0.27	$\chi^2=0.79$ p=0.38	$\chi^2=0.39$ p=0.54
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=4.33$ p=0.04	$\chi^2=0.40$ p=0.53	$\chi^2=0.47$ p=0.50
State FE?	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes
Controls?	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes
N	409,976	981	979

Notes: Unweightedprobit estimates obtained using data from the 1993 to 2011State and National Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Table 8: Falsification Estimates of Relationship between ABLs and Student Safety for Adults Ages 21-29

	Fear	Pistol	Property Crime	Violent Crime	Property Crime	Violent Crime
	DD	DD	DD	DD	DDD	DDD
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel I: ABLs</i>						
ABLs	0.025 (0.101)	0.102 (0.065)	-0.147 (0.089)	-0.175 (0.122)	-0.045* (0.026)	-0.042 (0.068)
<i>Panel II: Model Policy</i>						
ABL with Model Policy	0.089 (0.115)	0.050 (0.068)	-0.149 (0.104)	-0.179 (0.144)	-0.067** (0.029)	-0.048 (0.079)
ABL without Model Policy	-0.064 (0.146)	0.174 (0.104)	-0.131 (0.093)	-0.150 (0.136)	0.086 (0.055)	-0.007 (0.047)
χ^2 of $\beta_{MP} = \beta_{NoMP}$	$\chi^2=0.88$ p=0.35	$\chi^2=1.14$ p=0.29	$\chi^2=0.02$ p=0.90	$\chi^2=0.02$ p=0.89	$\chi^2=5.80$ p=0.02	$\chi^2=0.20$ p=0.66
<i>Panel III: Intensity Rating</i>						
Rating of 21 or more	0.172 (0.303)	-0.096 (0.137)	-0.061 (0.088)	-0.080 (0.113)	-0.170*** (0.052)	-0.199*** (0.063)
Rating of 15-20	0.112 (0.139)	0.059 (0.064)	-0.317 (0.285)	-0.428 (0.395)	-0.018 (0.062)	0.061 (0.197)
Rating of 14 or less	-0.064 (0.127)	0.183 (0.099)	-0.069 (0.075)	-0.035 (0.083)	0.028 (0.039)	-0.011 (0.040)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=0.03$ p=0.86	$\chi^2=0.95$ p=0.34	$\chi^2=0.61$ p=0.44	$\chi^2=0.60$ p=0.44	$\chi^2=2.97$ p=0.09	$\chi^2=1.42$ p=0.24
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=0.55$ p=0.46	$\chi^2=2.51$ p=0.12	$\chi^2=0.00$ p=0.95	$\chi^2=0.09$ p=0.77	$\chi^2=7.67$ p=0.01	$\chi^2=6.69$ p=0.01
<i>Panel IV: High Intensity Components</i>						
Student Reporting	-0.086 (0.279)	0.024 (0.110)	0.158 (0.341)	0.218 (0.424)	-0.007 (0.109)	-0.071 (0.184)
State Reporting	-0.246	-0.236	-0.507	-0.613	-0.020	0.196

Investigate	(0.158) -0.033 (0.204)	(0.269) 0.164 (0.129)	(0.412) -0.108 (0.271)	(0.568) -0.289 (0.387)	(0.091) -0.063 (0.050)	(0.251) 0.146 (0.174)
Sanctions	(0.178) 0.335 (0.178)	(0.303) 0.167 (0.303)	(0.316) 0.397 (0.316)	(0.429) 0.474 (0.429)	(0.069)* -0.121 (0.069)*	(0.187) -0.288 (0.187)
Training & Communications	(0.393) 0.079 (0.393)	(0.245) 0.099 (0.245)	(0.244) -0.023 (0.244)	(0.335) 0.118 (0.335)	(0.063) -0.007 (0.063)	(0.146) -0.211 (0.146)
<i>Panel V: Number of Components</i>						
4 or 5 Components	(0.392) 0.662 (0.392)	(0.277) 0.063 (0.277)	(0.139) 0.038 (0.139)	(0.137) 0.022 (0.137)	(0.086) -0.213** (0.086)	(0.095) -0.249** (0.095)
2 or 3 Components	(0.194) 0.026 (0.194)	(0.067) -0.015 (0.067)	(0.398) -0.381 (0.398)	(0.551) -0.536 (0.551)	(0.075) -0.134* (0.075)	(0.270) 0.086 (0.270)
Less than 2 Components	(0.115) 0.005 (0.115)	(0.079) 0.130 (0.079)	(0.058) -0.098 (0.058)	(0.067) -0.081 (0.067)	(0.027) 0.025 (0.027)	(0.038) -0.048 (0.038)
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{2-3 \text{ comps}}$	$\chi^2=3.67$ p=0.06	$\chi^2=0.11$ p=0.74	$\chi^2=0.86$ p=0.36	$\chi^2=0.83$ p=0.37	$\chi^2=0.43$ p=0.51	$\chi^2=1.28$ p=0.26
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=2.44$ p=0.13	$\chi^2=0.05$ p=0.83	$\chi^2=0.70$ p=0.41	$\chi^2=0.45$ p=0.51	$\chi^2=6.07$ p=0.02	$\chi^2=4.13$ p=0.05
State FE?	Yes	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes	Yes	Yes
N	299	298	981	980	1962	1959

Notes: Unweighted OLS estimates obtained using data from the 1993 to 2011 State and National Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Table 9: Difference-in-Difference Estimates of Relationship between ABLs and Human Capital Accumulation

	GPA	HS Dropouts	Suicide Ideation	Suicide Plan
	(1)	(2)	(3)	(4)
<i>Panel I: ABLs</i>				
ABLs	0.006 (0.016)	-0.002 (0.003)	0.004 (0.003)	0.003 (0.003)
<i>Panel II: Model Policy</i>				
ABL with Model Policy	0.009 (0.016)	-0.002 (0.003)	0.002 (0.003)	0.001 (0.003)
ABL without Model Policy	-0.020 (0.038)	-0.001 (0.011)	0.010 (0.005)	0.015* (0.006)
χ^2 of $\beta_{MP} = \beta_{No MP}$	$\chi^2=0.68$ p=0.41	$\chi^2=0.02$ p=0.90	$\chi^2=1.67$ p=0.20	$\chi^2=4.25$ p=0.04
<i>Panel III: Intensity Rating</i>				
Rating of 21 or more	0.028 (0.017)	-0.004 (0.004)	0.010 (0.005)	0.001 (0.004)
Rating of 15-20	-0.022 (0.030)	-0.001 (0.006)	0.003 (0.004)	0.003 (0.006)
Rating of 14 or less	-0.008 (0.024)	0.000 (0.006)	0.000 (0.004)	0.006 (0.005)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=2.44$ p=0.12	$\chi^2=0.15$ p=0.70	$\chi^2=1.21$ p=0.28	$\chi^2=0.13$ p=0.72
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=1.96$ p=0.17	$\chi^2=0.31$ p=0.58	$\chi^2=2.16$ p=0.15	$\chi^2=0.62$ p=0.43
<i>Panel IV: High Intensity Components</i>				
Student Reporting	-0.032 (0.038)	0.002 (0.010)	-0.006 (0.009)	-0.006 (0.006)
State Reporting	0.033 (0.041)	0.001 (0.005)	-0.003 (0.005)	-0.009 (0.006)
Investigate	-0.036 (0.033)	0.001 (0.006)	0.003 (0.006)	-0.001 (0.007)
Sanctions	0.078** (0.028)	-0.002 (0.007)	0.006 (0.006)	0.009 (0.007)
Training & Communications	-0.041 (0.031)	-0.006 (0.007)	0.000 (0.005)	0.001 (0.006)
<i>Panel V: Number of Components</i>				
4 or 5 Components	0.012 (0.022)	-0.001 (0.007)	0.001 (0.008)	-0.006 (0.005)
2 or 3 Components	0.008 (0.028)	-0.004 (0.006)	0.004 (0.004)	-0.004 (0.005)
Less than 2 Components	0.001	-0.001	0.004	0.010**

	(0.022)	(0.004)	(0.004)	(0.003)
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{2-3 \text{ comps}}$	$\chi^2=0.01$ p=0.91	$\chi^2=0.09$ p=0.77	$\chi^2=0.13$ p=0.71	$\chi^2=0.07$ p=0.79
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=0.15$ p=0.70	$\chi^2=0.00$ p=0.96	$\chi^2=0.14$ p=0.71	$\chi^2=7.92$ p=0.00
State FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes
N	430,330	1,071	1,037,818	1,045,427

Notes: Unweighted OLS estimates obtained using data from the 1993 to 2011 State and National Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Appendix Table I: Difference-in-Difference Estimates of Relationship between ABLs and Student Well-Being, Males

	Unsafe	Fight in School	All Fight	Threat	GPA	HS Dropout	Suicide Plan	Suicide Idea
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel I: Any ABLs</i>								
ABLs	-0.001 (0.003)	-0.001 (0.005)	0.000 (0.006)	-0.000 (0.003)	0.006 (0.019)	-0.003 (0.004)	0.000 (0.003)	0.001 (0.003)
<i>Panel II: Model Policy</i>								
ABL with Model Policy	-0.001 (0.004)	-0.002 (0.005)	-0.000 (0.006)	0.001 (0.004)	0.012 (0.020)	-0.000 (0.004)	-0.002 (0.003)	-0.000 (0.003)
ABL without Model Policy	-0.002 (0.008)	0.003 (0.007)	0.003 (0.010)	-0.006 (0.004)	-0.046 (0.035)	-0.018 (0.012)	0.009* (0.004)	0.009* (0.004)
χ^2 of $\beta_{MP} = \beta_{No MP}$	$\chi^2=0.01$ p=0.92	$\chi^2=0.39$ p=0.53	$\chi^2=0.10$ p=0.75	$\chi^2=1.34$ p=0.25	$\chi^2=3.19$ p=0.08	$\chi^2=1.87$ p=0.18	$\chi^2=5.93$ p=0.01	$\chi^2=3.55$ p=0.06
<i>Panel III: Intensity Rating</i>								
Rating of 21 or more	-0.003 (0.008)	-0.015* (0.008)	-0.011 (0.010)	-0.003 (0.008)	0.029 (0.023)	-0.003 (0.006)	-0.005 (0.004)	0.006 (0.005)
Rating of 15-20	-0.003 (0.005)	0.009 (0.006)	0.014 (0.008)	0.004 (0.005)	-0.022 (0.036)	-0.002 (0.007)	0.002 (0.005)	-0.001 (0.005)
Rating of 14 or less	0.003 (0.004)	0.003 (0.005)	-0.002 (0.007)	-0.002 (0.004)	-0.013 (0.021)	-0.004 (0.007)	0.004 (0.005)	0.000 (0.004)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=0.00$ p=1.00	$\chi^2=6.95$ p=0.01	$\chi^2=4.79$ p=0.03	$\chi^2=0.49$ p=0.48	$\chi^2=1.80$ p=0.19	$\chi^2=0.01$ p=0.91	$\chi^2=0.96$ p=0.33	$\chi^2=0.93$ p=0.33
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=0.53$ p=0.46	$\chi^2=3.30$ p=0.07	$\chi^2=0.46$ p=0.50	$\chi^2=0.00$ p=0.96	$\chi^2=2.16$ p=0.15	$\chi^2=0.01$ p=0.91	$\chi^2=1.62$ p=0.20	$\chi^2=0.81$ p=0.37
<i>Panel IV: High Intensity Components</i>								
Student Reporting	-0.019* (0.010)	-0.027* (0.011)	-0.031** (0.012)	-0.029** (0.008)	-0.032 (0.046)	-0.001 (0.015)	-0.014* (0.007)	-0.002 (0.009)
State Reporting	-0.012	-0.011	-0.009	0.003	0.050	-0.002	-0.017**	-0.010*

Investigate	(0.006) 0.007	(0.009) -0.005	(0.013) 0.005	(0.006) 0.001	(0.052) -0.026	(0.007) 0.000	(0.005) 0.007	(0.004) 0.001
Sanctions	(0.006) 0.007	(0.008) 0.008	(0.010) 0.008	(0.007) 0.002	(0.039) 0.063	(0.008) 0.001	(0.006) 0.010*	(0.005) 0.015**
Training & Communications	(0.006) 0.010	(0.007) 0.014	(0.011) 0.012	(0.005) 0.018*	(0.036) -0.051	(0.007) -0.001	(0.004) 0.006	(0.004) -0.003
	(0.008)	(0.010)	(0.010)	(0.007)	(0.037)	(0.009)	(0.006)	(0.005)
<i>Panel V: Number of Components</i>								
4 or 5 Components	-0.014 (0.011)	-0.027* (0.011)	-0.019 (0.011)	-0.018 (0.010)	0.013 (0.030)	0.002 (0.008)	-0.009 (0.007)	0.001 (0.009)
2 or 3 Components	0.003 (0.005)	0.002 (0.008)	0.006 (0.010)	0.012* (0.006)	0.004 (0.031)	-0.006 (0.008)	-0.004 (0.005)	0.000 (0.005)
Less than 2 Components	0.001 (0.004)	0.006 (0.004)	0.003 (0.006)	-0.002 (0.003)	0.002 (0.021)	-0.003 (0.006)	0.005 (0.003)	0.002 (0.003)
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{2-3 \text{ comps}}$	$\chi^2=1.85$ p=0.17	$\chi^2=4.03$ p=0.04	$\chi^2=2.75$ p=0.10	$\chi^2=6.19$ p=0.01	$\chi^2=0.06$ p=0.81	$\chi^2=0.56$ p=0.46	$\chi^2=0.38$ p=0.54	$\chi^2=0.01$ p=0.90
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=1.77$ p=0.18	$\chi^2=8.37$ p=0.00	$\chi^2=3.26$ p=0.07	$\chi^2=2.29$ p=0.13	$\chi^2=0.12$ p=0.73	$\chi^2=0.36$ p=0.55	$\chi^2=3.57$ p=0.06	$\chi^2=0.01$ p=0.93
State FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	538,835	512,488	500,643	521,414	209,101	1,071	511,212	506,317

Notes: Unweightedprobit/OLS estimates obtained using data from the 1993 to 2011 State Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Appendix Table II: Difference-in-Difference Estimates of Relationship between ABLs and Student Well-Being, Females

	Unsafe	Fight in School	All Fight	Threat	GPA	HS Dropout	Suicide Plan	Suicide Idea
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel I: Any ABLs</i>								
ABLs	0.001 (0.004)	-0.001 (0.002)	0.002 (0.005)	-0.003 (0.003)	0.007 (0.016)	0.000 (0.005)	0.001 (0.005)	0.005 (0.005)
<i>Panel II: Model Policy</i>								
ABL with Model Policy	0.000 (0.004)	-0.003 (0.003)	0.000 (0.005)	-0.003 (0.003)	0.007 (0.016)	-0.003 (0.005)	-0.001 (0.005)	0.004 (0.005)
ABL without Model Policy	0.003 (0.006)	0.006 (0.004)	0.010 (0.008)	-0.005 (0.004)	0.010 (0.044)	0.015 (0.011)	0.015 (0.010)	0.008 (0.009)
χ^2 of $\beta_{MP} = \beta_{No MP}$	$\chi^2=0.15$ p=0.70	$\chi^2=4.29$ p=0.04	$\chi^2=1.30$ p=0.25	$\chi^2=0.23$ p=0.63	$\chi^2=0.01$ p=0.94	$\chi^2=2.14$ p=0.15	$\chi^2=2.32$ p=0.13	$\chi^2=0.16$ p=0.69
<i>Panel III: Intensity Rating</i>								
Rating of 21 or more	0.004 (0.006)	-0.012** (0.004)	-0.014* (0.007)	-0.002 (0.004)	0.028 (0.016)	-0.006 (0.008)	0.000 (0.009)	0.020** (0.007)
Rating of 15-20	-0.004 (0.006)	0.002 (0.003)	0.011 (0.006)	-0.004 (0.004)	-0.023 (0.027)	-0.000 (0.009)	0.003 (0.008)	0.005 (0.007)
Rating of 14 or less	0.002 (0.004)	0.006 (0.004)	0.009 (0.007)	-0.003 (0.004)	0.000 (0.028)	0.005 (0.008)	0.002 (0.006)	-0.008 (0.007)
χ^2 of $\beta_{21+} = \beta_{15-20}$	$\chi^2=0.88$ p=0.35	$\chi^2=8.47$ p=0.00	$\chi^2=9.02$ p=0.00	$\chi^2=0.07$ p=0.80	$\chi^2=3.16$ p=0.08	$\chi^2=0.20$ p=0.66	$\chi^2=0.05$ p=0.83	$\chi^2=2.40$ p=0.12
χ^2 of $\beta_{21+} = \beta_{1-14}$	$\chi^2=0.05$ p=0.82	$\chi^2=9.15$ p=0.00	$\chi^2=7.22$ p=0.01	$\chi^2=0.04$ p=0.85	$\chi^2=0.90$ p=0.35	$\chi^2=0.78$ p=0.38	$\chi^2=0.02$ p=0.90	$\chi^2=8.18$ p=0.00
<i>Panel IV: High Intensity Components</i>								
Student Reporting	-0.010 (0.009)	-0.021** (0.007)	-0.027 (0.015)	-0.009 (0.005)	-0.034 (0.034)	0.004 (0.014)	-0.020 (0.012)	-0.013 (0.012)

State Reporting	-0.009 (0.010)	-0.004 (0.004)	-0.002 (0.009)	-0.001 (0.006)	0.021 (0.034)	0.006 (0.009)	-0.005 (0.010)	0.005 (0.010)
Investigate	0.006 (0.008)	-0.005 (0.003)	0.001 (0.007)	-0.004 (0.005)	-0.053 (0.029)	0.003 (0.007)	-0.006 (0.010)	0.008 (0.010)
Sanctions	0.005 (0.005)	0.004 (0.003)	0.005 (0.007)	-0.001 (0.004)	0.094** (0.025)	-0.006 (0.011)	0.010 (0.010)	-0.001 (0.010)
Training & Communications	0.003 (0.008)	0.006 (0.005)	-0.000 (0.006)	0.012* (0.005)	-0.026 (0.027)	-0.008 (0.010)	0.008 (0.010)	0.006 (0.009)
<i>Panel V: Number of Components</i>								
4 or 5 Components	-0.009 (0.007)	-0.024** (0.005)	-0.029** (0.009)	-0.011* (0.005)	0.009 (0.020)	-0.005 (0.014)	-0.021* (0.009)	0.000 (0.009)
2 or 3 Components	0.002 (0.008)	0.002 (0.004)	0.012 (0.007)	-0.000 (0.004)	0.015 (0.027)	-0.002 (0.007)	0.003 (0.009)	0.015* (0.006)
Less than 2 Components	0.003 (0.003)	0.003 (0.003)	0.006 (0.006)	-0.003 (0.003)	0.000 (0.025)	0.002 (0.007)	0.008 (0.005)	-0.001 (0.007)
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{2-3 \text{ comps}}$	$\chi^2=1.04$ p=0.31	$\chi^2=19.13$ p=0.00	$\chi^2=16.94$ p=0.00	$\chi^2=2.62$ p=0.11	$\chi^2=0.04$ p=0.84	$\chi^2=0.05$ p=0.82	$\chi^2=3.62$ p=0.06	$\chi^2=2.13$ p=0.14
χ^2 of $\beta_{4-5 \text{ comps}} = \beta_{1 \text{ comp}}$	$\chi^2=2.85$ p=0.09	$\chi^2=28.30$ p=0.00	$\chi^2=16.01$ p=0.00	$\chi^2=2.20$ p=0.14	$\chi^2=0.08$ p=0.78	$\chi^2=0.19$ p=0.67	$\chi^2=10.45$ p=0.00	$\chi^2=0.01$ p=0.92
State FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Time Trends?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	558,439	534,394	524,135	540,772	219,212	1,071	529,441	527,219

Notes: Unweightedprobit/OLS estimates obtained using data from the 1993 to 2011 State Youth Risk Behavior Surveys. Standard errors corrected for clustering on the state are in parentheses. Controls include gender, age, grade, race/ethnicity, average teacher salary, average pupil/teacher ratio, National school lunch participation rates, share of population with Bachelor's degree, beer taxes, zero-tolerance laws, BAC08 laws, cigarette taxes, state unemployment rate, and per capita income. **Significant at 1% level *at 5% level

Figure 1. Trends in Student Safety, YRBS

